



USAID | **MALAWI**
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FEED THE FUTURE AGRICULTURE DIVERSIFICATION (AGDIV) ACTIVITY MIDTERM EVALUATION

FINAL REPORT

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	v
ACRONYMS.....	vii
1. INTRODUCTION	1
1.1 Background and Project Information	1
1.2 Purpose of the Evaluation	1
1.3 Evaluation Team Members	2
1.4 Evaluation Design	2
1.5 Site Selection and Field Visits	3
2. FINDINGS.....	5
2.1 Project Overview	5
2.1.1 Quality seed stock	5
2.1.2 Addressing over-reliance on tobacco	5
2.1.3 Agricultural financing.....	6
2.1.4 Strengthening the agricultural inputs network	6
2.1.5 Working with international tobacco companies	6
2.1.6 Yields were targeted, and increased	7
2.1.7 Reducing post-harvest food losses.....	7
2.1.9 Backyard garden production/ Household soy processing	8
2.1.10 Women's empowerment, financial literacy, and economic participation.....	8
2.1.11 Soil conservation activities	8
2.1.12 Other project strengths	9
2.2 Field Travel Findings	9
2.2.1 Different interventions per Geographic Region	9
2.2.2 Summarized findings per community.....	11
2.2.3 Bamboo survival rates	12
2.2.4 OFSP survival rates.....	15
2.3 Tobacco/ Non-tobacco Evaluation Questions	18
2.3.1 To what extent have tobacco & non-tobacco farmers diversified production as a project result? How effective were efforts to increase area planted, production, yields, and profits?	18

2.3.2	To what extent has AgDiv strengthened and successfully built the capacity of the private sector to grow their businesses in a non-aid-dependent manner?	22
2.3.3	To what extent are farmers better connected to markets as a result of AgDiv? How effective has AgDiv been in increasing women’s and youth access to productive economic resources?	23
2.3.4	To what extent is the adoption of new technologies by smallholders growing in a sustainable, non-aid-dependent manner as a project result?	24
2.4	AgDiv Limitations	25
2.4.1	Two different projects and appropriate division of resources?	25
2.4.2	Weaknesses in OFSP and bamboo supply.....	26
2.4.3	Under-developed loan supervision in some technologies.....	26
2.4.4	Project reporting misses a key difference between “light touch” and heavy-benefit participants	27
2.4.5	Less field supervision.....	27
2.4.6	Sustainability.....	28
2.4.7	Nutrition achievements.....	29
2.4.8	Original AgDiv interventions not seen	30
2.4.9	Miscellaneous	31
4.	RECOMMENDATIONS	34
4.1	Reinforce AgDiv support where it has been effective	34
4.2	Geographic Scale-up	37
4.3	Project under-performance needs to be addressed	37
4.4	The nutrition component needs to be jump-started	38
4.5	The project should continue to plan for sustainability	39
APPENDIX A:	Field Trip Matrix	40
APPENDIX B:	Key Informants	48
APPENDIX C:	Focus Group and KII Interview Formats	49
APPENDIX D:	Focus Group Interview Notes	51
APPENDIX E:	Key Informant Interviews	124
APPENDIX F:	Resilience Villages Findings.....	124
APPENDIX G:	Reserved.....	180
APPENDIX H:	Documents Reviewed	181

APPENDIX I: Scope of Work	183
APPENDIX J: C.V.s of Evaluation Team Members	202
APPENDIX K: AgDiv Statement of Differences.....	202
APPENDIX L: MTE Final Comments on AgDiv Mid-Term Evaluation.....	2027

EXECUTIVE SUMMARY

The purpose of this mid-term evaluation (MTE) is three-fold: 1) to review, analyze, and evaluate the effectiveness of the AgDiv activity in achieving objectives; 2) to identify major constraints in achieving project results; and 3) to provide specific recommendations about strategies and approaches that USAID/Malawi should pursue in its future economic growth activities.

Within that framework, USAID/Malawi was also interested in addressing five specific questions related to tobacco vs non-tobacco farmers: 1) to what extent have farmers diversified their production as a result of the project?; 2) to what extent has AgDiv strengthened the capacity of the private sector?; 3) to what extent are farmers better connected to markets?; 4) to what extent is the adoption of new technologies by smallholder farmers growing in a sustainable manner?; and 5) what elements of AgDiv should be continued in future private sector-oriented agricultural development?

The MTE team conducted its research in Malawi from Sept 29 to Nov 8, 2019. Two weeks of in-country field travel from Oct. 21 to Nov 1, 2019 included visits to the eight Districts where the activity has been implemented. Thirty Focus Group Discussions (FGDs) were convened. The total number of participants in focus groups was 330, of whom 190 were women, 58%. Twenty-nine Key Informant Interviews (KIs) were also carried out.

Findings were divided into four sections: project strengths, field travel observations, answering four “tobacco farmer” questions, and project under-performance.

USAID’s AgDiv activity has demonstrated a number of strengths:

- addressing Malawi’s national deficit of quality seed by helping farmers move away from reliance on tobacco;
- addressing significant limitations in agricultural financing at the second-tier and at the village level; strengthening agricultural input markets by working with private sector multi-nationals;
- successfully addressing the long-overlooked issue of post-harvest food losses;
- introducing and scaling up inoculant use, drip irrigation, and solar pumping; attempting to address backyard garden production of nutritious crops and introducing innovative household soy processing equipment;
- addressing women’s empowerment, financial literacy, and economic decision making; and experimenting with soil conservation activities.

In all except one of these areas the project is achieving meaningful progress.

Regarding “tobacco farmer questions,” targeted tobacco farmers -- by leveraging existing relationships -- received more and better organized interventions including improved groundnut and soy than non-tobacco farmers. Their areas have expanded and their yields have increased.

Organized non-tobacco farmers also received more technologies and seeds and some were able to expand areas; many realized higher yields. The least organized farmers in the target areas center and the south of Malawi did not show the same results, which is to be expected. Here, the land area under cultivation and production for these people remained the same or declined.

Areas of project under-performance were noted as follows: required improvements in the bamboo and OFSP delivery system; issues of agricultural loan recovery in some interventions; less field supervision than is desirable due to the departure of a number of implementing partners; issues regarding the

sustainability of project interventions; under-performance in the project's nutrition component; and several miscellaneous issues.

Five **Conclusions** grow out of the Findings. Due to the leveraging of existing relationships, the activity yielded more benefit to tobacco farmers. Also AgDiv can build on its many strengths addressing areas of under-performance especially in OFSP delivery and in nutrition. The activity can give greater attention to sustainability in some of its interventions, particularly in the scale of distribution of the Purdue Improved Crop Storage (PICS) bags, through agro-dealerships.

Five multi-element **Recommendations** are offered. The project is achieving substantial gains in many of its endeavors and in these areas it should continue to build on its past achievements: improvement in the national seed stock; moving tobacco farmers out of reliance on that crop; expanded support for agricultural financing; continued but more finely tuned support of PICS bag distribution; continued support of inoculants and genetically improved seed; continued – and improved—support to OFSP promotion; vastly expanded scale up in the distribution of drip kits and soy kits; continued experimentation with resiliency in a few villages; and the discarding of warehouse receipting and the potential discarding of soy cows.

This evaluation further recommends that weaknesses should be addressed in the delivery of OFSP and likely bamboo. Another recommendation is for a reduction in the number of project participants in order to deliver more “layered” interventions with greater project impact to beneficiary farmers. Loan recovery from AgDiv partners to participants should be tightened.

Partner agencies appear to have lost some on-the-ground supervision capacity, and redressing this issue will require investing in developing new partners.

Lastly, the project is beginning to address sustainability of some interventions, particularly in PICS bags distribution through agro-dealerships.

ACRONYMS

AgDiv	Agriculture Diversification Activity
AI SL	Agro Input Supply Ltd.
CoFi	Community Finance, Ltd.
CRS	Catholic Relief Services
DAES	Department Agricultural Extension Service
DARS	Department of Agricultural Research Services
EPA	Extension Planning Area
FGD	Focus Group Discussion
FRIM	Forestry Research Institute of Malawi
FW	Farmers World
FTF	Feed the Future
GALS	Gender Action Learning System
GAP	Good Agricultural Practice
GOM	Government of Malawi
HA	Hectare
HQ	Headquarters
IBTCI	International Business & Technical Consultants, Inc.
KII	Key Informant Interview
LF	Lead Farmer
LLTC	Limbe Leaf Tobacco Company
MEL	Monitoring, Evaluation and Learning
MFI	Microfinance Institution
MWK	Malawi Kwacha (\$1.00 = MWK 750)
MOU	Memorandum of Understanding
MSME	Micro, Small, and Medium Enterprises
MTE	Mid-term Evaluation/Evaluators
NGO	Non-Governmental Organization
NPK	Nitrogen, Phosphorus and Potassium
OFSP	Orange Fleshed Sweet Potato
PERFORM	Malawi Protecting Ecosystems and Restoring Forests in Malawi
PICS	Purdue Improved Crop Storage
PIL	Peanut Improvement Laboratory
SANE	Strengthening Agriculture and Nutrition Extension
SME	Small and Medium Enterprise
SIL	Soy Improvement Laboratory
SOW	Statement of Work
STL	Soils Testing Lab
UP	United Purpose
USAID	United States Agency for International Development
VS&L	Village Savings and Loan association
WE EFFECT	Local NGO in Salima and Mangochi
WOLREC	Women's Legal Resource Centre
YONECO	Youth Net and Counselling
ZOI	Zone of Influence

I. INTRODUCTION

I.1 Background and Project Information

The Agriculture Diversification (AgDiv) Activity contributes to the United States Agency for International Development (USAID) Feed the Future (FTF) program goal in Malawi to sustainably reduce poverty and prevent stunting (long-term malnutrition) in eight districts in Central and Southern Malawi. AgDiv was contracted to Palladium International for a period of five years beginning in October 2016 and seeks to increase the competitiveness of high-value, nutrient-rich value chains through support for agricultural enterprises and increased access to markets and finance. It also aims to foster inclusive sustainable growth of Malawi's agricultural sector and to improve the nutritional status of women and children under five through a nutrition-sensitive approach of layering agriculture and nutrition behavior change interventions in rural communities.

The AgDiv Activity has been developed to achieve or further the following program objectives:

1. Inclusive growth of agricultural incomes and employment
2. Resiliency of smallholder farming strengthened
3. Improved nutritional status of women and children
4. Women empowered
5. CDCS Priorities for Integration advanced

AgDiv focused on eight geographic districts¹ (Mchinji, Lilongwe Rural, Dedza, Ntcheu, Balaka, Mangochi, Machinga and Blantyre Rural) across two regions (central and southern Malawi), reaching at least 166,000 households through nutrition-sensitive or agriculture-based interventions or both. AgDiv currently does not provide any direct implementation but rather works through a network of partners who have a local presence in its zone of influence (ZOI). It should also be noted that AgDiv received large budget cuts in its early implementation so many activities had to be scaled back.

This document is the Mid-Term Evaluation (MTE) of the project, conducted by International Business & Technical Consultants, Inc. (IBTCI), under USAID's Malawi Monitoring, Evaluation and Learning Support contract. The evaluation period spanned September 23, 2019 to February 2020.

I.2 Purpose of the Evaluation

As specified in the Scope of Work, the purpose of the evaluation was three-fold:

1. To review, analyze, and evaluate the effectiveness of the AgDiv activity in achieving program objectives and contributing to USAID/Malawi's efforts economic growth in Malawi.
2. To evaluate major constraints in achieving expected project results.
3. To provide specific recommendations and lessons learned on strategies and approaches USAID/Malawi should continue in its future economic growth activities.

Within that over-arching framework, USAID was also interested in answering five questions specifically addressed to issues related to farmers of tobacco in comparison to non-tobacco farmers:

¹ Malawi has 28 districts in all.

1. To what extent have farmers (both tobacco and non-tobacco farmers) diversified their production of agricultural commodities as a result of AgDiv's efforts? How effective have been AgDiv's efforts to increase area planted, total production, yields, and profits of the targeted commodities of soy, groundnuts and orange fleshed sweet potato (OFSP)?
2. To what extent has AgDiv strengthened and successfully built the capacity of the private sector to grow their businesses in a manner that will sustain beyond this activity?
3. To what extent are farmers better connected to markets as a result of AgDiv's efforts? How effective has AgDiv been in increasing women and youth access to productive economic resources (assets, credit, income, or employment)?
4. To what extent is the adoption of new technologies by smallholder farmers growing in a sustainable, non-aid-dependent manner as a result of AgDiv's approach?
5. What elements of AgDiv should be continued in future private sector-oriented agricultural development programming and which should be discontinued?

This MTE addresses both sets of issues, the larger, project-framework questions as well as the specific tobacco/non-tobacco questions.

I.3 Evaluation Team Members

The IBTCI mid-term Evaluation Team was composed of two international plus two local experts. The Team Leader holds a Master's degree in International Agricultural Development from Cornell University and has led over twenty such evaluations over fifteen years. The deputy Team Leader holds a Ph.D. in Agricultural Economics from Michigan State University. The other team members bring degrees in nutrition, public health and economics.

I.4 Evaluation Design

The evaluation design followed a mixed-method approach using both quantitative and qualitative techniques starting with a review of existing AgDiv monitoring reports, USAID references, and other secondary data sources. By using a mixed-method approach, the evaluation team gained insight about the progress of AgDiv project activities (mostly from quantitative, project-collected data) and processes (mostly qualitative information provided by key informants and community members.) Wherever feasible and relevant, data collected was disaggregated by gender.

The evaluators combined complementary and interrelated forms of information gathering and interpretation as described below:

- **Document Review.** Evaluation team members reviewed documents throughout the evaluation process including program reports and studies. Hundreds of pages of AgDiv documents were reviewed during the course of the evaluation. See Appendix H for the complete list.
- **Key Informant Interviews.** The MTE team conducted semi-structured, one-on-one interviews with a wide variety of stakeholders including relevant GOM agencies at the local level, subject-matter experts, private partners and community leaders, and development partners supporting GOM's agricultural initiatives. Twenty-nine KIIs were held during the evaluation. See Appendix C for a copy of the KII form and Appendix D for summaries these KII responses.

- **Self-assessment and Evaluation Team Comparisons.** Implementing partners responded to a self-assessment either through a questionnaire or standard interview conducted by the evaluation team. In addition, based on each evaluation team member's sectorial expertise, team members compared their analyses among themselves in four separate meetings the meaning and import of field travel findings and developed a consensus of the overall situation in each community and progress of the project.
- **Focus Group Discussions (FGD).** Focus group discussions, normally 6 to 12 people - with some exceptions above and below the target—were used to gather semi-structured qualitative data. Pre-selected participants discussed issues and concerns based on a list of key questions drawn up beforehand. Thirty FGDs were conducted, including a total of 330 participants, 58% of whom were female, over the course of two weeks of field travel. The FGD questionnaire is attached as Appendix C. The thirty filled-out questionnaires representing the discussion are attached separately, Appendix D. The FGD questionnaire was designed to stimulate honest commentary regarding ongoing implementation, and the MTE's assessment based on the quality of the discussions is that this was almost universally achieved.
- **Data Collection from Private Sector Companies.** This information was provided by two tobacco companies as well as Horizon Farms and other agriculture technology promoters about sales by type, geography, and time period.
- **Triangulation.** The MTE team cross-checked, or triangulated, evidence from between surveys, reported data, KIIs and FGDs as well as between the different FGDs that were held in the villages visited. In addition the team also checked the data from the annual survey.

Noted Limitations of this Evaluation Design.

Overall, limitations of the field work may come from its heavy focus on evidence derived from FGDs, such as:

- 1) *Response bias* is always an issue and the team worked to avoid this as much as possible by using a disclaimer at the beginning of each FGD that the discussions were being run by independent observers, not AgDiv or USAID staff.
- 2) *Recall bias* was minimized because the discussions were as much “community opinion” as “individual information,” and FGD members occasionally corrected one another; and the topics discussed in half the communities took place almost always less than six months in the past, and in the other half were vividly recalled. There were only two conversations where the MTE had to dig to establish the accuracy of FGD members' recall.
- 3) *Selection bias* was avoided by the MTE's random selection of FGD participants, as below. There are, of course, the other ‘usual’ design limitations consistent with a tight evaluation schedule.
- 4) FGDs generate insights and nuances but are not effective at generating quantitative data, particularly about outputs or outcomes.
- 5) The team had a limited time to conduct its field work and therefore was unable to visit all of the areas where AgDiv is providing support.

1.5 Site Selection and Field Visits

- The Evaluation Team drew its sample from fourteen of the 2018 Annual Agricultural Survey communities and fourteen currently active 2019 communities and purposively adjusted the sample to include High, Medium, and Low intervention communities. Slots per District were allocated proportionally based on the number of participants in that District compared to the total. Final slots were designated by year/ by intensity/ by District.

- A purposive sampling decision for villages was taken to visit villages which had been participants in the largest number of activities: PICS bag distribution, inoculant distribution, Orange Fleshed Sweet Potato (OFSP) distribution, and bamboo seedling villages.
- Fifteen participant names per village were chosen at random. From this list, 10 respondents were selected and invited to the FGD by the local extension agent (who did not participate in the discussion.)

Figure 1: List of the communities visited (in alphabetical order).

Chawantha- Lilongwe Chikwasa- Dedza Chiothela- Dedza Chulu- Balaka Horizon- Lilongwe Kabudula- Lilongwe Kantwanje- Balaka Kaphuka- Dedza Kasiya- Lilongwe Kutambala- Mangochi Kwilsaya- Machinga Machichi Coop- Mchinji Manjawira Ntcheu Masulani- Blantyre Mgulula- Mchinji	Mkanda Mpenu- Lilongwe Mkanda EPA- Mchinji Mngwangwa- Lilongwe Mpingu-Chitedze- Lilongwe Mtotela- Blantyre Mtuwa-Maiwa- Mangochi Mwati Coop - Mchinji Namwini- Machinga Nankumba- Mangochi Napolo A & B- Dedza Nsipe- Ntcheu Nyalure-Dedza Phanga- Lilongwe Silika- Balaka WOLREC (Chapsinja-Chinsomba)- Lilongwe
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Site visits generally took place in informal settings as illustrated by the following photos:



Mtuwa-Maiwa Mangochi 10/28/2019



Chapsinja FGD-Lilongwe 10/28/2019

In total, the evaluation included:

- Two weeks of field visits to 8 districts. Over 2,400 km. logged by each team.
- Average off-road visits to 14 FGD sites in the South was 15 km.; the most distant FGD was 28 km. from the road. In the Central Zone, FGDs were closer to the paved road.
- 30 FGDs were conducted.
- Total FGD attendance = 330, of whom 190 were women (e.g. 58%), and 140 were men.
- 29 KIs were interviewed.

The methods pursued were largely qualitative and aimed at mid-term feedback to USAID about issues that can help the activity going forward. Following are the findings, conclusions and recommendations.

2. FINDINGS²

The findings are divided into four sections: observed project strengths, detailed field level findings, objectively answering four of USAID’s five “tobacco farmer” questions, and observed areas of project under-performance.

2.1 Project Overview

Rarely, in one activity has such an attractive mix of agricultural design elements and inputs been blended together. Each element was examined in equal proportion. The AgDiv project addresses structural constraints and macro limitations, commercial and private sector production, and community and household issues. Positive project elements to be discussed are the following:

2.1.1 *Quality seed stock*

One fundamental obstacle to Malawi’s increased food production is old, genetic material (seed that has been used and reused by farmers) in soy and groundnut in the seed supply system, by common estimate, is at least twenty years old. It is difficult to improve production when the genetic potential of the seed (ability to achieve high production) is limited. The project has been involved with two U.S. university-based USAID-funded Innovation Laboratories, the Soybean Innovation Lab (SIL) at the University of Illinois and the Peanut Innovation Lab (PIL) at the University of Georgia, to bring “university expertise” to issues of quality seed supply, improved agricultural practices, appropriate input packages, harvesting, and post-harvest issues in the country. KIIs showed that the activity benefited substantially from having this (unusual but highly effective) expert backstopping. In addition, AgDiv purchased and imported seed stock and in conjunction with a private sector partner, multiplied the seed stock from 800 kgs to 13 MTs, with 25% of the production being delivered to the Ministry of Agriculture’s Seed Research station at Chitedze. These are important gains in improving the seed stock of the country.

2.1.2 *Addressing over-reliance on tobacco*

In conjunction with several tobacco companies, AgDiv has been working with thousands of farmers to move them out of an exclusive reliance on tobacco as a cash crop. Tobacco companies are interested in creating new revenue streams and markets as the world market for tobacco shrinks, and the government of Malawi interested in helping farmers make the transition. The activity has been supporting these tobacco companies in various ways that have helped accelerate the process. Several FGDs were held with tobacco farmers that demonstrated success in some areas and also noted areas for improvement.

Access to output markets is a much more complex issue, even for the deep pockets of tobacco producers. Malawi is a landlocked country with very poor roads, a broken railroad system, meager processing capacity, and very little cold chain infrastructure largely due to unreliable electricity and lack

² As standard practice in USAID evaluations, Findings are meant to be as objective, data-driven, and fact-based as possible. Evaluator judgment is reserved for the Conclusions and Recommendations sections.

of potable water. Additionally, over 80% of the country's agriculture output is derived from smallholder farmers.

AgDiv has also been engaged in supporting private sector development organizations with a similar commercial focus, Horizon Ltd among them. This partnership also brings with it the outreach to thousands of farmers that would otherwise be difficult. The FGD with the farmers suggested that Horizon is one of the high performers of the project.

2.1.3 Agricultural financing

AgDiv provided seed capital to Community Financing (CoFi), a subsidiary of Trade-line Corporation, a private Malawian company dedicated to smallholder farmer clients. CoFi is a registered, non-deposit, microfinance institution that provides loans to smallholders that support boosting production or upgrading the volumes of produce. CoFi finances seeds, fertilizer, logistics, equipment, and other assets. Through AgDiv's capital infusion, CoFi has been able to expand its portfolio and increase its outreach to additional farmers and farmer organizations.

The activity also provided capital infusion to one of its implementing partners, WOLREC (a local NGO in the finance space), the Women's Legal Resource Centre, a Blantyre-centered NGO. This financing helped the NGO strengthen its support to village savings-and-loan associations (VS&L), one of the principal village financing networks in rural Malawi. Several FGDs were enthusiastic about WOLREC's support of their VS&Ls and the impact that additional financing had had on members' (mostly women's) livelihoods.

2.1.4 Strengthening the agricultural inputs network

AgDiv managed subcontracts with agricultural input suppliers including Farmers World, Agro Input Supply Ltd. (AISL), SeedCo, PICS-ESA, and others. Several of these entities have tens of thousands of customers, and AgDiv has helped improve client contact; increased, diversified, and introduced new services; and strengthened outreach. Three examples are noteworthy:

- With support from AgDiv, Farmers World introduced a soil analysis service at a significantly reduced price of \$6.00/sample (US dollars) vs. the usual amount they charge of \$35-\$40. This service provides fast turnaround to get soil nutrient data to farmers, and offers a fertilizer blend that aligns plant nutrient needs to soil tests to maximize plant growth and yields.
- AgDiv supports AISL in its supporting of farmer cooperatives with improved soy and groundnut seeds, fertilizers, and inoculants at reduced prices, improving farmer access to inputs while strengthening cooperative services to its members.
- AgDiv supports PICS-ESA to develop agreements with agro-dealers for improved Purdue Improved Crop Storage (PICS) distribution. Agro-dealers in 2018 included Farmers World, Agora, and A&L; and this year the project hopes to include Chemical Plus and the Agricultural Trading Company. Both Farmers World and PICS-ESA expect to identify more village agro-dealers to better reach under-served rural areas.

2.1.5 Working with international tobacco companies

This relationship has been discussed above as it related to the farmers, but there is also a payoff in terms of relationship with the companies. Two of them especially have benefited from AgDiv

involvement in that they have been able to take on new and unusual activities with AgDiv assuming some of the risk associated with the activity – in seed multiplication, drip irrigation experimentation, and solar pumping in particular. One company hired a new Manager of Crop Diversification partly as a result of this relationship, and another is growing its network of field extension agents who provide self-financed agricultural advice. KIs from these two entities testify to the positive impact that AgDiv has had in these sectors.

2.1.6 Yields were targeted, and increased

Nationally reported crop survey data suggests that AgDiv contributed to important increases in yields and overall production in the target crops, which is addressed in detail in the sections that follow.

2.1.7 Reducing post-harvest food losses

One of the project's most dramatic successes has been the promotion and scale-up of Purdue Improved Crop Storage (PICS) bags, which are low-cost, three-layer, polyethylene bags designed to preserve harvested cowpeas or other foods and have been shown in other countries to protect against pests. Post-harvest crop losses are often difficult to measure but in many other parts of the developing world they can be as high as 35-40%. Two field-experienced KI respondents said losses range up to 30% in Malawi. PICS bags reduce that loss to around 1% or 2%, if stored just at harvest time. This is an enormous economic and food security benefit to the Malawi farmer. The PICS Managing Director said his total sales of PICS bags at the start of the project were 80,000 bags and now are over 800,000 per year as a result of AgDiv project promotion, while his competitors have hardly experienced any growth in sales. He estimates annual sales will be one million bags per year to satisfy the growing demand for the foreseeable future, and then a million bags per year as replacement bags, which will have an outsized effect on grain supply and food security in the country. FGD participants were universally positive about PICS bags, some using them to store grain, some to store next year's precious seed, some even killing weevils by oxygen starvation! A half-dozen or so FGD participants reported buying more bags beyond what was given.

2.1.8 Inoculants, drip irrigation, and solar powered pumping

The project has been cautiously expanding its introduction of three other agricultural technologies, inoculants, drip irrigation, and solar powered pumping. Inoculants are used with legume crops to treat seed and improve their ability to fix nitrogen. Timely and appropriate application of rhizobium inoculants³ according to farmer comments and project records produces healthier plants with 25% more foliage and improved pod growth and pod filling. Small-scale drip irrigation has vast potential to substantially improve the household food supply during the “lean months.” Solar pumping has the potential to revolutionize small-scale crop production. Respondents did not comment much on these technologies since so few participants had received them. However, agricultural literature suggests they may have great potential economic impact if they can be scaled up.

2.1.9 Backyard garden production/ Household soy processing

Two other technologies show enormous yet unexploited economic and nutritional potential. One is drip-kit irrigated backyard gardening, and AgDiv reports distributing 2,417 of these eight-dollar kits in the last several years. The other is a “soy kit,” a small, hand-operated grinder that produces a soymilk product in villages where it has been introduced, 217 soy kits distributed to date. FGDs related that these grinders are working well, that soymilk that was originally unknown in the villages is now being well received, that soy production is increasing around them because of the demand they are creating, and that they themselves are making profits selling soymilk two or three times a week. One respondent asked: “Where can I buy another when this one breaks?” Another said: “How can I buy another to expand my production?” There was also jealousy expressed by those who did not receive the soy kit toward the members who did. This technology appears ready to take off.

2.1.10 Women’s empowerment, financial literacy, and economic participation

AgDiv has been directing substantial attention to the inter-related issues of women’s empowerment, financial literacy, and economic participation. The project reports about 5,000 people have received Gender Action Learning System (GALS) training, 5,000 financial literacy training, and over 4,000 VS&L management training (with some overlap in the reporting), with about 30% of these groups being men. When such activities are coupled with strengthening the VS&L groups, the outcome seems to be enhanced. FGDs in both the Center and the South regions of Malawi who were participants in WOLREC training were appreciative of this training and asked for more.

2.1.11 Soil conservation activities

AgDiv has also begun working with a few large demonstration communities on soil conservation: swales (shallow channels), water catchment structures, contour runoff trenches, gully erosion structures, and similar efforts. Three communities in Dedza (out of four under this activity) were visited and the community structures were inspected. This is a small part of project activities and still on an early learning curve, but some of the activities show promise. More will be known by AgDiv when they monitor this after the Rainy Season and the effectiveness of the structures can be assessed for their technical quality and durability. See Appendix F for a fuller description of this intervention.

³ Microbial inoculants may help improve the nitrogen fixation in root systems

2.1.12 Other project strengths

Several other project strengths were noted on organizational lines. After a slow start in Year One, the activity significantly strengthened its Monitoring and Evaluation department. Unlike many field activities where evaluation is treated as an add-on, in AgDiv evaluation appears to be in the forefront of implementation where LEL staff are actually evaluating the data that is collected. As a related comment, monitoring and evaluation staff are providing much 'value added' in terms of thinking about how to measure performance of various outputs, how to supervise on-going activities better, how to ensure that project activities are on track. (One exception to this comment will be noted below.)

The project has benefited from strong external monitoring. A technical consulting firm was hired to independently assess the accuracy of project-generated data each year, an unusual design but one that has proven its worth. The quantitative data of the 2018 and the 2019 annual surveys conducted independently of project staff strongly corroborate substantial income gains the project has reported. The MTE team did not have any role in these surveys but as an outside observer the team can attest to how powerful the analysis is in these documents.

The AgDiv project has de-emphasized two problematic interventions: one is the decision to limit support for a proposed Warehouse Receipting System; the other was a decision to go slow on continued effort in small-scale industrial production of soymilk with soy cows.

The AgDiv project has a fifth goal, that of actively looking to coordinate with other USAID projects and drawing on the expertise of these other activities. There are so many other USG and non-USG actors in rural development in Malawi that having a dedicated goal to stay aware of and interact better with other actors which has worked well in other settings.

As a conscious decision early in the life of the project, AgDiv backed away from direct implementation, opting to work instead through partners (firms who have a local presence in Malawi). At one level, this has been a strength because it gives project staff the time to focus on broader issues, and that is to the good. There will be some comments below that will explore the downsides to this decision.

2.2 Field Travel Findings

Three themes are discussed below: different interventions per geographic region, summarized finding per community, and field trip findings on bamboo and OFSP survival rates.

2.2.1 Different interventions per Geographic Region

The following chart shows which villages were visited, and the agricultural interventions carried out in those village as discussed in the FGDs. Gender action learning and GALS training are not reflected in the table but financial literacy and VS&L training interventions are.

Table Two: AgDiv interventions per Community and Geographic Region

Community	Gnut	Soy	Inoc	OFSP	Bamb	Finan	Drip Irrig.	Soy Kit	PICS
Central Region									
1. Chawantha			√	√	√				√
2. Chikwasa- Dedza									√
3. Chiothela- Dedza			√	√	√			√	√

4. Horizon	√	√	√	√	√	√	√	√	√
5. Kabudula	√	√	√						√
6. Kaphuka- Dedza			√	√	√		√	√	√
7. Kasiya	√				√				√
8. Machichi Coop			√	√		√		√	√
9. Manjawire- Ntcheu				√	√	√	√	√	
10. Mgulula				√					√
11. Mkanda-Mchinji	√	√	√	√					√
12. Mkanda-Mpenu					√			√	√
13. Mngwangwa- (FW)	√	√		√					
14. Mpingu-Chitedze	√	√							√
15. Mwati	√	√	√	√					√
16. Napolo A & B	soil conserv		√		√	√	√		√
17. Nsipe- Ntcheu	√								
18. Nyalure	soil conserv.		√		√				
19. Phanga		√	√	√					
20. WOLREC (Chaps./Chi)						√	√	√	
Central Totals: N = 81	10	9	11	11	9	5	5	7	14

Community	Gnut	Soy	Inoc	OFS P	Bamb	Finan	Drip Irrig.	Soy Kit	PICS
Southern Region									
1. Chulu- Balaka			√	√					√
2. Kantawanje- Balaka				√			√		√
3. Kutambala-Machinga					√				
4. Kwilsaya-Mangochi					√				√
5. Masulani-Blantyre				√	√	√	√	√	√
6. Mtotela- Blantyre				√	√	√	√	√	
7. Mtuwa- Mangochi					√				√
8. Namwini- Machinga					√				√
9. Nankumba-Mangochi					√				√
10. Silika- Balaka			√	√					√
Southern Total: N = 29	0	0	2	5	7	2	3	2	8
TOTAL Activity: N= 110	10	10	14	16	16	7	8	9	22

As seen in this table:

- AgDiv activities which promote substantial improvement in farmer income through legume production are only seen in the Central Region. The lack of activities depicted in the first three columns of the Southern region show that this was not a priority in the south. There was, however, capital infusion and financial literacy training in the south that a few FGDs reported had modest income-producing results.
- FGD farmers in the Central Region received ten groundnut interventions or soil conservation activities, but none in the South; nine soy interventions in the Center, though none in the South; twelve inoculant interventions in the Center, just two in the South (an intervention rejected by both communities because of late delivery.)

- OFSP and bamboo were mostly received about the same rates in each region (these deliveries in the South will be discussed further below)
- VS&L promotion, drip irrigation and PICS bags were delivered in roughly proportional levels in communities visited in each of the two regions.

The difference between the central and the south is likely due to the leveraging of existing relationships from the tobacco sector. These farmers are already well organized and have contract farmed tobacco under tight supervision. This supervision has resulted in high production of AgDiv promoted crops of soy, groundnut and OFSP. The differences in interventions between the central and southern regions was an observation by the MTE that AgDiv does not agree with. This issue therefore merits further research.

2.2.2 Summarized findings per community

As FGD evidence accumulated, it was synthesized in the following table to summarize five key observations. Further detail is available in Appendix A.

Table Four: FGD rankings of interventions, by community

Central		Southern	
1. Chawantha- Lilongwe	C+	21. Chulu- Balaka	D
2- Chikwasa- Dedza	C	22. Kantawanje- Machinga	--
3- Chiothela- Dedza	C	23. Kutambala- Machinga	C+
4- Horizon- Lilongwe	A	24. Kwilsaya- Mangochi	C
5- Kabudula- Lilongwe	B+	25. Masulani II- Blantyre	C
6- Kaphuka- Dedza	C	26. Mtotela- Blantyre	C
7- Kasiya- Lilongwe	C	27. Mtuwa- Mangochi	D
8- Machichi Coop- Mchinji	C	28. Namwini- Machinga	D
9- Manjawira- Ntcheu	C	29. Nankumba- Mangochi	D
10- Mgulula- Mchinji	B	30. Silika- Balaka	D
11. Mkanda- Mchinji	C		
12- Mkanda- Mpenu	B+		
13- Mngwangwa- Lilongwe	A		
14- Mpingu-Chitedze-Lilong	B		
15- Mwati- Mchinji	B		
16- Napolo A & B- Dedza	C		
17- Nsipe- Ntcheu	D		
18- Nyalure- Dedza	A		
19- Phanga- Lilongwe	D		
20- WOLREC Chap./ Chin.	B+		

Scale of ranking: Five salient FGD findings were extracted from the FGD notes per group and evaluated by the MTE as follows:

LEGEND: "A" ranking means the intervention was reported by them as achieving significant success, had noticeably improved incomes, and/or had achieved substantial sustainability.

"B" means the intervention was reported as having some success, had achieved some improvement in incomes, and/or was achieving the beginnings of sustainability.

"C" means the intervention was reported with mediocre performance and did not demonstrate much improvement in incomes or in sustainability.

"D" means the intervention had performed poorly, there had been little or no improvement in participants' income as a result, and there was little or no evidence of sustainability of interventions.

“F” means the project was reported to have failed, there was no economic impact of any size, and the crop or technology failed.

“—” represents a FGD priority topic that was not a responsibility of AgDiv, thus not taken into account in deriving the final grade.

The data shows a decided difference between the two regions.

- The Central Region is substantially more successful than the South: 9 “A”s and “B”s representing good results, almost half ; nine “C”s representing so-so implementation; and only two “D”s, poor performance
- In the South there are no “A”s or “B”s. Four are “C”s and five are “D”s.
- Put another way, the South has as many poor performers as the Center has significant successes.

This is likely due to the substantial difference between the central region and the south where there is more poverty. Also because of the fact that AgDiv leveraged existing relationships from the tobacco sector, the farmers in the central region would show better results because they are getting more concentrated support from the tobacco companies.

2.2.3 Bamboo survival rates

After the first several FGDs in the South reported late delivery of various project inputs, the MTE team began carefully tracking community responses. The results indicated that most bamboo had been delivered to communities in the South in February 2019, that is, a few weeks before the rains ended, despite the fact that one of the management practices essential for the survival of giant bamboo is early and continuous watering. The following table summarizes the response from each community visited that received bamboo inputs from AgDiv.

Table Five: Bamboo Survival Rates in 2019

Village	FGD Parts.	Survival Rate	FGD Observation
Southern Region			
Kutambala-Machinga	8	31%	Seedlings arrived in January. Fertilizer/pesticide delivered but not distributed. Good training reported. 7/8 FGD received five plants each. Lead farmer has five surviving plants; one has four, two have one; three have none. 31% survivability. Problems noted were low soil moisture, inadequate fencing, and holes dug too shallowly.
Kwilsaya-Mangochi	9	28%	Seedlings arrived in Feb. (very late). Fertilizer and pesticide provided but not distributed. No training. 5/9 FGD members received five plants each. One has all five surviving because her land is near the river; four have one plant left; two have two left. Survival rate is 13 of 45, 28%
Manjawire-Ntcheu	18	60%	No training. No notice given of the seedlings’ arrival until the truck left Lilongwe. Each of 200 VS&L members got one seedling, one per person. Of the 18 FGD members, only 11 still had their one seedling alive.
Masulani II-Blantyre	15	41%	Twenty-two seedlings delivered to these FGD members; seven got two, eight got one. Eight have suffered complete death of

			the plants; 7 have nine plants alive. (9/22 = 41%) They say they don't know how to take care of them.
Mtotela-Blantyre	9	50%	Each participant received only three plants each. Most got no pesticide. FGD members report 50% mortality, 27 dead seedling of 54 delivered to nine people. 5/9 FGD members have one or two seedlings left.
Namwini-Machinga	8	0%	Bamboos seedlings arrived in Feb. (very late). Fertilizer/pesticide not distributed by the Lead Farmer. No training. Such high demand that they received only five. (5X8 = 40.) Not one seedling remains alive of these FGD participants.
Nankumba-Mangochi	11	11%	Each FGD participant received eight bamboo. Lead farmer had received training but did not cascaded to others. Seedling were delivered in good time about Jan 15, but no training on care of plants or adequate preparation. Surviving plants are 4 with one, and 2 each with three others: Total surviving: 10 of 88, 11%.
Central Region			
Chawantha	13	NR	Each participant received and planted 4 bamboo seedlings.
Chiothela	4	65%	Each FGD participant received four bamboos—they said in Nov 2017 (but Nov 2018 is much more likely since the plants are not yet 3 feet high.) The village is full of native bamboo and there is no evidence of soil erosion. FGD reports no training offered but farmers used their own experience to care for the plants. Total survival rate of the four is 65%.
Horizon	10	60%	Farmers received 8-10 bamboo seedlings in February 2019. Averaged about 60% survival rate among the ten farmers; now seedlings are about 1 meter high – were planted in wetlands. Termites killed some bamboo seedlings.
Kasiya-Dedza	16	20%	Reported in the FGD discussion, 10 seedlings were given to each farmer and planted in fields as a hedgerow, in wetlands, and near the house. Overall survival rate about 20%: a few with 80%; more about 60%; one person all seedlings died. Biggest cause of loss was termites.
Kaphuka-Dedza	10	40%	Five FGD participants received four bamboo—reportedly in Nov 2017 but based on plant size surely November 2018. They say it is a “fast growing variety” but two plants were only one meter tall. The farmer says this variety is highly susceptible to goat attacks (he lost one to his goats) and these plants don't recover the way local bamboo does. Small sample of interviewees: total survival is 8 plants of 20, 40%.
Mkanda-Mpe	11	NR	Received 4 bamboo seedlings per household. Survival rate not asked. [Not rated.]
Napolo A	6	25-50%	Serious doubt whether the seedling will take. They were delivered very late – end of February 2019 when the rains were tailing off. They are almost a $\frac{3}{4}$ km. away from the water source, meaning that women have to bring 20-liter jugs of water up the hill to water each of these hundreds of plants – and that they do so “maybe twice a week.” We did not count

			the hundreds of plants, but our “eyeball estimate” is that at least 50% of them have already died- maybe even 75%.
Nyalure-Dedza	14	60%	Ten bamboo to 14 of the group. Surviving plants reported were 84 survived of 140 seedlings – 60%. Those that had surviving plants reported low-lying land where the plants did well. Termites were a factor in seedling mortality.

NR = Not rated.

From the above table note that whereas project expectations are that each bamboo participant should receive ten plants, FGDs report hundreds of people getting only one or two plants, severely limiting the hoped-for economic benefit.

The United Purpose Dedza demonstration plot containing 5,500 seedlings being cared for in optimum village-like conditions reports an estimated survival rate of 75%. Project staff reports monitoring visits between March and October 2019 show a survivability of 76%. A study conducted by Limbe Leaf Lilongwe at AgDiv’s request suggests the same figure.

This information is very different from the project’s March bamboo spot check survey but this could occur for a number of reasons (timing, lack of rains, animal damage etc.). That survey reported an overall survival rate of 94%, which is a large difference. In that survey nearly 50% of farmers had not yet protected their seedlings and it was still rainy season. Is it possible that goats ate many of the seedlings between March and October? Is it possible the rainy season disguised the fact that the seedlings had been recently planted? Does the survival rate of five PCI farmers who received 329 bamboo (average: 66 each!) obscure the survival rate of the 114 farmers who received 512 seedling (average of 4 each)? How did survey staff think sampling these farmers would be a representative sample? These outstanding questions should be addressed by AgDiv and in the final evaluation. The MTE doesn’t know the answer to these questions. It is clearly in the project’s interest to resolve the discrepancy between its monitoring and the MTE findings.

In the random sample of farmers interviewed, many of who received bamboo, suggest that the 2019 bamboo seedling intervention was widely unsuccessful in the South, with mixed results in the Center.

There appear to be at least eight key elements to bamboo success, any one of which can impair the intervention. 1) First, is timely arrival of fresh seedlings, and farmers being adequately prepared for their arrival. Most FGD-reported fatalities had to do with dried-out seedlings received late in the rainy season. 2) Shipping of bamboo seedling from Lilongwe brings another obstacle as quick transit time is essential: a broken-down truck, for example, reportedly killed thousands of OFSP vines in 2019. 3) A third factor is quick transplanting into damp ground – best is lowland that will retain moisture well into the dry season. 4) Being near a latrine or another source of regular moisture is ideal but seems to work against the objective of using it in soil conservation. 5) Big, sturdy fencing against goat depredation is another key and may not have been emphasized enough. Dozens of interviewees – even quite experienced farmers – reported their seedling being destroyed by goats. 6) Chemical protection against termites is a requirement that most farmers in the South did not receive, nor a moisture-retention chemical either; there were several reports of chemicals being ‘hogged’ by the Lead Farmer. Moreover, the chemical packet cannot be split to accommodate a distribution of less than ten seedling per farmer. In much of the 2019 distribution, many farmers who got only one or two seedlings received no chemical protection. 7) The message of early-and-constant watering is another essential element that was not delivered to many. 8) Last, adequately dug holes for the seedlings is another requirement that some did not understand. Summing up: despite the fact that Malawi farmers plant millions of bamboo, this variety requires new plant husbandry the farmers need to hear about well before the seedlings arrive.

Note that much of the bamboo was being used by farmers for building purposes and not for watershed protection and many said it was too valuable to be used as a substitute for firewood. The project's early assumption that this cultivar's primary use would be as an alternative to charcoal is not born out by FG discussions.

2.2.4 OFSP survival rates

After several FGDs reported late delivery of OFSP, the MTE teams began exploring this topic. The following table lists those findings in 2019 (except where noted.)

Table Six: OFSP survival rates in 2019

Village	FGD #	Survival Rate*	FGD Commentary
(*Survival to harvest. If successful harvest, survival to next planting season as a proxy indicator of progress toward sustainability.)			
Southern Region			
Chulu- Balaka	9	33%	Every FGD member received 8 bundles of 100 vines apiece (!) = 800 vines, "mostly fresh" (a big difference compared to elsewhere); and promotion and program success was good. Trained by United Purpose how to prepare & care for the plants and the nutritional value of OFSP. 3 of 9 growers sold some of their sweet potato; the rest consumed in the HH. Three people have vines and can plant in the upcoming Rainy Season; the other six left their vines in the fields and the animals ate them and they have no way of getting more. The three with vines do not have enough to share.
Masulani II- Blantyre	15	0%	All 15 FGD participants received OFSP in late January. All 15 received dried out plants. All plants have died and there is nothing left. Only a few of them received a little training on the care of OFSP.
Mtotela- Blantyre	9	43%	Five of seven FGD participants got some OFSP vines very late, toward the end of the wet season, February. Three of the seven were able to save some plants by transplanting. Six received some training beforehand.
Silika- Balaka	10	0%	In 2018 OFSP delivered quite late- end of Rainy season and dried out. There was no production from AgDiv resources. [Note: WFP was promoting OFSP & cassava here and hired villagers to produce vines on low-lying land, which they did; and then WFP paid the farmers to distribute the vines to other villagers. The model seemed to work.]
Central Region			
Chawantha	13	NR	Received 5 bundles of OFSP; variety yielded slightly more than traditional varieties. Were also trained in OFSP. [Survival rate question not asked.]

Chiothela-Dedza	4	NR	Only one of four FGD members had experience with OFSP but reported that 20 members of one club got four bundles each. U.P. had numerous sessions on the nutritional value of OFSP. The group reported that “most” still had vines left and wanted to sell them to U.P. as part of a scale up effort. [Survival rate question not asked.]
Horizon Farm	10	Likely self sustaining	Six varieties of OFSP distributed: One bundle each to 500 farmers for multiplication. Early maturing and drought resistant – harvested prior to onset of drought. Stored OFSP in a modified root cellar for up to three months. Sell in market when local varieties are no longer available. Also consumed as nutritious food in the home.
Kaphuka-Dedza	10	30%	Eight FGD members received six bundles of OFSP in February (late). Several planted in lowlands with some success. (Hectares not reported.) Reported production was 12 bags @ 75/80 kgs./bag = 930 kgs. Not good. Cattle grazing after harvest destroyed vines of five of the eight, leaving only three with some vines left for next year. According to them, February delivery means that most of the choice land had already been planted with other crops.
Machichi Coop	8	Likely self sustaining	Delivered 1,000 bundles shared among five Coops; all of it was planted and harvested; OFSP was early maturing which was good because they received the vines near the end of the season. As a result, can't tell if it was a good harvest compared to local varieties. If planted at beginning of rains, might yield more; will see next planting season.
Manjawire-Ntcheu	18	28%	All eighteen FGD participants got some OFSP vines but very late—March. All the vines were dried out. The groups did not receive any planting or agronomic advice. Five of the eighteen still had some surviving vines – a survival rate of 28%.
Mgulula	8	NR	Each was given a bundle of OFSP vines. They managed to harvest the OFSP and found it to be high yielding. [No discussion of survival rate.] Did not receive training, so they grew them the way they grow the other ordinary sweet potatoes. However, they welcomed them as they have been hearing from the radio and the hospital that this type of potato has nutritional benefits.
Mkanda-Mchinji	11	Likely self sustaining	OFSP in the Demonstration Plots (per FW instruction); vines from the Demo Plots were distributed to farmer groups and farmers multiply the vines and grow OFSP. Some farmers planted 1 acre of OFSP instead of maize. OFSP has been particularly beneficial – grow it in the wetlands and can get two crops.
Mngwangwa	10	NR	Farmers received 1 bundle each of OFSP – a total of 150 bundles. OFSP is good and useful. [Survival rate question not asked.]
Mwati	2	NR	Coop and non-coop farmers received 2 bundles OFSP each in February 2019. Due to lateness in the season, farmers planted

			the vines in nurseries in wetlands and will plant this rainy season. Farmers received training on OFSP.
Napolo A & B	12	NR	[No meaningful data collected]
Phanga	11	0%	In 2017 received OFSP vines of six varieties but just enough for 1 demonstration plot. Planted on 0.25acre plot. Multiplied and shared it with 30 members (pass-on program). All of it was planted, but the rains were very poor and all of it died.
<i>[In the following three communities, the OFSP intervention was not an AgDiv-supported activity; but findings were discussed in the FGD and are included for their comparative value.]</i>			
Kutambala Machinga	8	Likely self sustaining	FGD members say PERFORM and MoAG staff conducted good OFSP training. They received some vines in 2016, again in 2017; 2018 results are from the 2017 supply. Group reports good production: better yields than traditional potato and fast-selling. Several reported growing twice during the year. All FGD members will be planting OFSP during this rainy Season. The big challenge is selling: vendors offer a low price and because the villagers are so far from the road they accept. Nevertheless, a successful technology compared to others in the South and likely self-sustainable.
Kwilsaya-Mangochi	9	78%	PERFORM seems to have conducted good pre-arrival training and all nine FGD members received OFSP. Seven of them had low-lying land, and those plants still survive. They think of it as “both” a food crop for the family because of its nutritional value as well as a cash crop. A relative success.
Namwini-Machinga	7	28%	Six of seven FGD members received three bundles each. Two still have some plants. Survival rate no more than 28%, likely less. Timing of the arrival, late in the rainy season, as in other communities in the South. They says: “the plants have to get here in December to survive.”

NR = Not rated.

OFSP distribution in the South suffered similar weaknesses as bamboo and appears to have been unsuccessful. It showed mixed results in the Center -- three successes and two failures-- where survival rates were mostly not discussed in the FGDs (which might imply some relative success).

There appear to be five main contributors to the success of the OFSP promotion. First is the timely arrival of fresh plant material. Most FGD-reported fatality had to do with dried-out plants received late. If plants have to be shipped from a distance (as the AgDiv Lilongwe-based distribution system seems to be), quick transit time becomes another essential element: one broken-down truck was reported in a Blantyre FGD to result in the delivery of dried-out seedlings to hundreds of farmers in 2019. A third positive factor is that of quick transplanting into damp ground – best is lowland that will retain moisture in the dry season. Early maturing varieties which the project is distributing have a clear advantage in this regard, all other things being equal. Most FGD farmers seemed confident in their ability to grow OFSP. There were many reports, however, of farmers not knowing they had to carefully retrieve the vines from the field after harvest so the plants wouldn’t be eaten by grazing animals, and then carefully kept moist till the next planting season.

Regarding *consumption* of OFSP, and other different nutrition issues, please see the Nutrition section, 2.4.7, below.

2.3 Tobacco/ Non-tobacco Evaluation Questions

2.3.1 To what extent have tobacco & non-tobacco farmers diversified production as a project result? How effective were efforts to increase area planted, production, yields, and profits?

When the evaluation team began its KIIs followed by FGDs, it became apparent that food security outcomes were directly influenced by how well organized the farmers were—either because of their participation in company activities or because they had self-organized into cooperatives. The more organized the community, the easier it was to deliver new technologies. Three tiers of organizational structure were identified within AgDiv’s target communities, each with its corresponding level of project impacts. AgDiv’s highest budget allocations were directed to two “tier one” tobacco companies with a combined 25,000 contract farmers. These farmers were well organized, regularly received critical inputs or loans, and had access to vital extension services.

A second tier of “organized” farmers were either working with or within the reach of Horizon Farms, Farmers World, and the Machichi and Mawati Cooperatives. Smallholder farmers in this tier also had access to critical inputs and vital extension services, however they were not bound by contractual arrangements as were the tobacco farmers. Most of these farmers did not have financial loan services, so that their farm inputs had to be purchased on a cash basis; and many also used saved seeds.

The third tier comprised the largest number of farmers, those who fall outside any type of organizational structure. These “independent” farmers were generally very rural, located far from agro-dealers (where farmers purchase inputs), and often quite distant from even informal markets. Because of the distances involved, acquiring productive inputs was extremely difficult. Most farmers relied on saved seed with poor germination rates, with little or no access to inoculant or fertilizers, resulting in very low yields. Typically, these farmers had little left to sell, and what they had was sold to local vendors (travelling traders) at very low prices. Each of these three tier groups are further discussed, as follows.

First Tier Organizations

The AgDiv approach was to build partnerships with two major tobacco producers, Pyxus (originally known as Alliance) and Limbe Leaf Tobacco Company (LLTC). A third partner may be added, for which discussions are taking place for the purpose of promoting uptake of AgDiv technologies in soy and groundnut. By partnering with these companies, AgDiv was able to reach a large number of farmers quickly in the introduction, promotion, and adoption of new technologies, thereby improving the livelihoods of thousands. To address the lack of quality seed, a second significant constraint on yields, the project established technical assistance partnerships with the USAID Soybean Innovation Laboratory (SIL) and the USAID Peanut Innovation Laboratory (PIL) to work directly with Limbe Leaf and Pyxus to conduct varietal trials to identify improved soy and groundnut seed varieties. Release of new varieties has the potential to increase yields for farmers in all tiers – though farmers with resources for inputs are likely to benefit earliest. These companies possess the financial, technical, and human resources to test improved legume varieties. AgDiv also purchased improved groundnut and soy seed in Zambia for immediate distribution to tobacco company farmers. Under the AgDiv-USAID agreement, AgDiv was

allowed to purchase improved seed and distribute it directly to the tobacco farmers. By doing so, AgDiv was able to reach a large number of farmers with complementary bundles of technologies and assistance at low cost by providing a relatively small piece of the package. This seed was provided on a loan basis, so that loan repayments can be used to distribute seeds again for the 2019-20 growing season.

Pyxus reported the following AgDiv project activities:

- In 2018, AgDiv procured 150 MT of groundnut seed from Zambia and distributed 14,225 10-kg packets to most of Pyxus' 15,000 registered farmers. Pyxus purchased inoculant to distribute to farmers along with the seed and reported that 70% of farmers chose to plant groundnut over soy due to higher market prices for groundnut.
- In 2018, Pyxus imported 80 MT of soybean and distributed 6,078 10-kg packets to 40% of its farmers; 10% of Pyxus farmers planted both groundnut and soy.
- In 2018, Pyxus purchased 90,000 PICS bags which were distributed to registered farmers as part of a loan package to them. In 2019, another 80,000 PICS were purchased by Pyxus and distributed to farmers. Training on these technologies was provided by Pyxus extension staff after TOT training by AgDiv.
- In 2018, 30 drip kits were purchased by AgDiv (25 at 0.5 HA and 5 at 1HA) and given to Pyxus farmers for production purposes. Pyxus provided the complementary solar pumps, tanks, and other needed equipment. In general, the value of the drip kit was 10-20% of the total cost of a full solar powered drip site.
- Through Pan African Trials, Pyxus hosted 40 variety soy trials on its Commercial Farms. The farm manager supervised trials and SIL gave 185 extension staff technical training to oversee trials. All seed harvested from the trial was recollected by SIL.
- Collaborated with PIL where 150 variety trials were implemented, and extension staff received technical training in groundnut. PIL provided six kits containing shelling machine, size grading machine, moisture testing kits, and aflatoxin testing kits.
- 185 extension staff received financial literacy training using the FINLIT Literacy Project.

Limbe Leaf reported the following AgDiv project activities:

- In 2018, AgDiv procured 48.2 MT of groundnut seed to be distributed by Limbe Leaf to their farmers on a loan basis. In 2018 LLTC also purchased 216 kg of inoculant to distribute to farmers along with the seed. No fertilizer was distributed in 2018 (but is planned to be part of the package in 2019.)
- In December 2018, LLTC received 100,000 bamboo seedlings, which were distributed to 10,000 farmers, ten each.
- In 2018, LLTC purchased and distributed 72,000 PICS bags to 10,000 farmers. AgDiv assisted with demonstration trials and TOT training for LLTC's 140 extension agents who then trained their 10,000 farmers.
- In 2019, 6,666 farmers received 10 kg of Grade A seed pack valued at \$196,647, which will plant 823 HA producing 499,500 kg of seed and grain. This seed was purchased by LLTC for the 2018 season.
- In 2019, LLTC purchased and distributed 216 kg of inoculant, 884,650 kg of NPK (Nitrogen, Phosphorous, and Potassium) fertilizer and 1,233 MT of Urea.
- In 2018 began OFSP research trials and groundnut research trials with AgDiv and PIL; Department of Agricultural Research Services (DARS) provided 835 kg pre-basic groundnut seed. May 2019 harvest estimated at over 9,000kg with average yield of 2.7mt/HA, triple the country average. 75% of seed remained with LLTC for further multiplication; 25% returned to DARS for foundation seed stock. The 75/25 method is the standard multiplication method used by DARS.

- In 2018 AgDiv purchased and distributed 10 Netafim drip kits (three 0.5 HA and seven 1.0 HA kits) to smallholder farmers for crop diversification and other irrigation activities. In general, the value of the drip kit was 10-20% of the total cost of a full solar powered drip site.

Second Tier Organizations

Horizon Farming Ltd. is a company that helps smallholder farmers improve their productivity, incomes, and household livelihoods. Horizon has 265 hectares of land and uses for its own farming purposes in addition to land for farmer training via an “In-growers & Out-grower” model. In-growers are given a small piece of land and provided training in Good Agricultural Practices (GAP) and are introduced to improved seeds and other technologies like PICS bags, drip irrigation, and use of inoculants to boost yields and income. Returns from yields are split 50/50 between Horizon and the in-grower farmer. Following a year of training, most in-grower farmers graduate and return to their own farms to begin applying their new skills. Horizon Farms strives to be the link that facilitates farmer access to both input and output markets. Horizon has contractual arrangements with over 10,000 farmers, works in 6 Extension Planning Area (EPAs), and coordinates activities with DAES Extension Officers from those EPAs. Horizon also has three of their own extension agents to coordinate activities with DAES.

Farmers World (FW) -- started in Malawi 26 years ago as part of the Meridian Group. FW has 115 retail agro-inputs stores designed as full-service shops. In 2016 it launched an Extension Unit with agents called “Agronauts” who are assigned to specific stores, working 2 days in the store, and 3-4 days in local farm communities. AgDiv helped diversify FW services and increased its extension outreach. Through assistance from AgDiv, Farmers World developed a soil-testing lab operated by the Malawi Fertilizer Company that makes fertilizer blends consistent with soil-test results. AgDiv subsidized the soil testing lab and paid for the first 4,000 test results to incentivize farmers to use this technology. The cost of a soil test is \$6.00 per sample, compared to \$35-40 per sample in Kenya. Through AgDiv, FW gave fertilizer discounts to farmers for legumes, groundnut, soybeans, and OFSP. AgDiv helped FW expand its farmer outreach, increased customer base, and facilitated diversifying the company’s service portfolio.

Farmer Cooperatives. Machichi and Mawati Cooperatives were found from FGDs to have limited resources, yet with the assistance of AgDiv linking them with AISL and with the provision of subsidies, both cooperatives were able to obtain critical inputs that clearly benefitted their farmer members. Below are reported activities from these two cooperatives:

Mwati Cooperative

- In December 2018, farmers received 150 packets of inoculant; 200 more in 2019. Based on yields, members will continue to apply inoculant even with own purchases.
- OFSP - received 2 bundles each in February 2019.
- Through AgDiv, Cooperative made a contract arrangement with *Agro Input Supply Limited (AISL)* to provide soy and groundnut seeds, inoculant, and fertilizer. Yields and quality have improved.
- Area under soy and groundnut is increasing due to higher yields; farmers are expanding production; income in the community has improved, as have family livelihoods.
- PICS Bags – Coop is arranging with AISL to provide PICS bags.
- Cooperative investments—membership fee is MWK 25,000. Money used to purchase maize, groundnuts and soy when prices are low and sell to other communities during the lean season.

Machichi Cooperative

- The Cooperative began activities with AgDiv in July 2018. Members were already growing soy and groundnut but AgDiv brought inoculants for their groundnuts and soybeans, which was helpful.

- PICS bags – 1,000 at first, followed with another 1,000. Four additional cooperatives in the area, so they shared with all of them hence each farmer received 1 bag.
- OFSP – AgDiv delivered 1,000 bundles shared among five Cooperatives; all was planted and harvested; OFSP was early maturing which was good, vines were received near the end of the season.
- Soy kits – received 4 kits with training. Kits given to four women who are now producing soymilk. Received intensive training from AgDiv for all interventions received.
- The cooperative works with women and youth– 68 out of 180 members are women. The youth and women can access loans and hold leadership positions in the cooperative.
- The CoFi loan group is the finance institution that supports the Cooperative’s loan agreement.

Third-Tier Organizations

Due to their remoteness and lack of organization, most of these communities received the least support from AgDiv, although even here the degree of impacts varied from little to moderate. In general, communities visited in the Central Regions= were better off than those in the South. Through the Department of Agricultural Extension Services (DAES) support, some communities formed Farmer Field Schools while also receiving AgDiv support. Some partner organizations were better at reaching out to their communities even though they faced difficult obstacles, perhaps because they were better organized, because they were better resourced financially, or had more qualified staff members. Below are FGD findings from two representative communities – one each from the Central and Southern regions. Complete FGD findings are in Appendix D.

Chawantha – Central Catholic Relief Services (CRS)

- OFSP - received 5 bundles from CRS in 2018; yielded slightly more than traditional varieties. Were trained in OFSP; shared vines with neighboring communities via “Pass-on Program”.
- Bamboo – each participant received 4 seedlings. One person received a soy kit, but all attended training; the soy kit recipient sells soy in the community; people like the soymilk.
- In 2018, no improved soy or groundnut seed was distributed. Farmers grow soy from saved seed.⁴
- Drip kit - One recipient received a kit; all received drip kit training.
- PICS bag - everyone received one; consider PICS bags too expensive to purchase.
- Planted area remains the same due to lack of improved seed; farmers use saved seed; yields remain the same or have fallen due to poor quality seed. Income has remained the same or fallen.

Kwilsaya — South (PERFORM and IITA/Cadecom/DAES)

- PICS bags were received in 2018 before harvest, 1 bag each. Of nine participants in FGDs, three said that they bought additional bags on their own.
- OFSP -- PERFORM conducted pre-arrival training – 7 of 9 farmers planted in lowland where all plants were reported to still survive. Respondents referred to their use as both a food crop for family consumption and as cash crop.
- Bamboo arrived late in February. Fertilizer and pesticide arrived but was not distributed. No training was given. Five FGD members received 5 plants each representing a survival of 28%.

⁴ Year 3 was the first year in which AgDiv provided soy and groundnut seed inputs, which were provided through LLTC & Pyxus, but not provided to any farmers outside of those organizations. In Year 4, AgDiv is piloting input loan packages to farmer cooperatives, groups and associations. Initial meetings took place with representatives of these farmer organizations in August and September 2019, and seed and inoculant was distributed in November 2019.

- No drip kits, soy kits, or capital infusion were provided to this group of participants.⁵
- Some of the farmers least organized in the Central Region received much less project support for technologies, and their area under cultivation remained the same or declined. Most of these farmers used saved seed as few had sufficient cash to purchase seeds.

2.3.2 *To what extent has AgDiv strengthened and successfully built the capacity of the private sector to grow their businesses in a non-aid-dependent manner?*

Limbe Leaf Tobacco Company (LLTC) and Alliance One/Pyxus both have significant financial, human resource, and management advantages, including established export market linkages that are absent to most non-tobacco firms. For instance, in 2018 Pyxus gave out \$28 million in farmer loans and reported a 98% repayment rate. Not only that, many of their farmers have graduated from taking loans, and now purchase inputs independently. The farming system network of tobacco companies comprised of thousands of contract farmers operates efficiently, and their business management and marketing skills are strong. However, with tobacco revenues in continued decline, alternative revenue sources became necessary. The advent of AgDiv in 2016 was favorable for both of these companies. Pyxus made it clear that AgDiv had “de-risked” many of their production-based interventions, and the company is highly appreciative of what AgDiv has shared with them. Pyxus further mentioned that after AgDiv, the company would likely establish its own Memorandum of Understanding (MOU) with the Soybean Innovation Lab and the Peanut Innovation Lab to continue varietal trials, assuming that SIL and PIL are willing to continue the relationship. It is also clear that Pyxus and Limbe Leaf have the resources to continue with the numerous technologies and interventions AgDiv has provided, including continuation of peanut and soy varietal trials and continued expansion into a diversified farming systems portfolio that will include value added processing through vertically integrated activities.

Second Tier Organizations

Horizon Farming Ltd. -- has its own 265 ha commercial farm for generating direct revenue, as well as contracts with over 10,000 smallholder farmers, with plans to expand to 15,000 farmers in the next few years. The company is one of AgDiv’s “anchor farms” and supports its smallholder farmers through intensive but practical training through its “In-grower-Out-grower Farm Model” discussed earlier. Through AgDiv, it has been introduced to improved groundnut and soy seeds, OFSP, use of inoculants, PICS bags, and drip irrigation. Horizon has a full time Farm Manager and two (2) Field Extension Officers (paid by Horizon.) The company uses a Lead Farmer (LF) model and has trained 30 of them who in turn reach out and train village farmers through use of demonstration plots designed to follow crop growth cycles for groundnuts, soy and OFSP. Horizon has also partnered with the Soybean Innovation Lab on varietal trials that hopefully will benefit Horizon’s commercial farm as well as the communities it supports. Based on conversations with the owner and General Manager as well as focus group discussions with some of its farmers, it was clear that Horizon has the knowledge, expertise, and financial resources to continue the company as a competitive private sector firm in a way that remains independent of outside assistance, whether by USAID or other.

Farmers World (FW) -- made it clear that AgDiv has helped them to diversify and strengthen the company’s service portfolio, which has made it more competitive and profitable as a private sector entity. In its first contract, AgDiv subsidized extension agent salaries; but now salary assistance is no longer needed as the extension service unit has become a profit center of its own. In partnership with

⁵ AgDiv provided capital infusions at roughly equal levels in both South and Central regions—2% of all participants received them in both cases. However, these cases are not necessarily representative of actual AgDiv program distribution; hence, it is not surprising that the FGD group was not included in the 2% receiving capital infusions.

AgDiv, Farmers World established 400 Demonstration plots, which are supervised by the extension staff and Lead Farmers. Farmer field days are held regularly throughout the crop calendar cycle to instruct farmers on improved technologies and GAP. In FGD interviews, recipients of FW extension services made it clear that their yields and livelihoods have improved because of these trainings and demonstrations. A third example of AgDiv strengthening Farmers World capacity was in development of a soil-testing lab coupled with a fertilizer blending facility that makes fertilizer blends that are consistent with each farmer's soil-test results. FW emphasized that it could not have launched the Soil Testing Lab without AgDiv assistance, but it also made it clear it has the resources to continue the lab on its own, and other previously supported AgDiv interventions. In fact, in several interviews with Farmers' World retail agro-dealer shops, managers mentioned that sales in the last two years have increased over 40%. Not only is FW acquiring new farmer clients, but existing clients are purchasing more product, including seeds, fertilizers and PICS bags – most of this being driven through the Extension Service Unit.

Cooperative Organizations

Machichi and Mwati Cooperatives were interviewed through FGDs and both had received assistance from AgDiv through a purchasing agreement with the agro-dealers, Agro-Input Supply Limited (AISL). AgDiv has also supported other cooperatives with the introduction of soy cows. Despite the potential benefits associated with cooperatives, cooperative membership is very low in Malawi due to under-performance. The five AgDiv soy cow supported cooperatives were negatively impacted by organizational and management problems, which gave rise to low levels of equity and debt capital, low investment levels, and subsequent loss of membership. The MTE team observes that if these cooperatives are to become more effective at serving their members free from USAID assistance, additional management training will be necessary.

Third Tier Organizations

These loosely or unorganized farmers are generally located in rural areas on unpaved roads that become increasingly degraded in the Rainy Season. Most of these farmers are extremely poor, are distant from both input and output markets, and usually rely on push bicycles as a primary mode of transportation and have small land holdings. This means accessing improved inputs from distant agro-dealers is prohibitive, as is transporting harvested crops to markets. This group is largely limited to utilizing low yielding, saved seed with almost no use of chemical fertilizer. Selling any small excess produce is usually done through small-scale "travelling" traders who offer low prices because of the high travel costs associated with reaching them; and because these farmers are desperate for cash after harvest they are forced to accept these prices. Even for donors, these people are difficult to reach; and delivering agriculture technologies or other types of assistance is very expensive. This third tier of independent producers, which comprises the largest share of Malawian farmers, will continue to require outside assistance if their livelihoods are to improve.

2.3.3 To what extent are farmers better connected to markets as a result of AgDiv? How effective has AgDiv been in increasing women's and youth access to productive economic resources?

Farmers connected to tobacco companies have evident and probably improved access to input markets through a loan process established by these firms. In KII and FGD interviews, it was noted that some farmers, through improved yields and income, have been able to wean themselves from the loan process and purchase their input needs on a cash basis. Smallholder farmers who work with Horizon Farming Ltd. have also benefitted, largely through the Horizon model that assists them in breaking the cycle of poverty through mentoring and training, and in sharing of resources. These farmers eventually return to their family-owned farms and produce at higher levels, thereby removing them from subsistence farming. The FW model also appears effective at improving farmer livelihoods, mostly

through extension service support and access to quality inputs, even though these inputs are purchased on a cash basis. Still, many farmers within FW's reach are unable to afford to purchase quality inputs. Some farmer cooperatives also represent access points to critical farm inputs, but most of these cooperatives will require continued technical and business management training to become reliable suppliers of inputs in the long term.

There are no dedicated aggregation points for crop output from these millions of farmers in Malawi, nor is there sufficient storage infrastructure in place, or an established grades and standards mechanism for most agriculture commodities. The exception is the Agriculture Commodity Exchange (ACE), which primarily stores and sells maize, which also instituted the Warehouse Receipt System as a finance mechanism for larger farmers. This lack of storage in key production areas, combined with a fledgling transport system and no grades and standards, has greatly raised the cost of doing business for most processors. All other farmers including those within organizational structures have not succeeded in developing reliable output markets. All remaining smallholder farmers sell to local vendors in small lots of mixed product of questionable quality and due to their immediate need for cash, this relegates them to "price takers."

AgDiv has made efforts to access markets for legume farmers by developing a database for cooperatives and associations to link them with agro-processing companies and business development service providers. Mount Meru is an agro-processing company that has been engaged by AgDiv and has initially agreed to contract activities with farmers, mainly through cooperatives or trade associations. AgDiv had also initiated negotiations with Sunseed Oil, which had plans to purchase soybeans from members of Nkhunguyembe Cooperative in Mkanda EPA, Mchinji District. However, this has had very limited success to date. Ultimately however, farmer engagement with high capacity firms will require that they and their organizations have the capacity to aggregate, sort, grade and store their crops to meet the required volumes and quality standards these firms require. Finally, AgDiv is working on the policy front with USAID/Malawi and USAID/Southern Africa to reduce impediments to more efficient markets.

Regarding *women and youth*, AgDiv has had limited success in improving access to productive resources through capital infusions into Village Savings and Loan Associations (VS&Ls) and through micro-finance activities with CoFi. AgDiv supported capital injections into eight VS&L groups through Youth Net Counseling (YONECO), however that entity is no longer a partner. Youth clubs that received capital injections were taking part in AgDiv activities, such as growing soy, groundnuts and OFSP. Each VS&L received an injection of MWK275,000 (US\$ 360) (for a total of MWK 2,200,000- \$2,930), allowing them to increase the size and number of loans. In 2019 AgDiv expanded capital injections to \$140,000 USD, reaching an estimated 9,000 additional participants with increased access to finance. AgDiv has also partnered with WORLEC to provide capital injections to 3,600 participants through VS&L groups. This was echoed in an FGD in Chapsinja/Chinsomba where AgDiv gave MWK300,000 to the first 10 groups that were formed. This allowed 20 women from the FGD to take out loans to start small businesses selling fruits, vegetables, and snacks. A second capital injection for the second VS&L groups is scheduled for 2020. Also, in April 2019 AgDiv followed up with loan participants at Horizon Farm in Mitundu, Lilongwe, who were the first VS&Ls to receive capital injections in December. AgDiv noted that these participants repaid 100% of the loans taken out.

2.3.4 To what extent is the adoption of new technologies by smallholders growing in a sustainable, non-aid-dependent manner as a project result?

Some farmers complained of late availability of inputs in agro-dealer shops and little promotion. Although many farmers have access to phones to receive radio messaging, many in the FGD groups did not have access to cell phones.

Drip irrigation and soy kits have had limited distribution but have huge potential. Soy kits in particular were highly prized, especially by women; and they were quickly used as a means to bring extra income into the household. Farm households also quickly accepted soymilk as an additional nutrient supplement, particularly for women and children. Even though most women tended to sell their soymilk to other community members, soymilk recipients benefited directly from its consumption. Drip irrigation similarly has great potential to expand, especially in small backyard garden kits. But small-scale farmers can easily benefit from larger drip kits as well, particularly for vegetable and OFSP production during dry season months. With income earned from selling produce during the lean season, farmers who take out loans should have the capacity to repay these loans from this additional off-season production. Demand for these technologies will likely grow even after the project ends.

Limbe Leaf (LLTC) and Pyxus have carried out improved soy and groundnut varietal trials with AgDiv's public partnership with the Department of Agricultural Research Station (DARS)/GOM, PIL and SIL. The objective has been to get the best varieties of soy and groundnut seed into the commercial market and onto farmers' fields. By conducting trials in partnership with DARS, the private sector, and end users, the process has been improved. Farmers who are linked to Pyxus, Limbe Leaf, Horizon, Farmers World, and Cooperatives will have better access to improved seeds and be the most likely to continue growing in a non-aid-dependent manner. A major problem with delivering seed on a wide, equitable scale is that Malawi's seed sector is not operating as an efficient market and is very dependent on Government subsidies, leaving farmers unable to access better performing seeds, heightening food insecurity. As AgDiv has emphasized, three key factors must be resolved within the seed sector -- quality, availability, and accessibility. Quality needs to be addressed if farmers are going to have confidence in planting improved seeds. If the process of delivering quality seed can be achieved in a reliable, efficient and affordable manner, new varieties that satisfy the needs of the market can be introduced and effective demand can be created.

2.4 AgDiv Limitations

This section reports under-performance. The first several topics relate to implementation concerns, followed by partnering issues, then sustainability concerns, original project strategies apparently abandoned, ending with several miscellaneous issues.

2.4.1 Two different projects and appropriate division of resources?

Based on field trip findings, AgDiv sometimes appeared to be two separate projects, successful in substantial measure in the Center, less successful in the South. Senior AgDiv staff report geographical and agronomic differences are not new and that these were acknowledged conditions from the project's inception. The AgDiv presentation to the MTE included targeting strategies for different technologies in the south, working through partners with different interventions, and a "light touch" with a broadly targeted intervention. Because of the leveraging of tobacco companies the farmers in the central region show much better results than those of the south.

A related question then arises. Data above demonstrate that PICS bag distribution has taken place equitably in the areas visited. VS&L (or SILC) promotion, similarly, seems to have taken place at relatively the same rate in each of the two Regions. Beyond these two economic benefits, though, many small farmers appear to be receiving very little project support. In 2019, hundreds of farmers in the South—and some in the Center—received one or two bamboo seedlings (estimated value: under \$5.00). Other farmers in the South and in the Center received one or two inoculant packets (value:

\$2.50), frequently late and sometimes rejected. Such resource transfers can be compared to the larger dollar value of project support to tobacco farmers.

2.4.2 Weaknesses in OFSP and bamboo supply

FGD respondents spoke highly of their appreciation for OFSP and bamboo. Villagers are enthusiastic about the potential of giant bamboo – and even where OFSP vines died last year, they are hopeful that AgDiv will undertake the initiative in future years.

However, all but one FGD in the South complained of late delivery of OFSP and bamboo inputs, late February, even early March. Most FGD groups in the South also reported the only notice they had that the plants were coming was when the trucks were leaving Lilongwe, that they had previously received little or no training before the plants arrived, and that the only “technical advice” they received was from the back of the truck as they were picking up the plants.

There are also subtle regional variations. Rains started in Blantyre in early November, thus the optimum time for OFSP and bamboo planting in Blantyre during the rains. In Mangochi and Machinga, the rains start a little later, and later still in Ntcheu and Dedza. FGD conversations suggest convincingly that not only did centralized procurement deliver months too late for viable planting of these two crops, but also there should be significant attention paid to small, regional variations in the agricultural calendar. Can such regional variation be managed by one centralized procurement function?

Each cultivar also represents distinct challenges. Giant bamboo seedlings are presently being supplied by a limited number of certified seed dealers whom AgDiv requests bids from, and the rights to that plant material are proprietary. Moreover, growing this variety from seed is agronomically very challenging, thus new seedlings have to come from the supplier each year. It is also possible to propagate asper bamboo from shoots but this is also challenging. The result is little “sustainability” in this intervention without annual sales by the seedling suppliers.

With OFSP, the situation is different. OFSP vines can be propagated from plant material for several years at least and do not need an annual re-supply of “imported” material. They can be grown locally and distributed where they are propagated. They can be stored locally for several years from one season to the next (controlling carefully for disease) and so become immediately available when the rains arrive to that particular zone. In one FGD village, the AgDiv OFSP plant material arrived late and desiccated, and died almost immediately. In that same village, the World Food Programme (WFP) the previous year had contracted local replicators to produce vines in quantity, and then paid those farmers to distribute the vegetative material to fellow villagers: it was WFP-supplied OFSP vines that were available in that village, not from AgDiv. PERFORM and CRS use the same decentralized methodology. One of the characteristics of this model, however, is that it requires an on-the-ground presence to choose the appropriately experienced farmer, supervise the distribution of the resultant vegetative material, and pay the farmer for his/her work. It is not a model that AgDiv’s centralized procurement function seems able to easily manage.

2.4.3 Under-developed loan supervision in some technologies

The vast majority of Agricultural loans have been provided through five entities – more than 10,000 farmers have received agricultural inputs through Pyxus and Limbe Leaf who have robust monitoring and supervision, 9,000 farmers have agri-linked loans through Community Finance - a microfinance institution that provides agricultural loans with a robust loan supervision and the Women’s Legal Resource Council (WOLREC) a local NGO working with more than 3,000 farmers in 120 VS&Ls.

Beyond these four entities though, it appears to the MTE team that mechanisms are weaker for tracking and collecting payment of loans for soy kits, mini-drip irrigation, or larger scale irrigation equipment. One knowledgeable project manager, uncomfortable giving a one-ha irrigation donation of MWK 1.4 million (US \$1,860) to a few farmers, developed an idea that the farmers would have to pay half the price of the equipment and the rest would be a “loan.” When asked who the loan-holder would be or who would receive the repayments, he had no answer. When asked when the repayments would start, no answer. If this well-intentioned and thoughtful implementing partner did not know how to institutionalize these loan repayments. This is an issue worth more exploration. Several women in FGDs spoke of successful soy kit women who were beginning to make a weekly profits and were now positioned to begin repaying their loan, (thus financing new soy kit purchases in the group.) But they have no incentive to begin repaying and no one yet asking them to do so. AgDiv reports that the first 80 (of 217--35%) of these machines were distributed as grant and that the other 137 were still within a six month grace period at the time of FGD interviews and perhaps these FGD participants were among that cadre. It will be important to track carefully the repayment of the other 137 – and hundreds more to come-- to beef up the loan-repayment side of this intervention.

Even in VS&Ls where there is supposedly more financial discipline, the issue of loan repayment is not yet clear. In several FGDs, women asked “After I pay back the soy kit loan, do I get to keep it?” “Or do I have to give it to another member of my VS&L?” And: “What will happen to my repayments? Will they be distributed to everyone when we ‘break the bank’ at the end of the year?” Villagers and even some implementing partners do not know who can answer such questions.

2.4.4 Project reporting misses a key difference between “light touch” and heavy-benefit participants

In FGD discussions in non-tobacco villages, many AgDiv interventions were found to be delivered with a widespread “light touch,” that is, a one-off input rather than a package of mutually reinforcing technologies. As discussed earlier, this produces the result that a poor farmer who receives three dollars or less of project support is counted in project records the same way as a tobacco farmer who received hundreds of dollars of assistance. Perhaps as little as one PICS bag distributed to 39,886 farmers in 2019 represented 55% of reported project participants, while inoculants and bamboo (both are problematic as we have seen) distributed to 23,211 farmers represent another 32%. Eighty-seven percent of 2019 project farmers could have received as little as one or two dollars of project resources.

2.4.5 Less field supervision

Early on (apparently late in Year One) AgDiv adopted a non-operational role, choosing to delegate on-the-ground implementation to large-scale institutional partners such as the tobacco companies, to sub-contractors such as Horizon Farms, and to implementing agencies, ongoing USAID projects, and local and international NGOs. While senior staff believe the project has benefited from this re-orientation (which does not appear to be a conception of the original project proposal), this section will discuss some of the downsides of that decision.

The first issue is that there are numerous examples of long-term partners being dropped from AgDiv or coming to their activity’s end without replacement. CARE, which was a full-fledged institutional partner in the original project proposal with a preponderant role in nutrition, withdrew from the project even before the project started. The local NGO focused on youth, YONECO, which was also a partner in the original project proposal, was dropped from project implementation at the end of Year Two. ExAgris was a partner for two years and has gone out of business. SunSeed participated early with AgDiv but did not continue on in the second year. PERFORM and NJIRA were USAID projects that worked for two years in the same geographic area as AgDiv; but when those activities came to an end,

their on-the-ground supervision ceased until a replacement entity could be found. Practical Action which was the institutional partner supporting the soil conservation work in the Dedza Resilience communities has ceased work. WE EFFECT, a local NGO in Salima and Mangochi whose MOU has come to an end, will not be replaced. In those areas visited, at least half a dozen observations were made when inadequate field supervision was apparent.

Project staff respond as follows. Two original partners, AgLand and Atethemsis, completed technical studies, and AgLand's ongoing TA role has been replaced by the Innovation Labs. CARE had a turnover of its country director who chose to leave the project and its gender empowerment role was filled by VOLREC. Its nutrition role has been filled by a number of organizations including UP, CRS 4Children, and Feed the Children. YONECO's sub-contract was not renewed, and its entrepreneurship and youth engagement roles have been filled by VOLREC, CoFi and AgDiv staff working with youth clubs. Practical Action's subcontract was not renewed, and its resilience role has been filled by added AgDiv staff and partners such as UP and the Peace Corps. The project staff reported that AgDiv currently has formal written agreements with 23 partners.

Current and previous implementing agencies report a frustrating relationship. Many expressed the ideas: "We are being taken for granted. We feel our services are provided at little cost to AgDiv, and this year we have been forced to assume risky performance contracts where if we do not deliver on the intended results, we will be out-of-pocket all the costs associated with our support." The basic issue appears to be salary support, which is not allowed by USAID. One key informant who accompanied the MTE said he is the only staff person responsible for AgDiv activities in his organization and that his mandate, which is to achieve one hundred GVHs, is an impossible burden. It is thus assured that fifty or more communities in his area will receive no project supervision of AgDiv activities. Other NGOs reported made similar observations.

AgDiv staff suggest it may be easier to leverage private sector than the NGO sector and that this issue might be something to reflect on where AgDiv uses a 'light touch' which relies on implementing partners. Part of this tension clearly revolves around a reported blanket prohibition by USAID/Malawi against salary support for NGO implementers. It also appears that there are communication problems between AgDiv and its partners that AgDiv would do well to address.

2.4.6 Sustainability

Sustainability of project interventions is the goal of all agricultural development, and difficult to achieve. In chewing on this issue (on which hundreds of books have been written), the MTE came up with a probably not-very-original idea that there are at least three stages of the diffusion of agricultural technology that AgDiv is working through. The first stage can be thought of as "Scale up of Effort," building a critical mass of awareness of and trust in a new technology, and this is taking place with PICS bags in many of the near-rural communities (with still a ways to go to reach far-rural communities). Kudos to the project, it is now trying to institutionalize the supply of PICS bags through existing agricultural input supply dealers. The MTE team talked to various KII agro-business people who stock and sell PICS bags with no project involvement. For the rural cash-strapped farmer, price is still a major constraint, and uptake by this clientele is still slow; but the bags are now available in most District towns and sometimes beyond. An AgDiv/PICS MOU to strengthen this outreach is under study.

A second stage involves building a repair and resupply network after the technology has taken hold. In PICS bags, it could be creating some mechanism whereby small, village-based agro dealers regularly restock their supplies (through a loan program?) by buying from the agro dealerships in the larger towns near them. A third stage once the market has been fully captured could be the regular market supply of

one million replacement bags per year throughout the country through agro-dealers, the estimate by a PICS bags staff of the annual post-saturation demand.

In this line of thinking, the project has not yet put together a successful, sustainable OFSP intervention, one of its primary indicators of nutritional improvement. If the WFP/PERFORM model is followed, the scale up stage could be thousands of certified farmers producing high-quality vegetative material readily available in most village markets at the start of the rainy season. FGD discussions have shown that OFSP is highly-valued in the community largely for its economic benefit⁶ with some secondary attractiveness because of its nutritional value. Stage Two might have some firm taking on the duplication and distribution of genetically improved varieties (perhaps more suitable to industrialization?) and/or gradually replacing existing OFSP varieties with new stock. With its own resources, U.P. is experimenting with industrialized OFSP baking, another “Stage Two” concept. There seems poor prospect for OFSP to get to the scale up stage in the current activity period.

After less than twelve months of promotion of giant bamboo, the project is still on a learning curve. There are some conceptual issues to be addressed for AgDiv to scale-up, as well as the immediate need to address the logistical shortcomings evidenced by management of this intervention in 2019. In this tentative “three-stage” conceptualization, perhaps project planners could begin thinking about one more year of “scale up” of soy, groundnut and inoculant in tobacco communities in the Center Zone and then some Stage Two interventions in these areas in Year Five of the project. In other interventions the project has not reached the scale up stage.

One last sustainability comment relates to the sputtering introduction of soy cows, the project’s MSME effort to industrialize soymilk production. Based on project reports, AgDiv’s decision to go-slow on soy cow activities appears well-founded. The soy cow technology was reported by one expert KII interviewee as ill-chosen and completely unsuited to Malawi, and the management challenge of running such machinery with ad-hoc cooperative member participation is a drain on staff a time. It appears that it is time to leave further involvement and research on this intervention to LUANAR University.

2.4.7 *Nutrition achievements*

Nutrition was an important part of the original AgDiv design and proposal: “to improve the nutritional status of women and children under five.” Ambitious goals were proposed that are far from being achieved: 8,400 cooking demonstrations for 200,000 households, 280,000 households adopting improved storage, 500 grassroots entrepreneurs receiving grants, 500 communities using community score cards. AgDiv staff said that these figures were based on the original concept that AgDiv would form Mothers Care groups in each district, but subsequently AgDiv received instructions from USAID not to form Care Groups itself but to work through partners who had Care Groups, such as Feed the Children and United Purpose. Staff also note that AgDiv sustained large budget cuts in Year 2 which restricted scale and scope of activities relative to the original proposal. Based on KIIs, it appears that in districts where VOLREC is an implementers, AgDiv began to increase awareness of the importance and sources of a diversified diet, food preparation, preservation, and handling – but not at the scale called for in the original proposal.

Nutrition interventions require good technical skills, especially if improved nutritional practices are being promoted. From KII and FGD discussions, it appears that some partners are being asked to deliver nutrition interventions without having the expertise to do so, resulting in limited effectiveness.

⁶ It appears that AgDiv staff conceptualize OFSP as primarily a nutrition intervention with secondary economic benefits. Many FGD participants described it exactly the opposite. See the nutrition discussion below.

Meanwhile, many geographic areas have not benefitted from nutrition interventions at all. FGD findings also suggest that nutritional messages are mainly implemented as an add-on to the other activities; as a result, targeting women and children for improved nutritional status as called for in Outcome 3 is only being accomplished on a minimal scale. A related project idea was to encourage families to grow vegetables to diversify diets, and there is no evidence to suggest any differences in nutritional quality or meal frequency are taking place in project communities. An AgDiv household study is underway, but most of questions of that study address agricultural topics, not nutritional themes. It is hard to see how the project is targeting and monitoring pregnant and lactating women and households with children-under-five.

Other nutrition-related findings include capital infusion to VS&Ls for diversified livelihood. However, FGD members mostly described using the money for small scale businesses, for farm input purchases, and for house repairs rather than for diversified nutrition. AgDiv focus groups report numerous instances of people using money to invest in livestock; but this is likely to result in less nutritional impact than one might suppose because livestock in the rural settings is mainly used as a safety net, and most households will not kill livestock for consumption but for sale. Various FGDs reported this same effect in OFSP, groundnut, and soy. A more vigorous monitoring of nutritional indicators may be needed.

Nutrition interventions have been few. Improved seeds were only delivered to tobacco farmers—one-fifth or so of 2019 participants—leaving the other four-fifths behind; and OFSP was mostly delivered late throughout the project with little training. Drip kits have been distributed to about 2,000 households—only recently according to many FGD comments—with 400 or so more delivered to partners but not yet to households. Soy kits, as promising as they are, have only been delivered to 217 families. Through FWV, the project has provided extension services to farmers, but, as above, a repeated response in FGDs was that crops (even OFSP) are seen essentially as cash crops grown for sale, not for improved household nutrition.

Gender focused activities were appreciated by the participants and should continue. However, capital infusion into VS&Ls are only taking place in three of the eight districts and the project could have a large impact on women's empowerment as well as improved nutrition with a scale-up in areas not currently served.

Finally the initial AgDiv design based achievement of its nutritional goals on improved agricultural production. Current data do not support that premise. In groundnut consumption, a small increase has taken place from 48% in the Baseline to 52% in 2019; but soy and OFSP have seen declines: soy from 23.6% at Baseline to 16.5% in 2019 and OFSP roots from 23.5% at Baseline to 16.7% in 2019 a drop of one-third in both crops. AgDiv is falling seriously behind in achievement of its nutrition goals.

2.4.8 Original AgDiv interventions not seen

This topic has been mentioned in a different context, but two NGOs, CARE and YONECO, who were integral partners in the winning proposal, disappeared from project implementation without discussion in the extensive project reporting reviewed by the MTE. One departure was apparently because “that component was no longer a project priority.” In both cases, the many-faceted roles and responsibilities of these entities remain under-replaced except by one or two AgDiv staff, which does not reflect nearly the same level of effort as a full-blown implementing partner's activities. USAID/Malawi has gone along with this shift in emphasis, but it seems unusual that two of the three original proposal winning actors would not be part of the implementation.

Finally, as called for in the “tobacco farmer questions” previously addressed, the project had the intention not only to work with agricultural input markets, but also agricultural output markets. Based on the evidence there are as yet no interventions that have resulted in significant transactions benefitting smallholder farmers. Although AgDiv initiated output market efforts with CoFi and Tradeline, exchange volumes have not been large and contractual arrangements are often tenuous, due largely to smallholder farmers not being able to provide supplies that reliably meet the quality standards and volumes required by processors.

2.4.9 *Miscellaneous*

There were numerous reports during this study that contract negotiations and approval with AgDiv suffered large delay, sometimes ten months, sometimes a year or more.

AgDiv is beginning to devise ways to better supervise the actions of the lead farmer—a concern corroborated by respondents in several FGDs where individuals kept all the bamboo chemical for himself or where the lead farmer had received five PICS bags when everyone else got one. Another rising project concern is how much “cascade learning” actually takes place. FGDs corroborate these AgDiv concerns.

There were numerous reports from agro-dealers that most of their current customers for PICS bags are middle-class suburbanites, not rural farmers. Thus, the task of getting the PICS bags further-down the agro dealership chain becomes even more important. See Recommendations, Chapter Four, for further discussion.

The quality of Quarterly and Annual Reports is not high. The team found them difficult to follow. Apparently for some time these documents were prepared by the Head Office, who did not have much contact with the project. The arrival of an in-country writer is likely to improve the situation.

3. CONCLUSIONS

These Findings suggest conclusions that are explained below under five themes that are detailed following this overview:

Increased agricultural production: As a result of AgDiv's efforts, substantial increases in agricultural production have taken place in the Central Region of Malawi. The quantitative Annual Agricultural Survey of 2018 showed how the number of farmers who applied at least one improved technology increased by 36%. That year, average yield among project participants increased for groundnuts by 67%, three-quarters above the average national yield. The mean gross margin for groundnuts increased by 86% in 2018; for soybeans by 28%; and for OFSP by over 200%. The follow-up Annual Agricultural Survey of 2019 showed that while average yields per hectare went down for ground nut and stayed about the same for soy and OFSP, hectares under the three crops nearly doubled. The lowered yields appear to be due to untimely and heavy rains at the time of harvest. Qualitative FGD sessions in the Central Zone corroborated these findings with farmers generally appreciative of project assistance.

I. The project has achieved food security and economic benefit to many participants in the South and in the Center but more for tobacco farmers. What should be the response?

As an early strategic choice, AgDiv has been channeling more resources to tobacco farmers in the Center than to other beneficiaries— to good effect. This was a calculated decision: where the most impact would be achieved with the time and resources at hand. Total support to tobacco farmers is reported at just over \$1million (none of it going directly to the tobacco companies, it should be noted) not including management costs, extension services, purchases from farmers, or complementary irrigation investments made by them. AgDiv estimates this has resulted in at least \$5.6 million in increased agricultural production, and the 2018 and 2019 Annual Surveys corroborate such calculations. Tobacco farmers have reaped the most rewards compared to other project beneficiaries.

- Tobacco farmers appear to have received significantly higher allocations of interventions including improved groundnut and soy than non-tobacco farmers. However, these input allocations were initially paid for by the two tobacco companies and were distributed to farmers through credit/loan agreements. As a result of this support, tobacco farmer areas have expanded, and yields have increased.
- Organized non-tobacco farmers (Horizon Farms, Cooperatives, Farmers World) also received more technologies and seeds. Some farmers working with these groups expanded areas, and many realized higher yields. Inputs from this tier of farmers were acquired through loans, or farmers paid cash or used their own saved seed.
- AgDiv is addressing Malawi's national deficit of quality seed stock for legumes.
- It is assisting the country's move away from reliance on tobacco as the highest foreign exchange earner in the economy.
- It is addressing limitations in agricultural financing at the second-tier level, as well as infusing capital at the village level.
- It is attempting to address strengthening agricultural inputs markets.
- It is working extensively with private sector, multi-national tobacco companies.
- It is directing relevant attention to the long-overlooked issue of post-harvest food losses.
- It is introducing and scaling up recent innovations in food production with enormous potential: inoculants, drip irrigation, and solar pumping.

- Directed to nutritional goals, it is addressing backyard garden production of high-nutrition crops and innovative household soy processing equipment, a.k.a. “soy kits.”
- It is addressing women’s empowerment, financial literacy, and participation in economic decision making.
- And it is piloting soil conservation activities and limited watershed protection.
- In some areas, farmers have been exposed to new technologies and are able to buy and use them on their own.
- Smallholder farmers who are part of an organized structure like Pyxus, Limbe Leaf, Horizon, Farmers World, and the better performing farmer cooperatives will likely continue to grow. For instance, Pyxus expects to expand from 15,000 contract growers to 40,000 in the next several years, which will represent a marked increase in the number of smallholder farmers with access to improved technologies in a non-aid dependent manner.
- A large number of the vast majority of independent, unorganized smallholder farmers may not have access to these improved seeds, or will not be able to afford them if they are available.

2. The project can and should build on its many successes, those noted in Strengths section of this report

Strengthening the agricultural supply network and the sustainability of AgDiv gains is another important component of success. Tobacco companies have proved useful partners in the AgDiv uplift and relationships can continue -- perhaps, however, under somewhat different terms than in the first several years. Increased agricultural production will always be the overall goal of the project

There is considerable potential in two proven technologies, drip irrigation and soy kits, and will be offering ambitious recommendations in that regard.

- In general, Tier 1 tobacco farmers are better connected to output markets for groundnut and soy. Quality (sorting, grading and storage), adequate quantities, and transportation still remain challenges. Tier 1 farmers should consider higher level strategies to enhance market functions by building consistent volumes and structured trade norms to improve the efficiency of markets.
- Nearly all other farmers, including those within tier 2 organizational structures, have not succeeded in developing reliable output markets. These will require more access to farmer loans for inputs and improved aggregation and storage of quality grains that meet processor and export market requirements.
- Independent Tier 3 smallholder farmers sell to local vendors (traders) and are forced to be price takers. This group needs critical assistance in organizational processes, including development of VS&L groups for loans and formation of small farmer groups, such as those formed by Farmers World. With this type of assistance these groups could evolve into farmer cooperatives for purchase and sale of both inputs and outputs.

3. AgDiv demonstrates under-performance in several components.

- In several FGDs respondents indicated that the monitoring and oversight of the loan recovery effort in several interventions seems to have been overlooked until now. AgDiv should systematically verify the extent to which this may be true and take appropriate action. Effective loan recovery can benefit from more managerial attention – both as a project component in and of itself, and because strengthening loan recoveries will enhance the impact of the capital infusion described above.

- It may be more effective to “layer” multiple interventions to fewer participants – such as the AgDiv modality in tobacco and resilience villages - than it is to scatter-shot assistance widely.
- AgDiv faces some challenges in finding more flexibility to its relationship with new District implementers as well as improve communication with its NGO implementers.
- In some locations, AgDiv has increased women’s and youth’s access to productive resources through capital infusions in VS&Ls and micro-finance activities with CoFi. However, for the vast majority of women and youth, those who do not participate in VS&L or CoFi financing and are independent smallholder farmers, have little or no access to productive resources.

4. The nutrition side of the project has suffered from low prioritization.

AgDiv does not appear to dedicate enough attention to the project’s nutritional goals. Some good work in nutrition education and linkages to other project interventions has been taking place. However, more project-wide attention should be paid to nutritional indicators to improve nutritional impact, not just where implementing partners are working but throughout the project.

5. The project is now deriving ways to increase the probability of sustaining some interventions in areas that have demonstrated proof of concept, including PICS bags, inoculants, soy and groundnut seed.

The PICS bags and inoculants were clearly superior technologies for most smallholder farmers, particularly for those who fell under the umbrella of Alliance One/Pyxus, Limbe Leaf, Horizon Farms, and Farmers World. Critical to adoption has been the timely arrival of the intervention within the crop cycle; the more structured companies achieved the on-schedule distribution of technologies, and their farmers benefitted accordingly. Conversely, FGD interviews suggest that many of the more rural participants, especially those with little organized structure, were the most difficult to reach and often received inputs “too little, too late.”

- Highly organized tobacco and non-tobacco companies will have the capacity to grow their businesses in a non-aid dependent manner.
- The very large number of non-organized, independent, rural smallholder farmers will not have the capacity to continue after the project ends.⁷

4. RECOMMENDATIONS

Growing out of these above Conclusions are the following recommendations organized under five overall themes:

4.1 Reinforce AgDiv support where it has been effective

Improvements in the national seed stock should continue to receive project support. Moving tobacco farmers into other productive activities continues to be an important development goal. Project

⁷ AgDiv recognizes this situation but states that it has been tasked to provide some farmers with heavy touch interventions and a much larger group of farmers with single interventions such as PICS bags. AgDiv has also been asked by USAID to deploy most of its interventions on credit. As a result, the project seeks to identify farmers where this is a possibility, which will clearly be a smaller group.

support of increased agricultural financing— capital infusion at the mid-level and at the VS&L level— is a great contribution to an energetic agricultural sector.

Soil conservation activities can continue on a demonstration and experimental basis. In a word: in all these areas where AgDiv has been making good progress, the strategy should be “more of the same.”

As detailed in previous chapters, the project is achieving substantial gains in many of its endeavors which should be continued. AgDiv’s activities should proceed as planned in the following

- Improvements in the national seed stock should continue to receive project support: through continued relationship with seed replicators (Limbe Leaf, Pyxis, Horizon Farms, others.) It should continue its support of the Agricultural Research station at Chitedze. It should continue its effective relationship with the USAID Soybean Innovation Lab at University of Illinois and the USAID Peanut Innovation Lab at the University of Georgia. These activities are working to satisfaction and all are contributing to improving the national genetic seed stock base.
- The project should continue its efforts to move thousands of farmers away from tobacco into other productive activities, groundnut, soy and OFSP.
- Project support for increased agricultural financing— capital infusion at the mid-level and improved VS&L management at the village level—is an essential component of an energetic agricultural sector and should be substantially expanded. This type of support should continue.
- Increase support to -- quadrupling grant financing -- to WOLREC to enable it to increase its capital infusion to half of its 392 groups that have not yet been served. We also believe the project should earmark a similar quantity of funds as WOLREC’s last year for other local implementers (U.P., CRS, others) who wish to support capital infusion for VS&Ls in their project areas.
- The project should continue to focus on increased agricultural production. This is an AgDiv skill set that is already well managed and well documented and needs no suggestions from the MTE how to do so. Because of a meaningful re-directing of funds to other activities called for in this evaluation, AgDiv’s reported decision to set up a revolving loan system for diversified tobacco farmers will reduce or eliminate the need for additional financial support to tobacco farmers in Years Four and Five.
- Reducing post-harvest crop losses should continue as a national (and project) priority; and promoting more use of inoculants, genetically improved seed, drip irrigation, and solar pumping are similarly important contributions to rural uplift. Nutritional objectives must not be left behind in the remaining years of the project, nor women’s empowerment, financial literacy and decision making. PICS bags should continue to be provided. 1) In communities that have received one free PICS bag in previous years, this practice should be discontinued in lieu of a subsidized price in Year Four with the bags sold through existing, project-supported agro-dealers to project participants—likely via a voucher system that AgDiv staff has experimented with on a limited scale. A further reduction in the subsidy should take place in Year Five. 2) In communities that have not yet received any bags, one free bag per person continues to be a viable program intervention. 3) Some “out of the box thinking” might also be in order. One agro-dealer thought that the Farmers World Argonauts could easily identify highly reliable farmers who could be loaned the price of a PICS bag and make enough money on the price variation between harvest and four months later to purchase the bag outright. Perhaps numerous VS&Ls could become involved in a similar way. 4) For communities the project may be returning to, one free “demonstration” bag is an appropriate intervention. 5) PICS-ESA has

made a proposal to the Minister of Finance that PICS bags be allowed into the country free of VAT tax (as are agricultural pesticides, seed, and fertilizers); a proposal USAID should support.⁸

- The activity should continue the promotion of inoculants and genetically improved seed, but in Year Four and Five these should reach not just to tobacco farmers in the Central Region but more widely. Several AgDiv staff cautioned: “The South is not a good place to grow groundnut and soy,” but staff have also noted there are areas in the South that are agronomically appropriate for these two crops that could receive support. The groundnut/soy package that has been promoted exclusively to tobacco farmers should be further expanded to areas and communities in the South taking into account climate suitability, including using the “layered” approach that AgDiv has successfully undertaken with tobacco farmers.
- OFSP distribution be doubled from 2019 levels. Recognizing the serious shortfall in project accomplishment of OFSP consumption noted in the nutrition section, AgDiv has stated that it intends to distribute 2-4 bundles per participant for the 2020 distribution, which is 200-400 plants. Field visits showed the most successful OFSP growing occurred when eight or ten bundles of plant material were distributed to each participant. New thinking is needed to address supply chain challenges. AgDiv’s centralized procurement system does not appear able to manage the challenges, hence perhaps the decentralized model promoted by WFP, PERFORM, and CRS’s 4Children project should be considered.
- More research is needed regarding giant bamboo. The cost-benefit analysis for this cultivar is attractive. But as seen in the field travel, the management challenge to get healthy seedlings into farmers’ hands is substantial, and the agronomic challenges facing small farmers in achieving a decent survival rate have not been resolved. As mentioned earlier, much or most of the bamboo provided is used by farmers for agro-forestry purposes instead of watershed protection. AgDiv believes that bamboo is a good alternative to hard wood as it is fast growing and once mature can be continuously harvested. This intervention should be closely monitored to insure adequate benefits to the participants. It is possible that many farmers thought their bamboo had died when in fact they were dormant. Monitoring bamboo more closely especially during the rains will answer questions about the efficacy of this intervention.
- Attention should be given to the enormous potential of two technologies that AgDiv has demonstrated proof of concept on, drip-kit irrigation (discussed here) and soy kits (discussed below.) Current project plans call for an additional 2,000 drip kits in Year Four. Support is merited for 10,000 kits distributed in Year Four and another 10,000 in Year Five. At eight dollars apiece, the \$160,000 total is good value for money for the drip kits for the individual small farmer or small farmer group. The 250m² and 500m² drip kit irrigation package should also be scaled up by an order of magnitude: five hundred each perhaps. Due to the required higher management skills and costs requirements of the IHA kits, their distribution should not be expanded.
- Regarding soy kits, Agdiv should scale up to 4,000 in Year Four and another 4,000 in Year Five. Various FGD interviewees related that the simple, hand-powered grinder is working well, that soymilk originally unknown in many villages is now being readily accepted, and that women are making a tidy profit selling the soymilk two or three times a week. One asked: “Where can I buy

⁸ A VAT exemption could reduce the price of PICS bag by 15% or more, down to close to \$1.00 per bag, meaning that the price-hurdle mentioned by most FGD participants that keep many cash-strapped farmers from buying them could be lessened.

another one when this one breaks?” Another said: “How can I expand my production?” Beyond the quantifiable economic benefit that is accruing to these women, the demand-creation of soy in the rural area as a result of this technology must not be under-estimated. Current price of a locally produced machine is about \$80.

- Soil conservation activities should continue on a demonstration and pilot basis. We do not believe the project is ready to engage in an expansion of this complex activity due to its high staff- and community-labor requirements; however we do support the project’s activities with the four resilience communities. See Appendix F for further discussion.
- The soy cow intervention is in some ways unsuited to rural Malawi, requiring management skill to run the machinery. Yet, thinking soymilk demand can be increased in Years 4-5 through AgDiv promotion of soy kits, could eventually make the soy cow technology a better possibility.
- The Warehouse Receipting system should be discontinued, as overly complex and unduly risky for impoverished Malawi farmers.

4.2 Geographic Scale-up

Benefits from AgDiv’s work in the Central Region can now be scaled more in the South. Said one well-informed, well-respected Kll in the South, “We have not seen any real transformation in peoples’ lives.” This decision to concentrate pilots in the Central Region was an early strategic choice that has paid good dividends. However, the results of this study suggest it is now time to decide whether to ratify that original strategic choice and *continue* this focus – or to *refocus* project resources to achieve more balance.

The tobacco companies already have a strong support system for their farmers and it is clear that leveraging this relationship has done well for AgDiv in the central region. It is the recommendation to explore similar partnerships in the south so that these farmers can begin to see similar results.

4.3 Project under-performance needs to be addressed

AgDiv components that have under-performed against expectations should be addressed as follows:

- Reorganization of the system for timely OFSP and bamboo seedlings delivery is a *sine qua non*. How these two interventions are managed must be corrected immediately since the growing season is upon us at this writing. MTE observed that these may be distributed together. If so then AgDiv should consider separating them. Satisfying the need for tens of thousands of OFSP vine clusters is likely a more demanding task than supplying half-a-million bamboo seedling from certified seed companies. The mechanics of the transfers may be similar but the planning, we suspect, is different.
- AgDiv should “layer” multiple interventions to fewer participants than it is to scatter-shot minimal assistance widely. Indeed, we think AgDiv agrees with this philosophy because this is the project modality with tobacco and resilience villages. Now is the time, the MTE believes, to apply that same principle more widely. If, as recommended, the project return to Years One, Two and Three villages, it should be with this “layered” model.

- Loan portfolios should be monitored, particularly soy kits and drip kits but perhaps elsewhere in the portfolio. The three or four large lenders do not need assistance in this area, CoFi, Horizon, and the tobacco companies. Most other project actors, would benefit from more oversight. Even one of the NGO partners that specializes in VS&L financing does not appear to us to have a robust mechanism to oversee all repayments. A new function should be created within the AgDiv Monitoring and Evaluation cell to assume this role. An example is the project's excellent detailed monitoring of soy kit production figures. That kind of comprehensive, serious oversight should be specifically assigned to one person (or function), and results should be included in Quarterly reports. Establishing such supervision will contribute to enhanced fiscal discipline throughout the project at the same time as it will strengthen the effectiveness of the capital infusions proposed above.
- AgDiv should replace the local implementing agencies that have disappeared in places like Mangochi, Ntcheu and Machinga. AgDiv has few implementing partners in these and other project areas, and this absence of local capacity should be addressed.
- AgDiv should repair communications with its NGO implementers and SAID can be approached to re-think its prohibition against salary support to NGO staff. New MOUs should be negotiated that recognize that NGOs do not have the vast resources of tobacco transnationals. It is counter-productive to think that one field staff can adequately supervise one hundred communities engaging in complex activities of this nature.

4.4 The nutrition component needs to be jump-started

Attention to nutrition requires improvement, as follows:

- In addition to working with Feed the Children and U.P. in Lilongwe and Mchinji, AgDiv should identify partners with nutrition expertise in other districts to complement the competencies of current implementers. One possibility is building new relationships with government institutions (e.g. Department of Agriculture Extension Services), commercial service providers (consultants), NGOs, and other stakeholders. We suggest these entities be contracted or partnered through grants or MOUs to strengthen the nutrition intervention. If this is not possible, AgDiv should subsidize the cost of the delivery of specific nutrition interventions.
- AgDiv should shift from an MOU with CRS to a grant agreement for the implementation of nutrition interventions in Lilongwe and recommends that this arrangement be extended to other partners and other districts, particularly in the Southern Region where AgDiv and CRS already co-exist.
- AgDiv should establish specific, numeric targets to deliver OFSP to food- and nutrition-insecure pregnant and lactating women and households with children-under-five. The project should work with NGOs with a strong focus on women and children; this should be done in all districts, not only where Feed the Children, U.P and WOLREC work. We also recommend the establishment of numeric targets for drip irrigation for pregnant and lactating women and households with children who are under five years of age.
- AgDiv should continue its work with the USAID Health Communications for Life project and at the same time build the capacity of other partners to systematically embed simple nutritional messages in agriculture extension messages in the three value chains. The objective should be to promote behavior change to increase demand and utilization of nutrient-dense foods, building the capacity of

partners to include nutrition topics almost every time they interact with participants so that nutrition is not a one-off topic.

- VS&L groups should dedicate a portion of their loan repayments to improved household diets and improved farm input purchases. AgDiv should consider working with WOLREC, COFI and CRS toward this end.
- AgDiv should work with Area 25 clinic staff to finance “visit days” from other GOM facilities to see how Area 25 links nutrition to agriculture.
- As AgDiv partners begin to work on output markets, they should consider to do so in a way that strengthens the role of women in this area. One example could be assisting soy kit participants to scale up soymilk marketing, perhaps through organized women’s groups as a way to develop value-added products to a wider customer base, as opposed to women selling individually.

4.5 The project should continue to plan for sustainability

The project has been planning for sustainability and has prepared a well-thought out document about how to achieve this

- One “demonstration” PICS bag should continue to be given to farmers in areas where the project has not yet had much influence. Support to PICS EPA in its petition to the Ministry of Finance for the VAT exemption is valuable. AgDiv should continue to work with Farmers World to promote PICS bag sales through a voucher system. Cooperatives should begin PICS bag storage as an income-generating activity for the cooperative. In like fashion – recognizing that it will sound unrealistic—AgDiv should undertake a similar effort to four or five hundred women’s VS&Ls. There is profit here ready for taking at very little risk.
- With inoculants, the project is still in the early “Massification Stage,” and seeking a demand-building strategy via widespread free packet distribution (in Year Four) where good supervision should be provided. AgDiv should work with cooperatives in facilitating their bulk purchase of inoculants as well as other input supplies. CoFi should include inoculants in its loan packages, and we encourage the project to distribute significant quantities of inoculant to its implementing NGO partners.
- AgDiv should continue efforts at seed variety trials in partnership with the GOM, private seed growers, and the Soybean and Peanut Innovation Labs. AgDiv should encourage CoFi to create an “input loan package” for its customers. Groundnut and soy initiatives should expand into the South where an implementing partner can provide good technical support and good supervision, thinking that good plant husbandry can adapt to different environmental conditions in the South, and that both crops have a future there. AgDiv should continue all possible efforts to increase the distribution of soy kits and drip irrigation. These two technologies are still early in the “Massification Stage” and so there should be no reason not to distribute them as widely as the project can afford. Donating or loaning them to hundreds of women’s VS&Ls is a viable strategy. The AgDiv “Stage Two” search for local suppliers and repairers for these two technologies should proceed at full speed.

APPENDIX A

Team Findings about local AgDiv progress and achievements, arrayed by region

See endnote for criteria for the ranking

FGD Name & # (Inst. Partner)	FINDINGS	Grade	Avg.
Central Region			
1. Chawantha (13) (9F-4M) CRS	- No improved seed in spite of reported promises from the implementing partner; no seed- no improved production- incomes low - Happy with training and OFSP- replicating to others 4 bamboo seedlings each; planted and pretty good results - One (of 30) soy kits delivered – everybody was trained; soy is liked & one drip kit and; one PICS bag each - SILC (VS&L) activities are contributing to improved livelihoods	-- B C C B	C+
2. Chikwasa (11) 3F-8M United Purpose	- Only AgDiv activity is distribution of PICS bags, total 16, to 11 all FGD participants. They like the technology but are not willing to buy on their own: too expensive and access to Farmers World is 28 km distance or a delivery fee of MWK 3,000 - Some previous (non-AgDiv) work with OFSP but only to three people - One drip-kit distributed free to one member but late and not yet installed, awaiting training.	B - D	C
3. Chiothela (4) 1F-3M United Purpose	- Four received five bamboo each in 2018; survivability 53%. Reported that 20 members received five each. - Received soy seed through the cooperative (not AgDiv) - Inoculants used by the coop as a “package” of inputs that are loaned to coop members; training offered to field demonstrations - Ten PICS bags to two of the FGD; not stocked locally and likely not willing to pay	C - B C	C
4. Horizon Famers (10) (5F-5M)	- Land area and yields are increasing for all three crops - Inoculants provided; groundnut and soy seed provided - PICS bags 15,000 bags distributed total/ two each/ self-buying OFSP: 6 varieties distributed/ 500 bundles/ but not to all 10,000 - Bamboo seedling 8-10 each/ est. survivability 60%, (20 stolen) - Input markets were good/ output markets vary by year 45 solar power pumps with 45 drip-irrigation kits	A A A A A A	A

	• 12 soy kits distributed, good profits • Women very active in small business activities • Capital injection with gender training (“improved our marriages”!)	A A A	
5. Kabudula/Tobac. (7 M) Alliance One	• Intensive training in soy and groundnut • Received soy and groundnut seeds and inoculant received (no OFSP by decision of supplier) • 10-20-25 PICS bag per grower (!) No drip irrigation/ no soy kits Area planted increased, in spite of bad imported groundnut- low quality = low prices; soy was good, and yields were good All inputs from Alliance One but expensive/ output markets were reliable but low prices. (Skewed because of the imbalance in the tobacco relationship) 1/57 women’s participation	A A A B C --	 B+
6. Kaphuka (10) (5W-5M) United Purpose	• Two Drip-kits distributed of 5 in the village to a ‘care group’ member; awaiting training. • OFSP delivered late in February, six bunches each; two are multiplying on their own. Reported production from 8 FGD members = 12 bags @ 75/80 kgs./bag = 930 kgs. Not super. Cattle grazing in the field destroyed the vines of five, leaving only three with some left for next year. • Inoculants delivered to five in January (late) when most had already planted. • Five received bamboo distribution (not AgDiv), total survivability = 8 of 15 • Eight FGD members with PICS bags; they like them but won’t buy on their own	C C F - B	 C
7. Kasiya (16) 1F-15M Limbe Leaf	• Farmers are diversifying to groundnut production from Limbe Leaf, better sales prices for gnut from the vendor; farmers growing groundnut largely because of Limbe Leaf • L.L. provided an output market for the first time, but late after the harvest and sale to others • L.L. providing extension services for groundnut (substituting away from tobacco) • Received bamboo seeding 30 each for three years (!) Survivability: 1 with 80%; two with 60%; the rest with 10%—overall: est. 20% Three PICS bag per HA; 6-9 per person (!)	B D B D B	 C
8. Machichi Coop (8) (3F-5M)	• No soy or g.nut seed/ no drip irrigation; no improved seed thus area is the same • Received 200 PICS bags (per coop X 5); Four soy kit (to women) and inoculants 200 OFSP bundles (given late) per coop • Not connected to input or output markets (fake seed is common) • Loans via coop (interest) 15-20% from COFI	-- B D	 C

	68/180 are women; women and youth sensitivity and incentives. Good nutrition training and gender; eat diversified diets	B A	
9. Manjawire (20) (10F-8M)	- Bamboo: late arrival; one bamboo/p/p for 200 farmers; mortality 40%; “training” at distribution site. - PICS: no training, no promotion, no distribution - OFSP: vines arrived late in March, already dried out/ survivability 28% 10 Drip kit distributed Aug.’19 (of 120); very late; loan of MWK 10000 (unclear how to repay loan) 2 soy kits to women: happy with the technology/ customers/ making money 16 liters twice/wk. - Capital infusion- working well, people like and benefit from it	F - F C B A	C
10. Mkanda-Mpenu (11) (8F-3M)	- No inputs received for the three value chains. Nor any technologies. Planted areas are down/ yields are down/ income is down - Received nutrition training (soy and OFSP) - Four bamboo seedlings each- (survivability not asked) - Not connected to any input/output markets/ forced to sell in the village - Women participating in SILC groups (not AgDiv promoted)	-- B C -- --	C+
11. Mgulula (8) (2F-6M) (DAES)	- No soy, no groundnut, drip irrigation, soy kits, bamboo, or inoculants - One bundle each of OFSP/no training; wetland multiplication; diets have diversified with OFSP - Listening to the radio and learning from it; gender and power sensitivity training in ext. meetings 1-2 PICS bag/ farmer with good results; 2 bought on their own. - Input markets are available, but cash is low; output markets only selling to village vendors who take advantage	- B B B --	B
12. Mkanda-Mchinji (10) 1F-9M Farmers World	- Project began 2016 - FW Agronaut used AgDiv gnut, soy and OFSP in demo plots; formed 15 Farmer Groups with 15-25 members each; farmers purchase own seed from FW; Agronaut visits farmers twice monthly. - Soil tests taken and fertilizers blended consistent with soil deficiencies. Fertilizer trials were basis of Demos; Field Days held throughout crop season to demonstrate fertilizer & GAP - OFSP very beneficial – grow in wetland & get two crops. Grow vegetables in wetland, two crops. - Received PICS with training; - Received inoculant but arrived late so could not use.	A A A A	B+

	- Connected to input markets, but not yet output markets; sell only to local vendors, so price takers. Livelihoods improved, but only moderate. More food available & OFSP has helped diversify diets. - Communities formed VSL groups within Farmer Clubs. Women access small loans from VSL and use for business. Both men/women access loans, some use for purchase of inputs.	D B --	
I3. Mngwangwa (10) IF-9M Farmers World (FW)	- Group received soy, groundnut and OFSP for demo plot + FW site-specific fertilizer including soil tests for 30 farmers - Very active extension service which is incentivizing adoption of improved varieties and practices and buying more inputs —getting new customers - Buying groundnut and soy from Farmers World (OFSP was free); yields have gone up, 40% of sales in the last three years. Better incomes and livelihoods. - Farmers value the site-specific fertilizer and soil sample recommendations - No soy kit, no drip kits, no bamboo	A A A A --	A
I4. Mpingu-Chitedze (8) (IF-7M) (Alliance One)	- Received groundnut & soy- no OFSP; very happy with crop diversification - Received good training and inoculants; 5-15 PICS bags - Area planted increased, in spite of bad imported groundnut; low quality = low prices; soy was good and yields were good (Observation that prices are generally worse in last 3 years) - No drip irrigation/ no soy kits - Happy with input market/ unhappy with output market; input loans reported very expensive-quality is good and reliable	A A -- B C	B
I5. Mwati Coop (2) (IF-1M)	- Soy and groundnut supplied from AISL under arrangement with AgDiv. Area under soy and groundnut increasing because of input supply - Inoculant for soy X two 350 pkts/ two each; PICS bags two each + training for both; - OFSP late delivery of two bundles/ lowland replication; no bamboo, drip, soy kits. - Better connected to input markets via AISL; not yet connected to output markets. - Livelihoods have improved significantly via AISL	B A C B A	B

16. Napolo A&B-Dedza (12) (10F-2M) Resiliency village	• Concept of “buffer zone” work is poor and bamboo survivability is no more than 25%. Will not serve the purpose for which it was conceived. • Lots of project input put to good use: PICS bags (in excess of need), 58 drip kits, tree seedlings. • Some good work on swails in the two sister communities, mostly by the women. Some runoff structures are constructed at great time investment, also good gully erosion control; but the durability of some of this work is debatable, and one may wash out, causing even more damage than the problem it tried to solve. Needs a quality evaluation at the end of the Rainy Season. • Good community mobilization leading to high village enthusiasm and hard work. Need to ensure that they are not disappointed with the results.	F B C (TBD) A	C
17. Nisipe, Ntcheu (21) 20F-1M Limbe Leaf	• Valuable training on aflatoxin and inoculant • Late supply affected unsuccessful ground nut cultivation last year that only produced 250 kgs of CG7 due to drought. • Late supply of inputs last year and no contact so far with L.L to see if it is coming back this year • Considerable success with OFSP from last year with a good chance of sustainability; donated by the Catholic Church (not AgDiv).	B D D --	D
18. Nyalure-Dedza (16) (6F-10M) Resiliency village	• Huge investment of community effort constructing water runoff trenches every 10 meters in a 100 HA(!) field down the slope for ½ km. Est. value of hand labor 1,400 person-days! Also ten gully break dams constructed- one visited seemed of good quality. • Women are doing most of the work-- a great extra burden on them. Gender burden needs to be taken into account in the planning of such activities. • Good potential impact, but structures need a quality review at end of Rainy Season to see how they functioned. Need to ensure that the community does not feel disappointed with the results.	A B+ TBD	A
19. Phanga (11) 6F-5M DAES	• AgDiv working through Farmer Field School • Received OFSP (6 varieties in 2017) shared among themselves; zero survival rate • (From DAES) they received soybean and inoculants with better plant growth observed, but crops destroyed because of high rains; members report survival rate 25% (no groundnuts) • No groundnut, no drip kit, no bamboo, no soy kits • Community struggling with output markets	- F C -- --	D

20. WOLREC Chapsinga/ Chinsomba (28) 28F	• Told by the implementer they would receive the three crops but received none. (Land for crops is shrinking/ declining income/ poor output markets/ inheritance issues) • Capital injection MWK 300K to ten groups; helped the women to start small businesses; (also planned for next year) • 10 soy kits received in June 2019; 10 drip irrigation kits received • Women spoke very highly of nutrition and gender training	-- A B A	B+
Important additional observation that almost all FGD participants in tobacco communities are male— vastly different to the other communities visited			
Southern Region			
21. Chulu (10) (9F-1M) United Purpose	• PICS: One bag/p in July 2018, 'way after harvest; good training; successfully adapted from grain to seed storage; low production = no need to buy another bag – expensive/not readily available. • OFSP: O.K. training; got vines late but eight bundles (!) helped get over the dryness; 30% survival • Inoculant: training given but came after planting and they sent it back.	B D F	D
22. Kantwanje (3*)(2F-1M) United Purpose	• PICS: only two received one bag each from (2017 distribution); limited awareness; limited uptake; uncertain UP involvement; • Drip irrigation: reported 100 distributed for free through the women's "care group" including (male) lead farmer [Not rated: somewhat questionable responses]	-- --	
23. Kutambala (8) (4F-4M) PERFORM	• OFSP: [Not AgDiv] good training on production and use; eat (tasty) and sell; one woman sold 10 bags @ MWK 5,000; vines being multiplied by themselves (Unanswerable question what to do about vines losing vigor over the years) • PICS: one bag each in Aug '17; good training on use; a few buying on their own; good technology but expensive (in Zomba MWK 950 but 40 km distant/ village price MWK 1,200) • Bamboo: received five each in January + chem & fert. were not distributed; 31% survivability; low moisture/ fencing/ know-how	-- A F	C+

24. Kwilsaya (9) (6F-3M) (PERFORM)	• PICS: good training; supplied on time; one bag each; two bought on their own; access is far away; good quality after storing; but low harvest = low bag demand • 2017 OFSP: [Not AgDiv] Good pre-training/ 7 of 9 have vines for food and sale • Five bamboo each: late arrival (Feb); pest. & fert. grabbed by Lead farmer; “training” at the truck delivery; survivability 28%	A --- F	C
25. Masulani II (17) (12F-5M) WORLEC- (no ag. expert in partner)	• 3 drip kits last month- no training, nothing yet to show • Two soy kits are working and people buying the milk; good customers • 7 PICS bags- from MoAg (DAES)- technical intervention is good; price is a constraint • Bamboo late supply- no training- 42% survivability- loss of credibility • OFSP delivered late- 100% death • VS&L working- capital infusion good; women very enthusiastic *Rating must not be interpreted as a reflection on VOLREC which has no expertise in agric. technical areas and was not supported to compensate for this.)	D A B F F A	C*
26. Mtotela (9) (6F-3M)	• VS&L working- capital infusion good; women very enthusiastic • OFSP- very late delivery; 3 continue; limited training in production; some utilization- 33% survivability • Bamboo: 3 seedling each (not 10)- high demand, anti-termite and bio-phosphate not shared/ 50% mortality, • PICS bags: one received ‘way late after crop- not used • 2 soy kits distribution; people buying milk • Capital infusion: working well; tangible benefits 3 X better than before; better access to loans	A D D C A A	C
27. Mtuwa (11) (9F-2M) WE EFFECT	• Each FGD member received five bamboo very late- March! Poor total survivability, 47% briefing” was held at the truck distribution site- no training. Land is low-lying and subject to flood which may have resulted in some good planting conditions. Unanswered question: “Where can we go to replace the ones we have lost?” • Four received one PICS bag each, though perhaps not from AgDiv—storing seed rather than grain. Long discussion of a “sellable sales price” • OFSP completely unknown- it is a “cassava cluster” area	D C --	D

28. Namwini (8) (5F-3M) (PCI)	- Bamboo: received late; “training” from the truck; five/p/p.; survivability = 0% - OFSP: [Not AgDiv] received late in Feb.; previous training in care and use from PCI; survivability was 33% (Survivability occurred in damp lowlands) - PICS: good training on use; 2-3 p/p; program duplication (PCI and DAES- [both supported by AgDiv])	F -- B	D
29. Nankumba (11) (8F-3M) WE EFFECT	- Eight bamboos distributed to each FGD member Jan 15 (on time!). But no training/ no instructions. Most have lost all: total mortality 78 of 88- 11% survivability for four people. One text message a month later advising: “important to water them early.” 17 PICS bags delivered to 8 of the FGD. Well liked technology. Mostly used to store seed rather than grain. No one has purchased on their own.	F C	D
30. Silika (10) (8F- M) (United Purpose)	- PICS: one each; tech. is appreciated; trained in use; but none have purchased/ storing seed. - Inoculant: Trained but arrived very late when already planted; kept over for next year except for one Lead farmer - OFSP: distributed very late and dry; people didn’t even come to pick them up they were so dry [WFP hired growers in this village to replicate and distribute, a methodology worth study. The only vines in the village come from this strategy.]	B D F --	D

- Scale of ranking:** Five salient FGD findings were extracted from the FGD notes per group and evaluated by the MTE team as follows:

“A” ranking means the intervention was reported by them as achieving significant success, had noticeably improved incomes, and/or had achieved substantial sustainability.

“B” means the intervention was reported as having some success, had achieved some improvement in incomes, and/or was achieving the beginnings of sustainability.

“C” means the intervention was reported with mediocre performance and did not demonstrate much improvement in incomes or in sustainability.

“D” means the intervention had performed poorly, there had been little or no improvement in participants’ income as a result, and there was little or no evidence of sustainability of interventions.

“F” means the project was reported to have failed, there was no economic impact of any size, and the crop or technology failed.

“—” represents an FGD priority topic that was not a responsibility of AgDiv, thus not taken into account in deriving the final grade.

APPENDIX B

KEY INFORMANTS

1. Area 25	Afshan Omar, Project Coordinator, Baylor University
2. CARE International	Matthew Pickard, Country Director
3. CoFi	Lerato Lekhoaba, Chief Executive Officer
4. CRS	Cesar Kachale, Nutritionist and Program Manager
5. Farm Radio Trust	George Limbika Vilili, Managing Director
6. Ministry of Ag.- Chitedze	Justice Chintu, Plant Breeder/ Programme Manager
7. Ministry of Ag. Mangochi	Owen Kumwenda, District Director
8. Ministry of Ag.- Dedza	Joshua _____, Deputy District Director
9. Farmers World- Dedza	Mayeso Efudala, (et. al.) Branch Manager
10. Farmers World- HQ	Caitlin Shaw, Project Manager
11. FRIM	Robert Mzumara-Bamboo Forest Research Institute of Malawi
12. Limbe Leaf Tobacco	Casey Clyde-Wiggins, Head of Diversification
13. Horizon Farming Ltd.	Andrew Goodman, Managing Director
14. MELS	Dickson Kazembe (et.al.), Consultant
15. Ministry of Ag.-Lilongwe	Hastings Yotamu (et.al.) Director
16. Ministry of Ag.-Blantyre	Sampson Mgwira, Extensionist
17. PERFORM	Blessing Mwale, Deputy Chief of Party
18. PICS	Pradeep Purushothaman, Managing Director
19. Practical Action	Patrick Thawe, Project Manager/ Resiliency Coordinator
20. Pyxus	Ronald Ngwira, Managing Director
21. SANE	Stacia Nordin, Project Manager
22. SIL	Peter Goldsmith, U. of Illinois professor and SIL Director
23. Tradeline Corp. Ltd.	Calvin Kamachaha, Group Chief Executive Officer
24. United Purpose Dedza	Ruben Kainga, District Coordinator
25. United Purpose- HQ	Adam Davies, Country Director
26. WEEFFECT	Judith Katumbo, Area Director
27. WOLREC	Gift Mauluka, Head of Programmes and Gladson Namacha, Project Off.
28. WOTA	Campbell Carruthers, General Manager
29. YONECO	Mac Bain Mkandawire, Chief Executive Officer

AgDiv Staff

Carl Larkins	Chief of Party
Elizabeth Sibale	Deputy Chief of Party
Lonester Sibande	Lead, Monitoring and Evaluation
Shelix Munthali	Value Chains Lead
Maggie Mzungu	Nutrition Lead
Chikumbutso Mtemwa	Gender Finance Specialist
Jeremy Venable	Director of Strategic Partnerships
Elizabeth Venable	Evaluation and Economic Analysis Consultant

APPENDIX C

Focus Group Questionnaire (Farmers/Women)

Village: _____ **Date:** _____
GPS Coordinates: _____ **N =** _____

“How many of you have received something from the project?” _____

FGQ1. As a result of this project, have you been able to diversify your production of ground nut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

FGQ3. Because of this project, are you better connected to input markets (fert./seed, etc)? Are they working better for you? Are prices better, are your supplies more reliable, are your purchase better quality?

FGQ4. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? How has this improved your livelihood? – are prices better, are your products higher quality. Are you eating a more diversified diet? (more g.nut? soy?, OFSP/) What are you eating now more than before? Please explain.

FGQ5. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women’s ability to make decisions on assets, loans and their use.?

FGQ6. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

FG #	G.nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Soy kits	Sow cows	Water-shed	Other
1											
2											
9											
10											

UNINTENDED CONSEQUENCES?

Key Informant Interviews (for Partners and Collaborators) **(Similar for other actors)**

1. Which agricultural value chains are you focusing on?
 - a. Have you changed your focal Ag value chain in the last five years?
2. Have you improved your client contact and or service delivery by participating in Ag Div?
 - a. What would you say has brought about the improvement?
3. What different services and technologies have you provided to your clients or your business because of Ag Div?
4. What changes have observed on your clients on their:
 - a. Crop yields for OSFP, Groundnuts and Soybean?
 - b. Area allocated to OSFP, Groundnuts and Soybean?
 - c. Access to inputs for OSFP, Groundnuts and Soybean?
 - d. Access to output markets for OSFP, Groundnuts and Soybean?
 - e. Access to credit?
 - f. Food security situation?
 - g. Diversified food consumption?
 - h. Women role in decision making
5. What do you think are the driving factors for the observed changes?
6. Has your involvement with Ag Div improved your outreach to women and youth? How?
 - a. How has your changes affected the lives of the women, youth and their families?
7. Of your reported new activities, new crops and new technologies, which ones are most liked by your clients?
 - a. Why are they liked?
8. Which activities in Ag Div would you do without donor support?
 - a. How would you manage to do that?
 - b. Are you currently doing anything to prepare for the exit of Ag Div?
9. Which activities would you want Ag Div to focus on?
 - a. Why should Ag Div focus on those activities?
10. What are the outstanding challenges in the agricultural sector which require more attention?
 - a. What should Ag Div do to address these challenges?
 - b. What other interventions are needed to address the stated challenges?

APPENDIX D

Focus Group Questionnaire (Farmers/Women)

Village Name: Manjawire
District/EPA Blantyre
Date: 10/22/2019
Participants: Eight men, 12 women

GPS Coord: 14°58'21.00"S; 34°45'44.00"E
Tape setting start: A05/A06
Tape setting finish 0:15 + 1:21

Village is 13 kms off the road. There is a high concentration of VS&Ls in this area under one GVH, which is way the FGD was so big. All women and men were active in meeting. Discussion took place as follows:

Bamboo

Bamboos seedlings arrived in Feb. (very late). Fertilizer and pesticide were also provided. There was no training whatsoever. There was no notice given of the seedlings arrival except when the truck left Lilongwe. All the plants that arrived got shared out and each beneficiary received one plant. Repeat: Each of 200 VS&L members in this GVH got one seedling each, one per person. Of 18 members of the FGD who had received bamboo, only 11 still had their seedling alive, that is, a mortality rate of 40%. As in other groups, agronomic “advice” was delivered at the truck distribution point. **OVERALL:** poor performance

OFSP

Eighteen FGD participants got some OFSP vines but very late—at the end of the wet season, March. All of the vines were dried out. The groups did not receive any planting or agronomic advice. Five of the eighteen FGD still had some surviving vines – that is, a survivability rate of 28%. **OVERALL:** poor performance

Drip Kits

Ten drip kits were distributed in this area to members of the FGD on a 10,000 MWK loan basis. The first five of any given VS&L were the ones who got the kits. They arrived only last month and will hardly be of any use before the start of the Rainy Season. One VS&L with high consanguinity is using it to grow vegetable to share among all the relatives; families. The preferred month for delivery of drip-kits would be April to July to take advantage of the good prices for vegetables at the start of the Dry Season. **OVERALL:** too soon to evaluate.

Soy kits

Two FGD members (and two others not present) receive soy kits last May. One started by delivering door-to-door to create demand, which worked. She now has an inventory of customers and knows who pays in cash, and who pays at the end of the month. She produces 16 liters a day two days a week and sells all her product by the end of the day. Soy is not common in the local market place so she has stockpiled a 100 kg. so she will always have a supply. Her costs of 200 MWK x 0.6 Kgs of soy. = 4 liters of milk or 480 MWK for soy to produce 16 liters sold at 300 MWK/liter. 480 MWK of cost vs. 4800 MWK of gross profit, a profit margin of about 1000%! Her colleague in this FGD reported similar figures. **OVERALL:** huge success.

PICS bags.

In this area, no distribution, no promotion, very little knowledge. 8 of 18 had heard of them in a MoAg training event in July. That was already too late for last year's storage. Mild interest in thinking about it for this year.

Capital Infusion

Same discussion as previous Blantyre groups. Last December, the infusion of WORLEC capital of 300,000 MWK was a big assist. Another group who reports that to rationally divide up 300,000 among thirty members is difficult. Divided equally it doesn't amount to much. Divided to product more of an economic "punch" means some won't get a loan the first time around. They asked for a loan up to 1 million. Response was to suggest that was not feasible, and that accelerating the loan repayments would create more money. **OVERALL:** modest success.

Other challenges: timely delivery of OFSP would be in Nov/December [that is, right NOW]; same for bamboo. Better time of drip-kit delivery would be April or May.

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No.** Has it been successful? **No.** Of these three, which has been most successful for you? **N/A.**

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No.**

Why? Have your yields in this crop increased, decreased, or remained the same? **No.** Why? Has money you earned from these crops increased, decreased, or remained the same? **No.**

FGQ3. Which AgDiv technology interventions are you using? **Soy kits for two.** Which have been the least beneficial and why?

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **No/ not applicable.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No.** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no.** Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No.**

GQ6. Because of this project, do women **Yes- several with good success.** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **Yes.**

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **Soy kits.** Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region.**

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable.**

Focus Group Questionnaire (Farmers/Women)

Village Name Masulani-II

34°57'42.00"E

District/EPA Blantyre

Date: 10/21/2019

Number Participants: five men, 12 women

GPS Coord: 15°29'53.00"S;

Tape setting start: A01/01

Tape setting finish 1:24

Women were fully engaged throughout the conversation. Conversation was lively and fun, and people enjoyed themselves. Discussion took place follows:

Capital Infusion

Community started its VS&L in 2011; not much economic growth for many years. Last December, the infusion of WORLEC capital of 300,000 MWK was a big assist; each of 23 members was able to take a 13,000 MWK loan. Last year's profit when the bank was "broken" was 20,000 MWK (US \$26). At this writing, they have 550,000 in the bank. Deducting the 300,000 MWK loan from WORLEC, they still have a profit of 250,000, more than ten times what they had last year. **OVERALL:** Good accomplishment

OFSP

All 15 FGD participants received OFSP—very late, at the end of the wet season, January. All 15 received dried out plants. All plants have died off and there is nothing left. Only a few of them received very little training on the care of OFSP. Nevertheless, they remain interested and would like it again this year—but this year delivered on time (which is almost now.) **OVERALL:** Complete failure.

Bamboo

All fifteen of the FGD group received bamboo seedling. Six received advice on how big to dig the hole – but no other advice on care of the plants, watering, nothing else; the others didn't not receive any advice at all. And the "advice" was delivered while the plants were being distributed, not in a training session. Seven of the fifteen got only two seedling each. Eight of the 15 have suffered complete death of the plants. Seven of the group have one or two plants that are alive. They don't know how to take care of them. They report: "The promoters tell us the plants will be good for us because of this and that..... but we don't know whether to believe them." **OVERALL:** Substantial failure.

Drip Irrigation

Three of the fifteen members, two men and one woman, received drip irrigation kits. Delivery took place one week ago. Thus, no experience, haven't been installed, don't know how, nothing to report. Delivery was taken as a 10,000 MWK loan. Group reports it was a difficult group decision who would get the drip kits: everyone wanted one and everyone was willing to take out the loan. Things the group reports that are not yet clear about the loan are: 1) how long a repayment period is required?; 2) will the repayment go to the VS&L like the capital infusion did?; 3) how is this 10,000 debt related to the 13,000 MWK they already owe to WOLREC; 4) after the loan is repaid, does the drip kit become the property of the person who got it, or is it owned by the group? **OVERALL:** too soon to form a judgment.

Soy kits

Two of the FGD groups (women) received soy kits, taking out a loan of 60,000 MWK. Kits arrived last May, processing began in July because of two months of shortage of soy in the village. Smell of soy was strong at first and the product got a bad name in the early months and decreased demand until vanilla was introduced. One woman only produces soy milk “on demand”—that is, only when a neighbor asks for it. The other has a refrigerator and has evolved her product into soy yoghurt with her refrigerator, and is selling every day with high interest from the school kids. One of the two women had detailed record keeping with her (not reviewed) and reported that production can be as high as 8 liters/day. Her recent profit calculations are 1.2 kg of soy (costing MWK 750) can produce 6 liters of milk which can be sold for about 2,500 MWK- a profit margin of 100%. Neither woman engages in “marketing” per se, the two of them are simply selling to their neighbors. In spite of initial difficulties, both women seem ready to continue. **OVERALL:** Good progress for two.

PICS bags

One PICS bag each was distributed to the fifteen FGD members as part of Min. of Agriculture Farmer Field School training [not AgDiv] but arrived in July/August, ‘way late after their crop had been treated with chemicals and stored in traditional bags. No experience with PICS bags so far. They are interested in project providing training on how to use them. **OVERALL:** no data to form an opinion.

Gender training and Financial Literacy Training is part of WORLEC’s usual programming, and the women commented on how beneficial it was and they hoped more would continue. Comment from the FGD that women’s access to loan financing is up greatly as a result of the project, and this is the intervention most appreciated by the village—it made the biggest difference.

According to the group, areas for AgDiv to explore going forward:

- Capital financing for agricultural implements within the VS&L structure;
- More emphasis on PICS bags training and their use
- Don’t just work with our VS&L. Scale up; there are many of our neighbors who could benefit from the benefits that we have received

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No.** Has it been successful? **No.** Of these three, which has been most successful for you? **No.**

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No.** Why? Have your yields in this crop increased, decreased, or remained the same? **No.** Why? Has money you earned from these crops increased, decreased, or remained the same? **No.**

FGQ3. Which AgDiv technology interventions are you using? **None so far.** Which have been the least beneficial and why? **PICS bags may have potential.**

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **Not applicable.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No**. Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no**. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No**.

GQ6. Because of this project, do women **Yes** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **Yes**.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **None so far successful**. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region**.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable**.

Focus Group Questionnaire (Farmers/Women)

Village Name: Silika

District/EPA Balaka

Date: 10/25/2019

Participants: two men, 8 women

GPS Coord: _____

Tape setting start: A10

Tape setting finish 0:5

2018 village is 21 kms off the road. Activities are supported by United Purpose. A noticeable poor area. The FGD was pretty hard work—the community was not very forthcoming. Lead farmer was a woman but was somewhat “apart” from the discussion. Discussion took place as follows:

PICS bags

All FGD members received PICS bags in 2018, but quite late, and after they had already stored their harvest in other ways. A number of them nevertheless began using it to store maize and pigeon pea seed and report good success with it. Because of low agricultural production, they do not see the need to buy any more bags saying “If you don’t have anything to store you don’t need a better way to store it.”

OVERALL: Modest success. No sustainability but some improvement in crop storage

OFSP

OFSP delivered quite late- end of Rainy Season and was all dried out. There was NO production from AgDiv

Project resources. [Note: WFP was promoting OFSP and cassava in this village and hired villagers to produce vines on low-lying land—which they did—and then WFP paid the farmers to distribute the vines to other villagers. The model seemed to work because there are reports of OFSP being used as a breakfast food for kids on their way to school. Also a few reports of occasional sale. **OVERALL:** Complete failure of the AgDiv activity.

Inoculant

This was an inoculant village but the chemicals arrived well after the plants were in the field and were never used. Some villages kept the chemicals and are wondering to use them this year, and asked for advice. No one had the answer. **OVERALL:** Complete failure of the AgDiv intervention.

P.S. It was very disheartening to be in this village.

----- Standard FGC questionnaire -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No**. Has it been successful? Of these three, which has been most successful for you? **No**.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No**. Why? Have your yields in this crop increased, decreased, or remained the same? **No**. Why? Has money you earned from these crops increased, decreased, or remained the same? **No**.

FGQ3. Which AgDiv technology interventions are you using? **PICS bags**. Which have been the least beneficial and why? **OFSP delivered late and all dried out**.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **No.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No.** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no.** Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **Breakfst food for the kids on the way to school as a result of someone else's project.**

GQ6. Because of this project, do women **No** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **No.**

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **None so far successful.** Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region.**

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable.**

**Focus Group Questionnaire
Nyalure Dedza Resilience village**

Village Name: Nyalure
District/EPA Dedza T GPS Coord: _____
Date: 11/04/2019 ape setting start: no tape
Participants: 6-8 at start; 16 by the end Tape setting finish _____

Village is 6 kms off the road. This is the third of the three Dedza “Resiliency villages” (plus one more in Ntcheu) that AgDiv has been supporting with soil conservation efforts.

To our surprise, when we got there, we were met by entire village. Probably thirty men and forty women, the women singing with our arrival. As quickly as was polite, we explained that we were there to visit activity sites, and not engage in a community meeting; and the larger group was disbanded, and we were accompanied by the leaders of the community to the project site. It became clear later that the reason for the community’s coming together was because of community infighting and not because of an erroneous message of ours.

Our guide was one of the community leaders, a woman, who was clearly an activist and a force for good in the community.

The project we visited was about 1/w km. from the center of the village—walking through furrows of land already plowed and mounded for the start of the rainy season. To get to the site where we stopped to talk probably took the best part of half an hour. The walk was on flat land and there was some initial question (in my mind) whether soil conservation activity was needed on such gently sloped land. When we got close to the mountain that forms the ‘back’ of the village fields, the group told us that flooding was a significant problem because of light, loamy soil and heavy rains characteristic in this area. Sounds like good reasons. The group decided to construct moisture infiltration trenches throughout the entire field. They excavated their trenches in lines that extends forty or fifty meters in length, 30 cms or more in depth, pretty much along the contour line, and every ten meters through fields that probably amount to over 100 HA. (Gasp!) This was an ENORMOUS undertaking and when we understood what they had done, we were astonished. They donate three or four hours two mornings in the week to this communal activity. The total group is 200 people; and women assume the majority of the work, and number 126 participants. What we were seeing was two months of work. (Back of the envelope calculation: +/- 175 people X four hours a week X two days X 8 weeks = 11,200 hours of heavy work –1,400 person days.) Given the size of the hectarage this is probably as good a ball-park figure as any.)

The women also reported the worked on ten check dams (as in the two other communities) and showed us one of them that as in the other areas, was full of 20 kg. boulders stacked into a wall. See picture.

For these soil conservation in Nyalure: “A” for effort. We sincerely hope their work is beneficial to them in the upcoming rainy season. However, please note the following. **Caveat:** At the same time as we applaud the community for this intense and heavy work, we must remember that this is voluntary labor – and largely contributed by village women—and that there are enormous, unquantified, and mostly hidden Opportunity Costs in these activities. In all her daily chores that the housewife has to put off, this is *extra* work for her in her already busy day. Project designers should be creating soil conservation activities that produce “the-most-benefit-with-the-least-effort,” not massive public works projects regardless of the human cost. Only a post-Rainy Season assessment (called for in this trip report) will

show whether this community's investment of time was worth the effort. If so, next year's efforts should not be more-of-the-same but rather achieving similar conservation gains with less effort. **OVERALL Assessment** until the structures have proven their worth: **"B"**

The group wanted us to visit their bamboo seedlings also, but time constraints did not allow it. Instead we used a methodology we had developed in other FGDs to go around the group one by one and have each one report on how many bamboo s/he had received and how many survived. Results were as follows:

As reported by 14 of the group that had accompanied us, surviving plants were: 9, 6, 3, 6, 7, 9, 0, 8, 6, 0, 9, 6, 9, 6 = 84 of 140 plants – overall 60% survival. Group reported that those who had good survival had low-lying, land where the plants did well, and the others had land that was relatively dry and the plants died. Termites were also cited as a factor.

Focus Group Questionnaire (Farmers/Women)

Village Name Nankumba

GPS Coord: 14°19'13.00"S; 34°47'46.00"E

District/EPA Mangochi

Tape setting start: (no tape)

Date: 10/29/2019

Tape setting finish

Number Participants: 3 men, 8 women

Eleni Haindi	Present	8 bamboos, 0 Surviving	1 PICS bag
Benedetta Samatchi	Present	8 bamboos, 0 Surviving	3 PICS bags
Emma Khusa	Absent		
Mackson Galasi	Present	8 bamboos, 2 Surviving	0 PICS bags
Duya Kaduya	Present	8 bamboos, 0 Surviving	0 PICS bags
Shallon Tambala	Present	8 bamboos, 0 Surviving	3 PICS bags
Esime Hussen	Present	8 bamboos, 0 Surviving	
Eda Chiware	Present	8 bamboos, 0 Surviving	2 PICS bags
Masidu Tchale	Present	8 bamboos, 2 Surviving	3
Magret Chiwaya	Present	8 bamboos, 0 Surviving	1 PICS bag
Amina Saikolo	Absent		
Steven Folotia	Present	8 bamboos, 0 Surviving	3 PICS bags

Six Km off the road. Group was lively and discussion was good. Only project intervention is bamboo. Discussion took place follows:

Each FGD participant received eight bamboos. The lead farmer had been given training the week before but had not cascaded the training to others. Seedling were delivered at an appropriate time, about Jan 15, but there was no training on care of plants or adequate preparation. The plant suffered lots of termite attacks in spite of the fact that the farmers had been given pesticide to treat them. The only plant care advice they actually received was one text message a month after the plants had arrived saying: water them carefully after they are first planted. "This was pretty late as they had planted the bamboos in fields far from their homes and watering would be a problem. Surviving plants are 4 with one man, and two each with three others: Total surviving ten of 88 plants, 11%. (Appalling.) [USAID staff were visiting the ET during this FGD.]

Some member of the FGD also received from the Min of Ag. one to three PICS bags each though from AgDiv sources: Total 17 bags for eight farmers. The people are satisfied with the technology and pleased it is working well. Bags are used to store seed rather than maize

The group had several good suggestions:

- Such a bamboo seedling program should be starting NOW in order to give people time to properly prepare their plots. This area suffers a Dry spell in February that the plants have to be protected against.
- "Is it possible to supply us with the seeds, and let us grow the seedling ourselves?"
- Agora is far away. How can we get an agro supplier who is closer to us?

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No**. Has it been successful? **No**. Of these three, which has been most successful for you? **No**.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No**. Why? Have your yields in this crop increased, decreased, or remained the same? **No**. Why? Has money you earned from these crops increased, decreased, or remained the same? **No**.

FGQ3. Which AgDiv technology interventions are you using? **None so far**. Which have been the least beneficial and why? **PICS bags may have potential**.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **Not applicable**.

FGQ5. Because of this project, are you better connected to markets to sell in? **No**. Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no**. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No**.

GQ6. Because of this project, do women **Yes** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **Yes**.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **None so far successful**. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region**.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable**.

Focus Group Questionnaire (Farmers/Women)

Village Name: Namwini
 District/EPA Machinga
 Date: 10/23/2019
 Participants: three men, 5 women

GPS Coord: 14°50'37.00"S; 35°33'50.00"E
 Tape setting start: A10 & A11
 Tape setting finish 0:40

2019 village is 14 kms off the road—long way. Project activities were promoted largely by PCI under the Njira project. When that closed, all other project promotion ceased except for action with the EPA extension agent (a woman.) Women and men were active in meeting. The farmers participated in the interventions of PICS bag, Bamboo and Orange Fresh Sweet Potato Vines. The table below presents the list of farmers we engaged in the FGD and their respective interventions.

Name of the farmer	Gender	OFSP	PICS Bags	Bamboo
Osman Makawa	Male	Y	Y	Y
Misoya Ningwa	Male	N	Y	N
Asiyattu Lewis	Female	Y	Y	Y
Elluby Makawa	Female	Y	Y	Y
Inesi Amin	Female	Y	Y	N
Bernadetta Chatha	Female	N	Y	N
Agness Mustaph	Female	Y	Y	N
Aisha Dinesi	Female	Y	Y	N

Discussion took place as follows:

Bamboo

Bamboos seedlings arrived in Feb. (very late). Fertilizer and pesticide were also provided but not distributed by the village leader. There was no training. As in other groups, agronomic “advice” was delivered at the truck distribution point. There was such high demand that they couldn’t give ten per beneficiary but only five. Three of the eight FGD participants reported receiving bamboo. Zero survivability. Not one seedling remains among FGD participants.

These came through an NGO called PCI. The NGO told us that the Bamboos were good for wood and planks. We did not hear from them on how long it would take to grow the Bamboo for us to reap the said benefits. We got five bamboos per person against the initial plan of 10 per person because we had to share with our friends who also needed them. The NGO also provided some “fertilizer for the bamboo and the chemical for treating termites”. The fertilizer and chemicals were never used in our bamboos because our group leaders did not share these with us. The count of who still has bamboos at their home or in their fields revealed a zero-survival

rate. The participants indicated that they need to be well trained on the bamboo production plus that the bamboos must be supplied at the onset of the rainy season if the survival rate would improve. They indicated that they got the bamboos towards the end of January 2019 which was coinciding with the tailing off of the rainy season. Asked if they had ever grown bamboos, farmers indicated that this was their first time. A probe of whether they got trained on bamboo production revealed that they were only briefed about the bamboo production on the day they were receiving the bamboos.

OFSP

Six of the FGD members received three bundles each. Two of them still have some plants (did not ask how many each has.) Survivability no more than 33%, likely less. The issue of timing of the arrival, late in the rainy season, as in all other communities so far in the South – seems to be the key. Everyone says they have to get here in December/January to survive.

The discussion revealed that farmers were provided with the vines in February 2019. They indicated that they had previously been trained on sweet potato production under the PCI project in 2017 and 2018. They then hinted that the 2019 distribution of vines was followed up with a training on utilisation of sweet potato which explored issues of baking using the sweet potato flour, making juices and using the leaves of the sweet potato as vegetables. Only two of the six consulted farmers indicated that they still have vines which will be used in the next planting season. Farmers were also concerned with the time when the vines were supplied. It was pretty late considering that the rainy season was almost gone. They hinted that the rate supply and planting of the vines exposes the potato to challenges of livestock feeding onto them in the fields.

PICS bags

Group received good training on PICS bags including not to use pesticides. They received bags in 2018 before harvest and just at harvest time, one bag each. They are satisfied with the results: “When we open the bags, It is as if the grain has just come off the field.” Some duplication between PCI two or three bags apiece, and the MoAg, one bag apiece. Bags were distributed late, but even then, they were used (for seed storage.) They have even used the bags with success to kill the weevils. [Note that the village lead farmer has five bags in full use.... Ahem.]

The PICS bags were supplied to all the eight farmers. They indicated that extension workers from Government and those from PCI project were the ones who supplied PICS bags in the area. Farmers indicated that they participated a thorough training on how to use PICS bags and also the benefits of the PICS bag. The farmers reported that the extension workers from government took them through the demonstration exercise termed “bag closing and bag opening”. Through this exercise they were able to compare the quality of the grain and infestation of weevils after four months of storing the grain in PICS bags and storing in their usual bags which goes with treating

the grain. Results were so encouraging because maize stored in PICS bag was as good as they had packaged it. Asked on how many bags each person accessed, this ranged from 1-3 bags. For farmers that were reached out by government extension workers they got a bag only whilst the farmers who were reached out by PCI project got two bags and those farmers who were with PCI and also government extension workers got 3 bags. None of the participants had ever tried to buy a PICS bag. They alluded this to the late supply of the bags because the bags came when they had almost bought the old bags and also committed resources to chemicals to treat their maize.

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name: Cheyadi

GPS Coord: -13.8 S

District/EPA ___ Mwati _____

Tape setting start: 00:00

Date: ___ October 24 _____

Tape setting finish: 1hr 09mins

45secs

Number Participants: _2: 1M/1F _____

Note: Ten (10) farmers were invited but only two showed up. The woman in particular was highly knowledgeable about the Cooperative, people in the Coop, and Ftf activities (AgDiv). Coop has 98 members.

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a. First contact was in 2017. Received inoculant for soy twice – first 150 packets in December 2018. Second tranche 200 more packets. Each member received at least 2 inoculants. All were distributed to Coop members and non-members in community.
- b. Supported with 5 packets inoculants which benefitted 5 farmers that had not yet planted their fields.
- c. Members will continue to use inoculant even if they must purchase it by themselves.
- d. Both Coop and non-coop farmers received 2 bundles OFSP each in February 2019. Due to lateness in the season, farmers planted the vines in nurseries in wetlands and will plant this rainy season. Farmers received training on OFSP.
- e. No soy or groundnut seed was given, but coop members have agreement with Agro Input Supply Limited (AISL) who supplies the Coop with Hybrid soy and groundnut. Yields on soy and groundnut doubled from inoculant; seed quality also improved.
- f. Soy provides superior return in yields and income than groundnut.
- g. Coop-AISL arrangement: Due to large coop purchases of soy and g/nut, AISL sells them at subsidized price and sometimes on loan. The coop gets K200 for each bag of seed sold on behalf of AISL. Some of this money is used to reinvest in Coop and members share the profits at year end.
- h. Now coop members mostly use hybrid seed and use saved seed at a minimum.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a. Area under soy and groundnut is increasing due to higher yields. Farmers are expanding production, which is due primarily from inoculant impacts.
- b. Income in the community has increased substantially, as have family livelihoods.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a. Received inoculant packets and training – two members given Training of Trainers (TOT) who then trained all other farmers.
- b. In 2018 both Coop and non-coop farmers received 2 PICS bags each and received training. In 2019 a second distribution of PICS bags, two per farmer.
- c. Coop is arranging with AISL to provide PICS bags, which will be sold to Coop – but have not yet received them. Farmers World also sells PICS bags.
- d. No bamboo seedlings were received but the chairperson of the group was trained on them.
- e. No Drip Irrigation was received.
- f. No soy kits were received.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a. Yes we are better connected to Input Markets because the Cooperative made a very favorable arrangement with AISL and now members can purchase quality inputs through the Coop. This was done independent of AgDiv.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a. We are not better connected to output markets because of AgDiv – sell to local vendors.
- b. In 2018 tried to make contractual arrangements with Superstar and began selling soy for 210KWA for a 50KG bag. But then Superstar terminated contract as they also had large stock of soy. Approached other processors, but everyone wanted bribes and Coop Management felt they were being taken advantage of.
- c. Establishing reliable output markets is not easy in Malawi.
- d. Were trained in nutrition and crop diversification to improve diets. They keep and use soy and groundnut flour to fortify porridge. Also purchase vegetables to improve diets. Mix beans and enriched vegetables with the Maize Nsima

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- a) Women and youth can obtain inputs on loan through the Cooperative, as can any member.
- b) The cooperative VSL group no longer operating as members were not paying back loans.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a. Soy with inoculant has been the best; groundnuts next. Both have increased family incomes, food security, and improved family livelihoods.
- b. Plan to expand acres of new land this planting season.
- c. Also invest in the Coop – each member has to give 25,000KWA to become a member. The coop uses this money to purchase maize/gnuts/soy when prices are low and sell to other communities during the lean season. Profits from these sales are returned to members.
- d. Members also contribute a portion of their harvest to the Coop – how much depends on that years harvest – some of this goes to improving infrastructure and to run the coop, some is sold and returned to members.

Additional resources

- a. Would like access to soy kits and training, even on processing soy using local methods.
- b. Grinding machines for soy flour and groundnut flour to improve family nutrition.
- c. Treadle pumps and drip irrigation.
- d. Improved seeds for families who cannot afford to purchase so they can expand area planted.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Focus Group Questionnaire (Farmers/Women)

Village Name Mtuwa GPS Coord: _____
 District/EPA Mangochi and Maiwa EPA _____ Tape setting start: A29
 Date: 10/28/2019 Tape setting finish 1:08
 Number Participants: 2 men, 9 women

Akisiona sate	Present	5 Bamboos, 3 Surviving
Alesi Mamu	Present	5 Bamboos, 2 Surviving
Amina Robert	Present	5 Bamboos, 1 Surviving
Anesi Wadi	Present	5 Bamboos, 3 Surviving
Asima Lukiya	Present	5 Bamboos, 2 Surviving
Asiyatu Pinifolo	Present	5 Bamboos, 2 Surviving
Ayida Poffa	Present	5 Bamboos, 2 Surviving
Ayines Wisiki	Present	5 Bamboos, 1 Surviving
Ayinesi Richard	Present	5 Bamboos, 3 Surviving
Blessings John	Present	5 Bamboos, 2 Surviving
Twaib Chindamba	Present	5 Bamboos, 4 Surviving

Ten Km off the road. Group was lively and discussion was good. Only project intervention is bamboo. Discussion took place follows:

Each FGD participant received five bamboos. Seedling were delivered extraordinarily late, March 2019, and with no training beforehand/ The only “training” they received was from the back of the truck as the seedling were being delivered. Nevertheless, survivability was somewhat better than we have seen in other communities because this community is involved with an agroforestry project with another NGO and has learned something about taking care of young plants. Also this is lowland, and subject to annual flooding thus a good place to care for such small plants. One farmer has four plants still alive, one three, six have two plants, and one has one. Total 20 plants of 45 delivered, 44%.

We also spent some time talking to them about other AgDiv interventions, though they did not receive anything else from the project. Four FGD members received one PICS bag each from a different project and are having reasonable success with them. They say the bags are working as they should, and the group’s only difficulty is the price. They spent a lot of time talking about what a “good” price would be and came to the figure of MWK 400. **At the end of the conversation, one interviewee has a though=provoking comment: that she (and others) would be enticed more to buy a subsidized bag at MWK 400 than receiving a free bag to only a few because of limited quantities of the donation**

There was also discussion of OFSP, but this area seems completely unfamiliar with the crop. It appears they are in a “cassava promotion area” and no nothing about OFSP

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No**. Has it been successful? **No**. Of these three, which has been most successful for you? **No**.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No**. Why? Have your yields in this crop increased, decreased, or remained the same? **No**. Why? Has money you earned from these crops increased, decreased, or remained the same? **No**.

FGQ3. Which AgDiv technology interventions are you using? **None so far**. Which have been the least beneficial and why? **PICS bags may have potential**.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **Not applicable**.

FGQ5. Because of this project, are you better connected to markets to sell in? **No**. Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no**. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No**.

GQ6. Because of this project, do women **Yes** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **Yes**.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **None so far successful**. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region**.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable**.

Focus Group Questionnaire (Farmers/Women)

Village Name: Mtotela
 District/EPA Blantyre
 Date: 10/22/2019
1:21
 Participants: Three men, 6 women

GPS Coord: 15°35'21.00"S; 35° 5'4.00"E
 Tape setting start: A05/A06
 Tape setting finish 0:15 +

Village is 12 kms off the road. Getting the community to warm up took some time. Women were pretty quiet for most of the discussion Discussion took place as follows:

Name of the participant	Gender	OFSP	Bamboo	PICS Bag	Drip Kits	Soy Kits	VSL (Capital Infusion)
Cedrick Nalasa	Male	Y	Y	Y	N	N	Y
Ellida Mtapwata	Female	Y	Y	N	N	N	Y
Chisomo Masache	Female	Y	Y	N	N	N	Y
Eflo June	Female	N	Y	N	N	N	Y
Olivia Bashiri	Female	N	N	N	N	N	Y
Fynes Field	Female	Y	Y	N	N	N	Y
Delizer Kapasule	Male	Y	Y	N	N	N	Y
Arafat Mahara (Lead Farmer)	Male	Y	Y	Y	Y	N	Y

OFSP

Five of seven got some OFSP vines—very late, at the end of the wet season, February. Three of the seven were able to save some plants by transplanting. Six received some training beforehand. They are told that this OFSP will be have better storage characteristics and will have better yields, but they of course have not seen anything yet. Nevertheless, they remain interested and would like it again this year—but this year it should delivered on time (which is almost now.) **OVERALL:** small progress.

Drip Kits

One of the FGD members had received drip-kit training in Lilongwe and trained four others on his return. Thirty-five (35) drip-kits were delivered to various VS&L members, each one taking out a 10,000 MWK loan; but they only received them last month and have not yet installed them. In this concentrated area, there are 10 independent VS&L groups, thus 3 or 4 drip kits were distributed per VS&L. It would have been much better for the loan-takers if the kits had arrived in April because they could have gotten two crops; now it will only be one. As in the other group, things the group reports that are not yet clear about the loan are: 1) how long a repayment period is required?; 2) will the repayment go to the VS&L like the capital infusion did?; 3) how is this 10,000 debt related to the 13,000 MWK they already owe to WORLEC?

Bamboo

Original plan was that each beneficiary would receive a ten bamboo seedlings but the demand surpassed the supply for the seedlings such that plants got shared out and each beneficiary received only three plant. The seedlings came accompanied by fertilizer and anti-termite pesticide which could not be equally and appropriately be divided up among all the recipients.. There was no notice given of the seedlings' arrival except when the truck left Lilongwe. Plants got shared out and each beneficiary received only three plants each. Some recipients got limited amounts of pesticide, and most got none at all. By hand count FGD participant by participant, the mortality was 50%, 27 dead seedling of 54 delivered to these nine people. Only five of the FGD members have any seedlings left. As in other groups, the planting and agronomic "advice" was delivered while the plants were being distributed, not in a training session.

OVERALL: poor performance.

Capital Infusion

Last December, the infusion of WORLEC capital of MWK 300,000 was a big assist; each of four cooperatives' representatives gave details of their accomplishments. First group Last year's profit when the bank was "broken" was MWK 800,000 (US \$1066). Already at this writing, they have MWK 900,000 and are looking to get to one million. The group comment was: "We aren't playing at making money now; this is serious money involved." Second group last year had 300,000 at the end of the year; now that have four times that among, 1.2 million. Third group reported they used to have 10,000 in profit, this year they have 1 million, ten times the amount. Fourth group member has taken her increased capital and built a small brick business, then petty traded G.I. sheets, and has made enough money to begin accumulating brick and G.I. sheet to build her own home and has already begun purchasing land to do so.

OVERALL: good performance

Group reports the challenge is to rationally divide up 300,000 among thirty members. Divided equally it doesn't amount to much. Divided to product more of an economic "punch" means some won't get a loan the first time around.

Other challenges: timely delivery of OFSP would be in Nov/December [that is, right NOW]; same for bamboo. Better time of drip-kit delivery would be April or May.

Soy kits

No one of these FGD participants received a soy kit, though two in other VS&L in this area did. Delivery just took place last month, so no experience yet. One FGD member buys soymilk from his neighbor but only two others (of 8) have ever drunk soymilk.

PICS bags

One FGD participant was given one PICS bag during a MoAg training, but it came late after he had already treated his crop in the traditional way. He doesn't produce much so doesn't think he needs any other bags. No other promotion of PICS bags to anyone else in this FGD.

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No**. Has it been successful? **No**. Of these three, which has been most successful for you? **N/A**.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No**. Why? Have your yields in this crop increased, decreased, or remained the same? **No**. Why? Has money you earned from these crops increased, decreased, or remained the same? **No**.

FGQ3. Which AgDiv technology interventions are you using? **None so far**. Which have been the least beneficial and why?

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **No/ not applicable**.

FGQ5. Because of this project, are you better connected to markets to sell in? **No**. Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no**. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No**.

GQ6. Because of this project, do women **Yes- several with good success**. and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **Yes**.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **None so far successful**. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region**.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable**.

Focus Group Questionnaire (Farmers/Women)

Village Name: Kwilsaya
 District/EPA Machinga
 Date: 10/23/2019
 Participants: 3 men, 6 women

GPS Coord: _____
 Tape setting start: A09
 Tape setting finish 1:03

2018 village is 6 kms off the Liwonde-Ntaja road. We checked the 2018 survey and this village has the second-lowest production of groundnut and soy per hectare of the entire fourteen, 450 kg/HA for ground nut, 250 kg/HA for soy. This is appallingly low. Women and men were active in meeting.

Participant Name	Gender	OFSP	PICS bag	Bamboo
Lucy Kaliati	Female	Y	Y	Y
Saida Yusuf	Female	Y	Y	Y
Mary Jemusi	Female	Y	Y	Y
Alice Maliki	Female	Y	Y	Y
Fanny Nathambwe	Female	Y	Y	Y
Yuda Masache	Male	Y	Y	Y
Collins Masang	Male	Y	Y	Y
Kingsly Kaluma	Male	Y	N	Y
Enelesi Thulamu	Female	Y	N	Y

Discussion took place as follows:

PICS bags

Group received good training on PICS bags including not to use pesticides. They received bags in 2018 before harvest and just at harvest time, on bag each. They were “trying it out,” and the bags worked well. Of the nine FGD participants, one man bought three more bags, one bought two, and one, one more. Price was high, though, 1,200 MWK at the agro-dealer store 30 km distant. One woman stored her pigeon pea in a PICS bag to good success. One man said his production was so low that he really had no need of any more than one PICS bag – a comment we understood after seeing the 2018 Ag Survey data

OFSP

PERFORM appears to have conducted good pre-arrival training and all nine FGD. Seven of them had low-lying land where they were able to plant and those plants still survive. They think of it as “both” a food crop for the family – because of its nutritional value—as well as a cash crop. A relative success compared to other villages in the South.

Bamboo

Bamboos seedlings arrived in Feb. (very late). Fertilizer and pesticide were also provided but not distributed. There was no training. As in other groups, agronomic “advice” was delivered at the truck distribution point.

Five FGD members received five plants each. One has all five surviving because her land is near the river; four have one plant left; two have two left. Survivability is 13 of 45, 28%

Their opinions of the future: OFSP will continue on its own steam. PICS bags use will grow only slowly because for this poor village they are really expensive. Bamboo will continue only with a few people. Other challenges: timely delivery of OFSP would be in Nov/December [that is, right NOW]; same for bamboo.

No Drip Kits

No Soy kits

No WOLREC so no Capital Infusion

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No** Has it been successful? **No** Of these three, which has been most successful for you? N/AWhy?

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **Decreased** Why? Have your yields in this crop increased, decreased, or remained the same? **Decreased** Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

FGQ3. Which AgDiv technology interventions are you using? **PICS, OFSP, Bamboo** Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? **No** Are they working better for you? **No** Are prices better? Quality better? Supplies more reliable? **No**

FGQ5. Because of this project, are you better connected to markets to sell in? **No** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) **No** What are you eating now more than before?

GQ6. Because of this project, do women and youth have more access to credit, income, or employment? **No** For women and youth, has the project lowered their cost of assets, credit & employment? **No** Is there any change women's ability to make decisions on assets, loans and their use.? **No**

FGQ7. Which agricultural activities (from the list) have been successful for you? **None** Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Focus Group Questionnaire (Farmers/Women)

Village Name: Kutambala- Mangochi
District/EPA Mangochi
Date: 10/24/2019
Participants: four men, 4 women

GPS Coord: _____
Tape setting start: A12
Tape setting finish 1:04

2018 village is 21 km. from the road—a long way. Because of rice cultivation and nearby low-lying land, the area feels much more populated than other communities visited so far; there was a steady stream of small markets we drove through, plus a constant stream of pedestrians. This was a PERFORM village and extension work was done by PERFORM until the Njira project closed. Women and men were active in meeting. Discussion took place as follows:

OFSP

FGD members say PERFORM and MoAG staff conducted very good OFSP training. They received some vines in 2016 and then again in 2017, and the 2018 results are from the 2017 supply. The group reports good production: better yields than traditional potato and fast-selling. One woman reported selling 10 bags at 5,000 MWK per bag. Several of them reported growing twice during the year, the Rainy season, and then again on residual moisture. All FGD members will be planting OFSp **URING THE UPCOMING** Rainy Season. The big challenge is selling: vendors come to the village and offer a low price and because they are so far from the road they accept the vendors' prices. A successful technology compared to other villages in the South and likely self-sustainable at this point. **OVERALL:** Sustainable success.

PICS bags

Five FGD group members received one bag each in Aug. 2017 after receiving PERFORM training. Two bought on their own; one other now has four, the fifth, two.. In spite of the bags' high performance, they doubt whether they will be able to buy more now that the free deliveries have stopped. They say they don't make enough money to pay the 1,200 MWK the bag seller demands locally. They could buy from Agora in Zomba at 950 MWK, but Zomba is sixty or seventy km distance. Some reported storing maize d uring the Rainy Season to good effect. Current stock of bags of the FGD participants is: 5+8+3 (lead farmer) +0 +0+1+3+ 0 = 20 among 8 FGD participants. According to the FGD, the technology is completely appropriate: what is lacking is Access. **OVERALL:** relatively successful for a few, but no widespread diffusion.

Bamboo

Bamboos seedlings arrived in January (late). Fertilizer and pesticide were also provided but not distributed. Different from some other groups, the FGD reports they received good training. Seven (of 8) FGD members received five plants each. One has all five surviving plants—he is the lead farmer. One has four surviving, two have one surviving plant; the other three have no surviving plants. Survivability is 11 of 35, 31%. Problems the FGD ascribes to low survivability are low moisture in these soils, lack of adequate fencing, and inadequate size of the holes that were dug. **OVERALL:** Some success but poor performance for the majority.

Suggestions for the future:

- where and how are we going to replace OFSP when the genetic vigor goes down in a few years, like our other potatoes did.
- This is a huge areal and only a few have benefitted from bamboo. This area needs a massification of effort in the next stage.

----- Standard FGC questionnaire -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **Beginnings in OFSP.** Has it been successful? Of these three, which has been most successful for you? **OFSP.**

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No.** Why? Have your yields in this crop increased, decreased, or remained the same? **No.** Why? Has money you earned from these crops increased, decreased, or remained the same? **No.**

FGQ3. Which AgDiv technology interventions are you using? **PICS bags.** Which have been the least beneficial and why? **Bamboo.**

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **No/ not applicable.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No.** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no.** Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No.**

GQ6. Because of this project, do women **No** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **Yes.**

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **None so far successful.** Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region.**

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable.**

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name _____ Horizon Farm
District/EPA_Lilongwe/Mitundu _____
Date: ___ Oct 25, 2019 _____
secs
Number Participants: __10: 5M/5F _____

GPS Coord: 14.13'01.7"S _____
Tape setting start: 00:00
Tape setting finish: 1hr 48 min 28
secs

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a) Yes – were given training and seeds for Groundnut, Soya, and six (6) varieties of OFSP. Horizon has over 10,000 farmers. Were given 500 bundles of OFSP for multiplication – gave 1 bundle each to 500 farmers for multiplication.
- b) Horizon works in 6 EPA's and coordinates activities with Extension Agents from those EPAs. Horizon also has three of their own Extension Staff to coordinate activities with DAES.
- c) Farmers liked two soya and OFSP. With Soya, yields are high and prices better than groundnut. This is due to the improved hybrid seed and use of inoculants.
- d) OFSP was also excellent – early maturing while also being drought resistant – harvest prior to onset of drought. Store OFSP in a modified root cellar with a base of sand so can be stored for up to three months. Sell in market when local varieties are no longer available. Also consume as nutritious food in the home.
- e) Groundnuts – use for home consumption and for sale to vendors or local markets.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a) Some farmers have increased area of planting and rent land as well. Others have not increased land. These farmers OFSP planted OFSP on land ranging from 0.5 acres to 1.5 acres, which produces a substantial amount of OFSP for the market. No trouble selling it.
- b) Use of inoculants has increased yields of soy and g/nut, which has resulted in some of the more successful farmers to increase area planted.
- c) Has income increased? Overall yes, but also depends on whether or not Horizon has been able to secure a market for soy and g/nut. This varies from year to year. If contracts are arranged, prices are usually good; when markets cannot be found, sell to local vendors, which often are not as well paying. Some farmers mix varieties, which makes it difficult to sell to large traders or processors who want single varieties and good grade material.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a) Inoculants have been very successful – healthier plants for both g/nut and soya, and higher quality.

- b) Solar pump with drip irrigation for two in this group. However a total of 42 solar pumps and drip kits were acquired through AgDiv.
- c) PICS bags – in 2017 Horizon farmers received 11,000 PICS bags; in 2018, another 4,000 PICS bags. Two farmers mentioned they had purchased PICS bags on their own from Farmers World. Stored maize in 2017 with PICS bags and sold out of season and received very good prices.
- d) Farmers received 8-10 bamboo seedlings in February 2019. Averaged about 60% survival rate among the ten farmers; now seedlings are about 1 meter high – were planted in wetlands. Termites killed some bamboo seedlings.
- e) Soy kits – 12 farmers received them with training (10 are women who received the kits through the VSL). Producers say soymilk sells for 100KWA for 500ML bottle. Anticipate more purchases as more VSL's become involved.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a) Input markets better – depends on the farmer – the more successful farmers purchase seed and fertilizer from Farmers World (FW); some farmers in group have difficulty with prices of FW inputs, so purchase from small suppliers, but then often get fake seed. But general, the input markets are competitive and reliable – there are 8 large national companies in Malawi.
- b) Some farmers recommended if FW could make available smaller sized packets of seed and fertilizer that may be more affordable to smallholder farmers.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a) Reliable output markets are difficult to find – Horizon tries to arrange contracts or MOU's with buyers, but not always successful. Farmers on their own are price takers and have little leverage because they need the money immediately.
- b) Nutrition – diversified diets – yes, received training, including on the types of foods to consume and had cooking classes. Overall, yes, since A-D they are eating more diversified diets.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- c) Two women in FGD group were members of VSL's and are very pleased with it – they have taken loans and made small-scale businesses with it to bring in extra income (selling fruits & vegetables, soy milk, and cooked food). One woman even brews beer for sale.
- d) AgDiv gave a Capital Injection of 300,000KWA to 30 VSL – all groups have repaid 100% of their loans to date.
- e) Gender training – the men commented that women actually have good ideas; women mentioned that gender training has allowed them to have more influence in the house in terms of how money is spent or invested. One even said it has made her marriage better.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a) **Would like better access to farm inputs through a loan – COFI helped finance 30 Drip kits at 500,000 KWA each plus other inputs. Also, 50,000KWA loans for seeds and fertilizer to individuals**

- b) Developing output markets needs to be addressed.
- c) Create more VSL groups with capital injection for wider reach
- d) Farmers to be organized in groups/associations
- e) More drip irrigation kits
- f) More OFSP vines

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Focus Group Questionnaire (Farmers/Women)

Village Name: Chulu
 District/EPA Balaka
 Date: 10/24/2019
 Participants: 1 man, 9 women

GPS Coord: _____
 Tape setting start: A09
 Tape setting finish 1:04

2018 village is 21 km. from the road—a long way. This is a United Purpose village and extension work is being done by that organization. A man and the women were active in meeting. The Lead farmer is a woman and appears to have an excellent rapport with her fellow villagers.

Name of participant	Gender	OFSP	PICS bags
Hawa Muhamad (Lead Farmer)	Female	Y	Y
Amina Abudu	Female	Y	Y
Abudu Wilson	Female	Y	Y
Jacquiline George	Female	Y	Y
Alice Kassim	Female	Y	Y
Fatima Twaibu	Female	Y	Y
Wyson Dango	Male	Y	Y
Maria Enoch	Female	Y	Y
Emily Jafali	Female	Y	Y
Alima Muhammad	Female	Y	Y

Discussion took place as follows:

PICS bags

Bags arrived in July 2018, which is to say, after the 2018 harvest and well before the Rainy Season. Bag use was well promoted by United Purpose, which trained them on how to use the bags, the benefits of the PICS bags and how to keep the bags in order to sustain their life span. No immediate use for the bags to store the grain, though some used it to store their recycled seeds for pigeon peas and maize,. One bag distributed per person. After poor yields last year because of irregular rains, no one has enough money in this village, they say, to buy more. Access is not a problem, however because bags are available in Balaka, 21 km away, if ever there is a need. In 2019, bags are being used: to store pigeon pea and other legumes, to store seed for the next planting and for other things. FGD members comment favorably on using the PICS bags over two seasons, the grain quality is maintained. Apart from being able to re-use the PICS bags, members said that the bags were good because they help them save resources used for buying chemicals to treat the grain and there are not required to buy the bags every year. In terms of bags available to store, one harvested four bags (thus short three), another, one (not an issue), two had immediate consumption needs and did not store, one (thus not an issue, then 2&1/2, 4&1/2, 2&1/2 and 3, so an unsatisfied need for PICS bags in five of the 9 FGD members. **OVERALL:** PICS bags are a valued tool for various storage issues and is well appreciated by the community, but cost is hindering its widespread use in poor communities like this one. The farmers expressed MWK500/per bag as their favorable price. They also indicated that they would appreciate if the bags were made available within their vicinity through the agro-dealer shops as opposed to Balaka.

OFSP

Every FGD member received 8 bundles of 100 vines apiece = 800 vines, “mostly fresh” (a huge difference compared to Blantyre communities); and promotion and program success was good as a result. They were trained by United Purpose on how to prepare for the planting, how to care for the plants (they had previous experience) and the nutritional value of OFSP. Production was good, they say: in terms of 50 kg bags: one with 2 bags then others 1&1/2 + 2 +2+ 1&1/2 + 2 + 2&1/2 +v2&1/2+v2. Wet weight and surely more than 50 kgs/bag. Maya will provide the conversion factor to estimate what production was in kgs. Three of the nine growers sold some of their sweet potato; the rest consumed it all in the HH. Three people have kept vines to be able to plant in the upcoming Rainy Season; the other six left their vines in the fields untended and the animals ate them and they have no way of getting more. The three that have do not have enough to share with the others. **OVERALL:** Really disappointing. Production seems to have been highly satisfactory and the community is highly engaged; and yet lack of care for the vines in the off-season means that most of the gains achieve in this community will be lost. **Lesson:** The three that stored the vines had backyard gardens which in an intervention that PCI project was promoting in the area and had these three as participants. Moving forward it would be a good idea if the AgDiv project ties up the drip kits to vine multiplication because vine availability remains a concern given that sweet-potato harvest is usually around May and the next planting season comes in November.

Inoculant

This was trained on how to use inoculant. The project supplied the inoculant way after the groundnuts had been planted and the community refused to take it.

Final note: United Purpose staff who requested 8 bunches for various new communities this year have been told that they will only receive two, repeating the errors of the Blantyre groups – not enough to make a difference.

----- Standard FGC questionnaire -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **Beginnings in OFSP.** Has it been successful? Of these three, which has been most successful for you? **OFSP.**

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No.** Why? Have your yields in this crop increased, decreased, or remained the same? **No.** Why? Has money you earned from these crops increased, decreased, or remained the same? **No.**

FGQ3. Which AgDiv technology interventions are you using? **PICs bags.** Which have been the least beneficial and why? **Bamboo.**

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **No/ not applicable.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No.** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No**

and no. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? No.

GQ6. Because of this project, do women Noo and youth No have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? Yes.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? None so far successful. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? Timely delivery of inputs based on the agricultural calendar of the region.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. Not applicable.

Focus Group Questionnaire (Farmers/Women)

Village Name Chiothela
 District/EPA Dedza and Linthipe EPA
 Date: 10/30/2019
 Number Participants: 3 men, 1 woman

GPS Coord: 14°13'7.00"S; 34° 1'59.00"E
 Tape setting start: 32
 Tape setting finish 0:58

		PICS bags	OFSP	Bamboo	Inoculant
Chivumbulutso Jasiteni	Absent				
Bazale Laisi	Present				
Samalani Elenewo	Present	No	Yes	Yes	Yes
Tikambitsane Mailos	Absent				
Lodesi Speshulo	Absent				
David Chimtudulani	Absent				
Chimwemwe Bikoko	Present	No	Yes	Yes	No
Nalinde Madalitso	Absent				
Mtiliza Chimtenje	Absent				
Yasoni Yohane	Absent				
Apatsa Lukasi	Absent				
Enesi Speshulo	Absent				
Mpangananji Josiyasi	Absent				
Kachitanni Jason	Present	Yes	No	Yes	Yes
Limitoni Mailosi	Present	Yes	Yes	Yes	Yes

Group was lively and discussion was good. United Purpose is the implementer. Lots of activities over the years. Discussion took place follows:

Each FGD participant received four bamboos—reportedly in Nov 2017, which would perhaps make it not part of AgDiv (though clearly a part of United Purpose.) They say one of the purposes of these bamboo is combat soil erosion and foster conservation, but it is a hard to completely believe them. The place is chock-blocked full of native bamboo plants, hundreds of them all around, and there is no evidence of soil erosion. After a year and a half (supposedly), the plants are not yet 3 feet high, *“because this variety sends off a lot of little shoots.”* No training was offered but they used their own experience to care for the plants. Also they reported listening to the radio program that promotes bamboo nurturing. Total survival rate of the four is 65%. The reported distribution was 100 shoots at 5 per participant for 20 club members.

Three of the four FGC participants received inoculant as part of a “package” of inputs that U.P. began since 2016. There was a training/ demonstration plot where the benefits of the inoculant could be compared side by side with untreated plants. The treated plants had more luxuriant growth and are less susceptible to insect attack. One person experimented with inoculant for groundnut and noted fuller pods and better yields. The individual farmer takes out a loan from the cooperative of 10 kgs of seed and must repay 20 kgs at harvest, and the coop can sell the 20 kgs. and with the proceeds, purchase more inputs for next season.

Two FGD members had PICS bags, five each, which seems unusual. They reported they got this as members of one of the coop's 'clubs,' which is a group of 20 committed to this-or-that intervention. And the inputs they get from the coop depend on whether that 'club' is getting an input. The woman participant who was only member of one 'club' (because of her husband) did not seem to object to not getting the different inputs that the other three FGD members reported getting. The three reported that "PICS bags are not available locally", (though we have verified earlier before the meeting that they were), perhaps a sign of not being willing to pay the cost.

Only one FGD member had experience with OFSP but reported that 20 members of one club got four bundles each. U.P. had numerous sessions on the nutritional value of OFSP (nutrition being an area of concentration for U.P.) The group reported that "most" still had vines left over and wanted to sell them to U.P. as part of a scale up effort – **not a bad idea!**

Overall: Probably a "B." The FG was small and so results should be treated carefully but it seems a lot of interventions are going pretty well in this village

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **Yes for OFSP.** Has it been successful? **Yes.** Of these three, which has been most successful for you?

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **Not mentioned.** Why? Have your yields in this crop increased, decreased, or remained the same? **Maybe a mild increase?.** Why? Has money you earned from these crops increased, decreased, or remained the same? **N/A**

FGQ3. Which AgDiv technology interventions are you using? **NOFSP, PICS bags, inoculants, bamboo** Which have been the least beneficial and why? **OFSP seems to have the highest potential**

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **Not applicable.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No.** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no.** Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No.**

GQ6. Because of this project, do women **No** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **No**

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **OFSP.** Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable.**

Focus Group Questionnaire (Farmers/Women)

Village Name Chikwasa =

GPS Coord: 14°10'3.00"S; 34° 9'14.00"E

District/EPA Dedza_ and Kaphuka EPA

Tape setting start: 33

Date: 10/30/2019

Tape setting finish 1:25

Number Participants: 5 men, 5 women

		Drip-Kits	PICS bags	OFS P	Bambo o	Inoculan t
Tanazio Saidi	Absent					
Mercy Dausoni	Present					
Peter Chiwaka	Present	No	Yes	Yes	Yes	Yes
James Malunga	Present	Yes	Yes	No	Yes	No
Thomas Tanazio	Absent					
Abudu Juma	Present	Yes	Yes	Yes	No	Yes
K. Piya (Chrispin Kapingaka Phiri)	Present	No	Yes	Yes	No	No
Khadija Cassim Mwachande	Present	No	Yes	Yes	No	No
Namazani Chinthenga	Present	No	Yes	Yes	Yes	Yes
Hendreson Lestara	Absent					
Lusiya Kimu	Present	No	No	Yes	Yes	Yes
Martha Victor	Present	No	Yes	Yes	No	No
Yacinta Anthnoy (present but not invited)	Present	Np	No	Yes	Yes	No

Group was lively and discussion was good. United Purpose is the implementer. Lots of activities over the years. Discussion took place follows:

Two members received Drip-kits recently, June-July, 2019, of a total of 25 distributed in the village. Both got it for their membership in a “care group” that is growing a vegetable garden for infirmed members of the community—which is a strategy we have heard from U.P. that it carries out.

Eight FGD members received six bundles of OFSP in February (late). Several of them planted the vines on lowlands to replicate and had some success. They reported it was an early maturing variety and produced a good harvest. Reported production was 2 bags + 3 +0 +1 +1 +3 +2 +0 = 12 bags @ 75/80 kgs./bag = 930 kgs. Not super production but something. Unfortunately, goat grazing in the field after the maize harvest destroyed the vines of five of the eight, leaving only three with some vines left for next year. This distribution showed that there was not enough to distribute in the face of high demand. Also, a February delivery means that most of the choice land has already been taken by other crops.

Five FGC participants received inoculant in January by which time most of them had already planted. They like the technology and saw on a 10X10 meter demo plot that they set up that plants with inoculant produced 43 kgs, while the untreated plants only produced 30 kgs. They note, though, that a hectare of production would require 10 packets of inoculant with a shop price of over MWK 1,000 which would be prohibitive for most of them. One man (a tobacco farmer) is so convinced that in spite of the cost, he plans to plant 1 HA with inoculant next season. The challenge is that the inoculant is not readily available in the local shops.

Five FGD participants received four bamboos—reported (again) in Nov 2017. They say that it is a “fast growing variety” but the two plants that we saw were not very big after growing for over 1 & ½ years. The farmer says this variety is highly susceptible to goat attacks (he lost one of his plants to his goats) and says these plants don’t recover the way local bamboos recover. Small sample but total survivability is 8 plants of 15, 56%. Another community that is chock-blocked full of native bamboo plants. The tobacco farmer has a beautiful stand of bamboo in the front patio of his house that he has been harvesting for 15 years. The group reports that over the recent several years, U.P. has distributed a lot of bamboo.

Eight FGD members last November received one PICS bags each, (except for one who is member of a ‘care group’ and got two.) They like the technology and report good results. They are resisting having to pay MWK 1,000 in the local Farmers World store (that stocks them) because until now they have gotten them for free

Overall: a “B.” There seems to be a lot of interventions going pretty well in this village.

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **Yes for OFSP.** Has it been successful? **Yes.** Of these three, which has been most successful for you?

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **Not mentioned.** Why? Have your yields in this crop increased, decreased, or remained the same? **Maybe a mild increase?.** Why? Has money you earned from these crops increased, decreased, or remained the same? **N/A**

FGQ3. Which AgDiv technology interventions are you using? **NOFSP, PICS bags, inoculants, bamboo** Which have been the least beneficial and why? **OFSP seems to have the highest potential**

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **Not applicable.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No.** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no.** Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No.**

GQ6. Because of this project, do women **No** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **No**

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **OFSP**. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable**.

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name: Mkanda (Masakawa)
33.7969848

GPS Coord: Lat -13.9098732, Lng

District/EPA: Mpenu EPA, Lilongwe

Tape setting start: 00:00

Date: 21.10.2019

Tape setting finish: 1:20:28

Number Participants: 11: 8F-3M

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a. No diversification of all 3 crops because project did not deliver seed
- b. On their own they grow groundnuts and soy, which are both successful as they get good yields with good rains.
- c. They are not able to grow OFSP as they do not have access to vines and no one is growing in their area but when they find it at the market they buy for home use.
- d. Received 4 bamboo seedlings per household

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a. Planted area has decreased as they do not have improved/increased access to seeds
- b. Yields have fallen because they usually plant poor quality/variety of seeds (own saved seeds)
- c. Income has fallen because they are not selling more due to poor yields.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a. None of the technologies are being used, as we did not receive any.
- b. One person within the group received a soy kit and is selling some soymilk.
- c. The Extension agent noted of the seven (7) communities he works in, three (3) received soy kits, but these were given to individuals.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a. No as they have not been connected to any markets

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a. CRS participants are not connected to markets; they sell to vendors who visit the communities and others take the produce to the informal markets which pay at a higher prices compared to the more formal market
- b. Participants were trained on how to locally (using pestle) process soy into milk and they can do this at household level for consumption.
- c. Received training on how they can use OFSP for juice, porridge and freeters

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.?

- a. Women are also participants and can contribute to what should be grown in the fields and how to you use the money for.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

New activities suggested:

- a. Capital investment for improved access to loans; which will improve their access to seeds
- b. Timely provision of seeds; they were promised OFSP vines but were informed it went bad whilst in transit
- c. Trainings and capacity building on farming methods
- d. Provision of soy and drip irrigation kits – they are willing to have them on loan
- e. PICS bags

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Additional Notes:

- They have not requested for inputs from CRS as they are not aware they can do so
- This EPA has 7 groups; 3 groups 1 person each received soy kits
- They have been trained on how to use drip irrigation but were told to go buy from Kanengo at K15,000 but the challenge is money but are willing to use it.
- On irrigation they use watering cans in the wet lands with others growing crops twice a year

Focus Group Questionnaire
Napolo A & B- Dedza Resilience villages

Village Name: Napolo A&B

District/EPA Dedza

Date: 11/04/2019

1:21

Participants: two men, 6 women times two groups

GPS Coord: _____

Tape setting start: no tape

Tape setting finish 0:15 +

Village is 6 kms off the road. These are two of the three Dedza “Resiliency villages” (one more reported in Ntcheu that AgDiv has been supporting with soil conservation efforts. We first visited Napolo A with one man and five or six women, then Napola B about three km. distant with one man and about the same number of women. The following project activities were visited

Community took us to a road along which we walked for about one km. where they explained to us that this was designated as a “buffer zone” to help protect their fields from excessive rainwater runoff from the nearby mountains. The group did a pretty good job about explaining what “buffer zone” meant to them, but it was hard to understand why such gently sloped land would require “buffering.” In fact, just above the fields is pretty dense underbrush that protects their lands far better than what they have expended considerable energy (hundreds of person-hours) constructing. Three lines of bamboo were planted in mid-February along the 1- 1&1.2 km stretch, probably two or three hundred giant bamboo seedlings. The reason for choosing giant bamboo was hard to understand. These plots surround the growing plots, thus do not compete for land with the planted crops. The spacing between bamboo plantings was probably at least 10 meters, -- and there were stretches where there were no plants for a hundred meters-- meaning that this variety of “clumping” bamboo would not provide much water absorption against a torrent of water, even if the seedling take successfully.

In fact, there is, serious doubt whether the seedling will take. They were delivered very late in the planting season – after Valentine’s day, i.e., end of February when the rains were tailing off. They are almost a ¾ km. away from the water source, meaning that the women reporting having to bring 20-liter jugs of water up the hill to water each of these hundreds of plants – and that they do so “maybe twice a week.” We did not count the hundred of plants, but our “eyeball estimate” is that *at the very least 50%* of them have already died, more like 75% --- numerous photos show this – and that another significant proportion of the plants will be dead by the middle of the dry season next year. Note that this is mostly women’s work, 253 of them (vs.147 M)—for cultural reasons that are hard to justify, thus the project has added an extra burden to women’s workloads with very little—one would say “no” return on their effort. For this part of the project **OVERALL: failure.**

The group also did some Herculean work on 119 meters of gully protection, placing hundreds of 20 kg. stones in ‘check dams’ down the length of a moderately eroded gully. This is good work—if physically very demanding. There is some protection against future erosion that will likely be the result from this effort. Pictures available. **OVERALL for this component:** “C” —pretty good work but physically very difficult and with very little demonstration effect. A post Rainy Season evaluation of the real success of this activity is very much required.

The group also constructed ¼ km of swails and water absorption trenches, in a few places planted with vetiver. Placement of the trenches is a little questionable, -- separated from the other work by at least 500 m—but the work is not bad. **OVERALL for this component:** “C.” Good (enough) work but without

much vision of how it fits with the overall need of the community nor with any overall soil conservation planning.

OVERALL for soil conservation in Napolo: no higher than a “C”

Group also received PICS bags in large quantity – to the point that they have fifteen bags yet undistributed (unheard of in almost all other interviews)

Community has a grain storage, storing ten or more PICS bags for the long term)

58 drip kits, a huge number for one area!): two each for the 27 villages that make up this cluster.

Napolo “B”

Group was one man and about six women. This community only started two months ago, Sept. 2019. 164 women of 200 total, participating in “village improvement” activities. In that time, they have excavated two water absorption trenches, 27 swails, begun tree seedling of exotic and local varieties. In December they think they will receive 10 bamboo each, $10 \times 200 = 2,000$. The first trench is a big one, 147 meters long, one meter deep, two meters wide and 30-40 cm. at the bottom of the trench. This is a TON of work! There is a second smaller trench ten meters higher up the slope of 36 meters. The contour line of the trench had some weaknesses that were discussion with the people, and they apparently recognized the weakness and were planning to address the issue. Time will tell. According to them, the purpose is to prevent flooding and road wash out during the rainy season for the farmer fields below. Women were asked to explain the construction and purpose of the trench and did so well.

On the way back to the car, a number of swails were seen about 10 meters apart in an attempt to slow rainwater runoff on moderately sloped fields. The swails were “eyeballed” to be built on the contour pretty well. They said they used a “line level” (which I am unfamiliar with though it appears by their description to be a hand-held replacement for an “A” level. The contour line on the larger trench described above was less well done. The group received snacks and drinks on their work days from U.P (and seemed to value the contribution far more than its economic cost); also received gumboots, two soy kits and some demonstration seed.. Inoculants were delivered but many weeks after the crops had been planted, and so worthless.

OVERALL: “B.” This is a fledgling group and they have begun with great energy and enthusiasm. It seems important not to over-tax their initial enthusiasm, nor to burden them with (for them) public works projects that require great commitment of manpower (in this case, woman power.). It will be important to see the effectiveness of the soil conservation structures during the rainy season to see whether this group can continue to build on this year’s activities. “B” for enthusiasm and hard work. Not yet “A” in terms of impact on people’s lives or assessment of the technical quality of the work.

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name Kasiya

GPS

Coord:

District/EPA _____

Tape setting start: _____

Date: Nov 1, 2019

Tape setting finish _____

Number Participants: 16 (1F); (15M)

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a. Before AgDiv planted tobacco and maize; now plant tobacco, groundnut and maize. Groundnut fetches highest prices & yields are good.
- b. Were not given a choice to plant soy by Limbe Leaf (LL), but prefer G/Nuts. However, some farmers grow soy on their own, but not part of the package.
- c. G/nut seed given to us by LL. No soy or OFSP

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a. About 60% said their land area was the same. About 40% said it was decreasing because of more family members to share the same amount of land.
- b. In 2017-18 yields were good, as was income. But in 2018-19 heavy rains destroyed much of the crop so income fell.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a. PICS bags were received in October which was on time for harvest; number bags per farmer depended on number hectares: 3 PICS/Ha; several received 6 and several 9. They use the PICS mostly to store seed and maize. Did not purchase PICS bags on own because was not in shops.
- b. Bamboo – 10 seedlings for each farmer; bamboo was planted in fields as a hedgerow; in wetlands; and near the house. Survival rate varied – average about 20% survival. A few about 80%; more about 60%; one person all seedlings died – most common cause of loss was termites. One man said Bamboo has been a huge success – he uses it to for fences, to roofing structures and constructing barns.
- c. No Inoculant given
- d. No Drip kits – however were told they will be trained soon (2019) so may get some.
- e. No Soy kits

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a. Input markets had mixed results with this Limbe Leaf (LL) group. Maybe a third (5-6) said the inputs they receive via loan from LL was enough; a much larger number said they purchase seed

from other farmers (farmers saved seed) because: a) it yields about the same as LL seeds; b) reduces how much they borrow and have to pay back; c) it is less expensive than LL seed.

- b. Group also mentioned that LL seed is not always reliable – in 2017 G/nut had only a 45% germination rate – LL did not charge them but yields were so small that farmers suffered that year.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a. First two years, sold groundnuts to local vendors; LL did not purchase their G/nuts.
- b. Third year LL offered to buy G/nuts but farmers were informed late, so had already sold most of it to local vendors (traders). Some farmers did sell to LL, said the prices were about the same as with local vendors; however with LL have transport costs to get the grain to their warehouse; local vendors come to their homes, so no transport cost.
- c. Diversified diets – mixed responses -- about 1/3 of the group kept some groundnuts for home consumption; a few said they consume vegetables when they have them, but most do not purchase because can't afford it. Others said they do not eat diversified diets.
- d. The FGD group did not receive Nutrition Training; Did not receive Gender Training
- e. Observation – this LL group of farmers were clearly not as well off as Pyxus farmers, or Horizon farmers – LL support was definitely at a lower level.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- a. Women have organized themselves into VS&L groups, and have taken out loans that way; but these groups have received no outside support from AgDiv or anyone else, so their loans are small and terms difficult, must repay loan in one month.
- b. Men borrow from wives and use loans to buy inputs; loans used for other household needs.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a. **Desperately need access to loans to buy farm inputs and use to start small businesses.**
- b. **Also would like loans to improve their homes.**
- c. Need improvement in output markets – farmers are at the mercy of vendors.
- d. Diversification should go beyond crops to also include livestock to better diversify income.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Focus Group Questionnaire (Farmers/Women)

Village Name Nisipe
District Ncheu
Date: 11/01/2019
Number Participants: 1 man, 20 women

GPS Coord: _____
Tape setting start: 36
Tape setting finish 1:01

Group was lively and discussion was good. This is a group of active VS&L participants and last year they had a MWK700,000 bank account that distributed to members. It was also this was a Limbe Leaf community. Discussion took place follows:

In January 2019, Limbe Leaf distributed 10 kg. of groundnut seed to each member and the plants were doing well until the onset of a drought period when the plants were podding. The contract was free seed and inoculant, and a guaranteed price of MWK 450/kg, agreed upon beforehand. Though the market price is MWK 600, they think this is a fair price because of the free inputs. (After the meeting it was reported that Limbe Leaf is changing this system this year.) L.L also provided agronomic advice on aflatoxin prevention, and other training services that they appreciate. Harvest was very small: 200 to 250 kgs of CG7. They thought L.L. would come to pick it up but they never did. They are still interested in a contract with L.L. and hope the company comes back though they had not taken any initiative to reach out to the company for that purpose. Perhaps as a result of our visit they will do so.

Last year the Catholic Church, CCJP, (not AgDiv) gave each of them three bunches of OFSP that they have had good success with. Everyone was able to produce and some got as much as 7-10 bags of product that they were able to sell in the market and eat at home. Nine of the 20 still have vines for the next season (now)—an early maturing variety that sells well in the market, and those who have will sell extra vines to those who do not have for this year's cultivation season.

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **Last year but not so far this year.** Has it been successful? **No.** Of these three, which has been most successful for you? **OFSP but not provided by AgDiv**

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **Not mentioned.** Why? Have your yields in this crop increased, decreased, or remained the same? **Last year's production was very poor because of untimely drought.** Why? Has money you earned from these crops increased, decreased, or remained the same? **N/A**

FGQ3. Which AgDiv technology interventions are you using? **Groundnut from Limbe Leaf if they come back** Which have been the least beneficial and why?

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **If Limbe Leaf comes back (we don't know) it will be better for us.**

FGQ5. Because of this project, are you better connected to markets to sell in? **No.** Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No**

and no. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? A little bit more of OFSP (but not from AgDiv.

GQ6. Because of this project, do women No and youth No have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? No

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? OFSP. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. Not applicable.

Focus Group Questionnaire (Farmers/Women)

Village Name Kaphuka GPS Coord: _____
District/EPA Dedza Tape setting start: 33
Date: 10/30/2019 Tape setting finish 1:25
Number Participants: 5 men, 5 women

Group was lively and discussion was good. United Purpose is the implementer. Lots of activities over the years. Discussion took place follows:

Two members received Drip-kits recently, June-July, 2019, of a total of 25 distributed in the village. Both got it for their membership in a “care group” that is growing a vegetable garden for infirmed members of the community—which is a strategy we have heard from U.P. that it carries out.

Eight FGD members received six bundles of OFSP in February (late). Several of them planted the vines on lowlands to replicate and had some success. They reported it was an early maturing variety and produced a good harvest. Reported production was 2 bags + 3 +0 +1 +1 +3 +2 +0 = 12 bags @ 75/80 kgs./bag = 930 kgs. Not super production but something. Unfortunately cattle grazing in the field after the maize harvest destroyed the vines of five of the eight, leaving only three with some vines left for next year. This distribution showed that there was not enough to distribute in the face of high demand. Also, a February delivery means that most of the choice land has already been taken by other crops.

Five FGC participants received inoculant in January by which time most of them had already planted. They like the technology and saw on a 10X10 meter demo plot that they set up that plants with inoculant produced 43 kgs, while the untreated plants only produced 30 kgs. They note, though, that a hectare of production would require 10 packets of inoculant with a shop price of over MWK 1,000 which would be prohibitive for most of them. One man (a tobacco farmer) is so convinced that in spite of the cost, he plans to plant 1 HA with inoculant next season.

Five FGD participants received four bamboos—reported (again) in Nov 2017. They say that it is a “fast growing variety” but the two plants that we saw were not very big after growing for over 1 & ½ years. The farmer says this variety is highly susceptible to goat attacks (he lost one of his plants to his goats) and says these plants don’t recover the way local bamboos recover. Small sample but total survivability is 8 plants of 15, 56% Another community that is chock-blocked full of native bamboo plants. The tobacco farmer has a beautiful stand of bamboo in the front patio of his house that he has been harvesting for 15 years. The group reports that over the recent several years, U.P. has distributed a lot of bamboo.

Eight FGD members last November received one PICS bags each, (except for one who is member of a ‘care group’ and got two.) They like the technology and report good results. They are resisting having to pay MWK 1,000 in the local Agora store (that stocks them) because until now they have gotten them for free

Overall: a “B.” There seems to be a lot of interventions going pretty well in this village.

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **Yes for OFSP**. Has it been successful? **Yes**. Of these three, which has been most successful for you?

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **Not mentioned**. Why? Have your yields in this crop increased, decreased, or remained the same? **Maybe a mild increase?**. Why? Has money you earned from these crops increased, decreased, or remained the same? **N/A**

FGQ3. Which AgDiv technology interventions are you using? **NOFSP, PICS bags, inoculants, bamboo** Which have been the least beneficial and why? **OFSP seems to have the highest potential**

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **Not applicable**.

FGQ5. Because of this project, are you better connected to markets to sell in? **No**. Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no**. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No**.

GQ6. Because of this project, do women **No** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **No**

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **OFSP**. Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable**.

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name Mkanda-Mchinji

GPS Coord: _____

District/EPA _____

Tape setting start: _____

Date: October 31, 2019

Tape setting finish: 1hr13mins40secs

Number Participants: 11: 10M/1F

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a) Project started in 2016. The Farmers World Agronaut used the AgDiv G/nut, Soy and OFSP in the Demonstration Plots (per FW instruction). The Agronaut (Maria) had formed 15 Farmer Groups, each with 15-25 members. The Agronaut visits farmers twice monthly.
- b) Soil tests were taken and fertilizers used that were consistent with soil nutrient deficiencies. Fertilizer trials were the basis of the Demo's – those with FW blended fertilizer, and those using regular fertilizer. Field Days are held at different times of the crop season calendar to demonstrate fertilizer and GAP effects.
- c) In 2019, 30 farmers also had soil tests and results will be given to them shortly with recommendations (the results have taken 1.5 months). Fertilizers will be blended for them that are consistent with soil deficiencies.
- d) Farmer's purchase improved G/nut and Soy seeds from Farmers World; farmers also recycle their seed. OFSP vines from the Demo Plots were distributed to Farmer Groups and farmers multiply the vines and grow OFSP. So yes, G/nut, Soy and OFSP was successful for these farmers.
- e) Farmers received training for soy, G/nut and OFSP.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a) Area planted has not increased, but yields for these farmers have increased. Some farmers planted 1 acre of OFSP where they used to plant maize. OFSP does not need fertilizer so less expensive to grow and has high yields and sells at the local markets.
- b) Incomes have gone up, but output markets are limited to local venders (traders) who take advantage of them. Input costs have also gone up which hurts.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a) Purchase our own improved seeds of Soy, G/nut. Were given OFSP vines through the Demo.
- b) OFSP has been particularly beneficial – grow it in the wetlands and can get two crops. Grow vegetables in wetland also, two crops.
- c) Received inoculant, but it arrived late so could not use it; returned it.
- d) No drip kits; no soy kits; no bamboo
- e) PICS – yes received 1-2 bags in 2017 and 2018, and training.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a) We are better connected to input markets through Farmers World, which is working with AgDiv. Also, FW organized farmers through formation of 20 farmer groups; is also providing valuable training on GAP, soil testing, and use of improved varieties.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a) No, we are not better connected to output markets; sell only to local vendors.
- b) Household livelihoods have improved, but only moderately. More food is available, and OFSP has helped diversify diets.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a) Input loans to top up what they have hence increase in yields
- b) Trainings in their farmer clubs.
- c) Access to output market

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Farmer	G/nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Sow cows	Soil Cons.
Farmer 1 (M/F?)									
Farmer 2 (M/F?)									
Farmer 3(M/F?)									
Farmer 4 (M/F?)									
Farmer 5 (M/F?)									
Farmer 6 (M/F?)									
Farmer 7 (M/F?)									
Farmer 8 (M/F?)									
Farmer 9 (M/F?)									
Farmer 10 (M/F?)									
Farmer 11 (M/F?)									
Farmer 12 (M F?)									

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name Mngwangwa (FW)

GPS Coord: _____

District/EPA _____

Tape setting start: 00:00

Date: October 31, 2019 _____

Tape setting finish: 1HR 11MIN

13SECS

Number Participants: 10: 9M/1F

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a. Received soy, groundnuts, OFSP (and maize). Apparently the seeds from AgDiv were used to develop demonstration plots for Farmers World farmers. Original plots were 30m x 40m but reduced size to 15m x 40m to reach more villages. Each village has 2 Demo plots.
- b. FW formed Farmers Groups – this Agronauts has 7 GVH, 13 clubs or farmers groups, and roughly 15-20 members per club (260 farmers; 60% female/40% male).
- c. Demo's reflect FW soil tests on Demo plots and use of Legume fertilizer for g/nut and soy, based on soil test results. Yields with Legume fertilizer were definitely superior to controls.
- d. Five farmers from the group received soil testing on their farms; results came back this week, so are waiting for recommendations.
- e. The Agronaut has been helpful; off-season visits twice/month; in crop season, one a week.
- f. Farmers plant the same crops (soy, g/nut, OFSP) on their farms; purchase inputs from FW when they can, and supplement with saved seed. FW Extension Service is appreciated – trained in all aspects of agricultural production (GAP) – planting techniques, fertilizer use, weeding and maintenance, harvest, postharvest (PICS). Everyone received 1 PICS bag in 2016-17 and 1 in 2017-18.
- g. OFSP - Farmers received 1 bundle each of OFSP – a total of 150 bundles.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a. Land area is basically the same but yields have increased a lot due to improved farming methods provided by the Farmers World extension services. However, when selling the grain, farmers are taken advantage of by venders and receive low prices.
- b. Money has increased somewhat because of higher yields – farmers are better off, but not a lot, but appreciate the improvement.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a. OFSP, soy and groundnut. All are good and useful.
- b. No drip irrigation, no bamboo seedlings, no soy kits.
- c. No inoculants but trained on them. They have been advised that they will receive this planting season

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a) Farmers purchase most of their seeds from FW because the quality is good, but they are more expensive. Sometimes cannot afford it, so will use saved seed and/or purchase from “travelling venders” – but then have problem with fake seed.
- b) Farmers seem very pleased with FW extension support and FW products.
- c) Kept saying they need loans so they can buy inputs – then they could expand area planted and increase yields.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a) No – sell only to local venders where we are taken advantage of – have no reliable place to sell our farm output.
- b) Crop quality is better because of improved seeds and training by Agronauts, but prices still low.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women’s ability to make decisions on assets, loans and their use?

- a) Yes, VS&L groups are available, and both men and women have taken out loans to start small business to supplement income. Also use the loans to pay for school and other household needs.
- b) Gender training has been good – have received from several organizations, including FW (via AgDiv). Women are more involved in decisions, and men are more receptive to helping around the house.
- c) Women comprise 60% of the farmer clubs reached by FW

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a) Program successful;
 - i. Now have more food due to improved farming methods.
 - ii. Able to sell excess
- b) Would like more training, longer training, and on different topics; not just a few hours.
- c) Learning Visits to see what other farmers are doing, especially the more successful ones.
- d) FSU provides good farm services, but badly need financial support to purchase inputs (loans)

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Note: farmers purchased their own soy and groundnut seed from FW; not from AgDiv; seeds from AgDiv were used on Demonstration Plots. OFSP was received from AgDiv.**

Farmer	G/nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Sow cows	Soil Cons.
Farmer 1 (M/F?)	x	x	x						
Farmer 2 (M/F?)	X	X	X						
Farmer 3 (MF?)	X	X	X						
Farmer 4 (M/F?)	X	X	X						
Farmer 5 (M/F?)	X	X	X						
Farmer 6 (M/F?)	X	X	X						
Farmer 7 (M/F?)	X	X	X						
Farmer 8 (M/F?)	X	X	X						
Farmer 9 (M/F?)	X	X	X						
Farmer 10 (M/F?)	X	X	X						
Farmer 11 (M/F?)									
Farm 12 (M F?)									

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name _____

GPS Coord: _____

District/EPA ____ Chapsinja/Chinsomba

Tape setting start: 00:00

Date: ____ October 28, 2019 _____

Tape setting finish: 1hr18min13secs

Number Participants: ____ 28 all Women _____

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a) Were told they would receive improved seed but did not. Did not receive any seeds for Groundnut or Soy; did not receive any OFSP vines; so no, we were not able to diversify production because of AgDIV but on our own which does not include OFSP.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a) Our land for these crops is shrinking because we must share our owned land with our children, so our plots are getting smaller. Cannot afford to buy land or rent land. Nor do we have improved seeds to increase our yields and income.
- b) Income has declined due to poor yields; also, are taken advantage of by venders because need money immediately when we sell.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a) Started with Project in 2018. At that time there were 10 groups with 15 people in each group or 150 farmers; later 10 more Groups were formed, each with 15 people of which capital injection will start in 2020.
- b) AgDiv gave a Capital Injection of 300,000 KWA to the first 10 groups. Twenty (20) women took out loans and used the money to start small businesses – selling fruits and vegetables; cooking snacks for sale, buying farm inputs; the income helps the family.
- c) June 26, 2019 10 soy kits were received and distributed to one participant in each of the 10 groups with the capital injection. Soy kits cost 60,000 KWA and loans from the VSL are being used to repay soy kits. Women like the soy kits and are making money from them. One woman was making close to 3,000 KWA in one-week from sale of soymilk. They also like drink the soymilk.
- d) 10 Drip irrigation kits were received for backyard gardens – 1 person from each of the first 10 groups received these kits at a cost of 6,000 KWA. Nearly all the women have backyard gardens though not only at home but also in the wet lands. Two women received training on drip irrigation; these women train others how to use them though not doing so in an active manner as others have not been supported with the process they only went and appreciated how others did it and they replicated.
- e) Women were given training on how to construct Rocket stoves – they are using them and are an improvement over traditional methods.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a) No they are not better connected to input markets – cannot afford Farmers World seed, so purchase seed from local agro dealers and have problems with fake seed.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a) No, sell only to local venders and are taken advantage of because sell immediately after harvest because they need the money.
- b) These women are also connected to Horizon Farms, but have difficulty using the markets because our quality is not good enough – cannot meet the standards.
- c) Women received nutrition training twice and felt they learned a great deal – they spoke VERY highly of the trainings and want more. This was also an incentive for the backyard gardens. Women are using more vegetables, groundnut and soy in their cooking now. Received training in cooking nutritious foods also – “One-Pot Dish” and are using the recipes.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women’s ability to make decisions on assets, loans and their use?

- a) Yes, they did have much better access to credit, and it has been a huge help for them. Many more women want to have access as well – AgDiv is supposed to give Capital Injection to 10 more VSL groups this year.
- b) Gender training was given where both men and women attended. The women liked the training Very Much, and said it has improved their lives; they would like more training.
- c) Note: these women spoke very, very highly of all the training programs they received – they are thirsty for knowledge and appreciate all that they have learned.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a) More Capital injections into VSL groups so they can start more businesses, and purchase machinery to make value-added products like peanut butter, soy milk, soy and groundnut flour, etc.
- b) Were introduced to COFI but was too expensive – to get a 50,000 KWA loan, must deposit 10,000 KWA and then pay an additional 3,000 KWA. They could appreciate if COFI also collects the payments close to where they stay so they save on transport cost to town.
- c) Want G/Nut seeds, soy seeds, OFSP.
- d) More drip irrigation – they have access to water from a dam, so drip would be perfect.
- e) More soy-kits and technologies for making g/nut flour, paste.
- f) Would like more training on Gender, Nutrition, and GAP.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name_Phanga

GPS Coord:

District/EPA_Wukwe EPA, Lilongwe

Tape setting start: 00:00

Date:__October 28, 2019__

Tape setting finish:1hr 07mins 36 secs

Number Participants:__11: 6F/5M__

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a) The group is organized into a farmer field school and receive agriculture support from AgDIV through government extension services.
- b) No. In 2017 received OFSP vines of six varieties but just enough to do 1 demonstration plot. Planted it on 0.25acre plot. Multiplied it and shared it with 30 members (pass-on program). All of it was planted, but the rains were very poor and all of it died.
- c) Soybeans – in 2017 also received one (1) 50kg bag of improved soy seed, distributed to 30 people, so each participant received 1.8kg seed. Planted it, and then we had to give back 100kg seed, which we did – we had a little left over for ourselves. In 2018 received more soy seed, but the rains were heavy and destroyed much of the crop. FGD participants said they harvested between 25-50 kgs of soy each for the 2018 season. Used the soy for household consumption, only 1 managed to sell. Have not yet received seed for 2019.
- d) Did not receive groundnut seed.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a) Land area is getting smaller because have to share land with children and have no money to buy land. Some have rented extra land.
- b) Five of the men are also growing tobacco, but cutting back as prices continue to fall.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a) Received inoculant for soy, and it made a difference – better.
- b) Did not receive drip irrigation.
- c) Did not receive bamboo.
- d) No soy kits
- e) This group did not benefit from interventions – very weak interventions and a poor community that are basically on their own.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a) Purchase from Farmers World which has good inputs, but expensive for them.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a) Output markets – sell only to local vendors and are taken advantage of because need money immediately after harvest.
- b) At the time of visit, the farmers showed us some of the tomatoes they harvested and are rotting because they have nowhere to sell. Probing if they could not sell to the city, they said where to start from is a challenge but they would be interested.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- a) Two women were members of a Cooperative (280 members) and sell to the cooperative, which is helpful. Coop has a warehouse near Farmers World, which is only 1.2 km distant. Also have access to certified seed on loan. Able to access VSL loans through the cooperative.
- b) Five women are members of an independent VSL with no link to a Micro-finance firm. Charges 30% interest and must repay loan in one (1) month. Loans usually used for small scale business and farm inputs.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a) Received nutrition training, which was very good.
- b) Gender training – very helpful and brought “enlightenment” – it actually has improved their marriages.

Additional Resources

- a) Access to affordable inputs
- b) Access to loans
- c) Soy kits and small machinery to make value added products like soy flour, groundnut flour, soy milk.
- d) Capital injection into VSL
- e) Drip irrigation
- f) Better access to output markets.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Farmer	G/nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Sow cows	Soil Cons.
Farmer 1 (M/F?)		X	X						
Farmer 2 (M/F?)		X	X						
Farmer 3 (M/F?)		X	X						
Farmer 4 (M/F?)		X	X						
Farmer 5 (M/F?)		X	X						
Farmer 6 (M/F?)		X	X						
Farmer 7 (M/F?)		X	X						
Farmer 8 (M/F?)		X	X						
Farmer 9 (M/F?)		X	X						
Farmer 10 (M/F?)		X	X						
Farmer 11 (M/F?)		x	x						
Farm 12 (M F?)									

Focus Group Questionnaire (Farmers/Women)

Village Name Kantwanje

District/EPA Balaka

Date: 10/25/2019

Number Participants: 2 men, 5 women*

GPS Coord: _____

Tape setting start: A10

Tape setting finish 0:48

This FGD was scheduled for Friday afternoon (after Mosque prayers in this substantially Muslim-influenced part of the country.) According to UP staff, it is a very large area comprising 27 groups. There were two funerals in neighboring villages also this day, so FGD attendance was very small. It was a 2018 community. The discussion started with only three people, the Lead Farmer (a man who took over most of the conversation), and two women, one of whom did not seem to have much (if any) connection to the project. Conversation was difficult, and F.S felt at times that the three members had separate agendas, and that we were not getting a full picture of the situation. Three other women joined late in the discussion but did not have any meaningful contribution. Discussion took place follows:

Area has only received OFSP and PICS bags [contradicted later on]

Distribution was one PICS bags/person but did not get to everyone (lady in the middle didn't get one)

PICS bags started in 2017 as a pilot, scaled up in 2018, nothing in 2019

PICS bags used to store seed and pigeon pea (from another AgDiv project)

Also drip kit distributed in September [??], 100 of them for free [??] Lead farmer was one who got one, although they were supposedly directed to "care groups." UP supposedly promoting the consumption of at least six nutrition group of foods [possible- It is a WEAS concept]

Additional clarification: 2 PICS bags each in 2017; one additional bag each in 2019

Some farmers went to Balaka to try to buy on their own.

MTE with substantial reservations about the honesty and transparency of this group. Suspected hidden agendas and the discussion largely controlled by the Lead Farmer with an obvious vested interest.

----- Standard FGC questionnaire not used in this FGD -----

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? **No**. Has it been successful? **No**. Of these three, which has been most successful for you? **No**.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? **No**. Why? Have your yields in this crop increased, decreased, or remained the same? **No**. Why? Has money you earned from these crops increased, decreased, or remained the same? **No**.

FGQ3. Which AgDiv technology interventions are you using? **None so far**. Which have been the least beneficial and why? **PICS bags may have potential**.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable? **Not applicable**.

FGQ5. Because of this project, are you better connected to markets to sell in? **No**. Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? **No and no**. Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? **No**.

GQ6. Because of this project, do women **Yes** and youth **No** have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use.? **Yes.**

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? **None so far successful.** Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources? **Timely delivery of inputs based on the agricultural calendar of the region.**

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box. **Not applicable.**

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name Chimtaka

GPS Coord: 13 45'19.2"S

District/EPA Machichi Coop, Chioshya EPA, Mchinji

Tape setting start: 00:00

Date: Oct 23

Tape setting finish: 1hr 38mins

07sec

Number Participants: 5M; 3F

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a. Mixed group interview – 7 members, one non cooperative-member, but he benefited from A-D intervention activities. AD advised that they could share Interventions with non-cooperative members, this was used as an incentive for them to join the Coop. Coop has 180 members.
- b. AD approached the Coop and they began with AD in July 2018.
- c. Coop members were already growing soy and groundnuts; AD brought inoculants for their g/nuts and soybeans.
- d. PICS bags – 1,000 at first, followed with another 1,000. Four additional coops in area, so they shared with all of them hence each farmer received 1 bag for free.
- e. OFSP – AD delivered 1,000 bundles shared among five Coops; all of it was planted and harvested; OFSP was early maturing which was good because they received the vines near the end of the season. As a result, can't tell if it was a good harvest compared to local varieties. If planted at beginning of rains, might yield more; will see next planting season.
- f. Soy kits – received 4 kits with training. Were given to four women and they are into soy milk production.
- g. Received intensive training from AD for all interventions received.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why?

Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a. Soya and groundnuts own saved seed – used inoculants and saw improvements – crops looked healthier and were more resistant to pests and disease; plants grew faster and pods were better quality.
- b. However, they believe if they could have been given improved hybrid seeds, the yields would have been very good. Hopeful maybe they will get improved seeds next year from AD. If they do, will expand acreage planted for both G/nut and Soy.
- c. Coop also makes peanut butter as a value added activity. Were given the machine by Oxfam.
- d. Soy kits were given to women at end of season, so most of their soybeans were already used up. Did make what they could and sold it; soymilk is very popular. A 200ML bottle sold for 100KWA.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a. PICS bags are good, but only received 1 bag each. Would consider buying PICS bags if had improved seeds and had higher yields and quality; then use of PICS bags would be more worth it.
- b. Inoculants which resulted in good quality crops and grew fast free from diseases
- c. Would like Drip Irrigation but did not receive any. Members have wetland so drip could be used to grow crops in dry season – have access to water.
- d. Seed purchased from agro-dealers is usually fake seed and prevalent in their area – quality is poor and so is germination.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a. The Coop is not connected to input markets – does not trust local agro-dealers because of fake seed.
- b. Recently the Coop approached a Seed Company and arranged that they use the coop as an agro-dealer so that they can supply the members and surrounding farmers with good quality seed; 200 bags of maize seed has already been delivered and are now in the process of arranging for similar quantities (200 bags) of improved hybrid groundnut and soy seed for their members and other local farmers. This will ensure that farmers are not buying fake seeds as has been the case.
- c. The coop provides loans at 15-20% interest to its members through COFI to purchase inputs.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a. The Coop and farmers are not better connected to output markets. Currently sell to local vendors and merchants who offer a fair price.
- b. Earlier this year the marketing committee of the Cooperative tried to arrange a contractual arrangement with Sun seed Oil, Rab processors and Capital Foods to obtain better prices and stable markets. Could not obtain a fair arrangement for their members; prices being offered were low despite their produce being of good quality as they are trained, and conditions agreed upon kept changing, so they finally ended the discussions as they felt they were being taken advantage of. They opted to sell to vendors who do not make too many demands even on the quality.
- c. Eat diversified diets also because they receive a lot of training on how they can use the locally available resources e.g. they had cooking demonstrations/field days on OFSP which they grew and they also purchase the soy milk from the women who accessed the soy kits.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- a. The coop does work with women and youth (from age 18) – 68 out of 180 members are women.
- b. The youth and women are also able to access loans and hold leadership positions in the coop
- c. COFI is the finance institution that supports the Coop loan arrangement.
- d. AD provided gender training and the members liked it, and would like more training. The training involved the entire family, not just the women.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a. Would like to acquire a capital injection for the Cooperative. The COFI loans are for members; the coop facilitates the process. But they would like a commercial loan to invest in the Coop itself, acquire more equipment, more value addition activities, including better access to both input and output markets.
- b. Would like more business and financial training for members and management.
- c. More gender training as well.
- d. Provision of improved seeds as a starter pack and in a timely manner
- e. Support for trainings and connection to markets for peanut butter as there are more profits in it.
- f. Improved water source (borehole) to meet MBS requirements as they process food.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Farmer	G/nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Sow cows	Soil Cons.
Farmer 1 (M/F?)			X		X				
Farmer 2 (M/F?)			X		X				
Farmer 3 (M/F?)			X		X				
Farmer 4 (M/F?)			X		X				
Farmer 5 (M/F?)			X		X				
Farmer 6 (M/F?)			X		X				
Farmer 7 (M/F?)			X		X				
Farmer 8 (M/F?)			X		X				
Farmer 9 (M/F?)									
Farmer 10 (M/F?)									
Farmer 11 (M/F?)									
Farmer 12 (M/F?)									

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name__Mgulula

GPS Coord: -13.47'22.7S 32.54'53.0E

District/EPA__Zulu EPA, Mchinji

Tape setting start: 00:00

Date: __Oct 24

Tape setting finish: 57mins 25sec

Number Participants: __6M; 2F

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- h. Ordinary farmers not belonging to any group
- i. The services are offered directly by an extension officer and lead farmer
- j. AGDIV came into their area and identified active farmers in 2017
- k. The project has exposed them to OFSP as they were each given a bundle of OFSP vines. They managed to harvest the OFSP and found it to be high yielding. The only challenge is that they were not trained on them, so they just grew them like the way they grow the other ordinary sweet potatoes. However, they welcomed them as they have been hearing from the radio and when they visit the hospital that this type of potato has nutritional benefits.
- l. G/nut and soy is already grown on their own

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- e. They allocated some land for the OFSP but not a lot as the vines received were not many. However, they have kept some of the vines for this growing season and the area planted will increase as they have been able to multiply the vines.
- f. The OFSP was used for household consumption only as it was not much
- g. Land used for gnuts and soy has remained the same as they do not have access to improved seed but with access to inputs, they can increase area for planting as they have some land that has idle

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- e. AgDIV exposed them to PICS bags by distributing 1-2 per farmer and they found them to be good. After this, 2 farmers managed to buy 1-2 on their own, whilst others have not as they find it to be expensive.
- f. They have not had exposure to drip irrigation, soy kits (soy milk), bamboo seedlings and inoculants (they only hear of them from the radio)

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- d. Agro-dealers are available at a distance, but they access them, and inputs are usually available
- e. The challenge with access to inputs is cash which makes them use the same seed from the previous year now and again.

- i. Soy – K3,000/2kg and require 5 packets/.5 acres
- ii. Gnats – K1,000/2kg and requires 20kg/acre

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- d. They are not connected to any markets as such they sell to vendors who usually take advantage of them as they are desperate to sell.
- e. Their diets have been diversified with the consumption of OFSP.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- e. There are no loans provided but the women are engaged in VSL groups which enables them to do small scale businesses.
- f. During farmer meetings, extension services provides them with gender messages around women empowerment and male involvement.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- g. Will appreciate access to loans, so they can have access to improved inputs (previously they used to through CADECOM but left 2 years ago).
- h. Warehouse services so that they can store their produce; now hugely affected with storage resulting in post-harvest losses.
- i. Access to markets to sell their produce.
- j. Improved irrigation systems.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Farmer	G/nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Sow cows	Soil Cons.
Farmer 1 (M/F?)			X		X				
Farmer 2 (M/F?)			X		X				
Farmer 3 (M/F?)			X		X				
Farmer 4 (M/F?)			X		X				
Farmer 5 (M/F?)			X		X				
Farmer 6 (M/F?)			X		X				
Farmer 7 (M/F?)			X		X				
Farmer 8 (M/F?)			X		X				

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name __Mpingu

District/EPA __Mpingu__

Date: __October 22, 2019__

Number Participants: __7 Male; 1 Female__

GPS Coord: 13,59'24.3"S

Tape setting start: 00:00

Tape setting finish: 1:19:43

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a. Already producing groundnuts and soy with Alliance One prior to AgDiv. However, were using local varieties, not the improved hybrid variety distributed by AgDiv (AD). This is Year 3 with AD.
- b. Did not receive OFSP.
- c. In addition, produce maize, sweet potato (local variety), beans, and indigenous vegetables, which are used for home consumption and sold when they are not in season as they also grow in the wetlands.
- d. Previously sold soy and groundnut to local venders; now sell to Alliance One (A1). Have a binding contract to sell to A1.
- e. Before AD, grew tobacco for A1 and received a full suite of inputs (seed, fertilizer, chemicals) from them on loan for production purposes. The loan is very expensive.
- f. Recently tobacco prices have begun falling, so A1 linked with AD to diversify into soy & groundnuts.
- g. Farmers have roughly 2 hectares tobacco; 1 ha groundnut; ½ ha in soy mixed with maize.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a. Recently increased area planted in soy and groundnuts. Soy yields with improved variety were good. Yields for G/nuts were poor due to poor quality seed and the fact that the seeds were received late.
- b. Alliance 1 Area Field Supervisor explained that the seed came from Zambia and believes it was damaged (cracked and open pods) during transport, hence poor germination rates.
- c. Groundnut yields were low and then prices were low due to poor quality. A1 paid 290KW/KG, when local market was paying 400KW/KG.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a. Participants were given intensive training in tobacco, soy and groundnut
- b. Received inoculants for soy and groundnut and received training.
- c. Received PICS bags depending on number hectares; ranges from 5 PICS; 10 PICS; 15 PICS for largest.
- d. Did not receive any drip irrigation nor were they exposed to it.
- e. Did not receive soy kits.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a. Inputs are received through Alliance 1 on loan, but terms are very expensive – high prices for inputs but low prices for produce.
- b. Through Alliance, qualities of inputs are good and are received on a timely basis. Exception was groundnuts, because seeds were received late, which contributed to low yields and some farmers raised concerns around CG7 that it is not of good quality and was imposed on them.
- c. Some farmers purchase additional inputs on local market if they have to and have the money. This could happen later in the growing season when they run out of inputs for other crops.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a. Prices have been worse in the past 3 years so farmers are struggling – have school expenses; high cost of inputs; household expenses – very little extra money. Each has 4-6 children.
- b. Regarding diversified diets, they grind soybeans into flour to make porridge; also mix in vegetables when they have them in the rainy season. Rarely eat chicken, fish or meat, only on special occasions.
- c. Goats are raised and sold for cash, but are not eaten.
- d. Diets are largely porridge and sima (ground maize).

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- a. No outside credit for the men – get loans for inputs through Alliance 1.
- b. Some wives have joined outside credit, like VSL and have received loans. Men have not joined.
- c. Wives tell the husbands to stop growing tobacco, grow maize and groundnuts; but men countered that they need to grow tobacco to get loans for inputs for their crops other than tobacco.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a. No outside credit for the men – get loans for inputs through Alliance 1.
- b. Would like to have access to small home-based machines for some value-added processing to start small business, like soy kits; or processing peanut for oil/peanut butter.
- c. Would like access to drip irrigation – participants have access to wetlands so could grow crops in the dry season, including vegetables and OFSP (one farmer mentioned he has grown OFSP before on his own and he would do it again as it attracted good monies).
- d. Would like to know the buying price for their products in advance.
- e. Ag DIV/Alliance should support them with access to stable markets

8. In which Value Chain is farmer producing? Which Interventions is farmer using? Check appropriate box.

Farmer	G/nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Sow cows	Soil Cons.
Farmer 1 (M/F?)	x	x							
Farmer 2 (M/F?)	x	x							
Farmer 3 (M/F?)	x	x							
Farmer 4 (M/F?)	x	x							
Farmer 5 (M/F?)	x	x							
Farmer 6 (M/F?)	x	x							
Farmer 7 (M/F?)	x	x							
Farmer 8 (M/F?)									
Farmer 9 (M/F?)									
Farmer 10 (M/F?)									
Farmer 11 (M/F?)									
Farmer 12 (M/F?)									

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name _____
District/EPA_Chawantha _____
Date: __October 21_____
Number Participants: __13 (4M; 9F)_____

GPS Coord: _____
Tape setting start: __00:00
Tape setting finish: 54 mins 48 secs

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- a. Received 5 bundles of OFSP; variety yielded slightly more than traditional varieties. Were also trained in OFSP
- b. Pass-on Program – gave some vines to neighboring communities
- c. Bamboo – each participant received 4 bamboo seedlings and planted them.
- d. 1 person received a soy kit, but all attended training. She sells the soy in the community. People like the soy milk
- e. Did not receive any improved soy or groundnut seed despite being promised that they would.
- f. The soy they grow is from saved seed and only for household consumption.
- g. 1 person (Community Agent) received a Drip kit – all received training on drip kit.
- h. We each received one PICS bag – but consider PICS bags too expensive to purchase.
- i. The group has 30 members

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- a. Area has remained the same. Community has extra land but cannot plan because lack seed; currently using own saved seed which is low yielding.
- b. Yields have remained the same or declined due to our poor quality seed. Can't afford to buy more seed because have other competing household expenses.
- c. Income has remained the same or fallen because yields are low.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- a. The only technology group received was OFSP and are growing it. Use it for home consumption and sell some for cash.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- a. No we are not better connected to input markets. Use our own saved seed. We do not use agrodealers as we have no money to purchase improved seeds.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before?

- a. Currently sell to informal markets (roadside) because have little to sell, and need cash quickly. Not connected to more formal output markets.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- a. The participants are members of the Saving Internal Lending Community (SILC) group, similar to a VSL. Contribute 500KW and then can borrow money.
- b. Some participants use the loans for starting small-scale businesses, like buying and selling fruits and vegetables when in season. Or cooking and selling to local villagers.
- c. Women already can make their own decisions to take loans, buy or sell. Women make decisions which crops to produce, consume or sell.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- a. Only received OFSP as a technology, and this has been good. PICS bags are too expensive but agree they are good. Participants stored soybeans in them.
- b. Some participants are members of the Cooperative and sell their soy or groundnuts through the coop, but these are better off farmers. They receive a higher price, but it takes longer to get our money. They sell on the informal market because need money quickly.
- c. We can appreciate if we can be given soy/g/nuts seeds as we know the nutritional and health benefits of those crops which can better be realized if we grow them on our own other than buying.
- d. If possible, the project should also provide us with pigeon peas as they fetch good prices

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

Farmer	G/nut	Soy	OFSP	Drip irrig.	PICS bags	Solar power	Soil kits	Sow cows	Soil Cons.
Farmer 1 (M/F?)			x						
Farmer 2 (M/F?)			x						
Farmer 3(MF?)			x						
Farmer 4 (M/F?)			x						
Farmer 5 (M/F?)			x	X					
Farmer 6 (M/F?)			x						
Farmer 7 (M/F?)			x						
Farmer 8 (M/F?)			x						
Farmer 9 (M/F?)			x						
Farmer 10 (M/F?)			x						
Farmer 11 (M/F?)			x						
Farmer 12 (M F?)			x						

Focus Group Questionnaire (Farmers/Women)
(Youth if available)

Village Name: Kabudula

District/EPA__Lilongwe

Date:__October 22, 2019

1hr:22mins

Number Participants:____7 Males

GPS Coord:

Tape setting start: 00:00 _

Tape setting finish:

FGQ1. As a result of this project, have you been able to diversify your production of groundnut, soy and OFSP? Has it been successful? Of these three, which has been most successful for you? Why?

NOTE: Using table p. 2 to identify which of the three VC respondents is actively growing.

- h. Project assisted them to introduce soy but for household consumption; now because they harvest a lot, they also sell some.
- i. No OFSP grown
- j. Have just started growing g/nuts with the project in the last growing season; have supported them with improved/hybrid variety and inoculants.
- k. Previously sold soy and groundnut to local vendors; now sell to Alliance 1 (A1). Have a binding contract to sell to A1.
- l. Recently tobacco prices have been falling, so A1 linked with AD to diversify into soy and groundnuts.

FGQ2. Has your planted area under these crops increased, decreased, or remained the same? Why? Have your yields in this crop increased, decreased, or remained the same? Why? Has money you earned from these crops increased, decreased, or remained the same? Why?

- d. Recently increased area planted for groundnuts to accommodate the seeds from Alliance 1.
- e. Soy is a new crop for them, so land has just been allocated but willing to increase with increased inputs
- f. Soy yields with improved variety were good. Yields for G/nuts were poor due to poor quality seed and the fact that the seeds were received late. Despite these challenges, they still noticed differences with the local varieties as it produced more.
- g. Groundnut yields were low and then prices were low due to poor quality. A1 paid 290KW/KG, when local market was paying 400KW/KG.

FGQ3. Which AgDiv technology interventions are you using? Which ones have been most beneficial for you and why? Which have been the least beneficial and why?

NOTE: Using table below, identify which of AgDiv project interventions is the respondent actively using? Check appropriate box.

- f. Participants were given intensive training in tobacco, soy and groundnut
- g. Received inoculants for soy and groundnut, which they appreciated as it contributed to good/improved yields despite the challenges with distribution of seeds) and received training.
- h. Received PICS bags on loans at a subsidized price depending on number hectares; ranges from 10 PICS; 20 PICS; 25 PICS for largest. 3 of the participants present in the FGDs did not receive any due to irregularities from Alliance 1; they thought they had more in stock only to realize it was not the case.
- i. Did not receive any drip irrigation nor were they exposed to it.

- j. Did not receive soy kits; also, not aware of soy milk but soy flour for porridge.

FGQ4. Because of this project, are you better connected to input markets (fertilizer/seed)? Are they working better for you? Are prices better? Quality better? Supplies more reliable?

- d. Inputs are received through Alliance 1 on loan, but terms are very expensive – high prices for inputs but low prices for produce.
- e. Through Alliance, qualities of inputs are good, access to seeds has been eased and they are received on time. Exception was groundnuts, because seeds were received late, which contributed to low yields and some farmers raised concerns around CG7 that it is not of good quality and was imposed on them.
- f. Concerns were raised on the collateral for g/nuts that K30,000 is too high but they are willing to grow the g/nuts.
- g. Some farmers purchase additional inputs on local market if they have to and have the money. This could happen later in the growing season when they run out of inputs for other crops.

FGQ5. Because of this project, are you better connected to markets to sell in? Which markets are you selling in? Are the markets more reliable? Are prices better; are your products higher quality? Are you eating a more diversified diet? (Groundnut? Soy? OFSP) What are you eating now more than before? Explain.

- e. G/nuts are sold to Alliance 1 whilst soy is sold to vendors
- f. Prices have been worse in the past 3 years so farmers are struggling – have school expenses; high cost of inputs; household expenses – very little extra money.
- g. Regarding diversified diets, they grind soybeans into flour to make porridge; also mix in vegetables when they have them in the rainy season.
- h. Diets are largely porridge and nsima (ground maize) as they prefer to re-invest the proceeds from selling their crops.

FGQ6. Because of this project, do women and youth have more access to credit, income, or employment? For women and youth, has the project lowered their cost of assets, credit & employment? Is there any change women's ability to make decisions on assets, loans and their use?

- d. Group has 1 female, 56 males; culture affecting women involvement.
- e. Alliance 1 has recently (4 months) introduced VSLs for farmers wives so that they can also be involved; the criteria includes that the women are actively involved in the field activities and are aware of what is happening.
- f. No outside credit for the men – get loans for inputs through Alliance 1.

FGQ7. Which agricultural activities (from the list) have been successful for you? Which have been the best? Why? Can you suggest other new activities that would be good for you? Based on this project, which activities are in need of additional resources?

- f. Need support at selling point; farmers do not fully understand the dynamics associated with selling the products and they feel they are only supported during growing period but not at selling time.
- g. Want timely delivery of seeds and of good quality especially g/nuts
- h. Need more PICS bags; they cannot afford to buy on their own as they produce a lot; to purchase all the bags they would need is too expensive for them.
- i. They are happy with selling to Alliance 1 as they know they have a ready market but will appreciate access to more markets for better prices and if Alliance 1 can be buying at higher prices. Participants are not able to sell to vendors due to binding contracts with A1.

- j. Reduce collateral for g/nut inputs so they can access more inputs and expand production.
- k. Alliance 1 provides a reliable output market but prices are low and payment period often delayed for three months.

8. Which Value Chain is the farmer producing? Which Interventions is the farmer using? Check appropriate box.

APPENDIX E

KII INTERVIEWS

Person Interviewed....George Vilili. Date ...18. 10. 2019

Key Informant Interviews for Partners and Collaborators

11. How are you involved with Ag Diversification project?

- Involved from year 1 of the project; has a formal contract
- Has partnership to handle communication and outreach; radio programs timed according to seasons
- During 1st years of implementation did communication mapping exercise for OFSP, PICS bag, inoculants which defined clearly defined their scope
- Operate free call center, provide frequently asked questions service and these inform the radio programs
- Operate a mobile platform for interactive voice response, SMS push with an actionable message, beep for automated response, short video clips (demos on PICS bag, inoculants)
- They conduct knowledge assessment calls (have 400,000 contacts in system and they administer a questionnaire)
- They are both an NGO as they do developmental work and are private

12. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last five years?

- Promote G/nuts, Soy and OFSP

13. Have you improved your client contact and or service delivery by participating in Ag Div? What would you say has brought about the improvement?

- Yes, as Ag DIV supported them to better engage with the National Agriculture Content Development Committee which is a forum for developing agriculture materials for mass media
- Yes, they have been able to manage content and build capacity of radio stations
- Yes, through development of message matrix for bringing the voice of farmers

14. What different services and technologies have you provided to clients or your business because of Ag Div?

- Able to conduct formative research to guide communication plan and usually come up with top 5
- Formation of community ICT hubs; where already existing farmer cooperatives have been provided with radio sets to listen to radio

programs and record them. From these listening clubs, other farmers have been able to operate demo groups to practice what they learn from the listening programs

- 20 new ICT hubs established in Ntcheu solely under Ag DIV.
- Promotion of OFSP consumption and radio programs on dietary diversified recipes

15. What changes have been observed on your clients on their:

Crop yields (OFSP, Groundnuts and Soybean?) Area allocated to the three; Access to inputs for the three; Access to output markets for the three; Access to credit; Diversified food consumption; Women's role in decision making?

16. What do you think are the driving factors for the observed changes?

17. Has your involvement with Ag Div improved your outreach to women and youth? How? How has your changes affected the lives of the women, youth and their families?

18. Of your reported new activities, new crops and new technologies, which ones are most liked by your clients? Why are they liked?

19. Which activities in Ag Div would you do without donor support? How would you manage to do that? Are you currently doing anything to prepare for the exit of Ag Div?

- Planning to link ICT hubs to DAECs and Village Action Committees for ownership and sustainability
- Work with already existing farmer clubs so that Ag DIV activities are built on already well-established groups.
- Engage extension workers as these are permanent government positions.
- Plans are underway to operate own radio station under public/Private partnership where government will have stake in content but not management for sustainability; programs will focus on rural livelihood and not only agriculture
- They have an MoU with LUANAR and the department for institutionalization

20. Which activities would you want Ag Div to focus on? Why?

- Improve on coordination for synergies; institutionalize a platform for AG DIV partner meetings. Partners could leverage on each other; conduct follow ups on the radio programs being delivered.
- Improve on the M&E indicators; not clear targets of what Ag DIV would want to be measured; there is need to create an understanding of what they should contribute to
- Ag DIV partners joint monitoring

21. What are the outstanding challenges in the agricultural sector which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

- Sector lacks leadership in extension; department lacking power to coordinate and lead; there is no quality assurance/assessment hence no accountability. Hence if Ag DIV can support in building the capacity if the sector in this area.
- Investment vs adoption uncoordinated
- Malawi Forum for Agricultural Advisory Services (MAFAS) a coordinating body with public, private, research, academia, and farmers membership is very weak but is good for sustainability and impact.
- Reach out farmers through more radio stations as they have scaled down a lot now; from 8 radio stations in year 1, 4 in year 2, 3 in year 3 and year 4 they will use only 1. The changes are due to budget cuts.

UNINTENDED CONSEQUENCES GOOD or BAD

Partners & Collaborator Questionnaire

October 16
Area 25
Afshan Omar

22. Describe your involvement with the Ag Diversification project?
23. [Initiative for the relationship started with me: I went to them. But it wasn't a hard sell. They were enthusiastic about the demonstration capability.]
- a) Started formally with AgDiv December 2018. AgDiv nicely complements our own activities
 - b) Technologies – PICS bags, soy kits; drip irrigation; bamboo for firewood/charcoal demonstrating of all of these on 5 HA plot of land owned by the MOH—lots of formal and informal observations by patients throughout their stay.
 - c) Supports Outcome 3 by integrating nutrition with women and child health—patients actually eating the produce from the demonstration plot
 - d) From garden production, provides full meals 3X per week to 50 staff and patients
 - e) Provided soy milk 2X per week to 50-75 patients (production is 2 l. per kit
 - f) Introducing the technologies to a recently-formed youth club
 - g) Used the PICS bags ourselves: successfully stored maize for three months and soy for six weeks.

 - h) Submersible solar-powered pump providing the water
 - i) New 1 HA irrigation equipment about to be installed, will expand the 'visual impact'
 - j) Site is visited regularly [a.k.a. good exposure] by MOH dignitaries, by MOH local staff, and by other health centers
24. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last three years? Why?
- a) Soy via soy kits; OFSP, Groundnuts
 - b) Now moving into promotion of bamboo—received 1000 seedling from AgDiv. Would love to have it all year long. We could easily distribute 600 seedlings per month
 - c) We distributed 900 PICS bags, could easily have distributed 3,000 more.
 - d) Changes focal VC - No
25. Have you improved your client contact &/or service delivery by collaborating with Ag Div? If yes, what has brought about the improvement?

26. Current relationship Baylor with MOH (public/private partnership) has been strengthened

- a) We have modified and strengthened our integrated program with the help of AgDiv
- b) The drip kits and soy kits have added a nutrition dimension we did not have before; the technologies have also added a resilience dimension

27. What different services and technologies have you provided to your clients or your business because of Ag Div?

28. How to grow OFSP, numerous different OFSP recipes, developing a visual manual on growing and recipes

29. What changes have observed on your clients on their: crop yields for OFSP, Groundnuts and Soybean; area allocated to 3 VC; access to inputs, credit, improved food security; diversified food consumption; women's role in decision making?

- a) Our approach that integrates nutrition with women/children health was there before AgDiv, but the drip, soy kits and OFSP adds more nutrition and potential income for our patients that were not there.
- b) Bamboo was also new which can be a fuel source for cooking..

30. What are the driving factors for the observed changes?

- a) AgDiv's technical assistance, training, and introduction to soy kits and drip irrigation allowed these changes to occur.

31. How has Ag Div improved your outreach to women and youth? How has your changes affected the lives of the women, youth and their families?

- a) Not significantly yet because Area 25 Health facility was already doing much with Outcome 3, but it has added to what we were doing.
- b) However, a "green" environment is good for maternal and infant health. Such activities could help to lower Malawi's very high infant maternal mortality rate.
- c) The PICS bags will help for food storage; the soy kit and Drip irrigation at this facility is improving the health of our patients.

- d) Introduced youth clubs through which the youths engage in income generating activities and are encouraged to replicate gardens in their areas.

32. Of your new activities & technologies, which are most preferred by your clients? Why are they preferred?

- a) PICS bags were significant – women saw their value. Same with bamboo, which has become very popular.
- b) OFSP was obtained independent of AgDiv
- c) Community interest to grow soy has been generated

33. Which activities in Ag Div would you continue without donor support? How would you manage to do that? Are you currently preparing for the exit of Ag Div?

- a) Area 25 Health Clinic already receives support from Baylor and Ministry of Health. Ashaf generates income for the feeding program on her own through “Farm to Table” program. It will continue without AgDiv.
- b) Construction of kitchen for hygienic preparation of the soy milk (which has received high acceptance)produced by soy kits provided by Ag DIV

34. Which activities would you want Ag Div to focus on? Why?

- a) Would like to see Ministry of Health and Ministry of Agriculture work together to consider replicating Area 25’s Integrated Model of Health and Nutrition. AgDiv might facilitate and encourage this process. Make it a learning center to stir interest
- b) Collaborate on provision of soy kits on loans targeting youths
- c) Acceptance of interventions is good but need to work on access

35. What are major challenges in the agricultural sector, which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

Partners & Collaborator Questionnaire

COFI: 9AM

Calvin Kamchacha, Group CEO

Lerato Lekhoaba, COFI CEO

36. Describe your involvement with the Ag Diversification project?

- a. Community Financing (COFI) is a subsidiary company of Trade-line corporation. The corporation has two other subsidiary companies. Suffice to note that they have company that deals with business coaching, business start-ups and markets linkages consultancies. COFI is a duly registered non deposit taking microfinance institution and it among other products provides loans to strengthen the performance of value chains through supporting the boosting of production or upgrading the volumes of produce. COFI financial products work on:
 - i. Input provision (loans for seeds, fertilizer)
 - ii. Logistics financing
 - iii. Equipment financing (loans for equipment for processing. This is where the soy kits, drip irrigation kits were found to be appropriate)
 - iv. Asset financing.
- b. COFI entered into a contractual agreement with AgDiv in December 2018. The thinking was that COFI should support farmers with input loans to help them enhance their production. The organisation had a target of 2000 farmers to reach out to. But by the time the deal was done it was already pretty late for the input loans. Despite this COFI managed to loan out to 890 farmers. The loan was cash instead of the actual inputs (as it was in the initial design). This change from input to cash loans has some minor difficulties arising from the need to track whether farmers used the money to buy inputs or not.
- c. Nevertheless, COFI has reached out to 2009 with its AgDiv supported loans as of September 2019. Some of the COFI clients have taken up drip kits (30 farmers) and soy kits (about 30 farmers).
- d. The COFI loans are tailored to the agricultural sector such that farmers have six months payment period for the input loan, of which for four months (when the crop is in the field) COFI exempts farmers from servicing the loan. The farmers are only supposed to pay back in the last two months when the crop is supposedly ready to be marketed. The soy kit loan is has 9 months as the repayment period whilst the drip irrigation kit is for 18 months.
- e. The COFI clients also benefitted from the Financial Literacy Trainings (FLAT) which AgDiv provided. In the view of COFI this has in a way helped its clients to put their loans to better use and thereby manage to repay it.

- f. Provide micro credit loans & services to SME's, including AD supported Co-ops;
- g. Strengthened women's empowerment by giving them access to loans
- h. Accounting and business training to Co-op members and women's groups

37. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last three years? Why?

- a) COFI has been working in the Soy and Groundnuts value chains. OFSP is something that they picked through the partnership with AgDiv.

38. Have you improved your client contact &/or service delivery by collaborating with Ag Div? If yes, what has brought about the improvement?

- a) Yes – Working with AD has allowed COFI to substantially increase our client contact and increase client base.
- b) AD provided subsidized loans (Year 1 @ 15% interest) for 6 months with 4-month grace period. Y2 @ 24% interest; Y3 at 36% interest. This has helped us to build a good rapport with our customers who in some cases would have phobia with the prevailing commercial rates for loans.
- c) Our collaboration with AgDIV has brought to us new partners in the business. For instance, we now work with WOTA on drip irrigation. This is something we should have not come across and the partnership obviously enhances our equipment financing arm.
- d) Through the partnership with AgDiv we have on board clients who understand the loan issues and need to repay the loan. This has been made possible by the FLAT. We registered a 94% loan repayment on the input loan facility that we extended to our farmers. This is not a usual thing.
- e) We have demand for equipment loan more especially for soy kits and drip irrigation.

39. What different services and technologies have you provided to your clients or your business because of Ag Div?

- a) AD supported the training programs for Co-ops members particularly on FLAT. This allowed us to train new customers, especially women.
- b) Of course, the drip irrigation kits and soy kits have not been the traditional input under our input loan portfolio.
- c) The subsidized loan is also another key thing we have managed to do because of AgDiv.
- d) We feel with the shared risk that COFI and AgDiv have undertaken we have managed to bring on board women who are generally excluded from the financial

markets through taking loans closer to their homes as there are now provided via cooperatives.

40. What changes have observed on your clients on their: crop yields for OFSP, Groundnuts and Soybean; area allocated to 3 VC; access to inputs, credit, improved food security; diversified food consumption; women's role in decision making?

- a) Generally, the groundnuts and soybean value chains have registered some tremendous changes overtime. We see good quality products and more volumes. Proxy indicators of these are that the marketing season has stretched from two months to almost four months. This extension on marketing season if put side by side with the realization that we have more processors coming on board signifies high volumes. Such volumes come from diversified crop production; increase in area planted. We also see changes in farm income.
- b) Soy kits have created new income stream for women & their families; also improved family nutrition from diversified crops (OFSP) and soymilk.

41. What are the driving factors for the observed changes?

- a) Assistance and interventions by AgDiv have improved the lives of our clients.
- b) Higher client income translates to more investments into their business, implying more demand for loans.

42. How has Ag Div improved your outreach to women and youth? How has your changes affected the lives of the women, youth and their families?

- a) Yes, especially through cooperatives; ability of women to borrow has allowed them to invest in business, like the soy kits and drip irrigation for backyard gardens. We have deliberately emphasised that the cooperatives should have more women on board. This seems to be working in a way as our database shows more women are accessing our loans.

43. Of your new activities & technologies, which are most preferred by your clients? Why are they preferred?

- a) Access to loans, which in turn has led to improved access to asset investments.

44. Which activities in Ag Div would you continue without donor support? How would you manage to do that? Are you currently preparing for the exit of Ag Div?

a) AgDiv's subsidizing of loans has allowed a new group of COFI clients to become current and future borrowers, even at the 36% interest rates.

45. Which activities would you want Ag Div to focus on? Why?

- a) Strengthen the data quality and client loan use tracking
- b) Much greater emphasis on supporting women's groups.
- c) Encourage co-ops to target more women.
- d) Develop financial tools that are designed for women, like soy kits.
- e) More radio messaging to women.
- f) Consider strengthening the governance and business structure of Ag Co-ops. Easier for us to work through co-ops than individual rural farmers.

46. What are major challenges in the agricultural sector, which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

- a) Improved functioning of Ag Co-ops. The Cooperatives generally have a weak governance structure and patronage (e.g. members not buying shares). There is need to invest in building viable farmer organisations at local level.
- b) Invest in policy projects which will deal with collusion of off takers and processors of farmers produce.
- c) Invest in opening up for international trade. This will drive up the prices of the commodities such soy and groundnuts.
- d) Improving co-ops access to markets by strengthening them, helping them aggregate and store products; sort and grade for quality standardization.

Key Informant Interviews for Partners and Collaborators

47. How are you involved with Ag Diversification project?

- **Approached Ag Div to build on PEPFAR project which was working on several areas including 192 VSL groups.**
- **Ag DIV supports these CRS VSL groups through inputs but no financial support**

48. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last five years?

- **Soy and OFSP**

49. Have you improved your client contact and or service delivery by participating in Ag Div? What would you say has brought about the improvement?

- **Yes, as Ag DIV has brought in layer-on activities which have complemented existing efforts.**

50. What different services and technologies have you provided to clients or your business because of Ag Div?

- **66 soy kits on loan (K60,000 re-payable from the 5 month) to VSL members for milk and yoghurt production.**
- **Food processing trainings as an add on for the 3 value chain crops**
- **OFSP vines**
- **Bamboo seedlings**

51. What changes have been observed on your clients on their:

Crop yields (OSFP, Groundnuts and Soybean?) Area allocated to the three; Access to inputs for the three; Access to output markets for the three; Access to credit; Diversified food consumption; Women's role in decision making?

- **OFSP production increased as there is high demand in communities**
- **Women's finance has improved with selling of soy products**
- **Soy products are being used for household consumption and replacing fizzy drinks amongst school going children**

52. What do you think are the driving factors for the observed changes?

- **Participants are experiencing business expansions from selling soy products which motivates them.**

53. Has your involvement with Ag Div improved your outreach to women and youth? How? How has your changes affected the lives of the women, youth and their families?

- **Women are those that are targeted and involved, men mostly support the women when there is malfunction of the soy kits. Youths involvement is mainly spill over as kits are used at households**

54. Of your reported new activities, new crops and new technologies, which ones are most liked by your clients? Why are they liked?

55. Which activities in Ag Div would you do without donor support? How would you manage to do that? Are you currently doing anything to prepare for the exit of Ag Div?

- Encourage loans and not free distribution of inputs e.g. PICS bags as they are also promoted by CRS through agro-dealers, soy kits are loaned out.

56. Which activities would you want Ag Div to focus on? Why?

- Trainings to use cascade models so more people are reached
- Ag Div team to work on supervisory role as currently they seem to be overburdened, that way they can also offer more support to partners.
- More sharing in their planning so partners are aware of focus areas and where they can tap from
- Include nutrition education/behavior change communication
- Engage care groups in the delivery of some of the interventions just like the way they have done with VSLs; to remove monotony in activities

57. What are the outstanding challenges in the agricultural sector which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

- Avail more soy kits as demand is high; submitted a proposal to Ag Div not yet approved.
- Continue to pursue on local production of soy kits

UNINTENDED CONSEQUENCES GOOD or BAD

- Jealousy amongst group members especially for those that received soy kits and are saving more because of sales

KII – District Agriculture Director
Owen Kumwenda
Oct 28, 2019

Courtesy visit to the Director of Agricultural Development- Mangochi

Known to Maya, warm handshake

Knows in general terms some elements of the AgDiv activities in his zone, but not very much.

He clearly feels left out of the loop, though he keeps a good ear to the ground and hears about things

He regrets that there is no AgDiv local person who he could related to or who could relate to him.

He likes PICS bags, thinks it is a good technology. **Speculates that if it weren't for the success of PICS bags, the AgDiv project would have closed long ago. [!!]**

Likes the idea of a bag subsidy (as a loss leader) to get people to use the PICS bags more.

FRIP coming to Mangochi on Friday for some sort of activity related to bamboo

Key Informant Interviews for Partners and Collaborators

58. How are you involved with Ag Diversification project?

- **Ag DIV builds capacity of horizon farm to ably reach out farmers**
- **Ag DIV provides financial support to Horizon farm**
- **265 ha of land, around for over 16 years**
- **First reached out to AgDIV for support**
- **Anchor farm model; supports farmers to learn and build their capacity so they can be business clients. Offer extension work, machine with a focus on improved livelihood. In-growers get 50%, out-growers 100%**
- **Has 1 Farm Manager and 2 Field Officers**

59. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last five years?

- **OFSP, Soy**

60. Have you improved your client contact and or service delivery by participating in Ag Div? What would you say has brought about the improvement?

- **Yes, extension services with good agricultural practices now reaching more farmers from 5,000 – 15,000**
- **Yes, farmers are now reached with more focused ideas achieving the farms vision of sustaining communities**
- **Yes, livelihood improvement has always been Horizons call but was using their own business profits hence were limited but Ag DIV has built their capacity around this which has enabled them build stronger partnerships for the farmers.**
- **These have been possible because of the financial and technical support from Ag DIV**

61. What different services and technologies have you provided to clients or your business because of Ag Div?

- **Drip irrigation kits (12) on loan**
- **Soy kits for milk and yoghurt production with VSL groups. Also partnered with soy innovation lab not only for the farm but also communities**
- **Nutrition open days and recipe trainings.**
- **Planting of OFSP**
- **Bamboos planting**
- **Training of small holder farmers**

62. What changes have been observed on your clients on their:

Crop yields (OSFP, Groundnuts and Soybean?) Area allocated to the three; Access to inputs for the three; Access to output markets for the three; Access to credit; Diversified food consumption; Women's role in decision making?

- Farmers increased farming land
- Increased yield has been observed for OFSP
- Ag DIV connected them to COFI so that their farmers can access loans especially for drip kits

63. What do you think are the driving factors for the observed changes?

64. Has your involvement with Ag Div improved your outreach to women and youth? How? How has your changes affected the lives of the women, youth and their families?

- Yes, 200 women are benefitting from VSLs; K15,000/farmer with loan repayment period of 6 months at 10% interest. Besides raising income, they are also equipped on value of consumption at household level.
- Yes, there is a youth club which is allocated some piece of land at the farm and their farming skills are built. Sports activities are also done.
- Additionally, besides youth and women, targeting is for the whole family
- Of the lead farmers they have, 60% are men and 40% are women.

65. Of your reported new activities, new crops and new technologies, which ones are most liked by your clients? Why are they liked?

- Not easy to mention as they all come with their motivation which is mainly cash realized from sales. Soy cows are good for training areas, but electricity is a challenge whilst soy kits are good in the communities

66. Which activities in Ag Div would you do without donor support? How would you manage to do that? Are you currently doing anything to prepare for the exit of Ag Div?

- Exit strategy; forming farmers associations and building their capacity to support themselves
- Introduced mobile apps to lead farmers for remotely training other farmers; farmers can easily access information and guidance
- Working with first capital bank to provide loans to farmers at the same interest rate even in the absence of Ag DIV

67. Which activities would you want Ag DIV to focus on? Why?

- Allow synergies/partnering with others depending on the different stages for diversity and expertise
- Focus on improving water sources; having reservoirs in place.
- Mechanization in the farmer fields; introduction to small engineering services.
- Right use of chemicals; though aware that it is not in favor of Ag DIV.
- Components implementation to be tailored according to needs especially where they have no capacity
- Awareness creation/messaging on the importance of the different technologies.

68. What are the outstanding challenges in the agricultural sector which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

- **Market opportunities through seed companies, research, NGOs and processors still need to be explored**

UINTENDED CONSEQUENCES GOOD or BAD

Partners & Collaborator Questionnaire

October 16, 2019

Limbe Tobacco Company

Casey Clyde-Wiggins

69. Describe your involvement with the Ag Diversification project?

- a) Began December 2018. Bamboo received 100,000 seedlings and distributed to 10,000 smallholder farmers. Distributed PICS bags
- b) Distributed 72,000 PICS bags to farmers.
- c) AgDiv (AD) assisted with demo trials and training of training (TOT) for our 140 Extension Agents who then trained our 10,000 farmers.
- d) Have a very good relationship with AgDiv – without AD diversifying would have been much more difficult.

70. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last three years? Why?

- a) Work with groundnuts (edible and seed), OFSP and soybeans. 1,186 farmers planted g/nuts; began research trials with OFSP.
- b) Have 3 Drip Sites – 1 ha each producing cabbage onions and tomatoes – have contracts with retail stores, formal markets.
- c) Soybean yields are currently 600-800 kg/ha – need to get it to 1200-1400kg/ha
- d) Demand for tobacco has declined. Have diversified, especially with AgDiv – will expand diversified production alongside tobacco.

71. Have you improved your client contact &/or service delivery by collaborating with Ag Div? If yes, what has brought about the improvement?

- a) We have always had contractual arrangements with our clients; provide a full suite of inputs as well as extension services with our 140 Extension Agents (EA).
- b) AgDiv has assisted us with the g/nut and OFSP trials; continue to provide technical support.

72. What different services and technologies have you provided to your clients or your business because of Ag Div?

- a) Drip irrigation, OFSP, PICS bags. With OFSP will move slowly because it depends on soil and water conditions. Also must consider how we will do value addition to OFSP.

73. What changes have observed on your clients on their: crop yields for OFSP, Groundnuts and Soybean; area allocated to 3 VC; access to inputs, credit, improved food security; diversified food consumption; women's role in decision making?

- a) Crop yields should increase with improved g/nut varieties.
- b) Drip irrigation has been an important contribution to our production activities, especially for vegetables and OFSP. Have limitations with water – conducting a hydrological survey to determine irrigation possibilities.
- c) We have always submitted vegetable kits to our farmers – cabbage, onions, tomatoes, carrots and squash. But GOM has stopped this distribution (comments?)

74. What are the driving factors for the observed changes?

- a) Technology – improvements new seed varieties; introduction of OFSP.
- b) Need to diversify due to declining demand for tobacco

75. How has Ag Div improved your outreach to women and youth? How has your changes affected the lives of the women, youth and their families?

- a) Limbe does have an outreach program for women and youth. In fact, they are participating in a nutrition survey to understand AD's impact on nutrition through its processing and utilization initiatives.

76. Of your new activities & technologies, which are most preferred by your clients? Why are they preferred?

- a) I don't believe this was addressed.

77. Which activities in Ag Div would you continue without donor support? How would you manage to do that? Are you currently preparing for the exit of Ag Div?

- a) Limbe has the resources to continue with the technologies and new value chains after AD project ends.

78. Which activities would you want Ag Div to focus on? Why?

- a) I don't believe this was addressed.

11. What are major challenges in the agricultural sector, which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

- a) Access to markets is main challenge – we have extremely limited access to export markets because there is no airfreight in Malawi and it is a landlocked country. The rail system is broken. Basic processing infrastructure is lacking; no cold chain infrastructure; unreliable electricity; water issues.**
-

AgDIV Project Evaluation KII Notes

KII-Interview: Monday, October 14. Hastings Yotamu and Joseph Ntengozo, Lilongwe, Ministry of Agriculture

Involvement with Ag DIV

- Aware of project in 2 perspectives
 - Ag DIV project presentation to District Agriculture Extension Committee before roll-out of activities
 - Project presentation to District Executive Committee
- A focal point from government was assigned to the project but was only involved once when they were looking for a list of co-operatives. Since AG DIV is sub-contracting, those in the districts especially AEDC's could be more familiar with how they are working.

Successes

- Could not mention specifics but when prompted along the lines of what Ag DIV is promoting:
 - PICS bags are a plus to the farmers and to the agriculture sector
 - Soy kits have been a game changer to soy bean in several ways;
 - previously was only grown for the markets but now farmers can process it themselves and sell the products and consume at household level
 - the shift from using local methods to make soy milk and yoghurt which could only produce less but this improved way yields more.
 - Increased soy bean and groundnuts production as cash crops (also with the focus on animal feed and oil processing) an advantage as the country is shifting from tobacco
 - Improved technologies resulting in increased yields per hectare

Challenges

- PICS bags distribution has concentrated on urban areas
- Malawi still relies on hand holes for farming which affects yields
- Reliance on rains for farming

Recommendations

- Engage more agro-dealers in PICS bags for good coverage and expansion especially for rural communities.
- Consider subsidizing PICS bags at agro-dealer and not farmer level
- Ag DIV to buy PICS bags from agro-dealers (check if not doing) for sustainability and their motivation
- Focus on mechanization for increased production

AgDIV Project Evaluation KII Notes

KII-Interview 1: Monday, October 14. Mr. Dickson Kazembe & Mkwanda Mtimuni, M&E Experts MELS Gemini House Lilongwe

MELS Activities

- Involved with AgDIV from year 1 to-date
- Conducts surveys through Centre for Development for 24 days

Successes

- Seen improvements in data management;
 - 1st and 2nd year was bad but migration to digital helped
 - Now focus on core indicators; reduced too many custom, extensive and ambitious indicators which was making management of partners difficult
 - M&E is now well structured which is now pushing technical people to deliver
- Good uptake of recommendations by AgDIV team
- AgDIV has good data system which makes verification easy
- The shift from part-time M&E

Challenges

- Minimal direct impact of some interventions on the project e.g. PICS bags not used for the value chain crops being promoted by the project, but one can argue from improved food and nutrition security point of view.
- There is a nutrition unit but with no proper/core indicators
 - No clear approaches on how children are being targeted with interventions
 - The focus on women; which category is being targeted is missing

Recommendations

- AgDIV to make separate arrangements on data so they can take control of parameters; others (Tobacco companies and financial institutions) have too much privacy/restrictions on data which affects validation.
- Data quality assessments are very important and should continue
- Project duration should consider period of setting things in place as start-up reduces time; either extra 6 months at the beginning or at the end
- Need for bridging programs to talk to successor programs and not operate in isolation; same applies with collaboration amongst USAID funded projects and non-USAID funded
- **Need to introduce interventions that clearly target children, pregnant and lactating women** (with continued emphasis on the value chain crops as they are also part of dietary diversification)
 - Introduce indicators on them even proxies (MAD, IDDS); Food consumption stand point
 - Mini-surveys should also be able to measure 24-hour dietary recalls
 - Improve on engaging with the department of nutrition
 - Check if nutrition indicators were dropped from the custom
- Exercise due diligence on choice of partners so that there is no picking and dropping as it affects implementation
- More effort needed on mind set change especially on the usage of cash crops also for household consumption for improved nutrition outcomes
- Can take in extra funds plus districts but should also translate to extra staff
- Indirect implementation is fine so long as they continue to strengthen data quality assessments

AgDIV Project Evaluation KII Notes

KII-Interview: Monday, October 14. Hastings Yotamu and Joseph Ntengozo, Lilongwe, Ministry of Agriculture

Involvement with Ag DIV

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 - the shift from using local methods to make soy milk and yoghurt which could only produce less but this improved way yields more.
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Recommendations

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- Consider subsidizing PICS bags at agro-dealer and not farmer level
- Ag DIV to buy PICS bags from agro-dealers (check if not doing) for sustainability and their motivation
- Focus on mechanization for increased production

KII – Min of Ag extensionist- Blantyre
Sampson Mgwira 14 yrs. experience

20-40% of farmers are aware of advantages of PICS bags

Promotion campaigns in the recent past with the MoAg and Save the Children, now also AgDiv

In farmers' minds, losses are "part of what is expected" and "normal" and we need to break that mindset

He thinks traditional losses are near 40% and the MoAg doesn't admit it because of political factors

Quality improves with PICS bags—weevils are fewer; grain when opened is "as good as when it came off the field." "I have personally been able to store maize at my house for a year with good results

80% of "townies" are using the bags

How can we tie into local grocery stores into PICS supply in the rural areas?

We need to re-activate the local agro-dealers who were frozen out by MoAg decisions taking away their clients years back

Significant obstacles in penetration into the distant rural areas.

Price is a key problem—plus competition from the local bag suppliers and the pesticide sellers

With intensive promotion we could get to 80% penetration throughout the country.

KII PICS Bags

Pradeep Purushothaman Managing Director PICS-EPa

800,000 bags sold so far this year. Original sales target was 700,000; raised to 1 million, will probably not get there this year.

Bags are manufactured in Tanzania to control quality. Supply is virtually no issue. For Malawi, Mozambique, Zambia, and two others

Spectacular growth over the last six years, mostly, he thinks with significant assistance to AgDiv promotion: Bags sold:

2013	3000
2014	7000
2015	70000
2016	235000
2017	285000
2018	485000
2019	800000

Competitor bags have not taken off anything like this.

Estimate of market penetration is only 20%, Not expecting to get to substantial national penetration for at least another five years.

Even at full penetration, there will still be a need for 3 million bags a year

He just lodged an important proposal with GoM to exempt PICS bags from 16.5% VAT—as are pesticide chemicals and fertilizer—PICS bags should get the same treatment. That would allow the retail price to drop from 1000 to 750-800, with significant uptick in sales.

PICS EPA has current marketing arrangements with ADMARC and Farmer Market , and new ones with Culimongol (90 shops) and ATC (40 shops). Also actively discussing with NGOs, WFP

Moisture monitoring card is in development.

Single largest impediment is market penetration to distant rural areas. No easy fix to this problem.

KII – Ruben Kainga UP Coordinator
And Joshua _____ - Dpty Director DADO Dedza
Oct 31, 2019

Project activities with AgDiv started in 2016 with no project agreement, just delivering supplies
We had already been working with farmers for a number of years and so we piggy-backed the AgDiv supplies onto other activities

But we were using our own resources to deliver AgDiv goods

Next year 2018m signed an MOU, July 2018-June 2019 – that has had to be No-cost extended

Signed a new MOU July 2019 to July 2020, but it is strictly a fee-for-services rendered contract.

Working with AgDiv in three of four project sectors: Ag production, Resiliency and Nutrition (not gender though we do a lot of work in Gender. Don't know why we didn't sign for Gender at the same time.)

In production:

- Received 13 drip kits, 1000 M2, 500 M2 and 250M2. It took ten months to take delivery. Still have 11 in stock and the NCE to get them installed.
- Also inoculants, though they too were delivered so late last year that I could only use 50%
- Also bamboo. We received total of 5,500 seedling and have a well-cared for demo plot. Survivability is about 75%; goat predation is high and plants don't survive it well
- Active discussion of advantages and disadvantages of the new variety

I wrote a written complaint to AgDiv about late arrival of bamboo, inoculants, and other commodities, to no effect. If bamboo and inoculant don't get to us soon, it will be a repeat of the same story this year.

Decided that the I HA drip kit worth MWK1.4 million was too big a donation for one group of people. We decided to charge them half price and they would repay the loan, but we have no way to collect on this loan or on any other loan product we would like to promote. We have nowhere to put the money. We did two training sessions on cost recovery because the farmers had no idea either. (No real sense they have confidence that this strategy is going to be successful.)

How to repair the drip kits? No real answer. "There is one farmer who has done a few things like this on his own.... Maybe he could do it??"

580 mini-drip kits distributed for free in 2018, now 800 mini-drip-kits for free in 2019. But WOLREC is distributing the same technology in the next-door District and is doing it as a loan? How will the farmers NOT learn of that?

PICS bags are a good technology and a big success but all the recent sales are to the Middle Class and the townies. The rural people don't have the extra cash to buy the bag.

Inoculants under study, and we see some results (unsaid: but the results are not all that dramatic.) Farmers prefer to invest in inoculants because they can see the healthier plant, even though the same cost for a PICS bag would be a better economic decision.

Shortened discussion on OFSP local replication in village nurseries by contract growers. Maybe possible but difficult to control quality World Bank ASWAP project (??) is working on this idea.

Person Interviewed Adam Davie **Date:** Oct 17

Key Informant Interviews for Partners and Collaborators

1. How are you involved with Ag Diversification project?

Working In 24 Districts, 240 staff, 30 projects; 8-10 agronomists on staff

Not an original partner; discussions were back and forth for many months

Especially In Dedza and Balaka -- we also have financing from Irish Aid that covers all of the salary costs of the AgDiv activities

Added two staff this year to do the work In 8 EPAs-- not nearly enough for good supervision

But our work with AdDiv has been frustrating. 14 months of negotiation. First signed in 6/18 and was based on fixed fee. Second one is paid by 24 milestones -- much stricter-- which puts all the risk on the NGO: we get paid for performance but if something goes wrong, we are out the salary costs.

Not a real "partner"; feel taken advantage of; 'they are doing very well out of this arrangement.

Never any stakeholder meetings

2. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last five years?

PICS bags demonstrations, also bamboo, inoculants, working with CARE VS&L groups

Scaling up nutrition in care groups,

Strengthening the GoM nutrition leaders

"Layering" Is a good approach compared to the competition and duplication that other donors fall into.

Complementarity and catchment management

10,000 bamboo plants in Dedza

3. Have you improved your client contact and or service delivery by participating in Ag Div? What would you say has brought about the improvement?

pleased with our progress

PICS bags have become mainstreamed

We are bringing them and drip kits to a new DFID Resiliency program In Balaka, Mangochi

4. What different services and technologies have you provided to your clients or your business because of Ag Div?

OFSP Is mostly a non-cash crop

Outside of AgDiv we are experimenting with OFSP flour in breadmaking--

100 farmers/ club, 3000 farmers

processing capacity of 500 kg./hr ; hoping to move to 800 loaves a day

[FS: called for in the proposal: the industrialization of OFSP]

30,000 PICS bags "stimulate demand" but the agro-dealers don't have any: It Is a recurring issue: the supply chain Is not keen on free stuff, for instance, no free drip kits

[FS: But FGD reported 100 were given away free in Balaka]

how are we going to stimulate demand and create a loan mechanism for soy kits?

5. What changes have observed on your clients on their:

Crop yields (OSFP, Groundnuts and Soybean?) Area allocated to the three; Access to inputs for the three; Access to output markets for the three; Access to credit; Diversified food consumption; Women's role In decision making?

What is the projects going to do about drip-kit repair facilities? And soy kit repair facilities? We shouldn't be repeating the treadle pump mistakes of only concentrating on the delivery...
What is the next stage in bamboo? -- how to support local production? by big-scale producers or by small-scale ones?

Project could be stronger on women's economic power- doesn't get much emphasis

We look at nutrition effects in other projects but not In AgDiv. : we count what they want us to count

6. What do you think are the driving factors for the observed changes?

It is great that AgDiv is spearheading agricultural innovation but, for instance, PICS bag prices are still too high

I am not completely convinced about soy-kits'

Inoculants though Is a no-brainer -- and taking off

Giant bamboo Is expensive. How many will buy it on their own? And -- in fact-- it appears not to become Cost-Benefit acceptable until it is used in land replication

7. Has your involvement with Ag Div improved your outreach to women and youth? How? How has your changes affected the lives of the women, youth and their families?

Already one of our strengths. Nothing new as a direct result of AgDiv

8. Of your reported new activities, new crops and new technologies, which ones are most liked by your clients? Why are they liked?

9. Which activities in Ag Div would you do without donor support? How would you manage to do that? Are you currently doing anything to prepare for the exit of Ag Div?

We are already taking our AGDiv experiences Into current programs/ replicating

Our two teams work well together-- build off one another's strengths

AgDiv appears to be moving toward big agro firms; but there is still a lot of need for small farmers

Concentrating on tobacco farmers, for instance, not our level of farmer

10. Which activities would you want Ag Div to focus on? Why?

What is "success?" Success is people buying the technology on their own. We need to stay focused on what the real objective is

Leave behind a system infrastructure to keep going what you have been introducing

A "partnership" and a consultative relationship, not a "hired hand"

Are there any other ag. technologies AgDiv could be investigating/ promoting?

11. What are the outstanding challenges in the agricultural sector which require more attention? What should Ag Div do challenges? What other interventions are needed to address the stated challenges?

Next big unaddressed topic is Water Supply. Currently not being looked at

KII – WE EFFECT, Mangochi
Judith Katumbo- Field Officer
Oct 28, 2019

Not much involved in the bamboo distribution that took place; person who was has left
This office is in the Cost-Extension phase til Dec 30 of the end of Phase III of the Malawi Lake Basin Program Office in Monkey Bay closed last month
Contract came down from the Head Office—as far as we could tell, a completely Top-Down intervention.
“Head Office agreed to the relationship; we implemented it.”

In terms of bamboo she says:

Good training took place- two, two-day events put on by AgDiv staff in different areas
Delivery took place in December and was coordinated with the Min. of Forestry
Some had good results (those who protected against termite attack); “some” did not receive the chemical and did not have good results.
She does not know the # of bamboo plants distributed _____ or the number of farmers _____; said she will provide the information later
[We did not ask survivability because she clearly didn’t know. Will ask in the village.]
Thinks the activity is “very important” as an income- generating activity [??] and for building materials
She personally knows of 5 farmers who received ten each, but “there wasn’t enough for everyone.”

Some of these villages have lots of bamboo already.
She says her project works with 45,000 farmers – since 2007
Five program areas: livelihood promotion; natural resources; financial services (VS&L, capacity building and others); farmer organization promotion and institutional development; nutrition and HIV/AIDs including kitchen gardens, green vegetables, IPM and sweet potato leaves.)
WFP has a school feeding program that uses locally purchased OFSP that is cooked on site that is improving school attendance.

She says: We will work with AgDiv on whatever they will offer, especially natural resources, Bamboo, drought-resistant crops, natural plants, OFSP – particularly vine multiplication

Asked at the end what would be the results of this visit and we clarified that we are external and have no influence on project decisions. If she follows up with her Head Office in a month, that might be away to proceed.

Women's Legal Resources Center (WOLREC)
Interviewees Gift _____ & Gladston _____ Date: 10/21/19
Key Informant Interviews for Partners and Collaborators

1. How are you involved with Ag Diversification project?

We have been Involved In negotiations for over two years but we only started this year.
Original concept was only for Capital Injection to our VS&Ls but has expanded
Soya kits:- distributed 40, could have distributed double that amount though that would have required support from AgDiv on staffing and operational resources.
Vines:- distributed 2,800 bunches to 2000 farmers/ only 1,500 survived becausee the vines were supplied late and almost all of them were dry.. We could have used probably 8,000.
Bamboo:- distributed 3,000 to 1,800 farmers but average was only 4 plants per farmer
Mini-drip kits distributed 281 to 80 groups. High demand; we could ask for 750 this year.
Capital Infusion MWK 300,000 to 120 groups (of 392.) We could have used a similar amount for almost all of them.
Also some support of our Financial Literacy training. that would have required support from AgDiv on staffing and operational resources.

2. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last five years?

At the start we were not interested in value chains but only in capital Infusion. Over time AgDiv came to us saying: "Would you be interested in this-or-that crop; how many of your farmers would be Interested?" and so we began to become Involved. We gradually learned to see the "fit" between women's empowerment (which is our Vision) and agricultural activities. In Its essence WORLEC has moved Into agricultural projects because of AgDiv;; we depend on partners with agricultural expertise to help us deliver the projects.

3. Have you improved your client contact and or service delivery by participating in Ag Div? What would you say has bought about the improvement?

"Yes", our group members are beginning to think of us "more holistically" [his words] than they used to, and we have begun to see our role differently too. Based on demand, we will want to continue many of these activities even after AgDiv leaves.

4. What different services and technologies have you provided to your clients or your business because of Ag Div?

See list above. However, note several very telling sentences:

"We have not seen any real transformation in peoples' lives."

"AgDiv is not really committed to Nutrition in any serious way."

"AgDiv is not committed to supporting our data collection system [but only to their required reporting.]

"AgDiv reporting on soy kits is quite time-consuming. We have to borrow staff from other responsibilities in order to comply."

"Most of our farmers see OFSP as income generating, not nutrition."

"Bamboo seedling distribution was done off the back of a truck with virtually no previous notice. The available shoots got divided up among all group members. Most only got three or four."

"The only training on taking care of bamboo that was offered was 30-40 minutes that took place at the same time as the distribution. Plant mortality is probably 50-60%"

"Vine distribution suffered from the same lack of planning." "Vine distribution in Blantyre was only dried-up vines that arrived almost at the end of the rainy season."

5. What changes have observed on your clients on their: Crop yields (OSFP, Groundnuts and Soybean?) Area allocated to the three; Access to inputs for the three; Access to output markets for the three; Access to credit; Diversified food consumption; Women's role in decision making?

Most questions not addressed. Last question, women's role in decision-making: "AgDiv (and many other projects) add women's decision-making activities as an after-thought. It should be the START of a project, not tacked on at the end."

6. What do you think are the driving factors for the observed changes?

No observed change.

7. Has your involvement with Ag Div improved your outreach to women and youth? How? How has your changes affected the lives of the women, youth and their families?

Q#1 Yes, see above. Q#2 No, see above

8. Of your reported new activities, new crops and new technologies, which ones are most liked by your clients? Why are they liked?
All of them.

9. Which activities in Ag Div would you do without donor support? How would you manage to do that? Are you currently doing anything to prepare for the exit of Ag Div?

As above. We haven't started thinking about it but we will find the necessary technical assistance to continue some of these activities. Our participants are finding them important.

Overall observations:

- WOLREC has lots of project activities --- all of them newly started In 2019
- They are a 'late-comer' contributor only this year -- negotiations took over two years
- Many AgDiv activities are ad-hoc activities and not well planned, and suffer from Implementation difficulties because of that.
- The amount of project support Is far less than they could have effectively used.
- No financial support for the Institution -- In fact they feel burdened by the reporting requirements and believe that is one of the factors that would slow them down In expanding project successes.
- They would not be particularly Interested in AgDiv paying for one additional person to fulfill reporting requirements -- they need Institutional support that they would be able to plan how to better adjust to project requirements
- Some participants are "over-laps:" capital Infusion + soy kits + OFSP vines + others
- Far greater demand for AgDiv Inputs than the supply
- WOLREC Is an enthusiastic supporter of the AgDiv project, but recognizes that project Implementation has been significantly flawed. They remain cautious about taking on too much extra too soon.
- For very poor farmers, OFSP Is seen as another cash crop. It Is (only) a "breakfast food" In the Malawian diet.

10. Which activities would you want Ag Div to focus on? Why?

Women's empowerment. See above.

What are the outstanding challenges in the agricultural sector which require more attention? What should Ag Div do challenges? What other interventions are needed to address the stated challenges?

Women's empowerment. See above.

KII – YONOCO
Mac Bain Mkandawire Executive Director
Oct 23, 2019

[RESERVED]

Partners & Collaborator Questionnaire

CARE

Mathew Pickard, Country Director

November 7, 2109

79. Describe your involvement with the Ag Diversification project?

- a. CARE was involved at the design stage with Palladium and their component was largely focused on Gender Programming. However, Mathew arrived after the proposal had been submitted and implementation was about to begin.
- b. CARE considers gender transformation as the “foundational pivot” for implementing projects. As a result, Care’s program design involved heavy gender analysis within AgDiv’s ZOI that was to influence, direct and strengthen project programming and implementation. The proposal had Gender Advisors that were to be stationed in three Districts.
- c. Mathew’s perception was that Carl believed there was too much emphasis on gender analysis that would take resources from the main thrust of AgDiv, and possibly slow down the implementation of Objective #1: “to increase area planted, production, yields, and profits.” Carl was into “counting the number of women reached, but not interested in digging into gender issues.”
- d. Mathew realized that it was going to be a constant battle with AgDiv to implement what CARE had proposed to do, even though USAID had approved the proposal. So CARE opted to pull out, and wrote a very detailed and compelling letter explaining to USAID why it had chosen to do so. CARE never heard back from USAID.
- e. Mathew said he would like the Evaluation Team to ask USAID to provide an explanation as to why they did not support CARE in their proposed Gender Component (which USAID had approved) and instead supported and later approved the removal of CARE from the project.

Partners & Collaborator Questionnaire

October 25, 2019
Farmers World
Caitlin Shaw, Manager

80. Describe your involvement with the Ag Diversification project?

- a) Farmers World (FW) started 26 years ago in Malawi, part of the Meridian Group that operates in four African countries. Have 115 retail shops for agro-inputs that are designed to be full-service stores.
- b) Has an Extension Unit that began 3 years ago (2016), many are assigned to specific stores, working 3 days in the store, four days in local farm communities.
- c) Started as a Pilot Program with African Agribusiness Partnership, an NGO, but since spun off from that and now turned into a core business as an Extension Service Provider. Began with 30 Extension Officers (Agronauts), now 130.
- d) A-D helped diversify FW services and increase our Extension outreach. Developed a fertilizer blending plant and a soil-testing lab (STL) that makes fertilizer recommendations based on soil-test results. A-D subsidized the STL and paid for the first 4,000 test results to incentivize farmer customers. Cost is \$6.00 per sample, compared to \$35-40 per sample in Kenya.
- e) Through AD, allowed to give fertilizer discounts to farmers for legumes, groundnut, soybeans and OFSP – but not maize.

81. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last three years? Why?

- a) With AD, focus on G/nut, Soy, and OFSP. Conducted Farmer Training on these three crops for AD.
- b) FW targets all farmers, but with A-D partnership focus on smallholder rural farmers, but those that are active with FW (patrons).
- c) FW Agronauts work with AD farmers (those active with FW); each has a Tablet that allows data collection on all agriculture activities – size of farm; crops grown; yields; soil conditions; trainings conducted; number farmers reached, etc. This data is shared with A-D (those farmers working with AD & FW).

82. Have you improved your client contact &/or service delivery by collaborating with Ag Div? If yes, what has brought about the improvement?

- a) Yes, A-D helped expand our outreach to smallholder farmers, increase our customer base, and helped diversify our service portfolio – a very helpful relationship.

83. What different services and technologies have you provided to your clients or your business because of Ag Div?

- a) Expanded our Agronaut program; in 2019 established a soil testing lab and conducted soil testing to 4,000 smallholder farmers; gave fertilizer discounts to A-D farmers; developed.
- b) Soil test is a spectral solution – a dry chemistry scan using infrared light. AD subsidized laboratory equipment at 70% of total cost.
- c) In first contract, A-D helped with Extension Officer's (Agronaut) salaries; no longer need salary assistance from A-D, as the Extension Service Unit (ESU) has become a profit center.
- d) In partnership with A-D, established 400 Demonstration plots, which are supervised by our Agronauts, and trained Lead Farmers.
- e) Refined our reporting mechanism which has 6 Program Areas: 1) Demo Plots; 2) Field Days; 3) Farm-level Data; 4) Soil Sampling; 5) Farmer Training; and 6) In Shop Extension Advice. All reports are given to customers as PDF files.
- f) A-D wants information from these six program areas, so established a direct link with A-D MELs team and share all reports with them.

84. What changes have observed on your clients on their: crop yields for OFSP, Groundnuts and Soybean; area allocated to 3 VC; access to inputs, credit, improved food security; diversified food consumption; women's role in decision making?

- a) No information on yields, acreage, etc from this interview; however, access to inputs and new farm services provided by FW should have improved farmer access to inputs and farmer knowledge through trainings, demonstration plots and farmer field days.

85. What are the driving factors for the observed changes?

- a) Mentioned above in #5.

86. How has Ag Div improved your outreach to women and youth? How has your changes affected the lives of the women, youth and their families?

- a) Not addressed

87. Of your new activities & technologies, which are most preferred by your clients? Why are they preferred?

- a) PICS bags, hybrid groundnut and soy seeds; soil nutrient information from soil testing lab; farmer trainings on Good Agriculture Practices to increase yields.

88. Which activities in Ag Div would you continue without donor support? How would you manage to do that? Are you currently preparing for the exit of Ag Div?

- a) Farmers World has the resources to continue all current activities, but assistance from A-D to introduce new technologies were extremely helpful;
- b) Could not have launched the Soil Lab without financial support from A-D.

89. What are major challenges in the agricultural sector, which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

- a) Diversification at the national production level is a huge challenge – especially diversifying away from maize. Because of all the maize, Malawi is a breeding ground for Fall Army Worm infestations. If farmers were more diversified, it would reduce the potential impacts of FAW.
- b) No functional output markets – input markets are better.
- c) Better financial assistance to small farmers – currently banks focus on large commercial growers. If farmers had access to more functional output markets, so prices and incomes improved, the need for loans to buy inputs could be reduced.
- d) Diversify input packages that are more tailored to small farmer needs – FISP is a perfect example – can only buy 1 type of basal fertilizer and 1 type of top dressing for the entire country – this makes no sense since soil conditions and soil nutrients vary dramatically based on geography.

90. What could A-D do better regarding Partners?

- a) Improve coordination among and between partners – in other words, better leverage the expertise of the various partners to improve project outcomes. For instance, some have a strong agriculture background, others social service, others banking. Weaknesses by one partner should be strengthened by the comparative advantage of other partners.
- b) Improve contractual timing – final approvals take too long and can seriously impede implementation. For example, selling A-D subsidized fertilizer – FW could not sell until we had the signed contract – even though it was backdated, we lost 10 months because we needed that signed document to proceed.

Partners & Collaborator Questionnaire

Total Land Care- Perform

Blessings Mwale, Deputy chief of party

October 18, 2019

1. Describe your involvement with the Ag Diversification project?

- a) Collaborated with AgDIV 2017-2018 because of USAID encouraging integration
- b) Had an MoU for conducting mutual work
- c) Focused on
 - i. Improving productivity of farmers crops so that they do not extend to virgin land; addressing drivers of deforestation
 - ii. Improving access to seeds, prevention of post-harvest losses
 - iii. Promoting giant bamboo seedlings, drip kits, G/nuts, soy, use of inoculants in farmer field schools.
 - iv. Worked with New Building Society to aid farmers access loans
 - v. Capacity building on cooking stoves – linked with AgDIV communities through training cascade

Strengths

- a) Services and technologies were rapidly adopted; drip kits have advantage of water efficiency hence use during drought is effective.
- b) Farmers that were using PICS bags were getting high value for their maize as it was not attacked compared to maize stored in normal bags
- c) Current statistics indicating farmers able to buy PICS bags on their own
- d) Regarding bamboo program - observed that individual (household) planting of bamboo was more effective than Community programs – cared for and managed better.
- e) AgDIV agriculture and nutrition interventions helped more as add on activities to our existing programs.
- f) Increased productivity on nutrition related products, especially OFSP and soy kits.
- g) Promotion of g/nuts and soy for production and nutrition, but with use of inoculants which greatly increase yields; access to inoculants is good and prices affordable.
- h) Their new phase is building on Perform with identification of opportunities for collaborations mainly resilience activities.
- i) Noted that AfriBam is trying to use tissue culture to propagate bamboo – should be looked into as possible solution if costs can be justified.

Challenges cited

- a) High demand with low supply of PICS bags and giant bamboo seedlings
- b) Pricing was high for PICS bags; farmers found it costly but argued with duration of use
- c) Farmers challenged by long distances to acquire inputs – this needs to be addressed. Messaging through radio where inputs are being sold, and which inputs.
- d) Mechanization challenged by unavailability of spare parts
- e) Maintenance of most technologies is critical – need to develop infrastructure to maintain technologies and obtain spare parts.

Areas to improve on:

- a) Access to technologies to be improved
- b) Need for more messaging around the technologies especially PICS bags
- c) Establish good networks with agro-dealers to carry PICS bags, soy kits, drip irrigation kits.
- d) Local production of bamboo seedlings should be sought out and established (if possible to ensure availability. Demand grew quick but supply was lacking.
- e) Explore on working with Afri-bam to get license to make charcoal from bamboos
- f) Diversified farming systems very important

Partners & Collaborator Questionnaire

Ronald S. Ngwira, Managing Director

Pyxus Agriculture Ltd

August 29, 2019

91. Describe your involvement with the Ag Diversification project?

- a) First meeting was at a Seed Symposium at the end of 2017. Pyxus was invited to attend to discuss what we were doing in alternative crop production from tobacco. AD set up more meetings with Carl and Jeremy – we worked out an MOU with Palladium to USAID to work with a tobacco company.
- b) Pyxus Malawi is part of Pyxus International Inc., and established on the New York Stock Exchange on September 16, 2018.
- c) This separated Pyxus from Alliance One, which left the Stock Exchange after 145 years.
- d) Pyxus has three Divisions: 1) Alliance One – tobacco; 2) Global Specialized Products – Cannabis for Medicinal purposes and Recreational Use; and 3) Value Chain Agriculture Products – our diversification branch.
- e) Moved 185 Extension Staff from Alliance One to Pyxus, to begin training on alternative crops. Pyxus has 20 large commercial farms totaling 23,000 HA; and 15,000 smallholder farmers under contract.
- f) To obtain an MOU with AgDiv/USAID was highly political, but it specifically separated out tobacco production (Alliance One) from Pyxus (diversified production of G/Nut and Soybeans).

92. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last three years? Why? JJH - Am including Technologies here also.

- a) Groundnut and Soybeans - 2018 – imported 150 MT of groundnut seed from Zambia and 80 MT of soy – germination rates were good, averaging 85-90%
- b) Inoculant – yes we use, but it was not part of AgDiv
- c) PICS bags – in 2018, Pyxus purchased 90,000 bags from AgDiv as part of a loan package to farmers; each of the 15,000 farmers received 5 PICS bags. In 2019, roughly another 80,000 were delivered and distributed. Farmers also received training through Pyxus Extension Officers.
- d) Drip Kits – received 30 kits, each which irrigates 1/2 HA. Water access was boreholes, dams, and rivers. Phillip Morris provided pumps. Pyxus grows vegetables on the 15 Ha of drip irrigation, which it uses to feed its 2,000 factory workers.
- e) Drip kits were also given to 15,000 farmers to be paid back by loan.
- f) Seed Trials & SIL- Through Pan African Trials (PAT), hosted 40 variety soy trials in two separate sites on the Commercial Farms. Pyxus Farm Manager supervised the trials and Soy Innovation Lab (SIL) gave his 185 Extension staffs a full suite of technical training.

- g) Seed Trails & PIL -- similarly, Pyxus collaborated with the University of Georgia's Peanut Innovation Lab (PIL) where 150 variety trials were implemented and Farm Extension staffs received technical training in groundnuts.
- h) Training of Extension Officers – Pyxus 185 Extension officers received Financial Literacy training using the FINLIT Literacy Project, but through AgDiv.
- i) PIL also provided a shelling machine, size grading machine, moisture testing kits, and aflatoxin testing kits.
- j) Peanut Training of some Pyxus staff at PIL, facilitated by AgDiv.

93. Have you improved your client contact &/or service delivery by collaborating with Ag Div? If yes, what has brought about the improvement?

- a) The separation of Pyxus from Alliance One has allowed us to collaborate with AgDiv, which has helped us tremendously in our diversification efforts in groundnut and soy. Have developed a five-year Strategic Plan – intend to expand farmer (client) base from 15,000 to 40,000 farmers.
- b) Focus will be groundnut and soy primarily with heavy emphasis on groundnut, which is more profitable. 70% of Pyxus farmers chose groundnuts over soy. Yields are about the same, but G/Nut prices are US\$580/MT for Groundnut vs. US\$330/MT for soy.

94. What different services and technologies have you provided to your clients or your business because of Ag Div?

- a) Will be ramping up production of soy and groundnuts with Pyxus farmers. Means increasing our land base significantly. Will begin growing our own seed and will have an operational seed factory by 2022. Will need to produce 2,500 MT of groundnut on 1,000 hectares of land. Pyxus Seed Plant will shell, clean, chemically treat, and bag their own seed.

95. What changes have observed on your clients on their: crop yields for OFSP, Groundnuts and Soybean; area allocated to 3 VC; access to inputs, credit, improved food security; diversified food consumption; women's role in decision making?

- a) Pyxus provides a full suite of inputs for their farmers on loan. With new varieties being tested and released, yields and profits will increase for Pyxus farmers.

96. How has Ag Div improved your outreach to women and youth? How has your changes affected the lives of the women, youth and their families?

- a) Now about 17% of Pyxus farmers are women. Women traditionally grow most of the peanuts. With diversification into groundnuts, and expansion to 40,000 farms, women farmers will increase to 60%.

b) No gender training but do have Farm Safety Training for both men and women.

97. Of your new activities & technologies, which are most preferred by your clients? Why are they preferred?

a) Groundnuts are the preferred crop from Pyxus farmers because it is more profitable.

98. Which activities in AgDiv would you continue without donor support? How would you manage to do that? Are you currently preparing for the exit of Ag Div?

a) Pyxus has resources to continue with the Technology Interventions AgDiv has assisted us with – we shall continue.

b) After AgDiv, will need a new MOU with SIL and PIL to continue the varietal trials with more varieties, if that is the direction Pyxus takes, and if SIL and PIL want to continue the relationship. It has been very advantageous to Pyxus. AgDiv has “De-risked” many of our production based interventions, and we are highly appreciative of what they have shared with us. AgDiv did a fantastic job linking the partners.

99. What are major challenges in the agricultural sector, which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

a) Access to quality inputs for the smallholder farmers. The tobacco companies are blamed for charging farmers, but when you look at how these farmers livelihoods have improved, the service we provide has been fair.

b) Taught our Farmers Good Agriculture Practices (GAP), provided them with access to inputs and increased their productivity tremendously.

c) Last year we gave out \$28 million in loans and had 98% repayment. Not only that, many of our farmers have graduated from taking loans, and now purchase inputs independently.

Partners & Collaborator Questionnaire

SANE

Stacia Nordin

October 30, 2019

2. Describe your involvement with the Ag Diversification project?

- d) SANE started a year before AGDIV. They cover similar districts as AGDIV (hence overlaps could be possible as SANE covers all TAs) with a focus on Agriculture and Nutrition; policy, coordination (of extension of services) and research
- e) They have also focused on agriculture diversification including giving a voice to farmers
- f) They supported AgDIV in year 1 by introducing them to coordination platforms. In year 2, jointly with SANE they started working with DAEC.
- g) They jointly developed an integration plan in year 2 which did not materialize due to the high number of partners to collaborate with on each topic and was revised in year 3 to focus mainly on:
 - i. national level collaboration,
 - ii. harmonization of material development for agriculture and nutrition which was affected by budget cuts and left to HC4L and
 - iii. linking on gender trainings (which has not yet materialized)
- h) They tried to collaborate on soy kits/milk, but communication was a challenge
- i) Areas SANE would want to collaborate with AGDIV
 - i. Coordinate more including at DAEC level
 - ii. Use the mapping they jointly did to achieve that
 - iii. Have more awareness of the district structures and use them; SANE also realizes that systems are letting down efforts
 - iv. Implementing partners to document and share more
 - v. Harmonize approaches where possible; gender, backyard gardens

Partners & Collaborator Questionnaire

Soy Innovation Lab (SIL), University of Illinois
Peter Goldsmith
October 15, 2019

100. Describe your involvement with the Ag Diversification project?
- a. Paladium via AgDiv knew what it did not know with respect to varietal trials and developing improved seeds. AD contacted SIL, so SIL shared the seed development platform with AD.
 - b. Malawi last variety release was in 2004, so AgDiv partners needed improved seed.
 - c. IITA was established as a hub and money delivered to 4 of 10 research locations for trials; this was coordinated by SIL.
 - d. The technology has moved forward and the first variety was registered and seed was delivered to AD Partners.
 - e. From SIL's perspective, USAID was very serious about conducting research for development purposes.
101. Which agricultural value chains are you focusing on? Have you changed your focal Ag value chain in the last three years? Why?
- a. Only working on Soy.
102. Have you improved your client contact &/or service delivery by collaborating with Ag Div? If yes, what has brought about the improvement?
- a. N/A
103. What different services and technologies have you provided to your clients or your business because of Ag Div?
- a. Comment on Soy Cow – Soy Cow was inappropriate technology for Coops, put the cart before the horse. They needed improved seed varieties first, inputs and improved production technologies to get yields and quality up.
 - b. Also needed basic business skills – like establishing a benchmark program for recordkeeping.
 - c. Soy kits were an epiphany – very appropriate technology. Conducted some basic economics on soy kits, and they were entirely appropriate.
104. What changes have observed on your clients on their: crop yields for OFSP, Groundnuts and Soybean; area allocated to 3 VC; access to inputs, credit, improved food security; diversified food consumption; women's role in decision making?

a. N/A

105. What are the driving factors for the observed changes?

a. N/A

106. How has Ag Div improved your outreach to women and youth? How has your changes affected the lives of the women, youth and their families?

a. N/A

107. Of your new activities & technologies, which are most preferred by your clients? Why are they preferred?

- a. The arrangement between SIL and AD is excellent – SIL has helped design and setup the variety trials, and AD through its partners manages their day-to-day operations.
- b. One comment – time could have been saved up front if SIL would have been involved in the Project Design stage – could have sped things up and saved money.
- c. Pan African Trials have been good – has allowed partners to see what a good soy crop looks like.
- d. SIL conducted economic assessments of soy trials for Companies – so they can see their potential.
- e. The Soybean Innovation Lab (SIL) SMART (Soybean Management with Appropriate Research & Technology) Farm is a knowledge and technology hub. Provides Limbe Leaf and Pyxus with evidence based technical guidance on soybean
- f. SMART Farm evaluates issues related to germination, planting date, amendments including phosphorous and inoculum, planting methods and varietal performance.
- g. Seven (7) SMART Farms were rolled out in December 2018.
- h. Addressed the Industrial Processing side – provided technical support and technical improvements for SunSeed Oil.

108. Which activities in Ag Div would you continue without donor support? How would you manage to do that? Are you currently preparing for the exit of Ag Div?

- a. Some direct research outputs may not continue with AgDiv, but before the project is over, would be good to make a strong case for the Soybean sector from a policy standpoint – look at the potential of soy from a commercial standpoint – employment and income for both rural and urban households through the multiplier effect.
- b. Pan African Trials – a good industry partnership – AD should continue promoting this.

109. Which activities would you want Ag Div to focus on? Why?

a. Should continue with seed trials for these provide evidence of what works and does not work – the seed industry, seed companies or tobacco companies, and DAR need to co-decide what they want to do next.

110. What are major challenges in the agricultural sector, which require more attention? What should Ag Div do to address these challenges? What other interventions are needed to address the stated challenges?

Partners & Collaborator Questionnaire

WOTA

Campbell Carruthers - General Manager

October 29, 2019

3. Describe your involvement with the Ag Diversification project?

- j) They respond to tenders in newspapers seeking for the supply of irrigation kits (drip and solar pumps)
- k) In 2018, supplied AgDIV with 10 solar pumps and drip irrigation (they come as a package) and 3 months ago 2 drip irrigations kits for Dedza and Balaka
- l) Installation services come with quality control checks, trainings of the farmers on utilization and maintenance of equipment
- m) Currently responded to call for interest to supply 10,000 drip kits to AgDIV – pending response.
- n) Involved with Limbe Leaf in Mchinji area where they are installing solar pumps and drip irrigation at a dam

4. General information on WOTA and Drip Irrigation kits

- a) Their main supply is in India but that does not affect availability as they do not run out of supply.
- b) Sustainability is a challenge when it comes to drip tapes as they wear out after a period of 2-3 years, but they have them in stock and farmers can access at a cost. However, may explore on local production.
- c) They have one shop and is in Lilongwe – they have not yet connected themselves to Agro-dealers for improved access and for the spare parts.
- d) Now starting to do soil sample and water testing to inform farmers better; not connected to farmers world efforts on soil sample testing.
- e) Drill boreholes and submersible pumps

Partners & Collaborator Questionnaire

Feed the Children

Scholastica Mkandawire – Program Manager

November 08. 2019

5. Describe your involvement with the Ag Diversification project?

- o) Implementing Tiwalere II – USAID funded
- p) Approached by AGDIV to collaborate and integrate AGDIV activities in the care groups.
- q) Districts of collaboration are Mchinji (4 Traditional Authorities) and Lilongwe. Mangochi was dropped as Feed is no longer in the district.
- r) Activities include; trainings food processing and utilization, distribution of 28 free soy kits and 414 drip kits received in October. These have been highly welcomed by the participants

6. Areas Feed the Children would want to collaborate with AGDIV

- a) Targeting of more participants with AgDIV technologies and interventions. Increase the supply for soy kits as demand is high
- b) Timely delivery of drip kits so they are used in the dry season – April
- c) Review meetings for implementers
- d) Proper coordination to avoid duplication of efforts; training same people on same things twice.
- e) AGDIV to support with the costs for delivery of AGDIV interventions that are being handled by Feed the Children – initially they were asked to submit a proposal which they did but did not receive feedback.
- f) Joint planning instead of just sending communications during mid-way to identify participants on adhoc
- g) AGDIV promotes good technologies but pathways need to be identified clearly
- h) Frame trainings to also target community participants

KII FRIM Bamboo

Interview notes with Robert Mzumara-Bamboo Focal Person for the Government of Malawi Forest Research Institute of Malawi (FRIM)

Meeting place: Zomba, Malawi

Date: 24th December, 2019

How has FRIM been engaged with AgDiV?

- The programme has had minimal engagement with government. FRIM, was engaged with AgDiV to clear the bamboos. About two years ago AgDiV organized a meeting with bamboo suppliers in Malawi. It was at this meeting which Robert attended, that news availed AgDiV had already decided on the species of bamboos to promote. The current bamboo suppliers were vouching to go for the species AgDiV wanted to promote and use. At this meeting the position of FRIM was that the newly introduced bamboo species should be promoted along species which have been tried and proved to work in Malawi's ecological conditions. The position of FRIM was upon reflection that Malawi had not evaluated the *Dendrocalamus asper* and *Dendrocalamus giganteus* species which AgDiV was geared to promote.
- The engagement with AgDiV later involved towards planning for joint research of the bamboo species being promoted. FRIM developed a concept note and plan for evaluative research on the bamboo species promoted under the project and those species that are already in use in Malawi. This concept note was shared with Afshan of Child Legacy who was representing AgDiV. FRIM has not had a response from AgDiV on the concept note. In the concept note FRIM was also proposing for a scoping study to among other things evaluate the bamboo performance in the AgDiV project sites. The evaluative study should have helped AgDiV to understand the vegetative growth and social value of the bamboos. The vegetative growth evaluation was meant to consider the climate, soil and water requirements as key variables. The social value would have looked at how the project participants envisage the use of the bamboos. This should have helped the project to learn whether the species of the bamboos being promoted were relevant to the ecology and the society.
- Robert has been invited to Farm Radio Trust programmes to provide my technical input on bamboo production. During such programmes I have vouched out to the bamboo growers the key principles for bamboo production. These programmes were done way after the bamboo planting season had set in.

Which species of bamboos are in Malawi and how are they performing?

Malawi has three local (indigenous) species and two introduced species. The local species are;

- *Oxytenanthora abyssinica* (common bamboo). This bamboo has high calorific value relative to all other bamboo varieties in Malawi.
- *Oreobambos buchari* (Riverline bamboo)
- *Arundinaria alpina* (mountain bamboo)

It takes about three years to start harvesting the local varieties.

The two introduced varieties which government of Malawi is promoting are;

- *Bambusa vulgaris* (yellow bamboo)
- *Bambusa multiplex* (green bamboo)

These varieties were introduced in Malawi from China. They have been around in the country for fairly over 30 years.

What are the key factors to consider establishing bamboo plantation among smallholder farmers?

- Bamboos require a lot of water especially in year 1. In year 1, the plantation needs to be watered even during the rainy season. A bamboo plant requires about 5-10 litres of water in its initial 7 months.
- The bamboo plant needs good soil nutrients for its initial growth.
- Mulching the bamboo plant is a must in year 1. In areas of severe heat, mulching using shades is recommended.
- The aforementioned factors require that the bamboo grower should be adequately trained prior to taking up any bamboo initiative.

Which bamboo species are good for water resource management?

- Running bamboos are good for water management. Mention was made that not all bamboos are aversive. For Malawi the Moso bamboo (*Phyllostachys edulis*) are ideal. This species is fast growing and grows to the diameter of 24cm.

From your experience of working with bamboos in Malawi what are acceptable survival rates?

- Survival rate of 70% is good as a minimum. Anything less than this is not being prudent on resources.

What is the sustainable way of ensuring supply of planting materials for Bamboos in Malawi?

First it must be known that there are three ways of raising bamboos seedlings.

1. One can raise the seedlings through tissue culture which is expensive, takes time and the seedlings struggle to establish their rhizome once transplanted.
 2. The other way is to do it through vegetative planting. This is most recommended method by IBAM. It requires special skills to it. Hence it needs a lot of capacity building on those that would be handling the seedlings. The advantage of this is that the seedlings are true to type.
 3. Multiplication of seedlings from planted seeds is also possible. This method permits for planting the seeds and raising the bamboo shoots on the nursery. FRIM works with this and has seeds in stock for the species AgDiv is working on.
- Bamboos seedlings can be produced locally by trained seedling multipliers. FRIM has ever used this model and it works. FRIM sells a 1 Kg of bamboo seed which has the potential of producing 15-20,000 live seeds.

What would you recommend to AgDiv or any other project considering having bamboo intervention?

- The bamboo projects and AgDiv in particular should first consider the needs and interest of the would-be growers. These needs should be interpreted and inform the species of the bamboos to promote. You cannot have a project on bamboos in different districts

and landscapes working only on one species. There communities whose needs are wood for carpentry or energy wood. There are those communities who need the bamboo for stocking their tobacco. All these communities may require different bamboo species.

- The project team should improve on communication and providing feedback and feedback that comes on time. “I was shown a trail of communication from FRIM to Asfhan asking her on when they would be making strides on the concept note that FRIM submitted to AgDiv. There was no feedback from Afsha for over nine months.” She only got back to FRIM in October 2019 to alert them that AgDiv was eager to reinstate the discussion, but this communication was not sustained until now.
- It would be ideal for bamboo project to run for at least 5 years. Year 1 should be invested in planning and year 2 implementation whilst learning while year 3 and 4 should go towards upscaling based on the lessons drawn.

APPENDIX F

Resilience Programming

At the request of USAID/Malawi, the following represents some thoughts about resilience programming as evidenced in three Dedza villages visited during the AgDiv Mid Term evaluation.

1. Site visit report for Napolo A & B villages

Village is 6 kms off the road. These are two of the three Dedza “Resiliency villages” (one more reported in Ntcheu, not visited.) The team visited Napolo A with one man and five or six women, then Napola B about three km. distant with one man and about the same number of women. The following project activities were visited.

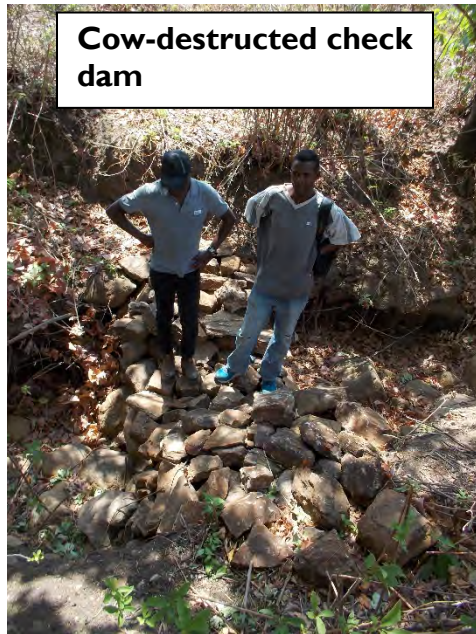
The community took the IBTCI team to a road along which we walked for about one km. where they explained to us that this was designated as a “buffer zone” to help protect their fields from excessive rainwater runoff from the nearby mountains. The group did a pretty good job explaining what “buffer zone” meant to them, but it was hard to understand why such gently sloped land would require “buffering.” In fact, just above the fields is dense underbrush that protects the lands far better than what they have expended considerable energy (hundreds of person-hours) constructing. Three lines of bamboo were planted in mid-February along the 1-1.5 km stretch, probably three hundred seedlings or more. The reason for choosing giant bamboo was hard to understand. These plots *surround* field plots, thus do not compete for land with the planted crops. The spacing between bamboo plantings was at least 10 meters, -- and there were stretches where there were no plants for a hundred meters-- meaning that this variety of “clumping” bamboo would not provide much water absorption against a torrent of water, even if the seedling take successfully.



In fact, there is, reasonable doubt about whether the seedling will take. They were delivered very late in the planting season – according to the community, after Valentine’s day, i.e., end of February when the rains were tailing off. They are almost a $\frac{3}{4}$ km. away from the water source, meaning that women say they have to bring 20-liter jugs of water up the hill to water each of these hundreds of plants – and they say they do so “maybe twice a week.” We did not count the hundreds of plants, but our best estimate is that *at the very least* 50% of them have already died, more like 75%, and another significant will likely be dead by the middle of the Dry Season next year. Note that this is mostly women’s work, 253 of them (147 M)—for cultural reasons that are difficult to accept. Thus the project has added an extra burden to women’s workloads with very

little—one would say “no” -- return on their effort. For this part of the project **OVERALL:** failure.

The group also constructed ¼ km of swales and water absorption trenches, in a few places planted with vetiver. Placement of the trenches is a little questionable, -- separated from the other work by at least 500 m—but the work is not bad. The group also did some Herculean work on 119 meters of gully



Cow-destructed check dam

protection, placing hundreds of 20 kg. stones in ‘check dams’ down the length of a moderately eroded gully.

This is good work—if physically very demanding. There is some protection against future erosion that will likely result from this effort. Note however that cows in search of water have already knocked down one of the check dams, calling into question the dams’ ability to resist a wall of rushing water. **OVERALL for this component:** “C-” — pretty good work but physically very difficult. It is hard to perceive a “demonstration” effect for such tucked away sites—evidently one of the justifications for these project activities . A post-Rainy Season evaluation of the

real success of this activity is very much required.

OVERALL for this component: “C.” Good (enough) work but with little vision of how it fits with the overall need of the community nor with any overall soil conservation plan.

Napolo “B”

The group was one man and about six women. This community only started two months ago, Sept. 2019. 164 women of 200 total, participating in “village improvement” activities. In that time, they have excavated two water absorption trenches, 27 swales, and begun planting tree seedling of exotic and local varieties. This December they think they will receive from AgDiv 10 bamboo each, 10 X 200 = 2,000. The first trench is a big one, 147 meters long, one meter deep, two meters wide and 30-40 cm. at the bottom of the trench. This is a TON of work! There is a second smaller trench ten meters higher up the slope of 36 meters. The contour line of the trench had one significant structural weakness that was discussed with the people, and they apparently recognized the weakness and were planning to address the issue. It could be a fatal weakness as it sits at the confluence to two opposing slopes and will carry the majority of the runoff at the highest velocity. Time will tell. According to them, the purpose is to prevent flooding and road wash out during the rainy season for the farmer fields below Women were

Water absorption trenches w/vetiver



asked to explain the construction and purpose of the trench and did so well. The contour line on the larger trench described above the first was less well done.

On the way back, a number of swales were seen about 10 meters apart built in an attempt to slow rainwater runoff on moderately sloped fields. The swales were “eyeballed” to be built on the contour pretty well. The group said they used a “line level” (which appears by their description to be a hand-held replacement for an “A” level. Did not get a chance to inspect the instrument.) The group received snacks and drinks from U.P on their workdays and seemed to value the contribution far more than its economic cost; also received gumboots, two soy kits and some demonstration seed. Inoculants were delivered but many weeks after the crops had been planted, and so worthless.



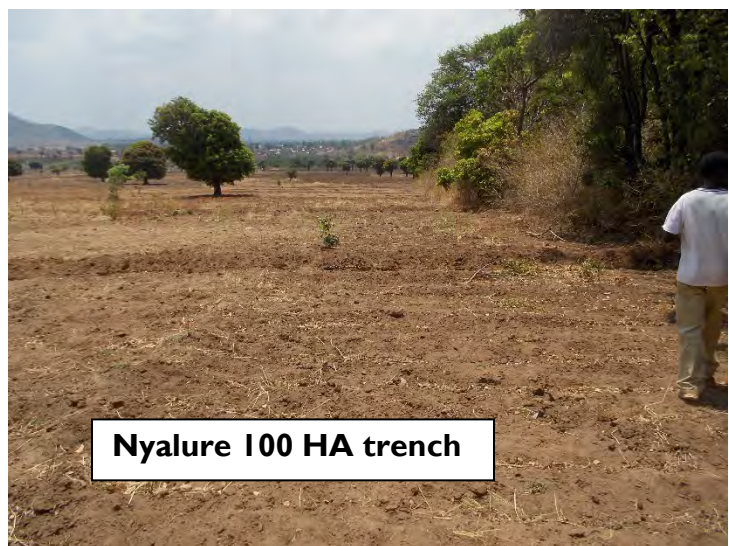
Napolo B trench work

OVERALL: “B.” This is a fledgling group and they have begun with great energy and enthusiasm. It seems important not to over-tax their initial enthusiasm, nor to burden them with (for them) a public works projects that require great commitment of manpower (in this case, woman power.) It will be important to see the effectiveness of the soil conservation structures during the rainy season to see whether this group can continue to build on this year’s activities. “B” for enthusiasm and hard work. Not yet “A” in terms of impact on people’s lives until assessment of the technical quality of the work.

2. Site visit report for Nyasure village

Village is 6 kms off the road. This is the third of the three Dedza “Resiliency villages” that AgDiv has been supporting with soil conservation efforts.

To our surprise, when we got there, we were met by entire village. Probably thirty men and forty women, the women singing with our arrival. As quickly as was polite, we explained that we were there to visit activity sites, and not engage in a community meeting; and the larger group was disbanded, and we were accompanied by the leaders of the



Nyalure 100 HA trench

community to the project site. It became clear during the visit that the reason for the community's coming together was because of community infighting, not because of an erroneous message of ours.

Our guide was one of the community leaders, a woman, who was clearly an activist and a force for good in the community.

The project we visited was about 1/w km. from the center of the village—walking through furrows of land already plowed and mounded for the start of the rainy season. To get to the site where we stopped to talk probably took the best part of half an hour. The walk was on flat land

and there was some initial question

whether soil conservation activity was needed on such gently sloped land.

When we got close to the mountain that forms the 'back' of the village fields, the group told us that flooding was a significant problem because of light,

loamy soil and heavy rains in this area. Sounded like good reasons. The group

decided to construct moisture infiltration trenches throughout the entire field. They excavated their trenches in lines that

extends forty or fifty meters in length, 30 cms or more in depth, pretty much along the contour line, and every ten meters

through fields that probably amount to over 100 HA. (Gasp!) This was an

enormous undertaking and when we understood what they had done, we were astonished. They donate three or four hours two mornings in the week to this communal activity. The total group is 200 people; and women assume the majority of the work, and number 126 participants. What we were seeing was two months of work. (Back of the envelope calculation: +/- 175 people X four hours a week X two days X 8 weeks = 11,200 hours of heavy work, or 1,400 person days.) Given the size of the hectareage this is probably as good a ball-park figure as any.

The women also reported the worked on ten check dams (as in the two other communities) and showed us one of them that as in the other areas, was full of 20 kg. boulders stacked into a wall, as above.

For these soil conservation in Nyalure: **"A"** for effort. We sincerely hope their work is beneficial in the upcoming rainy season. However, please note the following. **Caveat:** At the same time as we applaud the community for this intense and heavy work, we must remember this is voluntary labor – and largely contributed by village women; and there are enormous, unquantified, and mostly hidden opportunity costs in these activities. In all her daily chores the housewife has to put off, this is *extra* work for her in her already busy day. Project designers should be creating soil conservation activities that produce the-most-protection-with-the-least-effort, not massive public works projects that do not take into account the human cost. Only a



Nyalure check dam work

post-Rainy Season assessment (called for in this trip report) will show whether this community's investment was worth the effort. If so, next year's efforts should not be more-of-the-same but rather achieving similar conservation gains with less effort. **OVERALL Assessment** until the structures have proven their worth: **"B"**

3. Evaluator Comments

- It is risky to generalize from such a small sample.
- There is some technical person guiding and planning these activities. The activities are too complex for them to be village initiated.
- Contour lines – an absolutely critical component of soil conservation—still require careful supervision and control. Without a surveying instrument, it is difficult to “eyeball” the slope, but it appears that the first community Napolo A, (last year's work) did not plant on the contour as well as the two communities this year did. This may indicate the slow learning curve.
- The “buffer zone” designed for Napolo A was a waste of time and energy. Even if the seedling largely survive, they were planted late, they haven't been regularly watered and many of them are already dead. The spacing is far too wide, the plants ‘clump’ and do not grow out, and there are spaces between one plant and the next of sometimes 100-150 meters. They will indisputably not serve to protect soil on the downhill slope.
- The slope in Napolo A is not steep. It is hard for a visitor to visualize what the Rainy Season rainwater runoff will be from the granite hill above the fields – the farmers say it is severe—but the best protection to these fields is the already-existing thick vegetation on the slope above the road. It would have been better to strengthen that than undertake a “buffer” project, but less perhaps less “demonstration.”
- In the soil conservation activities in Latin America, it is the men's responsibility to do this heavy lifting. It is risky to ask mothers to leave her kids behind while she goes up the hill to do heavy manual labor for four or five hours.
- The Nyasure work is impressive on several fronts. First, it took an enormous amount of energy and community commitment, and the community is quite proud of its work. Without walking the hundred hectares to get to the top of the fields, it is impossible to adequately appreciate how much the community has sacrificed. Similar to the slopes in Napolo, the Nyasure gradient is fairly gentle. Thus, whether so much work needs to have been done will only be evident after the structures have lasted through the Rainy Season. These structures, too, need to be carefully evaluated after the Rainy Season ends to see their effectiveness. Unlike the two Napolo villages, in Nyasure the MTE perceives no environmental threat if any of the structures fail.
- Scale up may require many more resources: more technical decision-makers, more supervision, more community planning, more community meetings to prioritize projects. It will also require dedicated staff. This is not a “traditional” agricultural activity but very much a different discipline.

APPENDIX G

Reserved

APPENDIX H

DOCUMENTS REVIEWED

- The original AgDiv Technical Proposal
- AgDiv 5 Year Implementation Plan
- AgDiv Monitoring-Evaluation Plan Revised
- AgDiv Performance Indicator Reference Sheets
- AgDiv Year 1 Workplan
- AgDiv Year 1 Annual Report (Final)
- AgDiv Year 2 Workplan
- AgDiv Year 2 Annual Report
- AgDiv Year 2 Nutrition Survey Results
- AgDiv Year 3 Workplan tasks
- AgDiv Year 3 Work Plan Revised
- AgDiv Key Achievements and Lessons Learned from Year Three
- AgDiv 2018 Annual Survey Named EPAs
- AgDiv Annual Survey 2018
- AgDiv Coordinating Forum: A Concept Note
- AgDiv Resiliency Grant
- Bamboo CBA and Sensitivity
- Bamboo Spot Checks Survey Report
- Baseline Survey
- CBA All technologies
- CBA presentation to USAID
- CBA worksheet calculations
- Concept Paper AgDiv Coordinating
- CRS Bamboo Progress Report (30June 2019)
- CRS OFSP Progress Report (30June2019)
- CRS Soy kit Reporting (30Sept 2019)
- CRS Soya Milk Report (30June2019)
- Five Data Points by Cluster (IBTCI report)
- FINANCIAL LITERACY TRAINING PRE/POST EVALUATION PRELIMINARY REPORT
- Inoculant Spot Check Report (Feb 15, 2019)
- Key Informant List (10/10/2019)
- 2019 communities
- **Annual Household Welfare Survey**
- **Notes on Interventions Promoting Sustainable Technology Adoption**
- **Soy, Groundnut and Orange-Fleshed Sweet Potato Value Chains in Malawi**
- **AgDiv-Philip Morris Tobacco Diversification Initiative Impact Evaluation Scope of Work**
- **AgDiv Approaches to Addressing Key Challenges in Agricultural Structured Trade in Malawi**
- **Warehouse Receipts Finance: The Benefits and Risks for Smallholders**
- MELS Annual Survey 2018 Final Report
- MELS Annual Survey 2018 Comparison 2017-2019

- MELS Annual Survey 2019 Extrapolations
- Nutrition Survey Data Collection (1 & 2)
- PICS Targeting 2020
- **PICS Bags – How a \$2 Plastic Bag is Bringing Food Security to Malawi**
- Quarterly Report Year I-1
- Quarterly Report Year I-2
- Quarterly Report Year I-3
- Quarterly Report Year I-4
- Quarterly Report Year 2-1
- Quarterly Report April 2019
- Quarterly Report July 2019
- SIL Malawi Results Summary
- SIL Winter 2018 Trials Report
- SIL Oil Protein Concentration
- Soy Processing as Climate Smart
- WORLEC VS&L Groups Monitoring and Briefings on Basic Group Management Principles Report
- United Purpose June Monthly Report (2019)
- United Purpose Inoculant Exercise

APPENDIX I

Mid-Term Performance Evaluation of USAID's Agricultural Diversification Malawi (AgDiv) Activity

**United States Agency for International Development
(USAID)/Malawi, Office of Sustainable Economic Growth (EG)
May 2019**

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Project Information	
Project Name	Agricultural Diversification Malawi (AgDiv)
Award Number	Contract number AID-612-H-16-00001
Original Project Dates	October 2016 – September 2021
Original Funding	37.9 million USD
Implementing Partner	Palladium

Contents

Acronym List	3	
I. Background		4
II. Program Components and Description	4	
III. Evaluation Purpose	6	
IV. Evaluation Questions	7	
V. Evaluation Methodology		7
VI. Deliverables	9	
VII. Evaluation Team Composition	11	
VIII. Existing Sources of Information	12	
IX. Level of Effort (LOE) of Study Team by Task Deliverables		13
X. Scheduling and Logistics	14	
ANNEX I. Conflict of Interest Form Template	16	

Acronym List

AgDiv	Feed the Future Agriculture Diversification
CDCS	Country Development Cooperative Strategy
COR	Contracting Officer's Representative
DEC	Development Experience Clearinghouse
DO	Development Objective
DQA	Data Quality Assessment
FGD	Focus Group Discussion
GCC	Global Climate Change
GHG	Greenhouse Gas
GoM	Government of Malawi
IBTCI	International Business & Technical Consultants, Inc.
LDC	Least Developed Country
LOE	Level of Effort
MELS	Monitoring Evaluation & Learning Support
MGDS	Malawi's Growth and Development Strategy
MRV	Monitoring, Reporting, and Verification
M&E	Monitoring & Evaluation
NDC	Nationally Developed Contribution
NRM	Natural Resource Management
PES	Payment for Environmental Services
PITT	Performance Indicator Tracking Table
PMP	Performance Management Plan
PPS	Public-Private Partnerships
REDD+	Reducing Emissions from Deforestation & Forest Degradation
SEG	Office of Sustainable Economic Growth
TL	Team Leader
USAID	United States Agency for International Development
USG	United States Government
VTC	Video Teleconference

Background

The Feed the Future Agriculture Diversification (AgDiv) Activity contributes to USAID Malawi's Feed the Future goal of sustainably reducing poverty and preventing stunting in eight districts in Central and Southern Malawi. The Agriculture Diversification Activity was contracted to Palladium International for a period of five years beginning in October 2016. The AgDiv Activity seeks to increase the competitiveness of high-value, nutrient-rich value chains through support for agricultural enterprises and increased access to markets and finance. It also aims to foster inclusive sustainable growth of Malawi's agricultural sector and improve the nutritional status of women and children under five through a proven nutrition-sensitive approach of layering agriculture and nutrition behavior change interventions in rural communities.

The Agriculture Diversification Activity has been developed to achieve overall program objectives that will be implemented along the following interrelated outcomes:

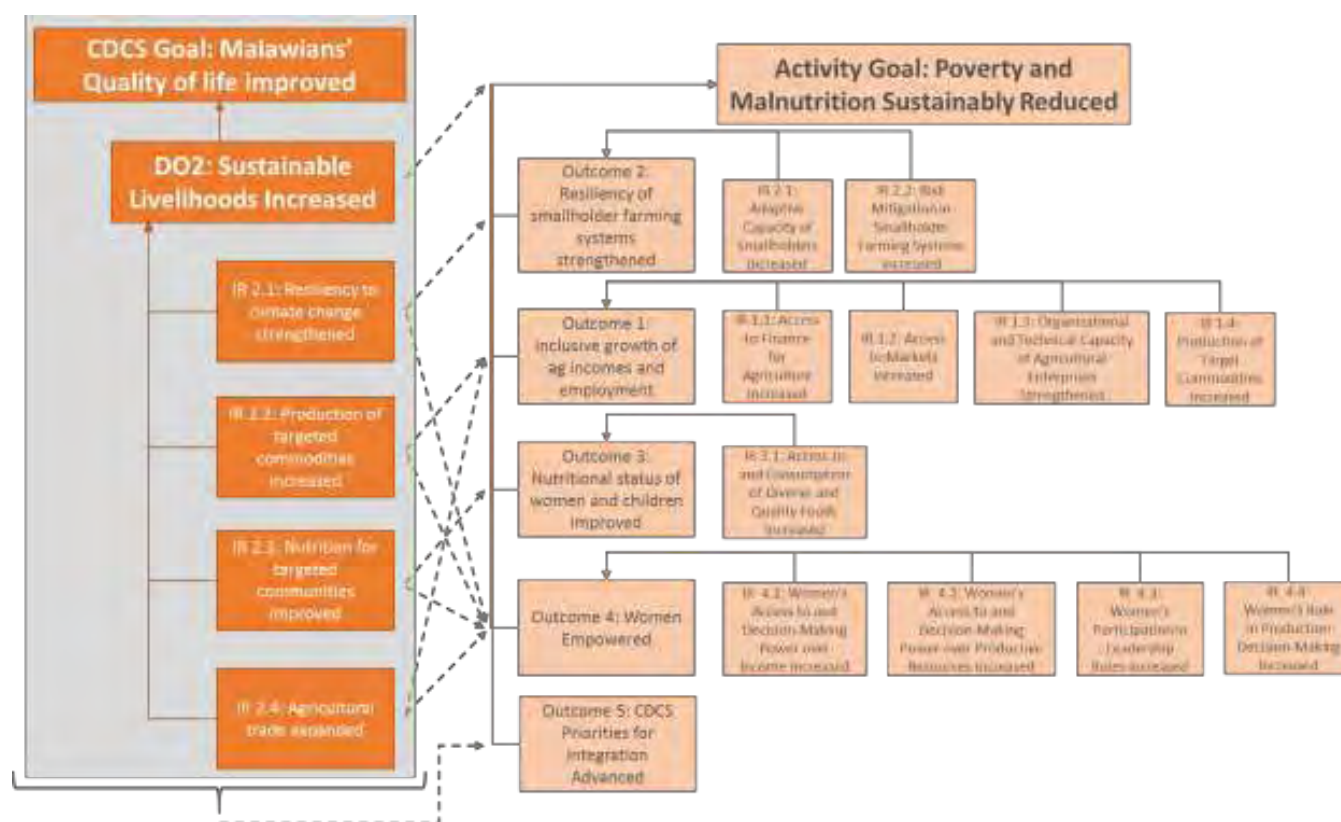
1. Inclusive growth of agricultural incomes and employment
2. Resiliency of smallholder farming strengthened
3. Improved nutritional status of women and children
4. Women empowered
5. CDCS Priorities for Integration Advanced

The Agriculture Diversification Activity's geographic focus is on eight districts (Mchinji, Lilongwe Rural, Dedza, Ntcheu, Balaka, Mangochi, Machinga and Blantyre Rural) across two regions (central and southern Malawi), affecting at least 166,000 households either through nutrition-sensitive or agriculture-based interventions or both.

Program Components and Description

The Palladium team strategy for Agriculture Diversification implementation is to work with and through partners that are active and have a good track record in the agricultural and nutrition sectors. These main implementing partners are expected to work directly with smallholders across the eight target districts. Palladium and its consortium partners (Agland and Atethemis) will play a facilitative role, strengthening the capacity of local partners and business service providers to capture and scale up existing models and practices that best calibrate the "push" of more efficient production with the "pull" of greater market opportunities, and through the agricultural value chains and nutrition-sensitive activities for better nutritional outcomes.

Figure 1. CDCS Results Framework and Ag Diversification Logical Framework Linkages



To achieve the results shown in Figure 1, AgDiv has implemented various activities under each of the Intermediate Results (IRs).

Outcome 1. Inclusive Growth of Agricultural Incomes and Employment

IR 1.1 Access to Finance for Agriculture - AgDiv is promoting access to finance and the structured trade of agricultural commodities. A commodity landscape assessment conducted in Year 2 has contributed to AgDiv's approach to improving formal commodity trading and market structure for agricultural commodities. To promote access to finance, AgDiv is injecting capital into MFIs and VS&Ls, as well as providing financial literacy training and capacity building for VS&L leadership. Under this IR, AgDiv has also facilitated investments by the European Investment Bank to support the National Bank of Malawi.

IR 1.2 Access to Markets Increased - AgDiv has promoted the distribution of hermetic storage technology, or PICS (Purdue Improved Crop Storage) bags, to reduce post-harvest losses. AgDiv has also facilitated linkages between farmer cooperatives and agricultural processing companies as well as other agricultural input and business development providers.

IR 1.3 Organizational and Technical Capacity of Agricultural Enterprises Strengthened - AgDiv has promoted trainings on endorsed technologies such as PICS bags, post-harvest handling, Inoculants, Good Agricultural Practices (GAP) and other improved agronomic practices. In addition, AgDiv installed five soy cow machines for cooperatives and LUNAR. A business consultant was also used

to mentor the businesses on how to generate profit from their soy cow businesses. In addition, AgDiv also helped a

number of youth clubs and individual entrepreneurs start small businesses producing soy milk using smaller soy kits, by providing the kits, training, and mentoring to the entrepreneurs.

IR 1.4 Production of Target Commodities Increased - To achieve this result, AgDiv promoted improved seeds for soy, Orange Fleshed Sweet Potato (OFSP) and groundnuts. These seeds were supported by improved agricultural practices and legume inoculant to improve nitrogen fixation. Drip irrigation is being promoted as a means of improving yields and extending the growing season for crops in Malawi.

Outcome 2. Resiliency of Smallholder Farming Systems Strengthened

IR 2.1 Adaptive Capacity of Smallholder Farmers Increased - To achieve this result, AgDiv focused on various watershed management strategies. AgDiv also promoted the cultivation of Bamboo to improve erosion and reduce the dependency on charcoal. These activities were augmented by the introduction of improved cookstoves.

IR 2.2 Risk Mitigation in Smallholder Farming Systems - To support this Intermediate Result, AgDiv worked with the government of Malawi to control Fall Armyworm. AgDiv also developed a Climate and Agriculture Resilience Analysis tool to examine critical aspects of climate change and agricultural productivity and the effects on income generation at the household level.

Outcome 3. Improved Nutritional Status of Women and Children

IR 3.1 Access to and Consumption of Diverse and Quality Foods Increased

AgDiv facilitated a Train the Trainer event for village level food processing and utilization. Soy kits were also used to promote the nutritional benefits of soy along with small scale industrial processing of soy using soy cows. AgDiv facilitated backyard production of OFSP and behavior change to improve household nutrition. AgDiv also promoted dietary diversity through cooking demonstrations, recipes, food availability calendars, and training in food preservation/storage and food processing.

Outcome 4. Women Empowered

AgDiv began to address this outcome with a Gender Analysis and Action Plan which was developed from an initial assessment of literature. This was followed up with the IFAD Gender Action Learning System (GALS) approach which utilizes a community led empowerment methodology. AgDiv also provided financial literacy trainings (promoting Village Saving and Loan Groups (VSLs)) and introduced time saving technologies such as rocket cook stoves.

Outcome 5. Cross Cutting Activities

This outcome focuses on the integration between AgDiv and other USAID activities within the agriculture sector. Altogether AgDiv has documented over 39 instances of integration interventions with other USAID Malawi partners.

Evaluation Purpose

The primary purpose of this mid-term performance evaluation is to assess the effectiveness of the AgDiv design and implementation processes. The evaluation will also inform management regarding effective implementation strategies that support increasing access to markets and finance and the connection

between this and improved nutritional outcomes.

Major objectives of this evaluation are to:

- 1) Review, analyze, and evaluate the effectiveness of the AgDiv Activity in achieving program objectives and contributing to USAID/Malawi's efforts economic growth in Malawi.**
- 2) Evaluate major constraints in achieving expected project results.**
- 3) Provide specific recommendations and lessons learned on strategies and approaches USAID/Malawi should continue in its future economic growth activities.**

Evaluation Questions

The contractor's evaluation of AgDiv must be comprehensive. Whenever possible, the evaluation team should ensure that data is gender disaggregated and subject to gender analysis. The contractor shall assess AgDiv performance and achievements against the performance indicators, targets, reporting requirements, outputs and deliverables described in the approved Activity Monitoring Evaluation and Learning plan (AMELP), Annual Work Plans and the agreement. While this evaluation is not a data quality audit, the contractor shall assess and describe the quality and use of performance monitoring data and information generated during AgDiv implementation. Evidence-based conclusions and recommendations on how AgDiv used performance monitoring data and information in performance management are required when describing AgDiv's effectiveness in component management.

The following questions should be addressed:

1. To what extent have farmers (both tobacco and non-tobacco farmers) diversified their production of agricultural commodities as a result of AgDiv's efforts? How effective have AgDiv's efforts to increase area planted, total production, yields, and profits of the targeted commodities of soy, groundnuts and OFSP been?
2. To what extent has AgDiv strengthened and successfully built the capacity of the private sector to grow their businesses in a non-aid-dependent manner?
3. To what extent are farmers better connected to markets as a result of AgDiv's efforts? How effective has AgDiv been in increasing women and youth access to productive economic resources (assets, credit, income, or employment)?
4. To what extent is the adoption of new technologies by smallholder farmers growing in a sustainable, non-aid-dependent manner as a result of AgDiv approach?
5. What elements of AgDiv should be continued in future private sector-oriented agricultural development programming and which should be discontinued?

Evaluation Methodology

The contractor must propose a robust evaluation methodology to answer the key evaluation questions identified above. The evaluation methodology will follow a mixed-method approach using both quantitative and qualitative techniques in gathering reliable data and valid evidence of project outcomes or impacts including review of relevant AgDiv, USAID, GoM, and other secondary data sources. The

contractor must develop a Mixed Methods Evaluation Design Matrix that will detail the data source, data collection methods, data collection instruments and analysis of data to answer each of the evaluation questions. By using a mixed-method approach, the evaluation team is expected to gain insight on the progress of AgDiv project activities (mostly from quantitative data collected by the project and others) and the processes (mostly qualitative information provided by the project staff that may be validated and enhanced by key informants) that lead to those impacts. It should generate gender-disaggregated data and reflect attention to gender relations such as the participation of women in training. Sequential (whenever applicable and advantageous) and iterative approaches should be used to integrate the mixture of methods at various stages of the evaluation.

The evaluators should utilize several different yet complementary and interrelated forms of gathering information/data such as those described below. The contractor is expected to utilize its expert judgment and evaluation best practices in selecting which methodological components to include in the evaluation design.

Document Review. Evaluation team members will review documents throughout the evaluation process including program reports, relevant studies to ensure that comprehensive and grounded best practices are identified.

Key Informant Interviews. The team will conduct one-on-one interviews with a variety of stakeholders including the most relevant GoM ministries and agencies, local government authorities, private partners and community leaders, bi- and multilateral development partners supporting GoM's agricultural initiatives. This will be done administering a semi-structured or structured questionnaire.

Self-assessment. The implementing partners will respond to a self-assessment either through a questionnaire or standard interview checklist put together by the evaluation team and approved by USAID before use.

Expert Opinion Survey. Utilizing expert opinion is a technique used increasingly in evaluation. The evaluation team, with the approval of USAID, can apply this method as well.

Focus Group Discussions (FGD). FGD (small group of 6 to 10 people) will be used to lead open discussion through a skilled moderator to gather semi-structured qualitative data. The pre-selected participants will discuss issues and concerns based on a list of key themes drawn up by the moderator. No more than 10 questions will be addressed by a group. These sessions will encourage free flowing discussion about the activity.

Mini Survey. This type of survey is small (30-40 participants) and can be performed rapidly in the field without analytical software such as SPSS or a large questionnaire. The sample size is not statistically significant. However, this type of analysis can be used to triangulate with other methods. Because of the small sample size this type of survey can be implemented quickly when time and resources are constrained.

Data Collection from Private Sector Companies. This will provide data on technology sales by technology type, geography, and time period.

All the methodological strengths and weaknesses should be explicitly described in the evaluation report. Prior to the start of the evaluation, the evaluation team shall meet with SEG office to refine the evaluation questions and methodology as well as address any other concerns the SEG office may have.

Limitations to Data Collection. There is little time for comprehensive surveys for this evaluation. No other limitations exist that IBTCI is aware of. The evaluation team need to report any other limitations that may be experienced during the evaluation.

Deliverables

All deliverables are internal to USAID, MELS and the Evaluation Team unless otherwise instructed by USAID. Evaluation deliverables include:

Evaluation Team Planning Meeting. Essential in organizing the team's efforts. During the meeting, the team should review and discuss the SOW in its entirety, clarify team members' role and responsibilities, work plan, develop data collection methods, review and clarify any logistical and administrative procedures for the assignment and instruments and to prepare for the in-brief with USAID/Malawi.

In-brief Meeting with USAID/Malawi. The in-brief meeting should occur within two working days of international team members' arrival in Malawi.

Inception Report. At the in-brief meeting, the Evaluation Team will provide an inception report that will outline key aspects of the Evaluation, including the Work Plan, Evaluation Design Matrix, and proposed Data Collection Instruments (e.g., interview guides). See more detail below.

- **Work Plan.** The Contractor will prepare a detailed work plan that includes a task timeline, methodology outlining approach to be used in answering each evaluation question, team responsibility, document review, key informant and stakeholder meetings, site visits, survey implementation, travel time, debriefings (for USAID, implementing partner and, if decided, the GoM), draft and final report writing. The work plan will likely not include a data analysis plan since there are no large surveys planned for this evaluation. The work plan will be submitted to the MELS and AgDiv Contracting Officer's Representatives (CORs) at USAID/Malawi for approval no later than the fifth day the Evaluation team arrives in Malawi.
- **Evaluation Design Matrix.** A table that lists each evaluation question and the corresponding information sought, information sources, data collection methods, data analysis methods, and limitations. The matrix should be finalized and shared with USAID/Malawi before evaluation field work starts. It should also be included as an annex in the evaluation report.
- **Data Collection Instruments.** Development and submission of data collection instruments to USAID/Malawi during the design phase and after the evaluation is completed.

Regular Updates. The Evaluation Team Leader will brief the MELS and AgDiv CORs, on progress with the evaluation on at least a weekly basis, in person or by electronic communication. Any delays or complications must be quickly communicated to USAID/Malawi as early as possible to allow quick resolution and to minimize any disruptions to the evaluation. Emerging opportunities to strengthen the evaluation should also be discussed with USAID/Malawi as they arise.

Debriefing with USAID. The Contractor will present the major preliminary evaluation findings to USAID/Malawi through a PowerPoint presentation before the team's departure for home office. The debriefing will include a discussion of achievements and issues as well as any preliminary recommendations. The team will consider USAID and MELS comments and incorporate them in the Draft Evaluation Report.

Stakeholders Workshop. The team will present the major findings from the evaluation to key stakeholders (as appropriate and as defined by USAID) through a PowerPoint presentation prior to the team's departure from the country. The debriefing will include a discussion of achievements and activities only, with no recommendations for possible modifications to project approaches, results, or activities. The team will consider key stakeholder comments and incorporate them appropriately in drafting the evaluation report.

Draft Evaluation Report. A draft report on the findings and recommendations should be submitted to USAID/Malawi and MELS 10 working days after departure of international team members from Malawi. The report must be no more than 50 pages in length (excluding annexes) and comply with the Checklist

for Assessing USAID Evaluation Reports (see annexes). The written report should clearly describe findings and the evidence for these findings, conclusions, and recommendations. The draft report must be of high quality with no grammatical errors or typos. A report is high quality when it represents a thoughtful, well-researched and well-organized effort to objectively evaluate what worked in the project, what did not and why. The draft report must have well-constructed sentences that are presented in a way that clearly presents findings, conclusions and recommendations. The report should answer all the evaluation questions and the structure of the report should make it clear how the questions were answered. The draft report must meet the criteria set forth under the Final Report section below. USAID will provide comments on the draft report within 10 working days of submission.

Video Teleconference (VTC) Presentation to the Mission, E3, and AFR/SD. The Evaluation team will lead and conduct a presentation via VTC to the Mission, E3 and AFR/SD after the team's revision of the final report based on USAID's comments and feedback.

Final Evaluation Report. The Contractor will submit two versions of the Final Evaluation Report that incorporate Mission comments and suggestions no later than five working days after USAID/Malawi provides written comments on the Draft Evaluation Report. The format of the final reports is provided below. The report will be electronically submitted in English. The public version of the final report that will be uploaded to the Development Experience Clearinghouse (DEC) will *not* include the annex on evaluation objective 3, "Strategic Options for Future Programming." The USAID-only, procurement sensitive version of the final report will include the aforementioned annex on evaluation objective 3. The Contractor must ensure that Appendix I of the USAID Evaluation Policy – Criteria to Ensure the Quality of the Evaluation Report is followed. The final report should at a minimum meet the following criteria to ensure the quality of the report:

- The evaluation report should represent a thoughtful, well-researched and well-organized effort to objectively evaluate what worked in the project, what did not and why.
- The evaluation report shall address all evaluation questions included in the scope of work.
- The evaluation report should include the scope of work as an annex. All modifications to the scope of work, whether in technical requirements, evaluation questions, evaluation team composition, methodology or timeline need to be agreed upon in writing by the MELS and AgDiv CORs.
- The evaluation report must include a separate annex to answer objective 3: Specific recommendations and lessons learned on strategies and approaches USAID/Malawi should continue in its future agricultural development activities.
- As this annex is procurement sensitive, it will not be shared with any other entity other than USAID/Malawi.
- Evaluation methodology shall be explained in detail and all tools used in conducting the evaluation such as questionnaires, checklists and discussion guides will be included in an Annex in the final report.
- Limitations to the evaluation shall be disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall bias, etc.).
- Evaluation findings should be presented as analyzed facts, evidence and data. They should not be based on anecdotes, hearsay or the compilation of people's opinions. Findings should be specific, concise and supported by strong quantitative or qualitative evidence.
- Sources of information need to be properly identified and listed in an annex.
- Recommendations need to be supported by a specific set of findings.

- Recommendations should be action-oriented, practical and specific, with defined responsibility for the action.

The format of the final evaluation report should strike a balance between depth and length. The report will include a table of contents, table of figures (as appropriate), acronyms, executive summary, introduction, purpose of the evaluation, research design and methodology, findings, conclusions, lessons learned and recommendations. Where appropriate, the evaluation should utilize tables and graphs to link with data and other relevant information. The report should include any dissenting views by any team member or by USAID on any of the findings or recommendations in the annex. The report should not exceed 50 pages, excluding annexes. A second version of this report excluding any potentially procurement-sensitive information will be submitted (also electronically, in English) to DEC and for dissemination among implementing partners and other stakeholders.

All quantitative data, if gathered, should be (1) provided in an electronic file in easily readable format; (2) organized and fully documented for use by those not fully familiar with the project or the evaluation; (3) owned by USAID and made available to the public barring rare exceptions. A thumb drive with all the data should be provided to the MELS COR and MELS Project Director.

The final report will be edited and formatted by the Contractor and provided to USAID/Malawi 5 working days after the Mission has reviewed the content and approved the final revised version of the report.

Evaluation Team Composition

The team will include two international and two local consultants. Collectively they should be seasoned practitioners with deep knowledge of agricultural markets, access to finance, nutrition and barriers to gender equality. They should have expertise in the following areas: project evaluations and assessments (ideally value chain and nutrition activity evaluations), markets, agricultural production, watershed management and/or related scientific fields. The local consultants should have a background in agriculture, livelihoods, and/or nutrition interventions.

Team Leader (International). This expert will serve as Team Leader for the AgDiv evaluation. The Team Leader will provide overall leadership for the team, and s/he will finalize the evaluation design, coordinate activities, arrange periodic meetings, consolidate individual input from team members, and coordinate the process of assembling the final findings and recommendations into a high quality document. S/he will lead the preparation and presentation of the key evaluation findings and recommendations to the USAID/Malawi team and other major partners.

The TL should have the following attributes/qualifications and experience:

- S/he should have a postgraduate degree in an appropriate field, with area of expertise in agricultural value chains, agronomy, and/or agricultural economics, with at least 10 years of international experience in agricultural development as well as conducting USAID evaluations, ideally for agricultural development projects. Relevant experience in Malawi or Eastern/Southern Africa preferred.
- S/he should have extensive experience in conducting quantitative and qualitative assessments.
- The Team Leader must be familiar with USAID regulations and systems including performance monitoring, gender policies and guidance, project management, budgeting and financial analysis, and reporting.
- Experience in international donor development program management and overseeing multiple program areas simultaneously is preferred.
- Should be experienced in preparing documents that are objective, evidence-based, and well organized.

- Excellent oral and written skills in English are required.

Senior Agricultural Specialist (International). The Senior Agricultural Specialist will be responsible for assessing the effectiveness of project implementation according to the M&E plan, while addressing the evaluation questions above. S/he will provide technical assistance and analytical ideas with respect to agricultural development, smallholder commercialization, access to markets, access to finance, and challenges facing the agricultural sector in Malawi. S/he will assess the capacity constraints that impede nutrition outcomes and gender equality at both the local and national level.

S/he will participate in team meetings, and in the absence of the team leader, lead key informant interviews, group meetings, site visits, and draft the sections of the report relevant to his/her expertise and role in the team. S/he will also participate in presenting the report to USAID or other stakeholders and be responsible for addressing pertinent comments provided by USAID/Malawi or other stakeholders.

The Senior Agricultural Specialist will have:

- A postgraduate degree in agriculture, agriculture economics or a related field.
- A minimum of 8 years of international field experience in agricultural development with an understanding of agriculture in southern Africa.
- M&E experience with at least one similar USAID project, or that of another international donor, and have familiarity with USAID regulations and systems.

Nutrition/Gender/Resilience Specialist (Local). The Local Nutrition/Gender/Resilience Specialist will have experience in nutrition, gender, and/or resilience in the rural Malawi context. S/he will participate in team meetings, key informant interviews, group meetings, site visits, and draft the sections of the report relevant to his/her expertise and role in the team. S/he also will participate in presenting the report to USAID or other stakeholders and be responsible for addressing pertinent comments provided by USAID/Malawi or other stakeholders. He/she will provide technical assistance and analytical ideas with respect to nutrition, gender, and resilience outcomes. He/she will assess the capacity constraints that impede nutrition, gender, and resilience outcomes at the individual, household, and community levels.

The local Nutrition/Gender/Resilience Specialist should:

- Have an advanced degree in nutrition, gender, resilience or related field.
- Be a Malawi national with at least 5 years of field experience in nutrition, gender, and/or resilience interventions.
- Have experience conducting at least two evaluation projects.

Evaluation Specialist (Local). The local Evaluation Specialist will participate in team meetings, key informant interviews, group meetings, site visits, and draft the sections of the report relevant to his/her expertise and role in the team. S/he also will participate in presenting the report to USAID or other stakeholders and be responsible for addressing pertinent comments provided by USAID/Malawi or other stakeholders.

The local Evaluation Specialist should:

- Have a degree in monitoring and evaluation, international development, economics, agriculture, or a related field.
- Be a Malawi national with at least 3-+5 years of field experience in evaluation, preferably with some sectoral experience with agriculture.

Existing Sources of Information

The evaluation team should consult a broad range of background documents apart from project

documents provided by USAID /Malawi. These should include, but are not limited to, documents on GCC, REDD+, and forest conservation, both in and outside of Malawi. The evaluation team should also review relevant GoM national strategies and policies, as well as relevant projects and strategies of other aid agencies active in Malawi. USAID, MELS, and the AGDIV project will provide the assessment team with a package of briefing materials, including:

- The agreement for AgDiv activity;
- AMEP for AgDiv;
- Project quarterly and annual reports, work plans and management reviews developed as part of routine monitoring;
- Training reports;
- Data Quality Assessment (DQA) reports;
- USAID/Malawi CDCS 2014-19 (Public version);
- USAID Malawi DO:2 Performance Management Plan (PMP);
- Performance Indicator Tracking Table (PITT);
- M&E tools;
- Training & Beneficiary Database;
- AgDiv Baseline Report;
- AgDiv Annual Beneficiary Survey Report;
- AgDiv annual data verification reports;
- USAID Evaluation Policy; and
- Checklist for Assessing Evaluation Report based on USAID Evaluation Policy.

Conflict of Interest. All evaluation team members will provide a signed statement attesting to a lack of conflict of interest, or describing an existing conflict of interest relative to the project being evaluated. USAID will provide the conflict of interest forms. See Annex 1 for the Template.

Level of Effort (LOE) of Study Team by Task Deliverables

Below is an estimate of the evaluation level of effort (LOE).

Level of Efforts of Team Members by Task Deliverables				
Task/Deliverable	Duration / LOE in Days			
	Team Leader/Ag Specialist	Sr. Agricultural Specialist	Local Nutrition/Gen der/Resilience Specialist	Local Evaluation Specialist
<i>Review background documents and home-based preparation work</i>	5	5	2	2
<i>Travel to Malawi</i>	2	2	0	0
<i>Team planning meeting and meeting with USAID</i>	2	2	2	2
<i>Development of Evaluation Work Plan (concurrent with document review and initial meetings)</i>	2	2	2	2
<i>Development of data collection instruments</i>	2	2	2	2
<i>Information and data collection. Includes interviews with key informants (stakeholders and USAID staff) and site visits</i>	20	20	20	20

Level of Efforts of Team Members by Task Deliverables				
Task/Deliverable	Duration / LOE in Days			
	Team Leader Agricultural Specialist	Sr. Agricultural Specialist	Local Nutrition/Generator/Resilience /Ag Specialist	Local Evaluation Specialist
<i>Discussion, analysis, and preliminary draft evaluation report in country including discussion with USAID</i>	5	5	5	5
<i>Debrief meetings with USAID (preliminary draft report due to USAID)</i>	1	1	1	1
<i>Debrief meetings with key stakeholders</i>	1	1	1	1
<i>Team Leader meets with Technical Specialists and USAID to synthesize findings/discussion</i>	1	1	1	1
<i>Depart Malawi/Travel to U.S.</i>	2	2	0	0
<i>Finalization of draft and internal review (IBTCI) remote</i>	4	4	2	2
<i>USAID provides comments on draft report</i>	0	0	0	0
<i>Team revises draft report and submits final to USAID (out of country)</i>	10	5	5	5
<i>USAID completes final review</i>	0	0	0	0
<i>Editing and formatting of report</i>	2	0	0	0
Total	59	52	43	43
Total Estimated LOE	59	52	43	43

Scheduling and Logistics

Funding and Logistical Support. USAID/Malawi's MELS project will be responsible for all off-shore and in-country administrative and logistical support, including identification and fielding appropriate local staff. They will take care of arranging and scheduling meetings, international and local travel, hotel bookings, working/office spaces, computers, printing, and photocopying. The Logistics Specialist will arrange field visits, local travel, hotel, and appointments with stakeholders and provide translation services.

Scheduling (see attached table). Work is to be carried out over a period of approximately 10-11 weeks. At this point in time, we anticipate that the evaluation would begin in mid-September, with work in Malawi commencing on/about September 9th, 2019, field work completed in mid-October 2019 and the final report and close out concluding in late November 2019. The anticipated September start date provides over one month to finalize, clear the SOW, recruit and approve the consultants, and complete background research prior to arrival. See Annex-1 for Malawi Mission Holiday Schedule.

A six-day work week (Monday-Saturday) is authorized for the evaluation team while in Malawi, however, no overtime or premium pay is authorized. The evaluation team will submit a work plan with timeline as part of the evaluation methodology proposal and develop a GANTT chart displaying the time periods during which activities occur.

Team mobilization will include: travel approval, airline tickets, visa, lodging, work facility and vehicle

transport arrangements, dates for meetings with USAID/Malawi SEG staff and key contacts, in-country travel agenda, and accommodations.

ANNEX I. Conflict of Interest Form Template

Disclosure of Real or Potential Conflict of Interest for USAID Evaluations

Instructions: Evaluations of USAID projects will be undertaken so that they are not subject to the perception or reality of biased measurement or reporting due to conflict of interest.¹ For external evaluations, all evaluation team members will provide a signed statement attesting to a lack of conflict of interest or describing an existing conflict of interest relative to the project being evaluated.²

Evaluators of USAID projects have a responsibility to maintain independence so that opinions, conclusions, judgments, and recommendations will be impartial and will be viewed as impartial by third parties. Evaluators and evaluation team members are to disclose all relevant facts regarding real or potential conflicts of interest that could lead reasonable third parties with knowledge of the relevant facts and circumstances to conclude that the evaluator or evaluation team member is not able to maintain independence and, thus, is not capable of exercising objective and impartial judgment on all issues associated with conducting and reporting the work.

Operating Unit leadership, in close consultation with the Contracting Officer, will determine whether the real or potential conflict of interest is one that should disqualify an individual from the evaluation team or require recusal by that individual from evaluating certain aspects of the project(s). In addition, if evaluation team members gain access to proprietary information of other companies in the process of conducting the evaluation, then they must agree with the other companies to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.³

Real or potential conflicts of interest may include, but are not limited to:

1. Immediate family or close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.
2. Financial interest that is direct, or is significant/material though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.
3. Current or previous direct or significant/material though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.
4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.
5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.
6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.

¹ USAID Evaluation Policy (p. 8); USAID Contract Information Bulletin 99-17; and Federal Acquisition Regulations (FAR) Part 9.5, Organizational Conflicts of Interest, and Subpart 3.10, Contractor Code of Business Ethics and Conduct.

² USAID Evaluation Policy (p. 11)

³ FAR 9.505-4(b)

Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name		
Title		
Organization		
Evaluation Position?	☐ Team Leader	☐ Team member
Evaluation Award Number (contract or other instrument)		
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)		
I have real or potential conflicts of interest to disclose.	☐ Yes	☐ No
If yes answered above, I disclose the following facts: <i>Real or potential conflicts of interest may include, but are not limited to:</i> <i>Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.</i> <i>Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.</i> <i>Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.</i> <i>Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.</i> <i>Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.</i> <i>Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.</i>		
I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.		
Signature		

Date	
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APPENDIX J

FRANK SULLIVAN

Nationality: American

Affiliation: IBTCI

Position Title: Team Leader /Agriculture Specialist

Education:

MPS, International Agricultural Development, Cornell University, NY	1982
BA, Philosophy, St. Mary's University, MD	1968

Relevant Experience:

Postgraduate Degree in an appropriate field. Mr. Frank Sullivan holds a Master's degree in International Agricultural Development from Cornell University.

International experience in agricultural development. Mr. Sullivan brings over 30 years of experience as a high-quality consultant in project evaluation and organization evolution, including over 12 years in chief of party positions and in rural development, agriculture, health, and community development project experience. He brings technical expertise in agriculture and natural resources (particularly in small-scale vegetable production, agricultural credit, soil conservation, most major field crops, sprinkler irrigation, and micro-watershed management); and food security (particularly in proposal preparation, monetization, port management, commodity storage, logistics, and evaluation). He was a Project Advisor on DAJ's Feed the Future project proposal in Honduras as well.

Relevant experience in Malawi or Eastern/Southern Africa. Mr. Sullivan has extensive experience in Eastern and Southern Africa. He has led evaluations in Tanzania, Angola, and Mozambique. He has in-country experience in Malawi as the CARE Country Director and as an evaluation consultant to Project HOPE.

Experience conducting quantitative and qualitative assessments. Mr. Sullivan has led and participated in numerous evaluations, including for USAID-funded projects. He most recently served as the M&E Advisor on IBTCI's Iraq Emergency Relief Project and served as the Team Leader for USAID/Tanzania's Environmental Protection project. He also worked as an evaluation Team Leader in Tanzania on USAID's WASH project, where he supervised a six-person team and authored the final evaluation. Finally, as Team Leader on the midterm evaluation of Food for Progress' development and nutrition project in Tajikistan, he assessed food/agriculture development project strategies, management, etc.

Select Professional Experience:

November 2015 - June 2018, M&E Advisor for IBTCI, Emergency Relief Project

(multiple countries), FFP, and OFDA, U.S. - Advised client on structure and content of, and developed evaluation matrices adapted to country conditions and program elements for dozens of implementing partners in different countries. Countries/programs included: Iraq Emergency Relief Project, Democratic Republic of the Congo Emergency Relief Project, Syria FFP, Syria OFDA.

February 2015 – July 2015, Special Advisor on Risk Mitigation, CARE USA, U.S. and Bolivia

July 2014 – October 2014, Team Leader, IBTCI, Tanzania - Supervised six person Final Evaluation of USAID/Tanzania flagship agricultural development & animal protection project.

Led development of evaluation, including methodology, instrument design, data collection, field oversight. Authored final evaluation report.

March 2014 – March 2014, Project Advisor, DAI, Honduras - Advised proposal design team on key aspects of agriculture and health interventions for Feed the Future RFP.

August 2013 – October 2013, Team Leader, IBTCI, Tanzania - Supervised six-person Final Evaluation of Tanzania flagship water/sanitation and watershed protection project including developing methodology, instrument design, data collection, field oversight. Authored final evaluation text.

February 2008 – June 2012 (periodic), Special Advisor on Risk Mitigation, CARE USA, Angola and U.S.

July 2007 – August 2007, Team Leader, Counterpart International, Tajikistan - Assessed mid-term implementation of Food for Peace food/ agriculture development project in rural Tajikistan. Assessment of project strategies, team effectiveness, overall program management. Authored final evaluation text.

March 2007 – May 2007, Team Leader, World Food Programme, Colombia

December 2006 – December 2006, Final Evaluator, CARE Georgia, Georgia - Sole evaluator of livestock development project in rural Georgia. Designed evaluation design, conducted field travel, interviews, assessment of crop C/B and overall environmental impact. Authored final report.

August 2006 – September 2006, Team Leader, SCF Mozambique, Mozambique – Conducted final project evaluation of Agriculture and nutrition development project. Led questionnaire design, field travel, crop assessments, GOM key informant interview, etc. Authored final text with input from two sector specialists.

September 2005 – November 2005, Country Director, CARE Malawi, Malawi

March 2005 – April 2005, Team Leader, SCF Mozambique, Mozambique – Conducted final project evaluation of Food for Peace agriculture and nutrition development project. Led questionnaire design, field travel, crop assessments, GOM key informant interview, etc. Authored final text with input from two sector specialists.

September 2004 – October 2004, Final Evaluation Consultant, CARE Honduras, Honduras – Conducted final project evaluation of agriculture and nutrition development project. Led questionnaire design, field travel, crop assessments, GOM key informant interview, etc. Authored final text with input from two sector specialists.

June 2003, Evaluation Consultant, Project HOPE, Malawi/Peru/Guatemala

September 2002, Senior Logistics Advisor, CARE Angola, Angola

September 2001 – October 2001, Team Leader, SCF Mozambique, Mozambique – Conducted final project evaluation of agriculture and nutrition development project. Led questionnaire design, field travel, crop assessments, GOM key informant interview, etc. Authored final text with input from two sector specialists.

September 2000 – October 2000, Team Leader, USAID, Nicaragua – Team leader to six person evaluation team assessment effectiveness of NGO response to Hurricane Mitch. Led evaluation design, field travel, supervision of evaluation team, and authorship of final report.

August 1998 – September 1998, Team Leader, USAID/LAC, Peru/El Salvador/Guatemala – Team leader of midterm evaluation in USAID/LAC region.

Languages:

English: R5, S5; Spanish: R5, S5

DR. JOHN HAYDU Nationality: American Affiliation: IBTCI

Position Title: Senior Agricultural Specialist

Education:

Ph.D., Agricultural Economics, Michigan State University, USA 1988

M.Sc., Agricultural Economics, University of Arizona, USA 1979

B.A., Philosophy, St. Thomas College, USA 1972

Relevant Experience:

A postgraduate degree in agriculture, agriculture economics or a related field. Dr. Haydu has a Ph.D. in Agricultural Economics from Michigan State University and Masters of Science in Agricultural Economics from the University of Arizona.

A minimum of 8 years of international field experience in agricultural development with an understanding of seed sector including seed commercialization in southern Africa. Dr. Haydu has nearly 40 years' experience as an agriculture development economist with a specialization in agricultural market systems and value chains. Serving as Chief of Party for a \$72 million USAID-funded project, he increased agricultural development and improved incomes of farm families through Agricultural Infrastructure Development, Agribusiness Development, Conditional Asset Transfers, and Training and Extension.

M&E experience with at least one similar USAID project, or that of another international donor, and have familiarity with USAID regulations and systems. Dr. Haydu has over 30 years of experience working on USAID agricultural development projects. He was recently engaged as Senior Agriculture Value Chain Advisor and Technical Coordinator for USAID/Burma's Feed the Future (FtF) project, a U.S. \$27 million 5-year development project, implemented by Winrock International (WI). In addition to the Burma FtF project, his project management experience includes serving as Deputy Chief of Party (DCOP) on a \$125 million USAID development project in southern Afghanistan (RADP-S). Prior to this he served as Chief of Party (COP) for a \$72 million USAID stabilization project (S-RAD). In 2009-2011 he was part of a team executing a \$350 million COIN & Stabilization project (AVIPA Plus) in Helmand and Kandahar provinces.

Should be experienced in preparing documents that are objective, evidence-based, and well organized. Dr. Haydu is an excellent writer and whose works have been published over 300 manuscripts in books, peer reviewed scientific journals, research reports and Extension publications.

Excellent oral and written skills in English are required. Dr. Haydu is a native English speaker whose writings have been published by universities and scientific journals.

Professional Experience:

June 2019, Agricultural Economist, IBTCI, Malawi – Developed training materials on cost benefit analysis and led training of Malawian workshop participants in the subject matter area. Designed training materials and prepared presentation slides for cost benefit analysis and assisted with the session on analytical frameworks and qualitative methods.

October 1, 2018 – February 28, 2019. Agribusiness & Nutrition. *DFID* & Africa Enterprise Challenge Fund (AECF). Team Leader, Agribusiness, Horticulture & Nutrition. Maximizing the Quality of Scaling Up Nutrition Plus (MQSUN+). MQSUN is funded by the United Kingdom (UK) Department for International Development (DFID). MQSUN+ provides technical assistance

(TA) to governments in the Scaling Up Nutrition (SUN) Movement. The 4-month research project, entitled “*Improving Nutritional Impacts of Agribusiness Investments*”, addressed the nutrition-knowledge deficit in agriculture development activities. Results of this project will allow AECF to confirm that its investments in support of agribusinesses (input supply, production, processing and distribution) are improving nutrition outcomes at the household level, particularly for smallholder farmers throughout Africa.

May 1 to August 31, 2018. Project Evaluation. USAID CGIAR Project Evaluation, Sr. Agriculture Expert. Employer: IBTCI). The Feed the Future (FtF) “*Malawi Improved Seed Systems and Technologies*” (MISST) project is a 4.5 year “nutrition and food security” project implemented by a Consortium of four CGIAR institutions. The centers include: International Potato Center (CIP); International Maize and Wheat Improvement Center (CIMMYT); International Crops Research Institute for the Semi-Arid Tropics (ICRISAT); and International Institute for Tropical Agriculture (IITA). The evaluation purpose was to assess the effectiveness of the MISST design and implementation processes, and to inform management what course corrections if any, were needed. Additionally, USAID sought strategic and programmatic options for future engagement to support seed production and dissemination in Malawi.

February 1 to April 8, 2018. USAID IRRI Project Evaluation, Team Leader. Employer: USAID/International Rice Research Institute, Philippines. “*ACI-IRRI Public Private Partnership for Rice Breeding and Seed Multiplication in Bangladesh*”. As team leader, developed a detailed evaluation methodology for the Work Plan including a data collection matrix that explicitly linked evaluation questions to particular data collection methodologies and data sources. The evaluation team employed a mixed-method approach utilizing both quantitative (including non-experimental design) and qualitative analysis (key informant interviews, stakeholder interviews/mini-surveys, and focus group discussions). The team leader developed an appropriate evaluation methodology based on the types of evaluation questions, implementation timeframe, data collection requirements, quality of existing data sources, and any potential biases.

July 15 to December 31, 2017. Senior Agriculture Development & Food Security Specialist. Employer: Blumont, Inc. Contract responsibilities included serving as lead technical writer for agriculture & food security proposals of USG funded contracts, value chain development, climate smart agriculture, food and nutrition security, and sustainable market focused interventions.

2016 – 2017, Senior Agricultural Development Specialist. JSI Research & Training Institute, Inc., “*Strengthening Partnerships, Results, and Innovations Globally*” (USAID/SPRING), location – Assisted in developing a guidance document to assist FtF agriculture projects with a nutrition mandate, to accurately monitor progress towards achieving verifiable nutrition results. Primary tasks involved conceptualizing, developing and writing the guidance document that accurately measures contributions of FtF interventions to improved nutritional outcomes.

2015 – 2016, Senior Agriculture Value Chain Advisor and Technical Coordinator, Winrock International (WI), Myanmar (Burma) - Provided overall direction for VC-RD Programs by leading development of annual work plans, coordinating and supporting Program Component Leads and running a private sector alliance building unit responsible for identifying key partnerships for value chain development. The unit leveraged a *small grants fund* to help buy down risks for value chain actors wanting to innovate or invest in local markets. The fund facilitated public-private investments, including contract production, value-added opportunities, fee-for-service operations, productivity-enhancing research, and other opportunities that arose. Finally, the advisor formed a cohesive team within the VC-RD technical program component, and

collaborated closely with Monitoring, Evaluation & Learning (MEL) to capture & measure economic contributions from project activities. He coordinated closely with USAID, other Donor Agencies, Working Groups, Agriculture Trade Associations, and Private Sector Partners to avoid unnecessary duplication of project activities.

2014 – 2015, Deputy Chief of Party (DCOP), Chemonics International, Afghanistan - Served as DCOP managing agriculture programs for a five-year, \$125 million USAID funded project. “Regional Agriculture Development Project, South” (RADP-S) operating in southern Afghanistan. RADP-S was an agriculture development project operating in Kandahar, Helmand, Uruzgan and Zabul. The project was comprised of five components – Production and Productivity Unit (PPU), Value Chain Facilitation Unit (VCFU), Enabling Environment Unit (EEU), Monitoring & Evaluation (M&E) and Communication & Outreach (C&O) – focused on wheat, fruit & vegetable crops, and livestock. Managed a small grants fund (SGF) to support innovation and private-sector investment to complement existing micro-finance loan programs. SGF invested in innovative approaches to reducing transaction costs to improve access to markets, such as mobile money and other mobile financial services and payment systems; it bought down the risks of providers to develop, test and/or market new services or products, provided training and technical assistance in safety standards, quality standards, productivity techniques and new financial services.

2013 -2014, Senior Agricultural Technical Advisor. STTA with Development Alternatives, Inc. (DAI), Pakistan - Served as technical & solution design lead for a USAID proposal initiative in Pakistan, *Commercial Agriculture in Pakistan* (CAP). Conducted agriculture sector analysis including value chain studies, economic impact analysis and end-market analysis. Interviewed potential private sector Pakistani firms and individuals for teaming and partnership arrangements.

2012 – 2013, Senior Agriculture Technical Advisor. International Relief & Development (IRD) - Provided technical and program guidance to IRD’s agriculture strategy. Identified new USAID *Feed the Future* programs, including changes in USAID approaches to food security and nutrition, applying knowledge to increase new business acquisition and improve the quality of design, development and implementation of active IRD projects. Served as technical lead for USAID proposal initiatives; conducted agriculture sector analysis including numerous value chain assessments, end-market analysis, baseline surveys, business and financial management studies. Conducted comprehensive Project assessments for ongoing USAID FtF and F2F programs, including USDA *FFPr* projects.

2011 – 2012, Chief Of Party. International Relief & Development (IRD), Afghanistan. Managed Southern Regional Agricultural Development (S-RAD) program, a 15-month \$72 million USAID-funded project in Afghanistan. Project goal of increasing long-term agricultural development and improving incomes of farm families. Through its four components -- Agricultural Infrastructure Development, Agribusiness Development, Conditional Asset Transfers, and Training and Extension Services – the project leveraged agricultural jobs, improved market linkages, direct interventions and capacity-building training to increase incomes and employment.

2009 – 2011, Director Of Training, IRD, Afghanistan - Designed, and implemented agricultural training programs for AVIPA Plus project in Afghanistan, a US \$300 million program. He organized, trained and managed 160 full time Afghan employees responsible for instructing over 90,000 farmers in improved agricultural practices. Established close ties with USAID Mission, Provincial Reconstruction Teams (PRT) military coalition counterparts (ISAF), Government of Afghanistan including Ministry of Agriculture, Provincial Universities, Provincial Governor’s

Offices, District Officials, and Village Community Organizations. Developed training modules for institutional capacity building at provincial, district and local levels.

2008 – 2009, Senior Partner & Consultant, Planet First Resources (PFR), Agricultural services directed at developed and developing economies, including conflict and post conflict countries. Research, training and extension services included Value Chain Assessment and Agribusiness Management; Strategic Planning; Country Needs Assessment and Project Evaluation; Cost-Benefit Analysis; Human Resource Management; Marketing; Economic Impact Analysis; Survey Research Technologies; Evaluation of Small & Medium Enterprises (SMEs) and Business Development Services (BDS). Specific technical information generated for USAID RFAs and RFPs. Provided technical assistance in project proposal design and development.

May 1981-July 1984 Agriculture Economist & Farm Management Specialist, USAID Crop & Livestock Project, The Gambia, West Africa. “The Gambia Mixed Farming & Resource Management Project” (\$9 million USAID development project) - Designed, implemented and completed a national socio-economic and farm management study. Trained and supervised 26 enumerators posted in 18 field stations throughout the country. Compiled data conducted and directed analyses and wrote project reports.

September 1979-April 1981 Agricultural Economist, Economic Research Service (ERS/USDA), Washington D.C. - Determined economic effects of restrictions on pesticides to crop systems. Wrote branch reports; developed and maintained contacts with personnel of Federal, State, and outside organizations for purposes of gathering/exchanging information.

Languages:

English (S5) (R5)

MAYAMIKO KAKWERA

Nationality: Malawian

Affiliation: IBTCI

Position Title: Local Evaluation Specialist

Education:

M.Sc., Rural Development and Extension, Lilongwe University of Agriculture and Natural Resources, Malawi 2017

B.Sc., Agricultural Economics, University of Malawi, Malawi 2010

Statement of Qualifications:

Mr. Kakwera is a Malawi national with nine years of field experience conducting evaluations to assess relevance, effectiveness and efficiency of policies, projects and programmes and sectoral experience with agriculture and rural development. The most recent USAID evaluation Mr. Kakwera contributed to was the Malawi Improved System and Technologies (MISST) with IBTCI as the Evaluation Specialist. Key activities of the project included capacity building, seed multiplication and private sector engagement on input and output markets. Serving as Team Leader, he conducted an impact evaluation of the Malawi Oilseeds Trust Interventions on Groundnuts and Soy Bean Inoculants, Soy Bean and Sunflower value chains. Additionally, he worked on evaluating two seed programmes that targeted four value chains, namely soybean, groundnuts, pigeon peas and maize. Mr. Kakwera also directly worked on a project that consisted of strong interventions on seed distribution and multiplication for cassava. Since 2013, Mr. Kakwera has worked as a staff associate and lecturer for Lilongwe University of Agriculture and Natural Resources. He teaches and conducts research in rural development programme design, implementation, monitoring and evaluation, market-oriented extension services, policy development and analysis, and extension financing. Mr. Kakwera holds a Masters' of Science in Rural Development and Extension and a Bachelor's of Science in Agricultural Economics from the Lilongwe University of Agriculture and Natural Resources.

Selected Professional Experience:

July-August 2019, Consultant, Saving Lives and Protecting Agriculture Based Livelihoods in Malawi: Scaling Up the Use of Modernized Climate Information and Early Warning Systems (M-Climes) Project, Malawi – Annual quantitative and qualitative evaluation of the Participatory Integrated Climate Services Approach.

May 2019, Evaluation Researcher, McKnight Agro-Ecological Hub Project, Malawi

January 2019, Evaluation Researcher, MSEKOCHIKA, Zambia – Wellbeing post assessment of participants.

October 2018, Data Management Specialist, USAID/Technologies Project (SSTP), AGRA-PASS Programme, Africa -End of project evaluation in 5 countries in Africa. USAID funded project.

July 2018, Evaluation Specialist, Malawi - Conducted the early impact evaluation for Soybean and Groundnuts inoculant marketing under Malawi Oilseeds Trust programme.

May 1st, 2018- June, 11th, 2018, Consultant/Evaluation Specialists, Malawi Seed System and Technology Project, Malawi - Mid-Term Evaluation of the Malawi Seed System and Technology Project. The project evaluation targeted four value chains, namely soybean, groundnuts, pigeon peas and maize. Key activities of the project were capacity building, seed multiplication and private sector engagement on input and output markets.

September 2017, Consultant, Government of Malawi & Civil Society Agricultural Network, Malawi – Conducted a review of the Malawi Milk and Milk Products Act (1971)

2017, Team Leader, Adam Smith, Malawi – Conducted an impact evaluation of the Malawi Oilseeds Trust Interventions on Soy bean and Sunflower Value Chains.

2017, Consultant, Government of Malawi & the World Bank through ASWAp-SP, Malawi - Development of the Malawi's Agricultural Extension Strategy.

January 2017, Researcher, Michigan State University, Malawi - Situation analysis of research and extension linkages in Malawi.

June 2016 - December 2018, Researcher, project, The Canadian International Development Research Council, Southern Africa - I have been working as researcher on Skills for Employment Project. This is an applied research project implemented in five countries of east and southern Africa. It is working on unlocking the challenges in Technical and Vocation Education by providing evidence-based policy and practical recommendations draw from the research.

September-December 2016, Consultant, Alliance for Green Revolution (AGRA), Malawi – Performed an end line study of the Strengthening Agricultural Input and Output Markets in Africa (SAIOMA) Program.

September 2015, Consultant, Government of Malawi (Ministry of transport and public), Malawi – Trained the Ministry of Transport and Public Works Program Officers on Social and Environmental Impact Assessment. European Union funded Project.

December 2014, Consultant, Farmers Union of Malawi, Malawi – Conducted End Evaluation for Farmers Union Strategic Plan 2011-2015.

November 2014 - February 2015, Consultant, AGRA, Malawi – Conducted End line study of 1st phase of PASS Program in 18 African Countries.

November 2014 - December 2014, Researcher, United States Department of Agriculture (USDA)/Michigan State University, Malawi - Performance and Beneficiary Assessment of the Tri-Lateral Dairy Value Chain Project.

November 2014, Researcher, Bill and Melinda Gates/ Michigan State University, Malawi - Understanding the Drivers for Uptake Perennial Crop Systems in Malawi: using SCENARIO Visioning and Planning.

October 2014 - June 2015, Consultant, NORAD, Malawi - Mainstreaming HIV and AIDS in Research, Teaching and Outreach Work of a University.

September 2014 - November 2014, Consultant, World Vision International, Malawi – Conducted a Baseline Study of the Chinguluwe Area Development Program.

August 2014, Researcher, Bill and Melinda Gates Foundation, Malawi – Researched the adoption of perennial grains in Malawi.

July 2014 - October 2014, Consultant, Natural Resources Institute of the University of Greenwich, Malawi – Conducted an Impact Assessment of Cassava Value Addition Project in Malawi (C:AVA-Project).

July 2014, Consultant, Africa Climate Investment Research, Malawi – Provided training of Farmer Organizations in Collective Marketing.

May, 2014, Consultant, NORAD, Malawi - Trained Lead Farmers and Extension workers on their roles in spearheading the work on climate change mitigation and adaptation in Malawi. NORAD.

2013-2014, Researcher, USDA/MSU/TANUVAS, Malawi - Developing and Strengthening the Dairy value chains in Malawi.

July 2013 - February 2014, Consultant, AGRA, Malawi – Mid-Term Review of the AGRA Market Access Program in Malawi.

October 2013, Research Assistant, IFPRI, Malawi - Trader and Agro dealer baseline study on Integrating Nutrition into Value Chains (INVC).

November 2013, Consultant, Development Fund of Norway-TAPP, Malawi – Conducted a Gender Roles Analysis in Livestock Interventions of TAPP projects

September 2013 - November 2013, Data Manager, United Nations Development Program (UNDP), Malawi – Conducted an Impact Assessment of Public Service Administration (PSA) Training Courses (done under Skill Focus Consult).

September 2013, Economist/Market Linkage Specialist, Self Help Africa Malawi, Malawi – Mapped out the value chains of amaranth and broiler chicken in Central Region of Malawi.

March 2013, Graduate Student Work, ARDEP, Malawi - Ex-Post Evaluation of Fish for all project implemented by the World Fish Centre (WFC) under ARDEP-NORAD.

November 2012 - June 2013, Data Analyst, AGRA, Malawi – Analyzed data related to the review of the AGRA/PASS Program.

October 2012, Socio and Agricultural Economist, Mpatsa Holdings, Malawi - Investment Analysis and Business advisor for Mpatsa-Nkhonjeni Aquaculture Farm (Done Under Aleksandr Consulting).

August 2012, Agricultural Economist/Market Analyst, Lilongwe Poultry Limited, Malawi - Business plan development and investment Analysis for Large Scale Poultry Venture (Done Under Aleksandr Consulting).

August 2012, Data Analysts, NEPAD, Malawi – Conducted a Situational Analysis for African Medicine Regulation Harmonization Study (Done under Kamwanja and Associates).

July 2011 - August 2011, Team Leader, AGRA, Malawi – Led a team in conducting a Starch Demand Analysis in Malawi: A Side Study for Commercializing the Cassava Value Chain in Malawi through Alternative Uses.

July 2011, Team Leader, FICA, Malawi - Mapped the Value Chain Actors and their take in the Goat Value Chain: A baseline study for the project on Strengthening the Markets and Value Chain Development in North Kasungu and South Mzimba.

November 2010, Economist, EU, Malawi - Analyzed the Cotton and Dairy Subsector in Malawi using the ASTI model.

June 2010 - August 2010, Market Economist, MACRA, Malawi – Conducted an Industry Performance and Demand Analysis for Postal Services of Malawi.

March 2010 - May 2010, Agricultural and Socio-Economist, GoM, Malawi - End Term Evaluation of One Village One Product (OVOP) project for Ministry of Trade and Private Sector Development.

February 2010 - March 2014, Researcher, IDRC, Malawi - Promotion of production and utilization of neglected crops in Malawi.

Languages:

English S(5) R(5), Chichewa S(5), R(5)

Vitowe Harazi Batch

Nationality: Malawi

Affiliation: IBTCI

Position Title: Nutrition/Resilience Specialist

Education:

M.P.H., Nutrition, University of Malawi, College of Medicine, Malawi

2018

B.S, Environmental Health, University of Malawi, Polytechnic

2008

Statement of Qualifications:

Have an advanced degree in nutrition, gender, resilience or related field; Ms. Batch has a Master's in Public Health, specializing in nutrition and also holds a Bachelor's of science degree in Environmental health from the University of Malawi.

Have at least 5 years of field experience in nutrition, gender, and/or resilience interventions; Ms. Batch has 10 years of experience in nutrition and resilience. Serving as the Technical Advisor for the Food and Nutrition Security Program, she is supporting and advising the FNSP team, national and district Government and NGO partners in designing and implementing the food and nutrition security interventions and Contributing to ensuring the sustainable continuation of specific multi-sectoral services to improve the food/nutrition and health services of the rural population. She is also promoting respect for rights through the empowerment of women, children and other vulnerable groups. During her time as a Quality Assurance Officer, for the USAID funded project Concern World Wide, Ms. Batch contributed in building the capacity of district health management teams, zone officers and health coordinators in management of the program, including nutrition interventions in the district implementation plans. Additionally, she aided in the implementation of food emergency preparedness and response programs targeting food insecure districts through assessments.

Have experience conducting at least two evaluation projects; Ms. Batch's experience as a Nutrition Emergency Consultant, for UNICEF, allowed her to conduct CMAM capacity, training needs assessments and quality assessments as well as scale up the CMAM program in all the 28 districts in Malawi. She also contributed to the development of the national CMAM guidelines, training manuals and monitoring tools, and national CMAM data base and their linkage with other nutrition interventions like NCST/SUN/IYCF. Additionally, Ms. Batch, assisted in the UNICEF nutrition section in developing and reviewing nutrition programs policies and guidelines. Furthermore she participated in national nutrition cluster coordination meetings and provided direction in developing emergency response monitoring tools and monitoring situation, and participated in assessments.

Oral and written fluency in English required. Ms. Batch has oral and written fluency in English.

Selected Professional Experience:

October 2016 - Present, Nutrition Technical Advisor, Food and Nutrition Security Program GIZ, Malawi – Supports the food and nutrition security program under the One World No Hunger special initiative with the aim of improving the nutrition of women of child bearing age and primary school children in Dedza and Salima districts by promoting interventions within the scaling up Nutrition/Nutrition Education Communication strategy and Nutrition Sensitive Agriculture Strategy. Interventions which include promoting Orange-Fleshed Sweet potatoes (OFSP) vine growing and consumption and Livestock Pass-on programs, school meals program, promoting back yard home and school gardens and integrated homestead farming. Supports the improvement of Food Security through Enhanced Potato Productivity, Technology Development and Supply Chain. Assisted in implementing social protection programs; village saving loans, cash

transfers, public works. Designs for Behaviour Change (DBC) approach to addressing barriers to good nutrition. Aids communities to build resilience to climate change effects by promoting climate-smart agriculture, encouraging irrigation, land and water conservation and afforestation. Supports sustainable livelihoods through agricultural development, nurturing natural resources and enabling access to microfinance markets. Working to improve respect for rights through the empowerment of women, children and other vulnerable groups and to ensure people are empowered to understand their rights and know how to claim them, speaking for themselves through rights-based approaches. Improves skills through literacy circles, vocational training capacity building, marketing courses and other training. Supports and advises the FNSP team, national and district Government and NGO partners in designing and implementing food and nutrition security interventions. Contributes to ensuring the sustainable continuation of specific multi-sectoral services to improve the food/nutrition and health services of the rural population. Participates in team meetings, Donors in Nutrition Security meetings, Agriculture and Nutrition. Participates in technical working groups, relevant national and district level nutrition security/resilience and cluster fora. Develops and implements tools for results based monitoring of the program progress and achievements.

April 2013 - October 2016, Nutrition Emergency Consultant - UNICEF, Malawi – Supported MoH-nutrition Unit, DNHA, DODMA, DHOs, DNCCs and National Nutrition Cluster with response in times of national or district food insecurity/drought, flooding disasters by engaging in preparedness and response, participating in national nutrition cluster coordination meetings and providing direction, developing emergency response monitoring tools and monitoring situation, and participated in assessments i.e. MVAC and SMART surveys and Post disaster needs assessment, supporting with nutrition therapeutic and anthropometric supplies management. Assisted in the UNICEF nutrition section and MoH/DNHA in developing and reviewing nutrition programs policies and guidelines; National nutrition policy, CMAM costed five year operational plan, CMAM/SUN (NECS)/NCST guidelines, training materials and monitoring and evaluation tools. Aided in the UNICEF nutrition section and MoH/DNHA in the effective roll-out, implementation and integration of nutrition key national policies and programs; Supported the District level MoH in effective implementation of nutrition interventions by monitoring program performance and general situation of MAM and SAM through the district monthly data reports and support with improvement by ensuring quality of care. Promoted positioning of nutrition information systems within the DHIS 2 and M&E systems at the nutrition directorate for maintenance of health and nutrition information. Advocated for UNICEF nutrition section and MoH/DNHA with the piloting and rolling out of home fortification with micronutrient powders as part of SUN/IYCF intervention in Nkhatabay district. Contributed to the development of UNICEF nutrition section donor proposals, quarterly and annual and quarterly work plans, and reports, and review for technical relevance. Supported in monitoring progress against programme indicators, UNICEFs strategic plan, and national nutrition roll-out strategies, and correcting problems as they occur. Assisted in the preparation of donor reports on monthly, quarterly and annual basis to ensure their submission in a timely manner. Assisted in the preparations of quarterly performance reports for MoH and national nutrition steering committees. Helped coordinate with members of the development community, including NGOs, UN and bilateral agencies in the exchange of information relating to Nutrition sector. Assisted in the identification and development of key advocacy areas for the nutrition programs.

Aug 2010 to Mar 2013: Quality Assurance Officer, CMAM Advisory Service (CAS), Concern Worldwide – USAID Funded – Built capacity of district health management teams, zone officers and health coordinators in management of the program, including nutrition interventions in the district implementation plans. Conducted CMAM capacity, training needs assessments and quality assessments. Scaled up the CMAM program in all the 28 districts in Malawi. Contributed to the development of the national CMAM guidelines, training manuals and monitoring tools, and national CMAM data base and their linkage with other nutrition interventions like NCST/SUN/IYCF. Participated in food emergency preparedness and response programs targeting food insecure districts with OPC/MoH and its partners and UN agencies through assessments. Documented program processes and outcomes to ensure lessons learnt and best practices. Contributed to development of programme proposals, work plans and strategic document plans and preparation of donor reports on quarterly and annual basis and submitting them to USAID. Worked closely with the CMAM steering committee to develop national scale-up and integration strategy. Developed and maintained working relationships with all key stakeholders, including MoH counterparts, UN agencies, partner NGOs, District Health Offices, and government officials. Identified, documented and shared key barriers to the integration and institutionalization of CMAM into MoH services in Malawi. Supported with the development of annual budgets and revisions and prepared section regular monthly forecasts.

Jan 2009 to July 2010: Primary Health Care and HIV/AIDS Coordinator, St. Montfort Hospital, Chikwawa- Supported and coordinated maternal and child health clinics. Promoted and coordinated food security and nutrition interventions and surveillance activities in the communities. Coordinated food insecurity response programs such as cash transfers, community sensitizations and mobilizations, community nutrition screenings. Built capacity of GoM staff in nutrition and food security monitoring for effective disaster preparedness and response. Assisted Chikwawa DHO and stakeholders in cholera emergency preparedness and response. Participated in Chikwawa District coordination meetings including DIPs, DACC and DNCC.

APPENDIX K: AgDiv Statement of Differences

Summary

AgDiv saw its Mid-Term Evaluation (MTE) as a valuable opportunity to identify and document impacts and challenges that are not captured in the annual farmer survey or through its internal M&E activities. Unfortunately, the initial findings over the course of the past five months, AgDiv staff have put in countless hours – often during evenings and weekends – to correct widespread problems in the resulting report. These problems stemmed from challenges with the evaluation methodology, factual inaccuracies, and unsupported conclusions and speculations. After providing comments and detailed written responses to a presentation of findings and two different drafts, many of the concerns have now been addressed. While AgDiv agrees with many of the conclusions reached in the final report, it still contains errors, omissions, and inconsistencies that undermine the findings, and lead AgDiv to file the following statement of differences in response.

One of the more pervasive problems was an apparently lack of understanding of key elements of AgDiv's strategy – the MTE did not appear to understand why AgDiv is working with anchor farms, how connecting them to suppliers and new technologies improves yields, markets and incomes for existing contract growers and increases opportunities for more smallholder farmers to enter into contract growing systems, or the importance to all Malawians from AgDiv's collaboration with the private sector to create a structured market for legumes. This was a missed opportunity to evaluate and provide evidence – in support of or against – AgDiv's strategy of larger ecosystem transformation for the promoted value chains.

Similarly, AgDiv's strategies for targeting different interventions take into account numerous objectives, including partner capacity, what is the best fit for communities, the challenges to delivering the intervention, opportunities for complementarities, potential to contribute to market systems goals, and opportunities to reach disadvantaged or underserved populations. The MTE's analysis of differences in implementation between the Southern and Central Regions does not appropriately take into account other elements of intervention targeting, as well as the nuances of differences within the regions, which can be quite large. AgDiv believes there are more effective approaches to achieving inclusivity that focus on what is likely to produce the best outcomes for communities.

Additional major concerns include:

- While many factual errors from earlier drafts have been corrected, a small number remain in the final report.
- Conclusions are drawn from focus group discussion data without realistic consideration of the strengths and weaknesses inherent in this method.
- The MTE report draws conclusions or makes speculations without triangulating findings. While AgDiv recognizes that experts can draw different conclusions from the same data, conclusions and recommendations that guide aid programs affecting people's lives have an obligation to be evidence-based, logical, and internally consistent.
- Several key elements of AgDiv strategy and key contextual factors are overlooked. For example, there is limited discussion of the issue of leveraging private sector resources, or of AgDiv's efforts to support broader market development through activities like structured markets research and stakeholder engagement. The MTE does not appear to understand the linkages between AgDiv decisions to work with private sector entities such as the tobacco companies and its market systems objective of establishing better-functioning output markets. Important contextual factors that are not mentioned include notable budget cuts in Year 2. AgDiv also believes that cost-effectiveness of different interventions and approaches is not adequately addressed.

Despite these limitations, the MTE report contains useful information and analysis. AgDiv believes that the section addressing USAID's key evaluation questions is well-reasoned and highlights some important challenges for achieving project objectives. In addition, AgDiv agrees that the number of focus groups reporting low bamboo and OFSP survival rates necessitates improvements in implementation for these activities, as well as closer monitoring at the level of each community, to ensure that every community receiving these interventions benefits from them. AgDiv believes the findings also underscore the power of delivering bundles of interventions through partners with the capacity to implement well and provide complementary interventions such as support for good agricultural practices (GAP) and access to markets, a strategy AgDiv is already expanding. AgDiv will also continue to expand the reach of its programs promoting PICS bags, inoculant, soy kits, and mini drip irrigation to support widespread adoption in Malawi.

With regard to allocation of resources, AgDiv believes this is important, but disagrees that trying to ensure that beneficiaries in the Southern and Central regions receive the same number and type of interventions is an effective way to achieve inclusion, ensure the best outcomes for beneficiaries, or make the best use of scarce development resources. Instead, AgDiv will seek to ensure that its interventions are accessible for disadvantaged groups by expanding the programs that are delivering impacts, replicating successful models through programs like the CoFi input packages on credit, and implementing programs such as an ultra-poor graduation program that are designed to complement more commercially-focused interventions carried out through private sector engagement.

AgDiv believes that the limited amount of time for collaboration between the MTE team and AgDiv on evaluation design and sharing project information was an important factor that negatively affected the quality of the evaluation, particularly in terms of helping the MTE team understand the project strategy and contextual factors. In the future, AgDiv would be eager to participate fully in more collaborative approaches to evaluation, although evaluation teams must understand their responsibility to ensure their reports are factually correct and conclusions are well-supported, particularly when discussing partners and partner staff, to ensure that partners are willing and able to participate productively in evaluation processes. AgDiv believes that its collaboration with the IBTCI team that conducts its annual surveys provides an excellent model for how a project and its evaluator can collaborate on evaluation design, data collection tool development, and data analysis and interpretation to produce good quality evaluation materials.

Comments on MTE Process

AgDiv believes that more collaboration early in the MTE Process would have allowed for a more insightful evaluation. AgDiv is a complex project, and the AgDiv team did not feel that the time allocated for meeting with the project and reviewing project data and documents was sufficient:

- AgDiv offered to meet the MTE team immediately after their arrival in country, but the MTE team was not able to meet with AgDiv until two business days before interviews were scheduled to begin. The meeting was less than half of a day. AgDiv's technical leads all gave briefings to the MTE team, but most of them did not have time to complete their briefing.
- AgDiv provided the MTE team with a large volume of documents, which would have been very difficult to review thoroughly before interviews began.
- AgDiv received a draft of the FGD questionnaire along with the MTE Inception report from USAID. AgDiv submitted major comments on the FGD form to USAID. None of the comments were incorporated; it is unclear if the feedback was passed from USAID to the MTE team.
- The MTE did not triangulate information received through KIIs and FGDs – resulting in factual inaccuracies (such as which activities were financed – or even implemented – by AgDiv). While some of these errors were eventually corrected, others remain in the final report, such as references to bamboo supplied by AgDiv in 2017 (a year before AgDiv began bamboo distribution) and repeated references to tobacco

farmers receiving more interventions and resources than any other group of farmers (many farmers from WOLREC who benefited from GALS trainings and capital injections received more).

- The process of responding to the MTE findings was itself challenging – the MTE team did not initially plan to share findings with AgDiv while in country, resulting in the CoP having to call into a last minute briefing from the field. Comments were then submitted in writing multiple times (after the in country briefing, after the first draft and after the final draft were received), with the team spending hours fact-checking data that could have been triangulated by the MTE team, and correcting errors made regarding the names of people, partners and technologies multiple times.

One positive step in the MTE process was the MTE team’s collaboration with AgDiv to modify the sampling methodology to ensure that communities with low, medium, and high impact interventions could be included, and that beneficiaries from both Year 2 and Year 3 were included. This ensured that the team could talk to beneficiaries with experience with most of AgDiv’s interventions. This was an example of how working with a project to make sure that methods match reality on the ground can improve evaluation quality.

MTE Methodology Limitations

While focus groups and key informant interviews can be a valuable source of information about project impact, they are most effective when used in concert with other data sources, and with a realistic view of their limitations. AgDiv believes that the MTE evaluation did not fully recognize the weaknesses of focus group data, and often drew conclusions that were stronger or broader than could be supported with the data. In addition, there were problems with how the focus groups were conducted that further limited the conclusions that could be confidently drawn from the data.

- First, the evaluation findings focused predominantly on data extracted FGDs, despite availability of other data, such as IBTCI annual survey data, AgDiv spot check and mini-survey data, partner sales data, and the AgDiv beneficiary database. This was a missed opportunity to triangulate findings, or to develop focus group questions based on current knowledge gaps.
- Another limitation of the focus on FG data is that it is not well-suited to assess market systems impact, a key element of AgDiv strategy. Farmers have an important and valid perspective, but they are only one piece of the market system and it is not reasonable to expect them to infer market-level strategy of interventions.
- The MTE used data from focus groups selected using purposive sampling for quantitative analysis, despite availability of alternative data. More inappropriately, the MTE implies population inferences from the non-representative focus group sample. For example, the MTE calculates average number of interventions per community within the focus groups and uses this as the basis for the conclusion that beneficiaries in the Southern Region receive lower numbers of interventions, and benefit from fewer project resources. However, AgDiv implementation data show that while AgDiv has fewer beneficiaries in the Southern Region, there is not a large difference in the share receiving layered interventions.
- The focus group methodology does not appear to be able to reliably differentiate between AgDiv interventions and interventions by other programs. AgDiv raised concerns about this in both its meeting with the MTE team before interviews began, and in its comments on the focus group questionnaire. The MTE team assured AgDiv that in the discussions, beneficiaries were very clear on what interventions came from AgDiv, and what interventions came from other funding sources. However, several focus groups discuss bamboo distribution that occurred in 2017, a full year before AgDiv had any bamboo activities, while others discussed receiving OFSP vines in districts where AgDiv did not conduct any distribution. Still other groups mentioned they were promised seed that wasn’t delivered, despite the fact that AgDiv did not do seed distribution outside of Pyxus and Limbe Leaf input packages. While the MTE report has been

updated to reflect corrections to findings with regard to some specific activities that we were able to identify as being inaccurately attributed to the AgDiv project, inconsistencies remain – such as Table 5: Bamboo Survival Rates in 2019 (Page 12) and Annex A: Team Findings about local AgDiv progress and achievements, arrayed by region (Page 40) both of which refer to bamboo that was received by communities in 2017 - a full year before AgDiv started its bamboo program. These examples raise questions about whether the methodology used can reliably attribute activities and outcomes—both positive and otherwise—to AgDiv. As suggested by AgDiv prior to start of interviews, in order to accurately assess impact of AgDiv interventions, it would have been better to have customized questionnaires for each community that directed them to respond to issues related to activities AgDiv reported implementing in those communities.

- Questions as posed to the participants in the questionnaire did not always appear to capture the intended meaning. The question on diversification asked if people were increasing their cultivated land. Responses were that they were not because they have to share land with children. AgDiv believes USAID's intent with this question was to understand if people were diversifying by reducing land for tobacco and maize and allocating it to other crops.

Another limitation of the methodology was the reach of the key informant interviews. The MTE does not appear to have asked United Purpose any questions regarding nutrition interventions and did not interview Feed the Children at all. AgDiv understands that the MTE team has a limited amount of time in country, and that AgDiv has a large number of partners. However, given that the MTE report included notable findings and recommendations regarding nutrition, these omissions are problematic.

Factual Errors in the MTE Report

The original draft of the MTE report contained a large number of factual errors, most that could have been resolved through more discussion with AgDiv. In some cases, errors have been repeated in both the preliminary findings presentation and draft MTE report. This has required AgDiv to allocate a sizable amount of staff time towards multiple rounds of fact checking and providing corrections. While many of the errors have been identified and corrected, others persist. For instance:

- “SunSeed and Feed the Children (an NGO) were partners that various anecdotal reports participated early with AgDiv but did not continue on in the second year.” (Page 27) As previously reported, Feed the Children (which implements the Tiwalere II Project) is still a partner of AgDiv, and works with the project on Soy Kits, Mini-Drip Kits and Bamboo. Through its partnership with the Soybean Innovation Lab, AgDiv is also collaborating with Feed the Children on the soy component of the corn/soy blend it uses in its school feeding program. The MTE does reference this partnership later in the report on Page 29.
- “In 2018, AgDiv purchased 90,000 PICS bags which were distributed by Pyxus to registered farmers as part of a loan package to them. In 2019, another 80,000 PICS were purchased by AgDiv and distributed to Pyxus farmers.” (Page 19). AgDiv has not at any time purchased PICS bags for tobacco farmers. Farmers from both Pyxus and LLTC did receive PICS bags through input loans that were financed by these companies, and AgDiv provided trainings of trainers for the extension agents.
- The MTE describes the early departure of two partners (YONECO and CARE) and states “In both cases, the many-faceted roles and responsibilities of these entities remain under-replaced except by one or two AgDiv staff” (Page 30). This is despite the addition of nearly 20 other partners, including WOLREC and CoFi (who are working on issues of women's empowerment and women's access to finance) and United Purpose, Feed the Children and CRS who are supporting nutrition interventions.

There are several instances where relevant data are omitted in places where they might contradict the MTE evaluation findings, or where the MTE report uses vague and subjective characterizations instead of precise numbers or facts. Key examples:

- The MTE report lists a number of partners who are no longer working with AgDiv, due to a variety of reasons, as evidence that the quality of AgDiv field oversight has deteriorated. (Page 27). However, the report does not discuss partners who have been added. The project began with 6 partners at the time the proposal was written. Currently, the project has at least 25 partners with formal written partnership agreements.
- In calculating geographic differences in interventions (Table 2 on Pages 9 & 10), the MTE left out GALS trainings.
- The MTE continues to use AgDiv's work with tobacco companies in the Central Region as evidence that farmers in this region received more support from the project than farmers in the Southern Region, despite evidence provided to the contrary. At multiple times the final report either directly states or infers that tobacco farmers have received more assistance than other farmers – particularly those in the Southern Region. The MTE writes: "AgDiv's highest levels of interventions were directed to two "tier one" tobacco companies with a combined 25,000 contract farmers." (Page 18), "Farmers least organized in Central/South received much less project support for technologies" (Page 21), "...Such resource transfers can be compared to the larger dollar value of project support to tobacco farmers." (Page 25) and "Tobacco farmers appear to have received significantly higher allocations of interventions including improved groundnut and soy than non-tobacco farmers." (Page 32). However, these statements contradict evidence from reported data, including the written response that provided to the MTE on January 17th: *"Although the tobacco farmers were among the farmers receiving bundled interventions, within that category, they are not receiving the most interventions, nor do they appear to have the highest AgDiv expenditure per farmer (AgDiv does not have estimates of costs per farmer for all interventions yet). Pyxus farmers got seed on credit, inoculant, GAP support, and access to markets; of this, AgDiv provided seed financing and TOT for GAP. Limbe Leaf farmers got seed on credit, inoculant, GAP, access to markets, and bamboo; of which AgDiv provided seed, TOT for GAP, and bamboo. Another group of Limbe Leaf farmers got only Financial Literacy training. The AgDiv financing for seed averaged about US\$40 per farmer; because this is structured as a revolving fund, these same benefits will continue in future years at a cost of US\$ 0 per farmer to AgDiv or USAID. In contrast, WOLREC had nearly 2000 farmers who received improved cookstove training, fin lit training, GALS training, VSL management training, and capital injections. (Almost 900 of these were in the South.) AgDiv estimates that financial literacy training alone costs about US\$77 per beneficiary, while GALS costs over US\$100 when delivered directly."*

Lack of understanding of key strategy elements

Many of the conclusions in the MTE report do not appear to be consistent with an understanding of key elements of the AgDiv strategy. AgDiv believes that allocating more time for discussion with AgDiv before data collection and a more collaborative evaluation process would have resulted in better incorporation of key strategies into the MTE. Examples include:

- **Private sector engagement and leverage of private sector resources.** This is a strategy of growing interest in USAID. Assessing the success of this strategy requires an understanding of how to look at the relative investments by USAID versus leveraged private sector resources. Despite the fact that this was a strategy that AgDiv emphasized in meetings with MTE, the report did not fully understand AgDiv's success in leveraging private sector resources.
- **Market development.** AgDiv's strategy of supporting better functioning markets was another key strategy emphasized in AgDiv's meeting with the MTE team. Using the private sector to develop markets is a

precursor to being able to link rural farmers to those markets. The target value chains are nascent and need to be established. The role of Innovation Lab partnerships, the private sector partnerships, and development of models for structured trade to build liquid, low-volatility markets all seem to have been missed in the MTE report. This provides an important context for AgDiv's work with the tobacco companies and why AgDiv is working with them despite the trade-off of often working with better-off farmers.

- **Technologies for broader development.** Related to this, there was little discussion of technologies that were not targeted to smallholders, but improve agricultural development or address market barriers. There was no mention of the introduction of commercial drip through Netafim and its sales for very large drip set ups. Buying kits, which are a step towards enabling farmers to earn quality premia, were rarely discussed in the context of market development.
- **The value of learning and adapting.** AgDiv believes that the ability to evolve based on unexpected opportunities and new learning about conditions on the ground is an asset to a project. The MTE highlights some positive adaptations, such as reduced emphasis on Soy Cows and no longer working with ACE. However, in other cases, AgDiv believes that the MTE report places too much emphasis on adhering to the original project proposal without explaining why the original approach would have been preferable.

Important Contextual Factors Not Addressed

There are a number of contextual factors that AgDiv feels are highly relevant to program decision-making and making an accurate assessment of project performance that were not addressed in the MTE. These include;

- **Value-for-money.** The MTE evaluation looks at magnitude of impact, and how well-liked interventions are, but it does not look at costs. While AgDiv does not have estimates of the cost of delivering an intervention to one farmer for all activities, it has estimates for many of them. A very cheap intervention with small benefits can be a better use of development money than an intervention with large benefits but very high cost. As an example, PICS bag training has proven effective when delivered through government extension agents who have received training from AgDiv. This allows AgDiv to deliver PICS bag training at the estimated cost of US\$0.16 per farmer. As a result, PICS bags don't have to achieve huge benefits to be very cost effective. Focus groups may not be a good approach to detecting this type of impact, as it might not be noticeably life-changing.
- **Budget cuts.** AgDiv faced a 70% budget cut in Year 2. This severely restricted the scale and scope of activities, and AgDiv's ability to provide partners with resources. This was mentioned to the MTE several times, but AgDiv did not see it referenced in the report. Achievements should be assessed in the context of this limitation. Given that AgDiv's budget has been restored and it has funding for additional resilience activities, AgDiv believes failure to address this factor was a missed opportunity to provide recommendations for transitioning from a lean project to a better-resourced one most effectively.
- **USAID preferences and policies.** USAID has expressed preferences and policies that have affected AgDiv's strategy and implementation approach. However, where these are mentioned in the MTE, they are done so with uncertainty; AgDiv believes it would be appropriate to confirm with USAID.
 - USAID has expressed a strong preference not to give farmers any type of productive resource for free or at a subsidized rate, preferring that the resources be given on credit. AgDiv believes there is value in demonstrating to farmers that a technology works, and that in the context of Malawi, restricting programs to those who can pay for them or who are eligible for credit will exclude many disadvantaged farmers. AgDiv's approach of giving free samples and using demonstrations of technologies represents a compromise that allows us to expose large numbers of farmers to the value of our promoted technologies, while not distorting agricultural markets.

- AgDiv's contract states: "Because USAID's FFP Development Food Assistance Program (DFAP) UBALE also works in agricultural production with its beneficiaries in Blantyre Rural, the Contractor must not implement agricultural production interventions in that district, but will implement complementary activities aimed at strengthening agricultural enterprises and improving access to finance and markets so that UBALE beneficiaries have opportunities to commercialize." However, the MTE suggested that this directive was an opinion of AgDiv "Senior AgDiv staff report [geographic differences are not new and that this was an acknowledged condition of the project's inception." (Page 25)

Response to Geographic Parity Analysis

The MTE report includes an analysis comparing the number and types of interventions received by focus group participants in the Southern Region versus those in the Central Region. AgDiv believes the use of this approach, as well the conclusions drawn from it, are illustrative of the lack of understanding of AgDiv project strategy.

AgDiv's original proposal included having staff in all eight Districts of the Zone of Influence. However, after the project began, AgDiv and USAID made a mutual decision that working through partners would be a better approach given the crowded NGO and donor project landscape in Malawi. This is reflected in the contract language above specifically excluding AgDiv from conducting agricultural production activities in Blantyre Rural - one of the districts in Southern Malawi. Under this strategy, AgDiv would identify evidence-based interventions and support their implementation by partners who already had staff and organizational structures in place throughout the Zone of Influence. The decision was not explicitly documented in project reports because those reports were written for an audience who was fully involved in, and aware of, the decision.

Moving to a model that leveraged partner networks and operations necessitated a different approach to interventions, however. Rather than replicating the exact same interventions, AgDiv instead developed a menu of activities that partners could choose from in consultation with AgDiv. AgDiv also recognized that the different technologies and interventions it had identified would require different strategies for successful implementation and scaling. For technologies, these strategies were selected with consideration of how sustainable markets for those technologies could be encouraged in Malawi. In targeting interventions, some key considerations for AgDiv and its partners included:

- Partner capacity and ability to deliver an activity well
- Needs and interests of communities, a consideration that AgDiv relied heavily on its partners who were working with those communities to assess
- The potential benefits of the activity, costs to deliver it, and potential risks to success
- The complexity of the activity and challenges in delivering it
- Opportunities to pair AgDiv interventions with complementary interventions or enabling environments
- The potential of the partnership to contribute to market systems goals, such as widespread awareness of a new technology to create supply incentives, or to establish reliable production volumes that can contribute to more stable markets
- Opportunities to reach disadvantaged or underserved communities with interventions that are a good fit for them

Reaching underserved areas is one objective among many. AgDiv has favored partners who can reach areas with few project activities, particularly for interventions like PICS bags, which are easy to deliver, have low risk of failure, and there is a market-systems benefit to widespread consumer knowledge of the technologies. There are trade-offs between these different objectives; for example, in Year 2, attempting to achieve widespread

distribution of inoculant with partners who did not have the capacity to deliver the perishable input with the right timing resulted in wasted inoculant and farmers getting the input too late. The lesson AgDiv learned from this was that tailoring interventions to partner capacities is important for project success. AgDiv believes this lesson is reinforced by the findings of the MTE focus groups, where communities working with the highest capacity, most engaged partners reported higher impact.

Given the multiple objectives of AgDiv's strategy, AgDiv does not believe that focusing on the average number of interventions per community among focus group participants is the right methodology to assess the success of the strategy. The analysis also uses data from purposively selected focus groups, which is not the best source of data for quantitative analysis, and the analysis does not include all of AgDiv's interventions. In fact, based on analysis of AgDiv's implementation data, there is not a large difference in the share of farmers receiving bundled interventions as opposed to one-off interventions in the Central and Southern Regions (See Table 1). These data are not perfect, as there are some inconsistencies in how partner-funded interventions are counted.

Table 1. Share of Beneficiaries Receiving Light, Medium, and Bundled Interventions

	Central		Southern	
	Number	Percent	Number	Percent
1-2 Interventions	108102	88%	59168	90%
3-4 Interventions	11404	9%	5085	8%
5-9 Interventions	3414	3%	1281	2%
	122920		65534	

Moreover, AgDiv does not believe that targeting parity between the Central and Southern Region is the best way to ensure inclusivity. For one, looking only at a regional level risks masking large differences within regions. Where AgDiv employs geographic targeting, it uses District or preferably EPA level analysis. (The choice of Region as the unit of analysis in the MTE is likely dictated by the constraint of a small sample size.) Further, employing interventions where they are less suitable, or where there is not a partner with the right expertise, is unlikely to ensure that beneficiaries have equally good outcomes.

AgDiv does believe that inclusivity is an important consideration in project targeting. AgDiv will work to increase the accessibility of its interventions for groups such as women, youth and the poorest people in communities, as well as its M&E related to this objective. AgDiv will seek to expand the reach of the programs that are achieving the best results and replicate successful models with high capacity partners or groups of partners. AgDiv will also explore approaches that specifically target disadvantaged populations. As one example of this, AgDiv is planning to partner with Concern Worldwide to pilot an ultra-poor graduation program in the context of one of its Resilience Challenge Fund sites.

Generally High Quality Responses to Key USAID Evaluation Questions

AgDiv found the responses to AgDiv's key evaluation questions to be measured, to show a realistic view of constraints to market development in Malawi, and to provide a basis for drawing valuable lessons for program design and strategy.

- 2.3.1 To what extent have tobacco & non-tobacco farmers diversified production as a project result? How effective were efforts to increase area planted, production, yields, and profits?** A lot of good

analysis was provided in this section of the MTE. There was one key factual error—it is not actually true that tobacco has the most interventions “AgDiv’s highest levels of interventions were directed to two “tier one” tobacco companies with a combined 25,000 contract farmers.” (Page 19). These farmers have less than many WOLREC beneficiaries, for example. However, it might be that they have better results; this was the hypothesis behind the strategy of working with these farmers, rather than giving inputs to farmers without sustainable GAP support or links to markets.

- **2.3.2 To what extent has AgDiv strengthened and successfully built the capacity of the private sector to grow their businesses in a non-aid-dependent manner?** AgDiv found these findings reasonable as well. However, it is worth noting that the group that is identified as not likely to see growth is not currently the main target of AgDiv interventions to increase farm yields and income, because of many of the barriers mentioned. Instead, they are the focus of food security and resilience interventions, like bamboo. Note that if a family has 5-6 bamboo, they do not need to be able to buy more to see sustainable impact, as they can harvest for 50 years – however this impact will not be realized until after the lifetime of this project.
- **2.3.3 To what extent are farmers better connected to markets as a project result? How effective has AgDiv been in increasing women and youth access to productive economic resources?** AgDiv finds the response to this question to be fair and raises good points about existing challenges.
- **2.3.4 To what extent is the adoption of new technologies by smallholders growing in a sustainable, non-aid-dependent manner as a project result?** AgDiv also finds this to be a mostly fair assessment. One factual note: AgDiv does promotion on regional/national scale through Farm Radio Trust and newspaper adverts, and is working on supporting private sector partners like PICS ESA and Farmers World to support sustainable, commercially-oriented promotion.

Lessons AgDiv will take from the MTE Data and Findings

- **Geographic division of resources:** AgDiv implementation data show that while AgDiv has had more beneficiaries in the Central Region, there is not a large disparity in the share that are receiving bundled interventions.
- In the Central Region, 88% received 1-2 interventions, versus 90% in the South. This was typically PICS training + a sample bag, or bamboo seedlings + watershed training.
- In the Central Region, 9% receive 3-4 interventions, versus 8% in the South. This is typically a combination of PICS, OFSP and/or Inoculant.
- In the Central Region, 3% received bundled (5+) interventions, versus 2% in the South. Bundles almost always included income-boosting interventions such as capital injections, soy kits, and/or inoculant, regardless of region.

AgDiv will continue to consider a range of factors in determining which interventions are implemented in different communities: how difficult the intervention is to deliver well; partner capacities and interest, community needs and suitability for the intervention, complementarities with other interventions, and the benefits of building widespread awareness of technologies. AgDiv agrees that bundling can create multiplicative effects and will work to continue to increase its use of bundled interventions. AgDiv also believes that reaching disadvantaged populations is also a very important objective. However, AgDiv does not believe that geographic parity is an appropriate proxy for this. This is especially true with regard to comparing Southern Region versus Central Region, a distinction that is likely to fail to capture large differences within Regions or even Districts. Rather than attempt to achieve parity between the Central and Southern Regions, a goal that AgDiv believes is arbitrary and would require sacrificing other

important considerations for implementation targeting, AgDiv will work to increase the accessibility of its interventions for groups such as women, youth and the poorest people in communities. As one example of this, AgDiv is planning to partner with Concern Worldwide to pilot an ultra-poor graduation program in the context of one of its Resilience Challenge Fund sites. AgDiv will also seek to expand the reach of the programs that are achieving the best results.

- **Distribution of resources between organized and non-organized farmers:** In discussing allocation of resources, it is important to draw distinctions between the outcomes of AgDiv interventions, the number/intensity of AgDiv interventions farmers received, and the AgDiv resources allocated to those farmers. The MTE incorrectly equates these concepts in analyzing the issue of allocating resources between tobacco farmers, other organized farmers, and unorganized farmers. To address each:
 - a. **Outcomes:** Based on focus group findings, the MTE finds that tobacco and other organized farmers appear to have better outcomes. AgDiv believes that this makes sense, given that tobacco companies and organized farming allows better access to markets and better delivery of interventions. AgDiv is collecting data, such as the survey with Philip Morris, which will allow further insight into this question.
 - b. **Number of interventions and resources:** Although the tobacco farmers were among the farmers receiving bundled interventions, within that category, they are not receiving the most interventions, nor do they appear to have the highest AgDiv expenditure per farmer (AgDiv does not have estimates of costs per farmer for all interventions yet). Pyxus farmers got seed on credit, inoculant, GAP support, and access to markets; of this, AgDiv provided seed financing and TOT for GAP. Limbe Leaf farmers got seed on credit, inoculant, GAP, access to markets, and bamboo; of which AgDiv provided seed, TOT for GAP, and bamboo. Another group of Limbe Leaf farmers got only Financial Literacy training. The AgDiv financing for seed averaged about US\$40 per farmer; because this is structured as a revolving fund, these same benefits will continue in future years at a cost of US\$ 0 per farmer to AgDiv or USAID.

In contrast, WOLREC had nearly 2,000 farmers who received improved cook stove training, fin lit training, GALS training, VSL management training, and capital injections. (Almost 900 of these were in the South.) AgDiv estimates that financial literacy training alone costs about US\$77 per beneficiary, while GALS costs over US\$100 when delivered directly.

Both of these models had good outcomes according to the FGD results, although the tobacco model, which leveraged existing market access investments, had more impact in the area of agricultural production. AgDiv believes that the MTE FGD results suggest that outcomes are best when interventions are delivered well, in bundles, and in the context of enabling conditions like access to markets. Where partners struggled to manage logistics or conduct oversight, such as with bamboo and OFSP in some communities, outcomes suffered. However, AgDiv does not believe that the correct takeaway is that it should attempt to deliver complicated bundles of interventions in new areas using partners like church groups with no experience in these programs. Successfully managing groundnut value chains to manage aflatoxin is much more complicated than delivering bamboo on time. AgDiv believes the appropriate lesson learned is that partner capacity and ability to deliver interventions alongside reliable market access are crucial for success. As such, AgDiv will work to include more farmers in carefully designed, successful models with high capacity partners or coalitions of partners, such as the CoFi input package program.

- **Bamboo:** AgDiv believes the MTE FDG discussions highlight important shortcomings in the outcomes of the bamboo distribution, particularly for some communities. AgDiv has provided USAID with a detailed plan for improving bamboo distribution, including a) working to improve on timely delivery of seedlings

and increased training and reminders for bamboo care, and b) closer monitoring of bamboo at the level of each community to identify challenges and work to make sure successful in all communities.

- **OFSP:** AgDiv agrees that more attention to both strategy and implementation of OFSP vine distribution is required. AgDiv will work to provide vines for wet season planting earlier. AgDiv will also be more selective about distributing vines for dry season cultivation, targeting only those who can plant near dambos, or pairing OFSP distribution with mini-drip kits.
- **Loan tracking:** With regard to loan distribution, AgDiv has documented repayment rate tracking (and high repayment rates) for its cash loan programs. However, AgDiv agrees that lack of clarity in loan terms for in-kind loans (drip kits and soy kits) was likely a problem in many cases. This highlights the additional challenges inherent in giving inputs on credit compared with giving them on a grant basis. AgDiv will work with finance partners such as CoFi to design and implement loan programs with clear terms as it scales up distribution of in-kind loans.
- **Reporting Light Touch versus Intensive Activities:** AgDiv will continue to be transparent in reporting the number of individuals receiving different types of interventions, as it currently does in its implementation reporting. AgDiv agrees there would be value in collecting farm-level outcome data for different groups of beneficiaries, but recognized that the IBTCI survey team has a limited budget, and collecting data on multiple subsets of beneficiaries while maintaining acceptable margins of error is unrealistic. AgDiv is seeking to address this gap by implementing a range of rigorous data collection activities, including an annual survey of tobacco farmers conducted in partnership with Philip Morris, which will allow us to monitor yields, gross margins, dietary diversity, and other welfare measures among tobacco farmers receiving support for diversification out of tobacco.
- **Field supervision.** AgDiv does not believe that there is any evidence that field supervision has deteriorated over the course of the project. AgDiv's proposal had 6 partners, AgDiv now has formal partnerships with at least 25 organizations (this estimate may be missing some MOUs). On the other hand, AgDiv's activities have scaled up, and AgDiv is very sympathetic to partner concerns about resources, especially with regard to staff salaries. AgDiv would support greater flexibility with regard to financing partner activities, especially given that AgDiv's model relies on working through partners instead of hiring its own staff to be based in each District. AgDiv believes that this would better enable USAID projects to have successful partnerships with both private sector actor and NGO partners, who are often better at reaching disadvantaged populations than their private sector counterparts.
- **Sustainability.** AgDiv agrees with regard to the importance of having sustainability strategies for each intervention, and with many of the specific recommendations, such as increasing large-scale efforts to introduce farmers to inoculant and small drip irrigation, and supporting local PICS distribution to increase rural reach. AgDiv has written sustainability strategies for its key interventions.
- **Nutrition.** It was difficult to draw a consistent conclusion or recommendation from the MTE regarding nutrition. However, AgDiv does recognize that it is very difficult to achieve large improvements in dietary diversity measures, let alone measures like stunting rates, through nutrition-sensitive agriculture interventions. In addition to scaling up key nutrition interventions such as soy kits and mini drip irrigation, AgDiv is engaging the Small Scale Irrigation Lab to strengthen the linkages between AgDiv interventions and nutrition outcomes.
- **Original project strategies.** AgDiv believes that, consistent with concept of learning and adaptation, the suitability and success of current strategy is more relevant than whether that strategy is consistent with the original project proposal. AgDiv believes that USAID's willingness to help AgDiv adapt its strategy based on lessons learned has allowed the project to take advantage of new opportunities and better address barriers to ag development.

Future evaluations

AgDiv viewed the MTE as a potential opportunity to complement the quantitative data collected in the annual IBTCI survey, as well as the findings from its own data collection, with qualitative data and an objective and thoughtful review of overall project strategy in the context of agricultural development barriers in Malawi. AgDiv would be enthusiastic about engaging with future evaluators through a much closer collaboration process, mirroring the process AgDiv follows with the IBTCI Annual Survey team, in which AgDiv contributes to designing data evaluation tools, planning evaluation activities, giving input on evaluation methods, and engaging in extensive information-sharing and feedback as results are interpreted.

APPENDIX L

MTE Final Comments on AgDiv Mid-Term Evaluation

Background

An in-country Activity Performance Midterm evaluation (MTE) of the USAID Malawi AgDiv project took place from Oct. 5 to Nov 8, 2019. A highly qualified team was assembled to carry out the MTE: two international agriculturalists with, between them, over twenty years of project management and evaluation experience, and two Malawi sector experts, one a lecturer at the Lilongwe University of Agriculture and Natural Resources with a dozen-or-more consulting assignments, and the other an M.P.H. nutritionist with a decade of experience working for various international and national organizations at both national and district levels. The First Draft of the evaluation was presented on Nov. 26. Extensive comments were received from USAID/Malawi and AgDiv on Dec. 17—fourteen pages of 10 font commentary and 260 textual observations. A revised document was submitted on Jan. 07, 2020. This text also received extensive commentary from AgDiv on Jan 28, 2020, 18 pages of commentary and dozens additional textual observations. A third edition of the document was submitted on March 5, 2020, and additional comments were received from AgDiv on April 20, 11 pages of commentary and 38 new observations on the text. Given the potential of continued substantial difference of opinion between AgDiv and the MTE team, it has been decided the MTE offers its final comments in an Appendix, Appendix K in response to the comments from AgDiv.

Introduction

The Mid-Term Evaluators have noted, with regret, the reactions and responses received from the AgDiv project to the Midterm evaluation. In the dozens of Midterm and Final Evaluations, this MTE's Team Leader has managed over fifteen years, the AgDiv Midterm evaluation has been the most contentious of any he has ever led. Benefitting from outsiders' perspectives, the purpose of a Midterm evaluation is to assess whether a project is on track toward achieving goals and where a project has achieved important successes, and offer suggestions on what a project may need to change or alter in order to achieve its desired objectives. The MTE team takes encouragement from AgDiv's recent comment that "many of the concerns have been addressed" and that "AgDiv agrees with many of the conclusions." The team nevertheless believes this purpose has yet to be achieved because of the legacy of the project's initial reactions to the text. The MTE team regrets this state of affairs because the project has largely been successful.

In the most recent AgDiv comments, it appears that the text still has a half-dozen or so areas of concern, and each will be addressed in the "high level" commentary that follows. AgDiv has expressed serious concerns with the validity of the Focus Group methodology and data collection. It expressed the opinion that "triangulation" did not take place. However the team triangulated with multiple sources including the annual survey of farm level outcome indicators

(2018 data) and this is explained further great detail at the end of this document. Below is a list of findings that AgDiv had problems with:

- The MTE found geographical disparities between the Center and the South.
- The MTE did not look at high level strategies such as building volumes to improve market functioning, leveraging project resources by working with the private sector, and others.
- Various contextual factors were not assessed: value-for-money, budget cuts, USAID preferences and policies.
- The findings on bamboo and the challenges with distribution and survival (though the sweet potato findings now seem to have been largely accepted).
- Time allocation by the MTE team: that field travel took precedent over fuller Lilongwe office presentations and that no USAID interviews took place.
- Some factual errors in the first draft of the text (since corrected).
- The findings on strained relationships with implementers.

Each of these observations will be addressed in the text below.

Favorable Findings

As a backdrop to the in-depth comments that follow, it seems important to state with renowned emphasis that the MTE found many achievements in the AgDiv project and reported on them in quite favorable terms. Various versions of the text spent five full pages of the overall findings, 15%, discussing the many positive aspects of the project with an additional 8½ pages of highly favorable text in the “Tobacco Farmer” section. Combining the two, 40% of total findings were highly favorable to project accomplishment. In the difficult back-and-forth interchanges over the months, our narration of these many accomplishments, the MTE team believes, has been overlooked. They remain an essential aspect of the findings: AgDiv has achieved many important results in its first three years of project implementation.

Focus Group Discussion Methodology

Throughout these months AgDiv has expressed a number of strong criticisms of Focus Group Discussion methodology, that it was “unscientific” and that it suffered from a number of unacknowledged weaknesses, especially recall bias.

As the MTE pointed out several times, the Focus Group Discussion methodology is a well-tested USG method to measure **qualitative** results and used throughout the USAID world in project assessment. USAID's Evaluation Policy states that Evaluation Reports will: 1) Address all evaluation questions 2) Describe methods and tools, including limitations of data and methods 3) Provide findings based on evidence and facts, not anecdotes 4) Give action-oriented and practical recommendations based on findings having highlighted those it is important to note that limitations to the evaluation should be adequately disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall

bias, unobservable differences between comparison groups, etc.) The MTE team agrees with the project that the MTE qualitative process does not produce quantitative results—it is not meant to. Instead, the FGD and KII methodology is meant to solicit different kinds of data than quantitative tools. It is combined with background reading, key informant interviews and direct observation in order to triangulate results. The MTE has sometimes wondered whether because the project has such strongly qualified quantitative expertise (as congratulated in the text, Sec. 2.1.12), it might be difficult for such experts to see the value and complementarity of qualitative data.

The MTE contends that the evaluation produced a number of important *qualitative* insights as follows:

- Significant problems with sweet potato and bamboo deliveries.
- Communities in the South were substantially less successful than those in the Center.
- 2019 sweet potato cultivars died in large quantities.
- Many participants (in the South at least) received only one bamboo cultivar per person.
- Poor perception of AgDiv by some of its partners.

Beyond that, AgDiv suggests that recall bias is a real concern that needs to be carefully managed. This is a valid concern. The latest AgDiv commentary on this topic take issue with the MTE's reporting that FGDs discussed events "almost always less than six months in the past," and the team appreciates the opportunity to correct that misstatement for the fifteen 2018 communities, where, in fact, the recall is on events that took place a year previously. It is also true that several errors of transcription (the year 2018 instead of 2017) or errors in farmer's reporting were caught by AgDiv review and have been corrected. On the other hand, AgDiv observation that the MTE assured AgDiv that project beneficiaries were able to distinguish between AgDiv resources and non-AgDiv resources is not correct: the MTE did not so assert. Indeed, thanks to AgDiv suggestion, the MTE was able to clearly separate three sweet potato communities that were not AgDiv beneficiaries in 2019 and report on them separately. The AgDiv assertion that all inputs would have taken place 10-12 months in the past is also somewhat incorrect; FDGs were held in October 2019 and half of the thirty communities had received AgDiv inputs in January/February 2019, eight months previously.

An important point that might be difficult to appreciate is the vividness of FGD members' recall. For many of these 330 interviewees the only agricultural input they ever received – or in the Center, the one that resulted in dramatic improvement in their agricultural production – has been from AgDiv: of course, they remember it. Many of these interviewees recall with clarity what they received, usually the month they received it, and in what condition. Farmers can recall with complete accuracy even a year later, for instance, that inoculants were received after the crop was planted, thus had to be discarded. Individual memory is enhanced by group memory in comments such as: "the seeds came in xxx, because that was when so-and-so happened, I remember it clearly." USAID staff who observed one FGD in the South will attest to the vividness of the FGD participants' memories and the richness of the discussion. Recall bias is an issue that needs to be carefully managed, and in future such events it can be better documented; but the MTE believes it has not affected the overall high quality of the reporting.

Triangulation

AgDiv has criticized the lack of triangulation in the MTE and the team admits that time constraints resulted in less of this than the MTE would have wished. The MTE did eventually receive 2018 Agricultural Survey results broken down by communities to be visited. This breakdown occurred two days after field travel had started. Recognizing these limitations, there are dramatic – until now not presented – corroborative data comparing 2018 Ag Survey data with FGD results. See the attached triangulation report at the end of this text.

Summarizing:

- Purposive selection to include high-activity and medium-activity communities reduced the originally planned number of “triangulation-possible” communities from thirteen to six. No triangulation with survey data was possible for 2019 communities, of course, because the 2019 Annual Survey had not been completed.
- 2018 Annual Ag. Survey in ground nut, shows several Lilongwe project-supported farmers have thirty times the ground nut production of those in the south, (with intermediate and falling productivity as one moves south through Dedza.) There is a similarly vast difference in soybean productivity between communities in the Center and those in the South. This is likely due to the project leveraging former tobacco relationships but is important to point out. The OFSP data are more difficult to interpret, but it appears that production in 2018 in both the Center and the South was satisfactory in only one of four 2018 Ag Survey communities visited.
- The project’s idea to more fully triangulate existing project reports to the communities visited is intriguing, but would have required considerably more time than was available and could have biased the reporting. The point is not to relieve future MTEs of striving for more triangulation. It is to suggest that the team’s triangulation that was possible convincingly demonstrates that communities in the South are substantially poorer than those in the Center and what appears from the outside appears to have received less project support. Please refer to the detailed triangulation matrix at the end of this report which illustrates the work that the MTE did with the 2018 annual survey data.

Geographical Disparities

Perhaps AgDiv’s strongest objection to the MTE is the finding that communities in the South have received fewer project interventions than communities in the Center and, as a result, benefitted less. As discussed in the text, the MTE team was so perplexed by the disparities encountered between communities of the South and the Center that in its all-day, inter-team workshop held mid-way through the travel weeks, it conceptualized a ‘two project’ model. AgDiv is partially correct in its assertion that a list of interventions in the communities visited is not logical “proof” of geographical disparities but the chart represented the MTE’s first real understanding that AgDiv is “one project” with substantial geographical and project

differences. The mental paradigm AgDiv uses, the “light touch” framework, did not provide the MTE the richness of data as Table Two. This table helped demonstrate that little (almost no) ground nut and soy cultivation had been promoted in the South—thus excluding this area from a major project success.

The project has also taken the MTE to task for not including in the analysis the project’s more costly intervention like the gender action learning, women’s empowerment, financial literacy training and Village Savings and Loan promotion. The team did so where they were talked about in the FGDs: several communities in the Center and the South. It bears mention that these are recent Year Three program interventions and began with the signing of a contract with a WOLREC, and took place in only a few communities comparatively speaking. These communities were also only a tenth of the communities that were part of the MTE sample thus were reported less frequently because the topics came up less in the FGDs. The project further clarifies “Although the tobacco farmers were among the farmers receiving bundled interventions, they [do not] appear to have the highest AgDiv expenditure per farmer (AgDiv does not have estimates of costs per farmer for all interventions yet.)” Based on thirty FGD findings (as well as back-of the envelope calculations that AgDiv can surely improve upon⁹), the MTE continues to believe project expenditure by Region is somewhat less equitable than AgDiv thinks. The MTE encourages the project to continue its development of a metric to explore this difference in point of view.

The AgDiv response to the First Draft in early January presented a table, in draft form then and in near-final form in April. This table provides good analysis of the “even-handedness” of light touch versus more intensive activities in the two regions that the MTE found useful. It also corroborated the MTE impression that the Center had received more resources than the South by population: 65% of project beneficiaries were in the Central Region compared to a population weight of 57%, and 35% of project beneficiaries in the South compared to a population weight of 43%. These apparently small percentage differences actually represent from 10,000 to 15,000 fewer farmers who could have benefitted in the South. AgDiv reports an early donor decision was taken to dedicate more emphasis to the Central Region than the South for various reasons, among them the need to work with former tobacco farmers in the Center and leverage the relationships and the extension model they have been utilizing over the years to increase yields of soy and groundnut. Also early on in the AgDiv implementation there were a substantial number of other USAID-financed project taking place in the South (some of them now over). The MTE did not take a position on whether this was an appropriate division of resources or an inappropriate one, but asked two questions: was USAID leadership aware of the implications of this allocation (or, as could easily happen, was it something that evolved that no one had consciously identified?); and did the project and USAID wish to re-evaluate that division of resources in Years Four and Five. In the end, because the Scope of Work compelled us to do so, the MTE offered one of its five major recommendation that the project should return to some Year One & Two, light-touch communities in the South to redress

⁹ \$40 per farmer X 25,000 farmers = \$1.0M versus \$77 per beneficiary X 2,000 to 5,000= \$154K to \$385K.

the under-appreciated geographical imbalance that may have occurred. As previous text stated: *“At the heart of the matter is a strategic question: ‘Is it appropriate to continue favoring the transfer of resources to the better-off parts of the country where the investment will have the greatest return, while investing fewer resources in less-developed areas of the country?’ This is not a simple question and well-informed, knowledgeable people will come down on different sides of the debate.”* For reasons which the MTE team does not fully understand, this rather mild commentary seems to have caused great pushback from AgDiv, which the MTE regrets.

One request on this subject is respectfully offered: Could the project please enlighten itself of the word *“parity?”* This concept was never introduced, and this word was never used in any MTE communication; its misinterpretation by project staff, up to and including the latest round of comments, has led to substantial confusion in AgDiv of what the MTE was suggesting.

The MTE reads with considerable interest the comment that “AgDiv will work to increase the accessibility of its interventions for groups such as women, youth and the poorest people in communities AgDiv will also explore approaches that specifically target disadvantaged populations. As one example of this, AgDiv is planning to partner with Concern Worldwide to pilot an ultra-poor graduation program. “ This is a new idea, one on which details are not yet available; but the evaluators are pleased that AgDiv may be moving to address the ultra-poor (many of them in the South) in new programmatic ways.

High Level Strategies

Another discontent AgDiv has reported with the MTE text is for not analyzing or commenting on high level strategies: improving market functioning by building volume, working with the private sector to create a structured market for legumes, leveraging existing investments to maximize benefits, and working with anchor farms and contract growers. These are valid project aspirations, but further thought may suggest they are macro issues more appropriate to the formulation of development hypotheses or in a project proposal. Such concepts are quite difficult to address in a Focus Group methodology, a point tacitly accepted in recent AgDiv commentary. The MTE team continues to believe that its village-based findings did not prepare them to knowledgeably comment on these strategies except in passing, as the evaluation did in several ‘tobacco farmer’ questions.

Contextual Issues

AgDiv also indicated that the MTE did not address important contextual issues, value for cost, budget cuts in Year Two, and USAID preferences and policies.

Value-for-cost is well-illustrated by PICS bags, an inexpensive intervention with small farmer benefit, compared to, say, a costly intervention such as 1 HA-irrigated plot that may generate large returns. The MTE supports the validity of the observation but does not agree with the AgDiv assertion that the FGD methodology is not a good way to detect low-cost impact. As

noted throughout the text, many FGD participants reported they were highly satisfied with their PICS bags.

The issue of budget cuts, clearly, is beyond the scope of an FGD discussion. There are other mid-term evaluations in which the Team Leader had been asked to take a look at budget viz-a-viz project implementation, but such analysis was not a part of this exercise.

Regarding the idea of the MTE offering comments on USAID policies and preferences, when a topic arose as part of the FGDs or KII interviews, the MTE judged it was appropriate to draw inferences; and as will be discussed below, the team did so regarding salary support for colleagues in sub-implementing agencies. In topic areas that did not arise out of FGDs or KII discussions, it did not seem appropriate for the MTE to offer opinions on complex topics that have been developed by in-country experts with long-term knowledge of country conditions.

In these three areas, the MTE team recognizes the legitimacy of AgDiv's wish for external commentary but, as with high level strategies discussed above, the MTE found these as project-level issues beyond the reach of this SOW. On these issues and in the strategies paragraph above, AgDiv's Statement of Differences already addresses these issues better than the MTE could.

Bamboo and Sweet Potato

The MTE now recognizes that the results of its FGDs regarding bamboo and sweet potato likely came as a surprise to project staff. A project that was going generally quite well (in the Center) was now seen to be significantly under-delivering in these two interventions. On the basis of the recently received comments from AgDiv staff, the MTE is hopeful that the MTE findings have given the project a better handle on these two interventions.

The new bamboo variety, *Dendrocalamus asper*, showed great agronomic promise and was being enthusiastically promoted by some in the project—perhaps without recognizing inevitable learning curve hurdles. It is a species that requires careful site selection; it requires that community promotion must give considerable training timely and regular watering for the first two years; it requires that careful supervision during distribution to ensure that the resource is not captured by rural elites; and it requires careful post rainy-season evaluation to assess whether this cultivar's potential is being reached. Much of this has now been recognized by AgDiv.

In sweet potato, the MTE surmises that in 2018 the project had encountered difficulties with sweet potato distribution and survival (it appears to be a common problem with this crop) and could easily have thought the issues were being addressed in its 2019 delivery schedule. This however was not the case. Recent communication did not discuss improvements in sweet potato programming thus it is a bit difficult to gauge what changes the project has implemented. However, the MTE is encouraged to read that "AgDiv agrees that the number of focus groups reporting low bamboo and OFSP survival rates necessitates improvements in

implementation for these activities, as well as closer monitoring at the level of each community.”

Prioritization

The project has expressed frustration in some of the choices the MTE made in its decision-making: there wasn't enough time for a full-scale presentation of the project; there was not enough collaboration on evaluation design; the MTE did not come back to project staff with questions after the field travel; the MTE did not interview USAID staff as part of the evaluation; and that the MTE did not see a wide enough sample of project sites to be able to reach the conclusions it did. These limitations are fairly typical for evaluations all of which have a limited time period for which to do their work. The MTE believes that the number and breadth of project sites visited was more than adequate. The other limitations are accurate. Unfortunately, USAID staff's presentation to the MTE was less than a full day. There was, however, substantial collaboration between the project and the MTE on adjusting the villages to be sampled, but perhaps not enough in other areas. The MTE did not come back to the project staff with post-field travel before the PowerPoint Debriefing, but considerable adjustment to the Power Point took place as a result of the AgDiv Debrief. It is also true the MTE did not interview USAID staff; however in the Team Leaders' experience, it is common practice that USAID staff are not interviewed during an evaluation (by USAID choice, the team believes) so as to not to influence the evaluators' forming their own opinions independently.

These frictions, however, do not adequately take into account real-life trade-offs that accompany evaluations of this nature. Two days after arrival and before the team was able to meet with AgDiv, the MTE was required to submit a fourteen-page Inception Report to USAID, with the AgDiv presentation to the MTE taking place the next day. The day after was Friday, a half-workday in Malawi; and Saturday, the team spent all day finalizing the site visit schedule. During these three days the MTE team received no comments from AgDiv on the FGD questionnaire. The following Monday, Key Informant Interviews began, followed by two weeks of continuous field travel, including a Saturday mid-travel, all-day workshop in Mangochi to compare notes. One of the teams traveled 3,950 km. during the two weeks. Thirty FGDs were carried out and twenty-nine Key Informant Interviews were conducted in this period. The Monday after the return from the field, a PowerPoint submission was required to be prepared to USAID summarizing major fieldwork findings, followed by its presentation to USAID the next day, and then with USAID approval, presented to AgDiv the following day. The day after, the last of in-country presence for the expatriate team members, was taken up with finalizing the PowerPoint presentation on the basis of input from USAID and AgDiv, and assigning team responsibilities for the write-up. This list is not to justify what the MTE was not able to accomplish but to demonstrate there was no “extra” time in this schedule. Any additional task or any change in tasks would have required abandoning one or other elements of the MTE goal: to visit as many geographically dispersed FGDs as humanly possible in two weeks' field work, and also to carry out an almost identical number of highly informative, highly documented KIIs. By their nature, evaluations always have to deal with time resource issues.

Factual Errors

AgDiv has suggested high dissatisfaction with the number of factual errors in the report. The Team Leader's very first comment in the AgDiv Debriefing on Nov. 6 was: "Any and all errors of fact will be corrected without question." The MTE agrees that the first draft had some important errors: inclusion of three non-AgDiv sweet potato communities, mistake in the number of soy kits and mini-irrigation kits reported, some mix ups in the number and detail of tobacco company interventions and others. Such errors are common in first drafts. The MTE is grateful to AgDiv staff for the corrections and also appreciates suggested changes brought to our attention in the April comments. The team has tried as best as they can to make recommended changes.

Implementing Partners

Another point of friction between AgDiv and the MTE team was the evaluation's finding that AgDiv was viewed by several project sub-grantees and/or implementing NGOs as slow to approve project agreements, sometimes over-reaching in its treatment of colleague organizations, and generally not very responsive to partner concerns. This was a widespread observation from many KII interviewees. The most recent formulation of this idea has been crafted in this way: "Current and previous implementing agencies report a frustrating relationship, ... taken for granted, ...services are provided at little cost to AgDiv, ... forced to assume risky performance contracts.... The basic issue appears to be salary support, which is not allowed by USAID." The MTE team saw that AgDiv perhaps acknowledged some of this when it read the following commentary: "AgDiv is very sympathetic to partner concerns about resources, especially with regard to staff salaries. AgDiv would support greater flexibility with regard to financing partner activities, especially given that AgDiv's model relies on working through partners instead of hiring its own staff to be based in each District. AgDiv believes that this would better enable USAID projects to have successful partnerships with both private sector actor and NGO partners, who are often better at reaching disadvantaged populations than their private sector counterparts."

AgDiv insists the MTE's perception of a fall-off in the number of implementing partners is inaccurate and reports the project has added twenty or twenty-five new partners. Without a list of those partners or descriptions of their roles, which was unavailable at the time, and in light of the fact that during the field travel there was no mention of a large number of implementing agencies other than ones that have been noted previously, the MTE continues to believe the "one-or-two AgDiv staff filling in the role of the NGOs" is still an accurate description.

A related point of contention is partner capacity and the MTE's finding of low field supervision; and in this area perhaps a qualifying comment is in order. As discussed in previous texts, early in the project, AgDiv took the decision to work through partner organizations: tobacco companies, anchor farms, on-going USAID projects, national and international NGOs. What the MTE text discussed by inference but could have articulated more clearly is that this intervention modality has been substantially successful in the Center: tobacco companies and anchor farms

have performed well. In the South, this modality has been less successful. The evaluation discussed a steady stream of implementing partners leaving the project (through choice, management decision, or end of project) and the slow incorporation of new implementing partners. Noted above, WOLREC came on board only in Year Three after a year of protracted contract negotiations, and at a level of financial support that WOLREC judged a fraction of its need and capacity. Other NGO and project partners (in the South) have come and gone, with lapses in continuity of supervision. The finding in one (high-quality) NGO of one field staff person for a hundred villages is a demonstration of this shortcoming. Clarifying thus: High quality partner capacity and field supervision in the Center is offset by lower partner capacity and lower levels of field supervision in the South. This makes sense since the center utilizes the long tried and true tobacco extension model with high level of improved agronomic practices.

Soil Conservation

One of the many exciting AgDiv innovations was its entry into soil conservation activities, and the MTE made a special trip to two Dedza communities where soil conservation had been taking place. Although some of this is characterized as watershed management it is actually soil conservation. Appendix F of the document reported specifically on project accomplishments—with cautious enthusiasm, but also with caveats suggesting that true effectiveness of the interventions could only be assessed after the end of the Rainy Season. As Dedza is only a day's back-and-forth travel, the MTE warmly encourages AgDiv staff to return to these two villages with Appendix F in hand to evaluate how well the soil conservation structures survived the rains. It would also be extremely useful to hear villager perspectives on the cost/benefit of these labor-intensive structures. Perhaps such a trip report from AgDiv will inform them better of the success of this intervention.

Bamboo and Sweet potato

The MTE notes that AgDiv has provided USAID with a detailed plan for improving bamboo distribution, including working to improve the timely delivery of seedlings, increased training and reminders for bamboo care, and closer monitoring of bamboo at the community to identify challenges. In sweet potato AgDiv agrees that more attention to strategy and implementation of OFSP vine distribution is required and has committed to provide vines for wet season planting earlier. AgDiv will also be more selective about distributing vines for dry season cultivation, targeting only those who can plant near low-lands or pairing OFSP distribution with mini-drip kits. Hopefully, data will soon be available for results of the 2020 distribution that will show substantial improvements in this distribution.

Key Evaluation Questions (Tobacco farmers)

The MTE appreciates that AgDiv has found the tobacco farmer section useful in highlighting important challenges and opportunities.

Improved Loan Supervision

The MTE also notes that AgDiv agrees that lack of clarity in loan terms for in-kind loans, particularly drip kits and soy kits, was likely a problem, and highlighted additional challenges in giving inputs on credit compared with giving them on a grant basis. The MTE team also notes that AgDiv will work with partners such as CoFi to implement loan programs with clearer terms as it scales up distribution of in-kind loans.

Expanded Drip Kit Programming

Finally, the MTE learned that the project is expanding its drip kit and soy kit programming. The MTE noted clearly in the text how innovative it thought these activities were, and how much hope it had for their expansion.

Nutrition

Somewhat different from the above topics, which are largely clarifications related to AgDiv's points of contention with the MTE evaluation, is the MTE's observation that the need for substantial improvements in AgDiv's nutrition activities did not receive as much emphasis in the MTE text as it should have. The AgDiv comment that the MTE did not interview United Purpose on nutrition nor Feed the Children is correct and to be regretted but, is only a small part of the concern. It is true that one of the MTE's five major conclusions and major recommendations relates to improving the project's nutritional interventions. Nevertheless in the MTE's view, Nutrition has not yet received as much project emphasis as it should and major changes in emphasis are required. The Philip Morris study in process that asks some nutritional and diet questions is a start, but much more needs to be done, the team thinks, on a project-wide basis. A small increase in groundnut consumption has taken place from 48% in the Baseline to 52% in 2019. Soy consumption has declined from 23.6% at Baseline to 16.5% in 2019, and OFSP root consumption has declined from 23.5% at Baseline to 16.7%, down 33% in both crops. The MTE has confidence the project will undertake—is undertaking—a number of improvements suggested by the Mid-Term Evaluation. The MTE encourages the project to make adjustments to achieve its challenging Nutrition goals.

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Conclusion

The MTE team has always conceived this study as an opportunity to identify and document AgDiv impacts and challenges not captured in the annual farmer surveys or through regular project monitoring. As articulated in the first draft, throughout the field travel and report writing, the MTE team was guided by the vision that this is a **qualitative** evaluation designed to **complement** existing quantitative studies not displace them. The team had many good things

to say about project implementation; as was our responsibility, it had a number of suggested adjustments.

Somewhere along the way, this collaborative, improvement-focused goal was overtaken by events, probably through miss-steps on both sides. This was never the intent of the study and the MTE deeply regrets this state of affairs. The MTE found a substantially successful project on many dimensions and hoped to offer productive suggestions on how talented project managers could make the project better. The MTE tried to do so; it thought it had done so. It continues to have that hope. When all is said and done, the MTE stands by its results. The AgDiv project has accomplished a lot, however, there are areas where the team's findings suggest improvement is desirable.

Triangulation

1. Triangulation between 2018 Annual Agricultural Survey data compare to key FGD commentary

The original MTE hope was to triangulate up to 13 communities from the 2018 Annual Agricultural Survey database. Purposive selection from the original data set to select for as many high- and medium- activity communities as possible reduced the number to six. No triangulation took place 2019 communities because the 2019 Annual Survey had not been written at the time of MTE field travel.

Table One: Key 2018 Ag. Survey Results in Ground nut compared to Selected FGD results

Village	HA	Bens	Avg prod. MT/HA	Avg Sale/ MT/ben	Total village MT sold	MTE Comment on Ag. Survey	Related FGD Discussion
GROUND NUT PRODUCTION							
CENTER Chiotela, Dedza	87.5	306	0.286	0.087	26.5	Intermediate production	FGD members discussed package of support + inoculants with good growth results plus demo plots and other support
CENTER Mgulula, Mchinji	191	531	0.359	.165	88	Good production and sales	FGD did not discuss project groundnut or soy support; they mentioned frequently use of their own seed year after year
Confusion in communities with same name in different districts							
CENTER Mkanda, Mpenu Lilongwe	372	788	.47	0.378	298	Good production/sales. Good HA/ good # of participants	FGD reported no diversification in gnut and soy because of no project support. They grow on their own and with good rain get good results.
CENTER Mkanda, Mchinji	[Not part of 2018 Ag Survey]						Excellent Horizon results in most activities. Rated "B+", one of the best.
CENTER Phanga, Lilongwe	405	1013	.40	0.205	208	Good production & sales. Good hectarage/ good # of participants	(Via DAES) 11 FGD members reported they did not receive groundnut support
SOUTH	66	336	0.197	0.025	8.5	South/ very poor production	[Questionable FGD responses]

Kantawanje, Balaka							27-village project area; each received 2 PICS bag in 2017; reported low awareness & uptake
SOUTH Kwilasaya, Machinga	39.2	227	0.173	0.018	4	South/ very poor production Poorest village in the MTE sample	Good training on PICS bags, supplied on time, one each; two bought their own. Very low harvest = zero bag demand FGD didn't report project support in gnut
Overall: 2018 Annual Ag. Survey shows some Lilongwe project-supported ground nut farmers have <u>thirty times</u> the production of those in the South, with intermediate and falling productivity as one moves south through Dedza.							

Table Two: Key 2018 Ag. Survey Results in Soya compared to Selected FGD results

SOYA PRODUCTION							
Village	HA	Bens	Avg prod. MT/HA	Avg Sale/ MT/ben	Total village MT sold	MTE Comment on Ag. Survey	Related FGD Discussion
CENTER Chiotela, Dedza	157.9	330	0.478	0.308	102	Good hectarage/ good # of participants	FGD members discussed "package of support" + inoculants with good growth results plus demo plots and other support
CENTER Mgulula, Mchinji	179.8	613	0.293	0.144	88	Good production & sales. Good hectarage/ good # of participants	FGD reported no soy support, no groundnut, bamboo, or inoculants.
CENTER Mkanda, Lilongwe	104.8	506	0.207	0.102	52	Good production & sales. Good hectarage/ good # of participants	See note above.
CENTER Phanga, Lilongwe	287	957	0.301	0.122	117	Good production & sales. Good hectarage/ good # of participants	(From DAES) they received one 50 kg. bag soy seed, distributed 1.8 kg/person. In CY 2018, received more + inoculants resulted in better plant growth, but crops destroyed because of high rains; survival rate reported at 25%

SOUTH Kantawanje, Balaka	0	0	0	0	0	South/ No production	[Questionable FGD responses]
SOUTH Kwilasaya, Machinga	1	41	0.101	0	0	South/ very poor production	Very poor village. FGD did not report any project support in soya.
Overall: Vast productivity difference in soya between communities in the Center and in the South							

Table Three: Key 2018 Ag. Survey Results in OFSP compared to Selected FGD results

OFSP PRODUCTION							
Village	HA	Bens	Avg prod. MT/HA	Avg Sale/ MT/ben	Total village MT sold	MTE Comment on Ag. Survey	Related FGD Discussion
CENTER Chiotela, Dedza	12.6	118	0.107	0.046	5.4	Poor production	FGD reported 20 members of one club got four bundles each and “most” still had vines left and wanted to sell them as part of a scale up effort. [Survival rate question not asked.]
CENTER Mgulula, Mchinji	23.4	204	0.115	0.074	15.2	Not an AgDiv supported activity	
CENTER Mkanda, Lilongwe	13.5	169	0.08	0	0		FGD reports no OFSP being grown in their area because of lack of access to vines
CENTER Phanga, Lilongwe	39	338	0.116	0.084	28.4		FGD reported they received OFSP, 6 varieties in 2017, for demo and “pass on” sharing but zero survival rate
SOUTH Kantawanje, Balaka	25.8	336	0.093	0.020	4.8	Poor production	[Questionable FGD responses]
South Kwilasaya, Machinga	34.3	289	0.119	0.051	14.7	Not an AgDiv supported activity	

2. Triangulation between KIIs and FGDs

The Southern team made five triangulation visits to agricultural suppliers to cross-check the availability and pricing of ag. inputs being described in the FGDs. The Central team conducted numerous triangulation assessments comparing FGD reporting to tobacco company and Horizon KII informants.

3. Triangulation among FGDs

In the Center, the structured format and sequence of questions of the FGD questionnaire meant that similar comments and observations during the FGD discussions ‘echoed’ the discussions of other groups (with differences easy to track and report.) In the South, early on it became obvious that the entry point to FGD dialogue was a discussion of PICS bags and the similarities and differences among the communities was easy to track. A similar methodology was then ‘piggy backed’ into the FGD on discussions of bamboo, OFSP and other project interventions.