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Assessment of Rural Sector Enhancement Program (RUSEP)

USAID / Nigeria; 2001 TO 2003 INCEPTION TO COMPLETION

Final Draft

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ACRONYMS

ADP	Agricultural Development Program
ARCEDEM	African Regional Centre for Engineering Design and Manufacturing
CAPAN	Cassava Processors Association of Nigeria
CIDA	Canadian International Development Agency
CNB	Central Bank of Nigeria
CSP	Country Strategic Plan
DAIMINA	Developing Agri-Input Markets in Nigeria
DAP	Diammonium Phosphate
FCT	Federal Capital Territory
FMA&RD	Federal Ministry of Agriculture and Rural Development
GON	Government of Nigeria
ICS	Information and Communication Support for Agricultural Projects
IITA	International Institute for Tropical Agriculture
IFDC	International Fertilizer Development Center
KARDA	Katsina Agricultural and Rural Development Authority
LGA	Local Government Area
LOP	Life of Project
MFI	Micro-finance Institution
MT	Metric ton
NBFI	Non-bank Financial Institution
NGO	Non-governmental organization
NPK	Nitrogen, Potassium and Potash
NSS	National Seed Service
PCU	Project Coordination Unit
RUSEP	Rural Sector Enhancement Program
RWF	Rural Women's Foundation (NGO)
SG 2000	Sasakawa Global 2000
SME	Small/medium enterprise
SO	Strategic Objective
SSP	Single Super Phosphate
TA	Technical assistance
UB	Union Bank Plc.
USAID	United States Agency for International Development
WARDA	West Africa Rice Development Association

1. EXECUTIVE SUMMARY

1.1 Introduction

This report presents the findings, lessons learned, and an overall assessment of RUSEP as a model for an expanded program in USAID/Nigeria's five-year strategic plan. Field visits and assessments were carried out in each of the four States where RUSEP operated. The assessment team met with men and women farmer groups, and commercial entities including bankers, commodity traders and agro-processors.

Data from IITA show that RUSEP provided varying degrees of support to 8,817 farmers organized in 534 farmer groups.

The assessment focuses first on findings and then on the lessons learned that are relevant to USAID/Nigeria's new strategic plan. The components of the project are discussed below first in terms of findings, followed by an assessment of the RUSEP model as a whole, and then by lessons learned.

1.2 Findings

Production – RUSEP increased production of targeted commodities through several interventions. Farmers generally reported that their yields doubled as the result of access to improved seed and more fertilizer. RUSEP did not provide hard data on changes in the targeted crops' productivity.

Extension – RUSEP conducted training sessions in collaboration with the Agricultural Development Program (ADP), Information and Support for Agricultural Projects (ICS) and several national nongovernmental organizations (NGOs) to provide extension services for technology transfer to RUSEP farmers.

Agricultural Inputs - Access to agricultural inputs had a positive effect on increasing farmers' productivity and yields, according to farmers' self reports. RUSEP introduced farmer groups to fertilizer and seed dealers. Some of these groups were able to purchase inputs at lower prices by buying in larger volumes.

Credit – The credit program was initiated in Katsina State during 2002. This was extended to Abia and Oyo States during 2003. Sixty-two RUSEP farmer groups representing 850 farmers received credit in the amount of N12.0 million ($92,000) in 2003. This represents about 10% of all RUSEP farmers, with Katsina farmers comprising about 88% of the total loan recipients.

Market Linkages – Effective linkage to major agro-processors was minimal, mainly because these companies do not normally purchase directly from farmers and also because most RUSEP producer groups could not meet the quality requirements of these large processors.

The Market Information System (MIS) – Some farmers stated that they listened to the RUSEP MIS broadcasts and that this information was useful. The broadcasts did not reach some areas in Oyo State due to transmitter limitations. Merchants generally found the information to be incomplete and not useful for their operations. IITA believes that the MIS is sustainable with minimal support. Other parties believe that the MIS is unsustainable in its present form and without outside substantial support.

Processing – RUSEP provided support to a limited number of small and medium-sized agro-processors. This is an area that would likely benefit from increased support in any future project.

Impact on Participants – Given RUSEP's lack of an M&E system, organized, longitudinal data on project impact at the household and community levels is lacking. However, men and women interviewees reported that RUSEP enabled them to cultivate larger areas, increase their yields, hire labor and tractor services, take care of household needs such as paying school fees, and buy small livestock.

1.3 Assessment of the RUSEP Model

Strengths – The RUSEP model was successful in forming farmer groups and improving their access to technical assistance (TA), credit, improved inputs, and market-price information. It introduced farmers to improved varieties and production techniques that increased their yields. RUSEP also engaged women: 30% of all RUSEP farmers were women; in Abia and Oyo States 83% and 40% respectively of all participants were women. Linking producers with Union Bank PLC.(UB) enabled 10% of RUSEP farmers to obtain credit with which to purchase inputs and/or hire labor during 2003. Some groups were in the process of purchasing machines for value-added processing activities with traditional commodities such as cassava and plantain. The model even worked to some extent in Adamawa State, where it began a year later than elsewhere: the MIS helped farmers negotiate better prices with middlemen; TA helped improve their yields; RUSEP introduced them to the UB; and peanut producers learned how to bulk their product, take it directly to a major agro-processor, thus increasing their profits. The assessment team's conclusions are that the market-driven technology transfer and commercialization model has the potential to improve livelihoods, and that an expanded project will benefit from taking into consideration the lessons learned from the RUSEP pilot.

Weaknesses –Providing TA to improve production and linking producers to markets were major weaknesses in RUSEP's commodity chain. Agricultural Development Program's (ADP) extension services were a weak link due to lack of and misuse of resources, although the quality of their work varied by region. According to producers, ADP extension agents visited them only once or twice a month, and according to RUSEP staff both the ADP and local NGOs need training to become competent partners in technology transfer. Producer groups' long-term credit-worthiness cannot be evaluated from the pilot project and is a potential weakness, according to two bank managers. Linking producers to the market was perhaps the weakest component of the model because RUSEP aimed at large agro-industries (e.g. Pokobros), and was not successful because large processors buy large quantities at harvest time at low prices through their established networks of independent agents. Farmers obtained better prices in their local markets and some have quantities of commodities for which they are still seeking buyers. The assessment concluded that producers should aim to market to small/medium enterprises (SME) versus large agro-processors like Nestle, and that producers will benefit from training to learn to clean, bulk, and deliver good-quality products. In Abia, linking processors to buyers generally did not work: market demand was limited or disappeared, and producer groups' expectations of having export markets in a few months were unrealistic or as yet untested.

Opportunities – There is the potential to expand the RUSEP model to a significant number of producers and into more remote areas with limited access to markets. The project can count on women's active participation, particularly in non-Muslim areas and in value-added processing activities. The RUSEP pilot and the assessment's site visits show that producers definitely have the expertise to improve their output and a strong interest in marketing alternatives to increase their incomes.

There appear to be some opportunities to link producers to small- and medium-sized agro-processors such as feed mills and poultry producers. For example, AFCOTT in Yola bought 100 metric ton (MT) of groundnuts directly from RUSEP farmers. Researching these SMEs' demands for a wide variety of commodities will be critical. Helping producers acquire the knowledge and means for delivering high-quality products to the market appears to be a real opportunity. This would entail promoting farmer associations, assisting them to develop their own warehouses and buy relatively inexpensive cleaning equipment, and then linking them to markets. Like producers, the private sector evidently has the potential to respond to commercial opportunities: input suppliers and commodity traders respond to market opportunities throughout rural Nigeria, despite infrastructure constraints (poor roads, lack of electricity, etc.) and limited rural purchasing power.

1.4 Key Lessons Learned

See Section 4.2.

1.5 Sustainability of the RUSEP Model

The key requirements for sustainability are:

- Institution of a method to charge farmers for the training and extension services they currently obtain gratis;
- Development of a cadre of extension advisors who have the expertise to function as private agricultural consultants, and would make contracts with producer groups to provide technical services for a fee;
- Creation of a MIS system that will be acceptable to all stakeholders who in turn will contribute to the cost of maintaining the system;
- Producer groups' long-term credit-worthiness, based on their ability to obtain, manage, and repay bank loans on time; and
- Building producers' capacity for identifying viable markets and managing their marketing of commodities, including processing, bulking, and transporting their products.

1.6 Replicability

The RUSEP model has the potential for replication. The elements to build on are producers' interest in generating income, their agricultural expertise, and market demand for certain commodities. Successful replication will depend on correcting the weaknesses in the different project components that this evaluation identified. The key elements of successful replication are:

- Facilitating producer groups' access to agricultural credit and, most importantly, providing TA to teach them to independently obtain, manage, and repay their loans;
- A source of agricultural TA with the expertise and resources to provide sound and timely assistance to producers. This includes expertise in the project's targeted commodities;
- TA to teach producers market-quality processing and bulking; and
- TA to teach producers to conduct market research to identify market outlets and manage their marketing.

1.7 Integration into SO 12

Based on the RUSEP model, a commodity-chain approach can contribute to improving Nigerian livelihoods. The model is resource-intensive so it is appropriate to implement it in selected areas. Increasing agricultural productivity and commercialization should help improve the well-being of farmer families. SME operators will be key actors in the commodity chain. The RUSEP pilot shows that women are active participants in the model, and they and their families will benefit from it. Increased agricultural production and incomes should have a positive effect on health and nutrition, particularly if the expanded project targets key food crops and improved processing.

2. INTRODUCTION

2.1 Purpose of the Consultancy

The overall purpose of the consultancy was to document lessons learned from USAID/Nigeria's Rural Sector Enhancement Program (RUSEP), and to assess its viability as a model for an expanded program in the Mission's five-year strategic plan. The consultancy's major objectives were to:

- Assess RUSEP as a model for market-driven technology transfer and commercialization;
- Recommend how to improve and expand the model within Strategic Objective (SO) 12;
- Report on the program's impact at the household and community levels;
- Quantify RUSEP's impact on agricultural productivity, income, and access to credit, inputs, and markets; and
- Identify the project elements with the greatest potential for sustainability and replicability, and suggest how these could be integrated into the new SO12 program design.

SO12 aims to improve livelihoods in selected areas, in part by improving the productivity, value-added, and commercialization of key agricultural commodities. That strategic objective was the context for the assessment.

2.2 Assessment Methodology

The consultants collected information from project documents and from the range of actors who participated in the project: RUSEP staff, rural producers, agricultural input dealers, technical personnel from the Projects Coordination Unit (PCU) and the ADP, UB personnel, and agro-industries such as Nestle. Field visits to Oyo, Abia, Katsina, and Adamawa States provided direct information from these different actors. Mr. A.A. Adeniyi of the PCU participated in the assessment in Oyo and Abia States. Former RUSEP staff members were interviewed, at the International Institute for Tropical Agricultural (IITA) in Ibadan and in the field. Due to constraints of time a number of the agro-industry personnel were interviewed by telephone. Annex A shows where the assessment team went and whom they interviewed in each State.

It is important to note the limitations on the information obtained in the field. The time for field visits was limited in comparison to the amount of information potentially available. Self-reported information from interviews is subjective and unverified, which means that it is illustrative and not precise. This is a universal caveat that applies to self-reported information, not just to this assessment. IITA's Grant Agreement for the implementation of RUSEP apparently did not require IITA to develop baseline data on agricultural production and productivity nor a M&E component to track results emanating from project interventions. The resultant lack of longitudinal, quantitative data in RUSEP's quarterly reports, and the difficulty of obtaining it from former project staff who are dispersed, limited the data on key topics, especially on productivity, that RUSEP could provide on short notice. However, we believe that the site visits and the numerous actors interviewed provided useful information for this assessment.

2.3 Brief Description of the RUSEP Project

USAID/Nigeria funded RUSEP as a pilot project in four states (Abia, Adamawa, Katsina, and Oyo) for a total of thirty months, from mid-2001 until early 2004. RUSEP's overall purpose was to implement market-driven technology transfer and commercialization with smallholders in order to generate income and employment in the four states. RUSEP's goal was to achieve the following:

- A prioritized agenda identifying the most likely areas where agricultural technology transfer would achieve the purpose of the program;

- An institutionalized market information generation and dissemination system in each target area giving real-time information over the life-time of the program to guide the farming community's efforts toward commercialization;
- A commercially-orientated structure of dealer networks to provide improved quality of germplasm inputs to the farming community;
- A program of technology transfer in areas of potential commercial priority;
- Catalyzing existing GON and NGO credit support schemes for disadvantaged smallholders, to help enhance commercial agricultural production; and
- Foster improved input and product market infrastructure and demonstrate immediate and potential economic improvement in the smallholder sector.

The "commodity chain" approach was designed to improve smallholder productivity of selected crops by: providing TA for transferring improved production practices; linking producers to input suppliers and credit; improving processing and storing techniques; and linking producers with buyers.

Needs assessment surveys in the four states identified the areas and major crops with commercial potential. These were:

- Abia State: yam, cassava, rice, plantain/banana;
- Adamawa State: maize, rice, groundnut;
- Katsina State: maize, sorghum, soybean; and
- Oyo State: maize, soybean, cassava, and yam.

RUSEP's criteria for choosing its participating farmers were:

- Geography: where the project could have impact in its short time as a pilot. The population had to have some access to inputs and decent infrastructure such as passable roads for marketing;
- Farmers with extra land that they could use for market production (farmers that were not using all of their land for subsistence production);
- Farmers who had worked with ADP and therefore had some knowledge of modern technology such as fertilizer and improved production techniques; and
- Full-time farmers (e.g., .not a teacher who farmed part-time).

By 2003 there were 534 RUSEP farmer groups with a total of 8,817 members (Table 1 below). Thirty percent of these farmers were women. There is a much higher proportion of women's participation in the southern regions (Oyo and Abia); 83% of the RUSEP farmers in Abia were women in 2003.

Table 1: Number of RUSEP Farmers and Groups in 2002 and 2003

	Number of Groups			Number of Farmers			
State	2002	2003	Percent change	2002	2003	Percent change	Percent of women, 2003
Oyo	71	161	+127	1,760	2,003	+14	40
Adamawa	54	74	+37	800	1,512	+89	17
Abia	45	92	+104	1,000	2,010	+101	83
Katsina	72	207	+135	2,260	3,292	+46	2
Total	242	534	+121	5,820	8,817	+51	30

Source: IITA, May 2004

3. FINDINGS: ASSESSMENT OF RUSEP AS A MODEL

3.1 Production

A major RUSEP goal was to provide technical assistance to 1,000 farmers in each of the four States where the project operated. According to IITA, RUSEP provided varying degrees of assistance to 5,280 farmers during 2002 and to 8,817 farmers during 2003. Farmers received training on choosing appropriate crop varieties for their locales, the treatment and preparation of seed for planting, and fertilizer application. RUSEP farmers also were trained in improved processing and storage techniques. Processing included some women producers learning to make new products such as soy cheese, soymilk, and cassava chips that they sold in local markets.

RUSEP built on men and women's agricultural expertise, the fact that they already had experience with modern inputs and working with ADP, and their desire to increase production. Producers in each of the four project areas reported that their production of RUSEP-targeted crops increased. The general report was that productivity (yields) increased from 50% to 100%. Producers reported that these increases were the result of access to improved seed, the use of more fertilizer (via credit), the ability to hire labor and tractor services (via credit), and theoretical and hands-on training in improved production techniques. For example:

- Some women's groups reported that they used their traditional production techniques for maize but had better yields because they used more fertilizer;
- A men's group reported that their maize yields increased about 50% when they changed their production techniques, but not their variety;
- Producers in Abia reported that RUSEP introduced early-maturing cassava (12 versus 18 months) and yam minisets that produced better than the traditional varieties;
- Rice producers in a village in Abia reported that their productivity increased 50% solely as the result of cultivating a new variety from RUSEP; and
- Some maize producers in Katsina reported that their maize yields almost doubled due to the use of hybrid varieties, increased fertilizer application, and RUSEP training.

These self-reports are unverified and therefore only illustrative Some groups noted that access to credit and inputs allowed them to increase the area they cultivated as well as increase productivity on existing fields. The only quantitative data provided to the assessment team to address these topics, or to quantify project impact on productivity is that provided verbally by IITA (See Table 2 below). However, neither IITA nor ADP provided written data in support of these figures. In addition, RUSEP's project reports provided no quantified data on changes in productivity.

Table 2: Comparison of Yields in MT/Hectare Before and After RUSEP

State	Variety	Before	After
Oyo	OP Maize*	0.5-0.7	1.5
Katsina	Hybrid Maize	1.0	2.5
Adamawa	OP Maize	0.7	2.0

Source: Verbal communication with Dr. Wale Adekunle, IITA, May 2004
*Open Pollinated (OP)

3.2 Extension

Transferring technology was a core RUSEP activity. The RUSEP staff first conducted training for its NGO partners and the ADP personnel collaborating with the project. The NGO partners included: Sasakawa Global 2000 in Katsina and Adamawa States; Rural Women's Foundation (RWF), and the

Ecumenical Community of Women Farmers in Abia State; and Information and Communication Support for Agricultural Projects (ICS), and the Rice Farmers' Association of Nigeria in Adamawa.

The second step in the training process was at the village level where NGOs and ADP, with assistance from RUSEP, trained producer-group leaders. The training at this level was both theoretical (in the classroom) and practical, with hands-on implementation of new techniques in farmers' fields. RUSEP reported that farmers preferred the latter and that it was more effective, as they are expert farmers and unused to classroom learning. RUSEP staff assessed how producers used their training through M&E visits. In the third step of the training, the farmer group leaders who received training taught group members the improved practices.

According to the producers in each of the four project sites, ADP's traditional "train and visit" model generally remained the same with RUSEP. Both women and men reported that ADP gave them short training sessions on improved production techniques for the RUSEP target commodities, and then visited them once or twice a month. The technique that both sexes most frequently reported as "new" was a change in plant spacing. Training and extension services seemed to be of secondary importance to producers for increasing production; access to credit and fertilizer clearly were more important. However, some stated that there was not enough training on marketing, price discovery, and locating buyers, as RUSEP only provided training in marketing to 250 farmers

Based on it collaboration with the NGOs, RUSEP's conclusion was that most of them were weak and need considerable capacity-building before they could participate effectively in market-driven technology transfer. Another conclusion was that ADP staff requires training to bring them up-to-date. RUSEP staff noted that ADP generally has limited technical capacity due to lack of resources (vehicles, computers, money) and lack of motivation, and the quality of their work varied by region. State funding and individual personalities are two major factors that influence ADP's work. Private-sector technicians (agricultural consultants) who could complement ADP would improve the new project's effectiveness in transferring technology.

IITA was responsible for producing training aids for the project and engaged the ICS project to do so. The materials were developed in collaboration with RUSEP staff and were produced as brochures with pictures and posters. A video showing improved cultural practices was produced in English and translated into local languages, and a compact disc was distributed to ADP officers. University of Ibadan staff is evaluating the ICS training materials; their findings may be useful for the expanded project.

IITA conducted evaluation of training programs and materials at the end of each training program. The full impact of this training can only be measured at a later time. Monitoring and evaluation visits enabled RUSEP staff to understand how farmers used the knowledge gained from their training.

Union Bank officials in Katsina State mentioned that there had been a good spread effect among farmers. Farmers had seen the results (increased yields being obtained by their participating neighbors) and inquired about becoming eligible for group loans. Farmers were able to recall the different training topics presented as well as the planting technique “Sasakawa” demonstrated. In field interviews, farmers mentioned that the training was beneficial.

3.3 Agricultural Inputs

RUSEP addressed two major constraints to producers' use of improved seed and fertilizer: lack of money to buy them, and limited knowledge in using them with new cultural practices. ADP officials in all four states mentioned that producers could not afford to buy sufficient fertilizer in general, and that this limited their use of hybrid seed in particular. Credit enabled producers to buy improved seed, and additional quantities of fertilizer. TA taught them improved cultural practices. Credit also enabled producers to hire the labor, animal traction and/or tractor services that are necessary to increase their area under production and thus yields.

Most farmers in all four States already were using fertilizer and some improved seed, particularly hybrid maize, before the advent of RUSEP. However, farmers who were able to access credit with RUSEP's support were able to purchase more improved seeds and more fertilizer. A number of farmers reported doubling their use of fertilizer after receiving production credits. RUSEP assisted farmers to select different varieties of improved seed appropriate for their agro-ecological zone. For example, hybrid maize was selected for use in some areas and open pollinated varieties were used in others. The availability of improved seed is not seen as a constraint to increased production.

Farmers in Goya mentioned that they saved hybrid maize seed from last year's harvest for this year's planting. A leading farmer explained to this group that he tried to save money by using maize seed he had selected from his last year's harvest to plant his new crop. He stated that in doing so, his yield with this carry-over seed, following the same cultural practices, fell from 110 bags to 70 bags -- a reduction of 35%.

RUSEP introduced farmer groups to input suppliers, mainly fertilizer and seed dealers. In some cases, producers were able to obtain lower purchase prices either by buying as a group or because RUSEP intervened with suppliers. Expanding and improving these supplier links should not be difficult. Seed dealers reported giving farmers seed on short-term credit of one to two weeks. The IFDC-managed Daimina Project has trained fertilizer dealers (wholesale and retail) in many locations. The expanded availability of fertilizers, including higher analysis fertilizers like Urea and DAP, and other farm chemicals should be beneficial to RUSEP farmers. It probably would have been beneficial if there had been more than the minimal interaction that occurred between RUSEP and IFDC.

In Adamawa, RUSEP provided farmers an improved rice variety (Faro-44) not available from local seed dealers and also provided fertilizer at reduced prices. In 2003 the project farmers were given fertilizer at cost and delivered to their villages; this year they are "badgering" ADP for more of the same. RUSEP thus raised expectations about continuing project support that are not sustainable. A follow-on project should work toward linking producer groups with input suppliers and training the groups to manage their own purchases, so that they can function independently and the provisioning process is sustainable. Producers already have links to input suppliers; they will benefit from training to cut their costs, if possible, and from technical advice about input use.

Premier Seed Company and Alheri Seed Company are both headquartered in Zaria. Each company relies on more than 200 contract farmers to multiple their foundation seeds each year for sale to farmers the following year. Both companies stated that 80 to 85% of their sales are hybrid seeds. The owner of Alheri Seed Company stated that his major competitors, in addition to Premier Seed Company, are the community-based seed-multiplication farmer groups that NGOs support. Seed multiplication might be a component option for a follow-on, new project.

3.4 Credit

Both producers and RUSEP reported a well-known but critical fact: farmers need credit in order to increase production. Nigeria's smallholder sector has limited access to credit because it has been a poor credit risk. To address this constraint, IITA developed a relationship with a leading private bank, Union Bank Plc. (UB). In this manner, RUSEP facilitated access to credit from UB for participants: the requirements were that they deposit an amount equivalent to 25% of their loan in a bank account, bought agricultural insurance, and applied for credit in groups. IITA worked with UB to develop a new set of financing arrangements. IITA then provided training to the farmer groups in how to manage groups, crop enterprises, bookkeeping, and credit use, as well as how to complete loan application forms for presentation to banks.

In 2002, only RUSEP farmers in Katsina State obtained credit: forty-four percent of the farmer groups received credit in the amount of N3.2 million. According to the credit Table 7 in Annex B prepared by IITA, eighty-four percent of these farmer groups repaid their loans on time, 5% of the groups repaid their

credit late, and 11% of borrowers defaulted on their loans in the amount of 16,000 Naira, or 5% of the total amount. However, Alhaji Shaib, the Agricultural Credit Manager of Union Bank in Funtua, stated that all the loans were eventually repaid in full. In 2003, 24 percent of RUSEP farmer groups in Katsina received a credit in the amount of N8.2 million (See Table 8 Annex B). They accounted for 88% of all the RUSEP farmers that got credit in 2003. Fifty-seven percent of their loan amounts were repaid by the end of April 2004 and the rest was due by the end of May. If it is repaid, RUSEP's credit component will continue to function in Katsina.

Alhaji Shaib offered the following information: a) his bank branch in Funtua has the capacity to lend N60 million to Katsina area farmers; b) interest on agricultural production loans is set at 19 %. and c) if farmer groups repay their loans on time, the Federal Government will rebate to them 40% of their interest charges

Credit from UB became available to RUSEP farmers in Oyo and Abia States in 2003. Five percent of the farmers in Oyo State and less than 1% of those in Abia state obtained N3.4 million and N400,000 of credit, respectively, in 2003 (Table B.3., Annex B). Thus there is little information and too little time to determine how well the credit component is functioning in these states. The branch bank manager in Iselin, Oyo State, said that he made loans totaling N2.748 million to nine RUSEP groups in April 2003. Two of the groups had paid off their loans by late March 2004; five groups were paying their interest monthly, as required; and two groups had paid neither their interest nor their principal and were "in trouble," according to the bank manager. Seven of the groups in Oyo should reimburse UB 80% of their loans, or N2.198 million by the end of May. Whether or not the groups do so remains to be seen. UB's willingness to continue the credit program will be influenced by current farmer groups' repayments of their 2003 loans. USAID could check on the RUSEP farmers' repayment records with UB in July.

The bank manager for in Yola, Adamawa State, reported that RUSEP farmers did not get credit in 2003 due to miscommunications between UB in Lagos and his area office in Bauchi that allocates the funds. Also, the farmer groups in at least one of the villages did not have their 25% deposit.

Several factors make credit for smallholders problematical. Most smallholders are poor, do not have tangible collateral (modern land-tenure titles and equipment), and historically have been a poor credit risk. Commercial banks' stockholders seek profit, not poor risks; the default rate on smallholders' loans is high; and the value of small loans does not justify the recovery costs. The Central Bank of Nigeria's (CBN) policy is, in principle, to reimburse banks 75% of defaulted loans in order to encourage credit for the agricultural sector. In reality, according to UB's Assistant Manager in Yola, the CBN repays in six to eight years, if it repays at all; even a small loan with 20% interest compounded over that time becomes enormous, and then the CBN fights repaying it and tries to evade repayment by questioning the legality of the procedures followed in extending the loan.

At the branch level, the reality is that many farmers do not have experience dealing with banks, so they are labor-intensive clients for the bank and vulnerable to being cheated by dishonest bank staff. The bank managers interviewed in Oyo and Adamawa states could not identify factors that led to smallholder success with credit. The manager in Oyo State said that he extended credit to the RUSEP groups only because they were working with IITA, and that would "enable" them to repay their loans. Farmer groups that obtain credit fail after about six cycles of borrowing and repayment due to poor management, according to the assistant manager in Yola. The fact that banks do not pursue defaulters leads others to default because there is no penalty. In his experience, women have less access to credit and tend to repay more than men; men know how to use the system and tend to default on their loans

Access to credit through RUSEP was a powerful factor in attracting farmers to work with the project, particularly in the north. News of the availability of credit continues to draw farmers to the RUSEP groups; both men and women respondents in the north said that many people want to join their groups to get credit. Farmers in the south initially preferred to use their traditional credit systems and were distrustful about depositing money in the bank because of previous scams that also demanded deposits.

Several groups stated that they wanted RUSEP or ADP to repay their loans, and farmers mentioned they did not understand why they had to pay for insurance on their loan with the bank. These two factors indicate that RUSEP's training on management of credit was deficient.

Producers consistently cited one major problem with credit: they received their loans late in the agricultural season, which limited their utility to some extent as it affected timely access to inputs required for planting. However, according to the bank managers, producers repay at the last minute and apply for credit late. Late loan repayment may be partly due to lack of market outlets and timely sales, as well as to lack of experience managing credit. The net result is a "cycle of lateness" that is difficult to break and may have a negative effect on production. The conclusion is that a new project will need to provide life-of-project support and training to build producers' capacity to obtain and manage credit sustainably.

As a partial solution to the problem of credit availability, the project could benefit from an inventory credit program that allows producers to store their commodities and use them as collateral for loans This would permit farmers to counteract sales prices at harvest-time when prices are about their lowest, but they need money.

Annex B contains three tables that depict the situation on credit/loans made to RUSEP farmers. These are:

- Credit in Katsina State in 2002;
- Credit by Village in Katsina State in 2002; and
- Credit in All Project States in 2003

3.5 Markets and Market Linkages

The Nigerian commodity market is volatile in pricing and producers have little control over prices in their local markets. Prices are low at harvest-time, when producers need to sell to obtain cash and pay expenses and loans, and rise in later months. Consider the spread in prices for crops in Table 3:

Table 3: Prices in Naira for Selected Commodities in Funtua, Katsina State

Crop	Harvest Price, 2003	April, 2004	%Increase
Maize	22,000	33,000	50
Cow peas	28,000	41,000	46
Sorghum	18,000	23,000	28
Millet	20,000	30,000	50

Source: Agricultural Officer, Union Bank, Funtua, Katsina State

RUSEP generally was not successful in developing commercial linkages for several reasons. One reason for the lack of success in forging market links was that farmers will not honor pre-harvest commitments to large agro-industries such as Pokobros, because these companies buy in large quantities, at low prices at harvest-time. Farmers in all regions play the market, and all of the farmer groups reported selling their RUSEP commodities at better prices in their local markets than to the agro-industries with which RUSEP tried to link them. Dealing on a cash-and-carry basis is the custom in local markets and producers' preference.

Another reason for the marketing component's weakness is that independent buying agents or middlemen play a key role in the existing system. These agents source, clean, and store commodities in their warehouses, and ship them to the agro-industries at the time and in the condition required. Smallholder farmers currently cannot do this, so targeting SMEs that buy periodically and in smaller quantity might be their functional commercial level. The quality of RUSEP farmers' products was another reason for lack of successful marketing links. Buying agents estimate that about 10% of a bag of grain is debris, so they discount prices to farmers by that amount. Nestlé's purchasing manager, who bought 23 MT of soybean

from RUSEP farmers, said that it was "too little, too late, and too dirty." Quality and quantity are likely to be the constraints on marketing to big buyers until project farmers can clean, sort, bulk, and market good-quality products on time.

Farmers will need training to forge links with commercial buyers and to manage those links independently. The RUSEP pilot shows that it is neither successful nor sustainable for the project to identify market links without farmers' full participation. Training farmers to condition (clean, sort and dry) their products so they meet commercial specifications is the first step in commercialization. Helping them bulk and store products is the second step, and may enable them to eliminate the middlemen and thus increase their profits. For example, the RUSEP peanut farmers in Adamawa cleaned and bulked 100 tons of peanut, rented trucks, bypassed the middlemen, and took their product directly to a major local buyer (AFCOTT). The purchase price was discounted because their debris was 10% rather than the 8% allowed, but the sale was successful. Bulk storage, however, will require warehouses and technical training in storage techniques. Marketing to SMEs that buy throughout the year is probably is more viable option than targeting big agro-industries.

Sound market research in collaboration with producers is the basis of establishing and maintaining marketing linkages. Interviews with the farmer groups indicate that they might have unrealistic expectations about marketing when they are working with a project. Farmers in the north wanted buyers to come to their villages and buy products at high prices; groups in the south who had not begun processing expected to have export markets "in a few months." Market outlets and producers' comprehension of and ability to manage their role in marketing are essential in a commodity-chain approach. The new project will have to invest in building both of these during the life of the project.

Poor infrastructure and corruption can add to the cost of transportation and decrease farm-gate prices. Road taxes and bribes can add N1,500 per MT for grain shipped from Kaduna to Lagos. These costs are ultimately passed to the producers or to the end-users.

Table 4 is an example of how bulk sales to a wholesaler could increase farmers' profits. If farmers in Katsina could take their maize to Kaduna and sell it in bulk, they could earn an additional N3,000 per MT. The price shown in this table is for a uniform, properly bagged product that warrants the premium price for this product (no deduction for debris, for example). Figures in Table 4 were provided by a major grain buyer in Kaduna who last year traded 19,000 MT of field crops. He stated that he would pay a premium for the grains and soybeans that meet his requirements.

Table 4: Description of Transaction Costs (in Naira) for Maize in Katsina State

Transaction	Cost or Price/MT
Farm Gate Price	25,000
Bagging & Transport to Kaduna	3,000
Handling Charges (loading/unloading)	1,000
Sub-total	29,000
Price at dock in Kaduna	32,000
Net gain to farmer for selling direct	3,000

Source: Interview with a commodity trader in Kaduna

3.6 The Market Information System

RUSEP developed and put into place a Market Information System (MIS) system that operated in the project's four pilot states, with varying degrees of success. The staff responsible for its implementation reported that it is expensive to provide the information, the private sector will not contribute to a MIS run by the government due to corruption, and that poor infrastructure (radio transmission and GSM) constrains the timely communication of market information. These factors made it unsustainable, in their

opinion. The former MIS Manager noted that most people lack the ability to use the Web to access the MIS site, so this component of the MIS was largely unsuccessful.

RUSEP staff reported that the ADP personnel in Oyo state made up commodity prices without going to the market. Other ADP offices did a better job but, according to RUSEP staff, ADP would need training and supervision to operate a MIS and probably would be pulled in different directions by the GON if they were responsible for the system. The private sector has its own information systems but RUSEP had neither the time nor the resources to synthesize them, according to the staff. How to structure a MIS needs consideration: The system should be national, as the market has no boundaries. Another option would be to focus on major commodities and their prices, and report from the principle areas where these commodities are produced, rather than organizing the system based on Nigeria's 774 Local Government Areas (LGAs).

According to an email message of 13 May 2004 from IITA, "RUSEP operated a cost-effective MIS. RUSEP had private buy-ins from media organizations like national television and newspapers that published RUSEP data free of charge. Radio stations also provided large discounts because the information was considered a public good. These limited the operational cost to data collection. For data collection, we utilized workers of collaborators who were only given a token as low as one dollar per week as allowances. In fact, British American Tobacco has already indicated interest in taking over the RUSEP MIS." Negotiating with the states' agricultural offices to subsidize the costs of MIS radio and television broadcasts and newspaper insertions is clearly one option to make it sustainable.

Producers generally did not rely on the MIS in deciding about marketing. The transmissions did not reach several villages in Oyo State because the transmitter was not powerful enough; most farmers in Abia did not listen to the broadcasts; and farmers in the meeting in the village of Goya, Katsina State, reported while they listened to the market prices on the radio, the information was of limited utility. However, the producers in Adamawa used information from the MIS to negotiate better prices with the middlemen, who "complained bitterly" about their knowledge. The cowpea merchants in Kano get market prices in the local markets through their own buyers and reported that they do not use the radio or newspapers for market-price information.

Different actors in the commodity chain have different requirements for a MIS. A large bulk buyer stated that the MIS information was not useful: it was too general, too late, and did not provide the necessary details for making a decision about initiating purchases. A large commodity marketer, Mr. Boma Anga, the CEO of Goldchains International Ltd., told the assessment team that he and his fellow traders would be willing to pay an annual subscription fee to access a MIS that provided them with useful market information. Useful information would include: prices; volumes available for purchase today; a projection of future volume offerings; and the cost of transport for both a 10 MT truck and a 30 MT semi-trailer from individual market locations to a trucking reference point (Lagos, Ibadan, and/or Onitsha).

There is an opportunity for a future project to support the development of an effective MIS. An in-depth assessment of the value of the MIS to farmers should be the first step in establishing a MIS. Producers, market agents and processors should be surveyed to determine their requirements for a MIS. If the MIS is included in a future program, the technical assistance contractor should explore how to make it sustainable and transfer the activity to a Nigerian entity. Farmers might be willing to pay a small fee per bag of product to support the system. The system should factor in location (farm gate, rural or urban market) and associated costs, e.g., a producer levy. Volume, price and grades should be reported for each commodity. The information should be valid and timely. Producers, market agents and processors should be surveyed to determine their requirements for a MIS. The information must be in a form that gives buyers and sellers a valid indication of prices.

3.7 Processing

RUSEP's support for processing was mainly in Oyo and Abia States. The field visits to these states showed that the project had little impact on this component. Processing is mainly women's work in all regions and thus a key area for supporting women's participation in the commodity chain. Women in Oyo State reported learning to process soybeans into milk and cheese to sell in the local markets; constraints of time did not allow an analysis of the extent or profits from these activities. The RUSEP groups interviewed in Abia State either were not successful or had not started their processing operations. The Cassava Producers Association of Nigeria (CAPAN) was still waiting for UNIDO to give it machines to begin processing cassava flour. The members reported that they are making contacts for market outlets while they wait. A woman's group that plans to process plantain into flour and chips is in the process of building its factory shed. This group evidently had not yet done its market research but stated that it planned to start selling these products in its area and export them "in a few months." Neither CAPAN nor the woman's group knew how much they would be required to pay for their machines, even if only partial payment was required. These two groups' ability to do market research and run their businesses is questionable. They are getting indebted without a sound basis for operating and assuming that RUSEP will support them if they encounter problems, which is not possible.

Market demand is a moving target for most small processors, particularly rural smallholders whose knowledge of outside markets is limited. The conclusion from the field visits is that processing groups will need life-of-project training and support to learn to manage their groups, maintain their machinery, identify and maintain market links, and maintain quality control. For example, the women's group in Uzuakoli that got a machine and planned to sell cassava chips for animal feed reported that their market disappeared and that the chips were not a viable product. Now they produce only flour and compete with four other millers that already existed in their village. Without sound research the project cannot assume that market demand exists for either traditional or new processed products. IITA's response to this statement was that market opportunities were identified and still exist for high quality gari in the area. Producers' limited knowledge and unrealistic expectations of demand in the national and international markets will need to be improved through long-term training.

Large agro-processors have requirements that can make it difficult for farmers who have small quantities of products to sell directly to them. The larger agro-processors like Cadbury (27,000 MT per annum requirement for sorghum) prefer to work through bulk commodity dealers, and procure the majority of their annual requirements within 3 months of harvest when prices are normally at their lowest levels.

More marketing efforts need to be directed at existing and new agro-processors, including vegetable oil extraction facilities and feed mills. Their requirements for raw materials tend to be continuous throughout the year and might offer producer-groups higher prices than selling in the market

While Nigeria produces about one million MT of vegetable oils per year, there are a few oil seed extraction firms in the four states that participated in this project. Their largest concentration is in Kano and Jos. They are producing cottonseed, groundnut and soybean oils. Few of these firms were contacted by RUSEP. Given the limited quantities of oilseeds produced by RUSEP farmers, IITA considered that a better strategy was to work with smaller processors. RUSEP farmers in Adamawa State did sell 100 MT of groundnuts at N55,000/MT to AFCOTT, which claims that it would double its purchases of groundnuts if they were available.

There are a number of feed mills that support the poultry industry, as well as an emerging pork industry. Many of the feed mills in Katsina State have limited storage capacity and thus buy commodities on a regular basis throughout the year, according to a major trader/supplier in Kaduna. Although farmers in Oyo State sold grains to feed mills during 2002 and 2003, RUSEP farmers, as a whole, did not explore this opportunity.

3.8 Impact on Participants

Working with agricultural households that can take the risk of producing for the market is likely to orient a commodity-chain project to those with more resources, and bypass the poorer households with fewer resources that cannot take on additional risk. According to IITA staff, RUSEP specifically chose farmers with "excess" land that they could use for commercial production because, as a pilot project, it had limited time.

Men and women farmers in Oyo State reported that access to credit enabled them to increase their cultivated area, and hire labor and tractor services. The men said that hiring local labor and tractor services were community benefits. Their yields of soybean doubled as a result of the new varieties made available by IITA and production techniques that IITA promoted. One woman reported that she bought a refrigerator with her profits; most people said that they paid school fees, took care of their children and household needs, and reinvested in production with their earnings. Several women in Katsina stated that they bought small livestock with their profits; one bought a sewing machine and another food staples for petty trade in her village. Repair of housing, buying a vehicle, and buying livestock were other benefits mentioned by several men.

RUSEP also had some impact in Adamawa, where its program was limited. Producers there used the MIS to negotiate better prices with the middlemen. Maize production doubled in one village and rice-producers received an improved rice variety (Faro-44). Bank officials visited the project villages and the process of applying for credit began, even if it was not completed. RUSEP built producers' awareness of some options for improving production, such as bank credit, and improved inputs and how to use them. The peanut farmers in Hong village bulked their product, rented trucks, and took it directly to the end-user (AFCOTT). This process eliminated the middleman and increased their profits. RUSEP linked the rice producers in Gurin village with the rice millers' association in Yola, which took machines to the village and milled the rice there. This added value to the commodity as middlemen came to the village to buy it.

Farmers feel a sense of empowerment when joining groups and becoming involved in commercial transactions. Signing agreements among farmers to repay a loan to a bank transmits a sense of self and group-esteem that would not be possible otherwise. It also gives limited-resource farmers a chance to develop other opportunities on their own.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Assessment of the RUSEP Model

The assessment of the RUSEP model is framed in terms of its strengths and weaknesses. Lessons learned and opportunities for expanding the model also are included in this section.

4.1.1 Strengths

The establishment of groups empowers individuals to work together to create greater opportunities than individuals working independently. Farmers also appreciate building trust among members of their community.

RUSEP's TOT (Training of Trainers) efforts established a sizable cadre of lead farmers with the capacity to train other farmers in improved crop husbandry and storage practices.

RUSEP exposed farmers to the nuances of the wider market forces that drive the markets, such as the grain market. Market information services increased farmers' knowledge about the variation in market prices over time and space. This information is useful in planning their production.

Technology transfer was feasible and, in combination with access to credit, enables producers to increase production. Training Nigerian partners to do the technology transfer will make the model sustainable.

RUSEP made credit available to smallholders through a commercial bank, which is an achievement given the sector's history as a poor credit risk. Access to credit was key in generating interest in the project and in enabling farmers to increase production.

Transferring knowledge and techniques for improved production was successful, and increased producers' interest in the potential for increasing production and profits. This is a key step in the commodity-chain.

The MIS gave some farmers useful information with which to negotiate prices with middlemen.

RUSEP developed a public-private partnership that engaged the ADP, Union Bank, and private companies including input dealers, seed dealers, and NGOs. This pilot project suggests that public-private partnerships can be viable and can be expanded.

RUSEP built on both men and women producers' interest and expertise in increasing production by introducing them to new varieties, production techniques, and in some cases new markets.

Women in all areas were active participants in the project, from production to marketing. Some learned to produce new crops (soybean) and process them into new products (soy milk and cheese).

Nigerian NGOs such as the Rural Women's Foundation strengthened their links to rural communities in the context of the project, and maintained a working relationship after RUSEP ended.

The project introduced improved varieties appropriate for producers' specific agro-ecological zones.

RUSEP trained ADP staff to increase their technical competence, and provided resources such as vehicles to ADP to help improve their performance.

RUSEP oriented producers toward the market by building their capacity to clean and bulk products and seek more profitable markets.

4.1.2 Weaknesses

The model cannot depend on producers having the organizational and technical capacity to produce the quality and quantity of product for large buyers in its early stages: developing this capacity will require additional time.

The goal of linking producers directly to large end-users like Nestle is premature, in most situations, as the farmers are not currently able to provide the quality and quantities of commodities that such end-users require.

The model should include specialized technical support to develop producer groups' ability to manage credit.

The model cannot depend on government services such as ADP and national NGOs as effective implementing partners without providing training, and in some cases, resources.

The MIS program was unsustainable. There was no private sector buy-in. Producers reported little benefit from it, in spite of IITA claims to the contrary.

There was no M&E component in the RUSEP Project. As a result, it is not possible to objectively assess the project's impact on household productivity and well-being.

Lack of market research can leave producers and processors, who have limited knowledge of the wider market, without outlets. Obviously this is a brake on the commodity chain.

4.1.3 Opportunities

The RUSEP model can be applied to a significant number of producers and into more remote locations with limited market access. The benefits to these more remote farming communities could exceed those of farmers closer to urban markets and larger buyers of agricultural commodities.

Developing marketing linkages with small- to medium-size buyers of commodities for trading and agro-processing has been under-exploited. These SMEs potentially offer multiple benefits for farmers and businesses.

Nigeria imports about 250,000 MT of vegetable oils each year. There should be potential for a RUSEP follow-on project to encourage and support increased production and processing of oil seed crops like groundnut and sesame.

There is potential to form village farmer groups into village farmer associations and further to link these farmer associations with those in neighboring communities. Through this process, there could be a large enough membership to jointly undertake a number of activities that would increase the farmers ability to: a) offer quality commodities (those cleaned, sorted, and dried by the associations through the purchase of small, inexpensive processing equipment); b) construct proper commodity storage facilities; and c) have a large volume of commodities with which to negotiate favorable sales prices directly with large buyers, traders and SMEs. Inventory credit is another alternative for increasing producer profits that would require collaboration in associations.

A broader project approach could include capacity-building for commodity traders, market agents and small to medium processors.

There is an opportunity to involve the private sector in the design, development and financial support of a MIS system that would provide appropriate, and useful information. Properly designed and implemented, a wide range of players in the agricultural and agribusiness sector might buy into the program. This could include feed millers, oilseed extractors, flour and rice mills poultry producers, processed food manufacturers, food trade associations, food brokers, traders, and commodity exporters.

NGO-supported, community-based seed production is a successful competitor with formal seed suppliers. Commercial production of improved seeds by RUSEP farmers might be an opportunity for an expanded project to orient producers toward market production.

A new project could facilitate producers' access to credit in kind (inputs) rather than in cash.

Several ADP and RUSEP staff recommended this in an expanded RUSEP model because it would support production and ensure that project participants invested their credit in agriculture. Credit in kind would effectively address producers' lack of access to sufficient inputs, which is a major constraint on productivity. The risk with cash credit is that producers may spend part of their credit on their many non-agricultural needs rather than solely on production.

Women reported that they were active participants in the RUSEP pilot project. However, even those outside the Sharia area in the north reported that, according to custom, their husbands controlled their earnings. There is the potential to increase women's control of their project earnings by having the new project help women's groups open bank accounts and train them to manage their earnings. Group control of profits, and keeping them in the bank rather than in the household, often increases women's control of their profits.

4.1.4 Threats

Market traders will view farmers selling directly to bulk commodity buyers or to large agro-processors as a threat to their traditional marketing role. Traders would rather deal with individual farmers to negotiate specific prices with the aim of reducing their purchasing prices. Farmers negotiate individually and

require cash periodically based on household needs. Marketing sales can vary widely and traders can exploit market opportunities more easily than individual farmers.

4.2 Lessons Learned

4.2.1 Production

RUSEP farmers are producing below their potential yields. Sasakawa Global 2000 was able to get some of its participating farmers producing five MT per ha of maize over a period of several years, according to IITA. This compares to the 1.5 to 2.5 MT per ha reported by IITA for its RUSEP farmers in three of its project areas. RUSEP farmers should be able to double their yields, as farmers have done in other sub-Saharan countries with similar technical assistance and access to improved seeds and cultural practices.

Low yields appear to result mainly from not using optimum amounts of NPK nutrients. The use of higher analysis fertilizers like urea and Diammonium Phosphate (DAP, 18-46-0) and purchasing new seeds each season should lead to a material increase in yields. For this to happen, RUSEP farmers will need larger amounts of agricultural credit.

IITA found that there is a wide variability in yields among farmers within a group. This indicates the need for long-term TA, including hands-on farmer training.

Farmers learn new techniques best through hands-on practice. This requires the allocation of sufficient staff and staff-time to technology transfer.

Farmers need better on-farm data (technical and financial) to improve their decision-making as to cropping mixes, input applications, and crop forecasting, in order to maximize their farm incomes.

Muslim women rarely attend technology-transfer training sessions or practice sessions in the fields, and they hire labor for production. Training the poor farmers who provide this labor would help transfer technology to those who use it and potentially improve their production, as well as their employers'.

4.2.2 Extension

The quality of ADPs work and the resources it has available vary by location. ADP will need financial and technical support if it is to be utilized as an effective implementing partner for future projects.

IITA found that few national NGOs have the capacity for working independently to transfer technology. They will need training to become full partners in the new project.

Farmers need training to improve their understanding of the entire marketing chain. Good training should have various individuals working in the commodity chain discuss how they operate, what their needs and problems are, and how farmers can produce and offer commodities that will bring them a better return.

Producer groups will need several years of experience to become competent to obtain and manage credit, and to do business with input merchants, according to the RUSEP staff.

Working with Muslim women participants requires female project staff, so that the participants can attend training sessions and receive TA first-hand. Processing may be a more viable area than production for Muslim women, as most cannot work outside the home.

Producers will need training over the medium term in order to produce and process a commodity that meets market-quality standards for large industries such as Nestle and Guinness.

4.2.3 Agricultural Inputs

A number of Daimina's fertilizer dealers are being trained in the provision of farm extension services. These dealers also have the capacity to serve as marketing agents for farmers' commodities.

The private sector responds to market opportunities and supplies agricultural inputs in peripheral areas, although they may be expensive.

Nigerian-based research institutes, including IITA, have proven their ability and willingness to deliver improved germplasm materials (plantains, cassava, rice and soybeans) for a commodity-chain project.

4.2.4 Credit

Credit fueled the growth of RUSEP. It was the catalyst for the formation of farmer groups and provided them the funds to buy improved seed, buy more fertilizer, and hire labor and in some cases hire tractor services for land preparation.

The small amount of credit provided limited the amount of fertilizer farmers could purchase. Initial credit provided by Union Bank in Katsina State averaged N10,000 ($77) per farmer and was increased to N15,000 ($116) the second year. Increased use of nutrients should further increase yields and productivity.

Union Bank in Funtua, Katsina State has stated its willingness to increase the amount of credit to producers if they remain credit-worthy by continuing to repay their loans on time.

RUSEP's approach to providing access to credit for smallholders combined with a responsive bank is potentially a successful model. New farmer applicants will need training and support to become credit-worthy.

Assessing the success of the credit program requires a longer time period; it has been operating in one project area only since 2002, and in the other project areas since 2003.

RUSEP's human resources were insufficient to assist all the farmer groups to apply for credit. The successor to RUSEP should have at least one credit professional, in each hub office, responsible for assisting farmers to apply for and manage agricultural production loans.

Producer groups generally repay their loans late. This means that they receive their next loans late in the agricultural season. This "cycle of lateness" is a constraint on their timely access to inputs and starting production activities on time.

The banks' lesson learned is that smallholders are a bad risk. Only project farmers can change that, over time.

4.2.5 Marketing and Marketing Linkages

Farmers want to attract buyers to their village to purchase their commodities. This will require improved market infrastructure for processing and storing large quantities of products.

The development of market linkages between groups and the wider market is a process that is fluid and will require continual assessment and modification. Buyers will come and go and market conditions will change.

The model required a considerable amount of effort and resources to establish the market-orientated concept in a community. Groups have to be formed and assisted in their organization and training.

The project should train producers to identify viable markets, and not make the marketing decisions for them. Producers have to be active partners and decision-makers in marketing their commodities.

Farmers need to speak with one voice in negotiating with buyers; they need a person in their village who is trained in marketing to identify buyers and negotiate the best prices.

The quality of farmers' commodities needs to be improved through training in proper drying, sorting, grading, cleaning, and standard bag-weights to maximize their selling price.

Large agro-processors, e.g., Nestle and Guinness, have particular procurement requirements that do not lend themselves to small lots of commodities delivered to them. The larger industrial processors prefer to use commodity bulk buyers to source and deliver their products.

Farmers need to be able to sell in ten to thirty MT lots in order to sell to large bulk buyers.

Producers will need to honor sales agreements to buyers, even when the buyer's prices are not as high as current market prices at the time of delivery - if producers want to sell to these buyers in the future. Several producer-buyer links were broken due to the fact (e.g. RUSEP's rice producers in Abia State who refused to sell to Pokobros).

Producers are not paid fast enough when an end-user buys their commodities. Timely payment to farmers requires that a bulker or merchant buys from the producers and then deliver the commodities to the end-user.

Market demand and commodity specifications should be determined first, and then the variety and source of seed for producers can be selected. ADP did not do a good job of identifying the crop varieties that commercial buyers wanted, and some sales were reported lost as the producers did not plant the variety of seed the end-user wanted.

4.2.6 The Marketing Information System (MIS)

The MIS developed and implemented by RUSEP is not sustainable in its current form and under current conditions.

4.2.7 Processing

Any new project should conduct a thorough market analysis to determine the feasibility of agro-processing investments.

The feed millers' association in Nigeria should be approached for developing a coordinated processing and marketing program.

4.2.8 Impact on Beneficiaries

Women will be active participants in a commodity chain. In 2003, women accounted for 83% and 40% of the RUSEP farmers in Abia and Oyo States respectively.

A Monitoring & Evaluation system is necessary for an objective assessment of project impact.

4.3 Sustainability and Replicability

It will take at least three more years to set the RUSEP model on a firm, sustainable basis. Sustainability will be based on: establishing functional, independent producer groups; producers' credit-worthiness; building capacity among Nigerian implementers; and producers' having the organizational and technical capacity to forge and maintain links with the market.

If the RUSEP model can be refined to streamline the steps, reduce the transaction costs and deliver on the benefits, the model can be replicated in most agricultural areas in Nigeria. The role of Nigerian NGOs is key to the replicability of the RUSEP model. They should be integrated into all components of the project.

4.4 Integration of RUSEP into USAID's SO 12

The goal of USAID's SO 12 is to improve livelihoods in selected areas of Nigeria. USAID's strategy makes a strong connection between: increasing agricultural productivity that pushes households into commercialization; opens up the rural economy; and ultimately improves the livelihoods in targeted communities. SO 12's premise is that farmers' livelihoods will improve as they become commercial

producers. A definition of a commercial farmer is one who uses modern practices (mono-cropping, crop rotation, conservation and tillage methods), improved inputs, and sells most of his products.

The RUSEP model can be used to assist farmers to become commercial farmers. In doing so, it addresses three of SO12's IRs: increasing productivity, adding value to commodities, and commercializing targeted commodities. The commodity-chain approach will work toward these results.

4.4.1 Intermediate Result 12.1. - Increase Productivity of Selected Commodities and Products

According to producers' reports, their yields of RUSEP-targeted crops have increased. Some of this increase reportedly is due to increased productivity and some is due to expanded areas of cultivation. Producers said that both types of increases are the result of the project's technical training and access to credit, and thus improved inputs and labor. A new project will have the opportunity to work with DAIMINA's agricultural input dealers, who will improve the input delivery system in some areas, which potentially could contribute to producers' profits.

4.4.2 Intermediate Result 12.2. - Increase the Value-Added of Selected Commodities and Products.

RUSEP made progress in adding value to rice, soybean, and cassava at the community level. Machinery appropriate for use at the community level and the technical expertise of IITA's nutritionist/technology transfer specialist were two major factors in producers' learning to add value to both traditional and new crops. The project again built on producers' interest in increasing profits and their existing expertise in processing. Based on RUSEP's experience, there is potential to increase the value-added of targeted commodities. The critical factors will be to produce market-quality goods and to identify markets.

RUSEP was weak in developing and strengthening agro-processing enterprises. This needs to be better exploited in the Agricultural Competitiveness Project. The project can target entrepreneurs at all levels beyond the farm gate that can invest in agro-industrial enterprises.

An expanded project that works with agro-processors as well as farmers will need more diversified sources of credit than just Union Bank. MFIs (Micro-finance Institutions) and NBFIs (Non-banking Financial Institutions) as well as additional commercial banks should be tapped to provide credit. In particular, SMEs in agro-processing have not been targeted by financial institutions and they hold opportunities for USAID's initiative.

4.4.3 Intermediate Result 12.3. - Increased Commercialization of Selected Commodities and Products.

RUSEP's experience shows that farmers will use modern inputs and practices and will increase production given appropriate support. Farmers are interested in producing for the market and working on addressing their marketing constraints. RUSEP has set the stage for farmers to form apex associations with greater marketing power than small farmer groups. Such apex associations will permit farmer groups to improve their commercialization and obtain better prices for their production, as well enabling them to purchase their farm inputs in volume, and at a lower cost.

Annex A: SITE VISITS

Table 5: RUSEP Assessment Site Visits, April-May 2004

Respondents	Oyo State	Abia State	Katsina State	Adamawa State
Men farmers (by village and RUSEP commodity)	Ago-Are (soybean, maize)	Ozuitem (yam), Okpomenyi (rice), CAPAN[1] (cassava)	Dukke (soybean, maize, millet), Goya (soybean, maize), Maska (soybean, maize)	Mallam Hore village, Ganye area (maize, cassava)
Women farmers (by village and RUSEP commodity)	Tede (soybean, maize, cassava), Saba (soybean, cassava)	Uzuakoli (cassava), Ogwe (plantain)	Dukke (maize, peanut) Goya (soybean, maize) Maska (soybean, maize)	
Local ADP personnel		E. Nwogu, E. Okoro (Program Manager)	I. Dabai	L. Mandama, M. Raji (Program Manager)
Former RUSEP staff [2]	*IITA-Ibadan*: W. Adekunle, K. Amegbeto, S. Blade, A. Dixon, K. Makinde, V. Manyong, A. Onabolu	C. Ezedinma, R. Okechukwu, A. Onabolu	A. Aboki	A. Mohammed
Union Bank	Local bank manager in Iseyin		Alhaji A.T. Shaib, Agri. Credit Manager	Assistant Manager for Agriculture, Yola branch
Agricultural input dealers			Alheri Seeds, Premiere Seed, DAIMINA/IFDC	Premiere Seed, fertilizer dealers in the market
Agro-industry	Nestle (Lagos), Precious Food Processing Ent. (Ibadan)		Cadbury, (Cowpea wholesalers in Kano's Dawanau market)	AFCOTT (subsidiary of AFPRINT in Lagos)

[1]CAPAN: Cassava Processors Association of Nigeria.
[2]In Ibadan, the consultants met with most of the former RUSEP managerial team that was based at IITA in Ibadan; in the other sites we met with former local staff.

Annex B: CREDIT STATISTICS

Information source for all tables: IITA/RUSEP, May 2004

Table 6: Credit in Katsina State in 2002

Number of farmer groups in Katsina	Total number of farmers	Number of groups that got credit	Number of farmers that got credit	Total amount of credit	Number of groups that repaid on time	Number of groups that repaid late	Amount of credit repaid late	Number of groups that defaulted	Amount of the default
72	2,260	32 (44%)	473 (21%)	N3.2 million	23 (72%)	5 (16%)	236,781 Naira (7%)	4 (12%)	160,000 Naira (5%)

Table 7: Credit by Village in Katsina State in 2002

Farmers and loans	Villages			
	Dukke	Maska	Goya	Total
Total number of RUSEP farmers	309	364	278	971
Number of farmer groups that got credit	14	10	8	32
Number of farmers that got credit	223 (72%)	157 (43%)	93 (34%)	473 (49%)
Number of farmers that have repaid their loans	181 (81%)	139 (89%)	79 (85%)	399 (84%)
Number of farmers with outstanding loans	42 (19%)	18 (11%)	14 (15%)	74 (16%)
Amount of loan (Naira)	1.4 million	1.0 million	800,000	3.2 million
Amount of loan outstanding (Naira)	245,581 (18%)	103,019 (10%)	48,181 (6%)	396,781 (12%)
Percent repayment rate	83	90	94	89

Table 8: Credit in All Project States in 2003

State	Number of farmer groups	Number of farmers	Number of farmer groups who got credit	Number of farmers who got credit	Total amount of credit (Naira)
Oyo	161	2,003	12 (8%)	93 (5%)	3.398 million
Abia	92	2,010	1 (1%)	10 (<1%)	400,000
Katsina	207	3,292	49 (24%)	747 (23%)	8.2 million
Adamawa	74	1,512	0	0	0
Total	534	8,817	62 (12%)	850 (10%)	11.998 million

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