



**Baseline Study Results for the
Cashew Integration &
Acceleration Program (BeninCaju)
Benin**

**Eric Weiss, PhD
Senior M&E Consultant
17 August, 2016**

Table of Contents

Table of Contents.....	iii
Table of Figures	vi
Table of Tables	vi
Executive Summary	1
Part I. Introduction.....	8
1.1 Background.....	8
1.2 Benin 2016 Cashew Campaign.....	9
1.3 Sampling Considerations	10
1.4 Report Protocols	12
Part II: Surveyed Cashew Producers.....	15
2.1. Demographics.....	15
2.2 Cashew Plantations and Holdings	22
2.2.1 Numbers of Plantations and Cashew Trees	22
2.2.2 Plantation Intercropping and Other Trees	28
2.3 Cashew Production, Yield, and Disposition.....	31
2.3.1 Cashew Production.....	31
2.3.2 Cashew Yield	32
2.3.3 Disposition of Raw Cashew Nuts (RCN).....	34
2.4 Cashew Expenses	36
2.5 Cashew Sales and Income	41
2.5.1 RCN Sales	41
2.5.2 Income from Cashew	47
2.6 Cashew Production Training and Practices	53
2.6.1 Good Agricultural Practices (GAP) for Cashew	53
2.6.2 Harvest and Post Harvest (HPH) Training and Methods for Cashew	62
2.6.3: Use of Radio and Mobiles for Cashew.....	68
2.7 Changes in Cashew Harvest Quantity and Quality.....	71
2.7.1 Harvest Quantity	71
2.7.2 Harvest Quality	73
2.8 Producer Associations/Cooperatives	76
2.9 Availability, Access to, and Use of Credit	81
2.10 Poverty Scorecard.....	85
Part III: Surveyed Members of Producer Groups	91
3.1 General Producer Group Information.....	91
3.2 Producer Group Details	93
3.3 Reasons for Joining The Group and Provided Services	94
3.4 Producer Group Management.....	95
Part IV Surveyed Processors.....	97
Part V Processor Employees.....	120
5.1 Employee Profile	120
5.2 Processor Employee Satisfaction.....	125
Annexes	133
Annex 1: Producer Questionnaire.....	134
11. APPARTENANCE AUX ORGANISATIONS PAYSANNES	152
Annex 2: Producer Group Questionnaire	159
Annex 3 : Processor Data Collection Form	165
Annex 4: Processor Employee Questionnaire	172
Annex 5: Disaggregated Values of Key BeninCaju Parameters.....	175
Annex 6: Avoidance of Contamination Methodology.....	179
Annex 7: Baseline Indicators- Attachment E.....	185

Table of Figures

Figure 2.1-1: Surveyed producers' home communes	15
Figure 2.1-2: Age of surveyed producers.....	16
Figure 2.1-3: Surveyed producers' literacy rates	16
Figure 2.1-4: Surveyed producers' educational level	17
Figure 2.1-5: Size of surveyed producers' households	18
Figure 2.1-6: Percentage of surveyed household members involved with cashew.....	18
Figure 2.1-7: Surveyed households' total annual income	19
Figure 2.1-8: Percentage of household income derived from cashew	20
Figure 2.1-9: Primary food crops in which surveyed producers invested cashew income	20
Figure 2.1-10: Impact on food crop production from investment of cashew income.....	21
Figure 2.2-1: Numbers of surveyed producers' separate cashew plantations	22
Figure 2.2-2: Surveyed producers' total cashew area	23
Figure 2.2-3: Self-reported numbers of surveyed producers' cashew trees.....	24
Figure 2.2-4: Total numbers of surveyed producers' productive cashew trees	25
Figure 2.2-5: Ages of "most" of the productive cashew trees in surveyed producers' plantations	25
Figure 2.2-6: Plantation level cashew tree density in surveyed producers' plantations	26
Figure 2.2-7: Overall cashew tree density in surveyed producers' plantations	27
Figure 2.2-8: Overall cashew tree spacing.....	28
Figure 2.2-9: Most recent year that surveyed producers intercropped their cashew trees	28
Figure 2.2-10: crops intercropped on surveyed producers' cashew plantations	29
Figure 2.2-11: Other types of trees on surveyed producers' cashew plantations.....	29
Figure 2.2-12: Surveyed producers' sources of cashew planting materials.....	30
Figure 2.2-13: Types of cashew planting materials used by surveyed producers.....	30
Figure 2.3-1: Surveyed producers' estimated RCN production.....	31
Figure 2.3-2: Surveyed producers' cashew yield per tree for different plantation sizes.....	33
Figure 2.3-4: Surveyed producers' cashew yield per hectare for different plantation sizes	34
Figure 2.3-5: Surveyed producers cashew yield per hectare for different plantation densities	34
Figure 2.5-1: Number of separate sales of RCN by surveyed producers.....	41
Figure 2.5-2: Average price paid to surveyed producers for RCN over the buying season.....	42
Figure 2.5-3: Number of RCN sales by surveyed producers	43
Figure 2.5-4: Average RCN amount (kg) per sale	43
Figure 2.5-5: Average amount (FCFA) received by the surveyed producers per RCN sale. Erreur ! Signet non défini.	
Figure 2.5-6: Prices paid for RCN by different types of buyers	46
Figure 2.5-6: Types of buyers for surveyed producers' RCN.....	46
Figure 2.5-7: Surveyed producers' income from sale of RCN	47
Figure 2.5-8: In-kind income from value of unsold RCN.....	48
Figure 2.5-9: Surveyed producers' gross income from cashew	49
Figure 2.5-10: Surveyed producers' net income from cashew	50
Figure 2.5-11: Net income per producing cashew tree	50
Figure 2.5-12: Net income per tree disaggregated by total number of producing trees.....	51
Figure 2.5-13: Net income per hectare of cashew.....	52
Figure 2.5-14: Net income per hectare of cashew disaggregated by total plantation size	52
Figure 2.6-1: Surveyed producers' sources of direct training on GAP	53
Figure 2.6-2: Most recent year of surveyed producers' direct training on GAP.....	54
Figure 2.6-3: Surveyed producers' other sources for information about GAP for cashew.....	55
Figure 2.6-4: Specific GAP for cashew for which surveyed producers got information from indirect sources	55
Figure 2.6-5: Most recent time surveyed producers' cashew trees were pruned	56
Figure 2.6-6: Reasons cashew plantations were not pruned	57

Figure 2.6-7: Number of weedings in the last 12 months	57
Figure 2.6-8: Disposition of weeds resulting from weeding cashew plantations.....	58
Figure 2.6-9: Reasons given by surveyed producers for not protecting plantations against bushfires	59
Figure 2.6-10: Numbers of surveyed producers' cashew trees with pest infestations	60
Figure 2.6-11: Surveyed producers methods for treating cashew trees against pests	Erreur ! Signet non défini.
Figure 2.6-12: Number of times cashew plantations were treated against pests.....	61
Figure 2.6-13: Reasons given for not treating cashew plantations against pests	61
Figure 2.6-14: Surveyed producers' sources of direct training on HPH methods	62
Figure 2.6-15: Year of surveyed producers' most recent direct training on HPH methods.....	63
Figure 2.6-16: Surveyed producers' indirect sources of information about HPH methods for cashew.....	63
Figure 2.6-17: Number of times per month RCN are collected during harvest season	64
Figure 2.6-18: Surveyed producers' reasons for not using nylon string to separate the cashew nut and apple.....	65
Figure 2.6-19: How surveyed producers know when RCN are fully dried.....	65
Figure 2.6-20: RCN drying locations used by surveyed producers	66
Figure 2.6-21: Materials used by surveyed producers to package RCN	67
Figure 2.6-22: Reasons surveyed producers do <i>not</i> use jute bags to package RCN	67
Figure 2.6-23: Surveyed producers knowledge of RCN quality criteria used by cashew buyers.....	68
Figure 2.6-24: Messages/topics about cashew heard on the radio by surveyed producers	69
Figure 2.6-25: Surveyed producers' uses of mobile to get information related to cashew	70
Figure 2.7-1: Surveyed producers perception of change in the harvest <i>quantity</i>	71
Figure 2.7-2: Reasons given by surveyed producers for perceived recent <i>increase</i> in harvest <i>quantity</i>	72
Figure 2.7-3: Reasons given by surveyed producers for perceived recent <i>decrease</i> in harvest <i>quantity</i>	73
Figure 2.7-4: Surveyed producers perception of change in the harvest <i>quality</i>	74
Figure 2.7-5: Reasons given by surveyed producers for perceived recent <i>increase</i> in harvest <i>quality</i>	75
Figure 2.7-6: Reasons given by surveyed producers for perceived recent <i>decrease</i> in harvest <i>quality</i>	75
Figure 2.8-1: Surveyed producers' membership rates in producer organizations.....	76
Figure 2.8-2: Members of surveyed households in producer associations or cooperatives	77
Figure 2.8-3: Role of surveyed household members in their farmer group.....	77
Figure 2.8-4: Year that surveyed producer household members joined their producer group.....	78
Figure 2.8-5: Reasons members of surveyed producer households joined producer groups	79
Figure 2.8-6: Reasons surveyed producer household members did <i>not</i> join any producer group	79
Figure 2.9-1: Surveyed producers' sources of credit	81
Figure 2.9-2: Number of times surveyed producers received credit since 2011	82
Figure 2.9-3: Total amount of credit received by surveyed producers since 2011	82
Figure 2.9-4: Surveyed producers' primary uses of received credit	83
Figure 2.9-5: Percentage of received credit used by surveyed producers for cashew production	84
Figure 2.10-1: Simple Poverty Scorecard for Benin.....	86
Figure 2.10-2: Poverty scorecard question scores for surveyed producer households	87
Figure 3.1-1: Surveyed producer group members' home communes	92
Figure 3.1-2: Surveyed producer group members' roles in their group.....	93
Figure 3.3-1: Reasons surveyed producer group members joined their group	94
Figure 3.3-2: Producer group services that surveyed producer group members would like to see improved	95
Figure 5.1-1: Surveyed processor employees current employer	120
Figure 5.1-2: Ages of surveyed processor employees	121
Figure 5.1-3: Surveyed processor employees assigned section	121
Figure 5.1-4: Surveyed processor employees current position status	122
Figure 5.1-5: Surveyed employees time with their current employer.....	123
Figure 5.1-6: Surveyed employees length of time in their current position.....	123

Figure 5.1-7: Surveyed employees' <i>time with current employer vs time in current position</i>	124
Figure 5.1-8: Processor employee position vs time with current employer	124
Figure 5.1-9: Surveyed employee assessment of their workload.....	125
Figure 5.2-1: Surveyed employees' overall job satisfaction	126
Figure 5.2-2: Surveyed employees' satisfaction with the opportunity for advancement	126
Figure 5.2-3: Surveyed employees' satisfaction with opportunity to receive better pay	127
Figure 5.2-4: Surveyed employees' agreement that they would recommend their current employer to others.....	128
Figure 5.2-5: Surveyed employees agreement that their work gives them a sense of accomplishment ...	128
Figure 5.2-6: Surveyed employees' agreement that they have clearly defined work quality goals.....	129
Figure 5.2-7: Surveyed employees' agreement that their current job makes good use of their skills and abilities	129
Figure 5.2-8: Surveyed employees' agreement that supervisors and managers are committed to quality products.....	130
Figure 5.2-9: Surveyed employees agreement that they are paid a fair salary.....	131
Figure 5.2-10: Surveyed employees' agreement that supervisors and managers try to meet requests for better working conditions	131
Figure 5.2-11: Surveyed employees agreement that supervisors and managers are flexible when workers need time off	132

Table of Tables

Table EX-1: Required CIAP Indicators	3
Table EX-2: Other key results	5
Table 2.3-1: Other dispositions of surveyed producers' RCN	35
Table 2.4-1 Surveyed producers' cashew farming expenses	37
Table 2.4-2 Surveyed producers' cashew farming expenses disaggregated by total plantation size	39
Table 2.4-3 Surveyed producers' cashew farming expenses disaggregated by total number of producing cashew trees	39
Table 2.4-4: Total average cashew farming expenses for <i>all</i> surveyed producers by <i>total number of trees</i>	40
Table 2.4-5: Total average cashew farming expenses for <i>all</i> surveyed producers by <i>total plantation size</i>	40
Table 3.1-1: Demographic profile of surveyed producer group members	91
Table 3.2-1: Producer group details	94
Table 3.4-1: Surveyed producer group members opinions on the management of their group	96
Table 4.1: Summary of CIAP partner processors	99
Table A5-1: Disaggregated values of key BeninCaju parameters	176

Executive Summary

This report presents the key results from the Baseline Study of the BeninCaju Cashew Integration & Acceleration Program (BeninCaju) conducted in May-June 2016. In the text and in the figures and tables in this report, the terms “CIAP” and “BeninCaju” will be used interchangeably.

BeninCaju (The Cashew Integration and Acceleration Program - BeninCaju), is a five year program implemented by TechnoServe (TNS) in partnership with Catholic Relief Services (CRS). BeninCaju encompasses a sector-wide value chain approach that will grow the cashew sector in Benin into a more productive, diversified, and inclusive economic growth engine for Benin and its people, and set it on a sustainable course for continued growth. BeninCaju will:

- Improve returns from the major crop of cashew for smallholder farmers and for Benin’s economy as a whole
- Ensure local processors have the financing, managerial capacity, and resources to fulfill their potential role as the engine of change by investing in their supply chain, and through satellite processing, and farmer financing.
- Promote innovation particularly in producing cashew by-products, such as juice and oil
- Strengthen the capacity of key stakeholder organizations in the cashew value chain.
- Provide assistance to improving the legal/regulatory enabling environment for the cashew sector.

Expected impacts and outcomes of the BeninCaju program will be:

- Increased productivity and incomes for farmers,
- Increased volumes and percentage of processed cashew kernel,
- Increased sales volumes of cashew byproducts,
- Strengthened institutional support for the cashew sector in the public, private, and NGO sector
- Large-scale job creation,
- Increased returns for actors throughout the value chain –

Over its five years, BeninCaju will work with smallholder cashew producing households and producer groups in the following 12 Communes in four Departments:

- Department of Collines: all 6 communes,
- Department of Zou: Djidja commune,
- Department of Borgou: N’Dali, Parakou and Tchaourou communes
- Department of Donga: Bassila and Djougou communes

An overall introduction to the Baseline Study is presented in Part I of this report.

The primary component of the BeninCaju Baseline Study, the results of which are presented in this report, are interviews of 900 smallholder cashew farmers in the BeninCaju operational areas and fieldwork measurements taken in their cashew plantations. These 900 farmers comprised two distinct sub-groups; 452 (50%) cashew producers (farmers) that are in villages that BeninCaju intends to work in (“BeninCaju villages”), and 448 cashew producers living in villages that BeninCaju will not work in over the life of the

program (“Control villages”); these producers are the designated *Control Group* that will be necessary for implementation of the double-difference evaluation method, if it is decided by TechnoServe and USDA to use this approach to provide an end-of-program assessment of BeninCaju impacts, outcomes, and outputs and to allow proper attribution of these results to BeninCaju as appropriate. The results of the Baseline Study derived from the interviews and the fieldwork pertaining to the surveyed producers are presented in Part II of this report.

In addition to producers, interviews were also conducted with 403 members of producer groups of whom 205 (51%) live in the BeninCaju villages and 198 (49%) live in Control villages. Again, using the double difference method of evaluation, BeninCaju impacts, outcomes, and outputs for the producer groups in the BeninCaju villages can be assessed and attributed to the BeninCaju interventions, as applicable and appropriate. These results are presented in Part III of this report.

Because BeninCaju will also work with cashew processors, Baseline data were collected from key informant data from the six cashew processors located within the BeninCaju operational communes. The results of these interviews are presented in Part IV of this report.

Additionally, interviews were conducted with 150 employees of the six BeninCaju partner processors; the results and findings from these interviews are presented in Part V of this report.

The BeninCaju Terms of Reference included a set of indicators that BeninCaju is required to measure at Baseline and again as part of the Endline study. The results from these two point-in-time measurements will be compared to determine and assess the changes in the values of these key indicators over the life of the BeninCaju. The values of these indicators at baseline for BeninCaju producers and Control producers (where that distinction is applicable) are presented in Table EX-1. The report section(s) and figure(s) and/or table(s) where the indicator is discussed, or especially those cases for which the indicator is not a single datum, but rather requires an assessment of several pieces of collected data, are also presented in this table for the reader’s easy reference.

Additionally, the data collected from the six partner processors are presented as separate processor-specific values rather than aggregated. The reasons for this are that the responses to many of the questions are qualitative, responses to some questions were not provided by some processors, and generating average values for the quantitative variables from at most 6 cases would not yield reliable or meaningful statistics.

Table EX-1: Required BeninCaju Indicators

Required Indicator	Average BeninCaju Value	Average Control Value	Report Section Where Presented
Producers			
Farm (plantation) size (<i>total area summed over all plantations for each surveyed producer</i>) (ha)	4.1	3.6	Section 2.2.1 Figure 2.2-2
Number of productive cashew trees (<i>total counted/estimated for each surveyed producer</i>)	703	488	Section 2.2.1 Figure 2.2-5
Cashew tree density (<i>average over all surveyed plantations</i>) (trees/ha)	143	124	Section 2.2.1 Figure 2.2-7, Figure 2.2-8
Cashew yield per productive tree (kg/tree)	2.81	2.80	Section 2.3.2 Figure 2.3-2 Figure 2.3-3
Cashew yield per hectare of cashew plantation (kg/ha)	225	199	Section 2.3.2 Figure 2.3-4 Figure 2.3-5
Price paid for cashews (<i>average over all reported sales during the entire season</i>) (FCFA/kg)	515.5		Section 2.5.1 Figure 2.5-2
Average gross income (sales plus in-kind) from cashew (only cases with gross income>0) (FCFA) (producer level average)	304,282	223,419	Section 2.5.2 Figure 2.5-8
Average net income from cashew (only cases with gross income>0)(FCFA) (producer level average)	208,461	163,913	Section 2.5.2 Figure 2.5-9
Access to cashew inputs	---	---	Section 2.6
Rates of use of cashew inputs	---	---	Section 2.4 Section 2.6
Cashew farming costs (<i>total costs averaged over producers with costs > 0</i>) (FCFA)	107,405	73,487	Section 2.4 Table 2.4-1
Adoption rates of good agricultural practices (GAP) for cashew	---	---	Section 2.6.1
Adoption rates for harvest/post-harvest (HPH) practices	---	---	Section 2.6.2
Access to credit (<i>percentages of surveyed producers that reported they have formal access to credit</i>)	77%	72%	Section 2.9
Use of credit (<i>percentages of surveyed producers that have gotten credit since 2011</i>)	40%	35%	Section 2.9 Figure 2.9-2
Knowledge, attitude, and practice (KAP) related to cashew production and harvesting	---	---	Section 2.6.1 Section 2.6.2
Farmer Based Groups/Cooperatives (Group Member Data)			
Membership size, including dues-paying members	29.9	31.8	Section 3.2 Table 3.2-1
Membership fees (Average joining fee) (FCFA)	3273	3919	Section 3.2 Table 3.2-1
Membership fees (Average share of company fee) (FCFA)	5966	6483	Section 3.2 Table 3.2
Membership fees (Average yearly membership fee) (FCFA)	2900	2217	Section 3.2 Table 3.2
Membership services, such as production aggregation and advocacy	---	---	Section 3.3 Figure 3.3-1 Figure 3.3-2
Engagement in value-adding activities	---	---	Section 3.3

Required Indicator	Average BeninCaju Value	Average Control Value	Report Section Where Presented
			Figure 3.3-1 Figure 3.3-2
Organizational and financial management capacity	---	---	Section 3.4
Extent of participation in FBG decisions and management by members	---	---	Section 3.4
Access to and utilization of credit	---	---	Section 3.3 Figure 3.3-1 Figure 3.3-2
Perceptions of additional services needed as well as constraints and barriers to those services	---	---	Section 3.3 Figure 3.3-2
Processors			
Installed processing capacity (m tons)	All available, collected, processor-related data are presented in disaggregated (processor-specific) format in Table 3-1.		
Utilization of new processing technology			
Capacity utilization rate			
Range of products produced			
Finished product prices			
Total RCN purchased (m tons)			
Total RCN processed (m tons)			
RCN loss due to spillage, low quality (m tons)			
Sales volumes by product segment			
Quality certifications			
FTE-adjusted employees			
Access to buyers and export markets (number of buyers and/or number of export markets reached)			
Employee attendance rate, by job category			
Processor Employees			
Annual turnover rate, by job category (percentage of employees looking for another job)	31%	Section 5.2	
Employee satisfaction, by job category (only overall rate)	74%	Section 5.2	
Processor procedures for addressing worker and supervisor complaints (percentage employees that say management tries to meet employee requests)	74%	Section 5.2 Figure 5.2-11	
Extent to which processors meet worker demands for improved work conditions and improved safety (percentage employees that say management tries to meet demands)	75%	Section 5.2 Figure 5.2-10	

Other, key results, disaggregated where applicable by BeninCaju vs Control group producers, are presented in Table EX-2. Note that for brevity the term “producer” is used in this table; this should be understood to refer strictly and exclusively to *surveyed producers* only and *not* to the larger population of cashew producers in the BeninCaju areas or more generally in Benin.

These results, and those in the preceding table, which compare surveyed BeninCaju and Control producers, show that the two subgroups are very similar with regard to many of the key parameters of interest. This suggests that the samples of surveyed producers are quite similar in many respects, thus facilitating the use of the double-difference evaluation method to be employed at BeninCaju Endline.

Table EX-2: Other key results

Key Result	BeninCaju Producer Value	Control Producer Value	Report Section Where Presented
Producers			
Total number of producers interviewed	452	448	Section 2.1
Percentage of producers interviewed that are male	85%	82%	Section 2.1
Percentage of producers interviewed that are female	15%	18%	Section 2.1
Average age of producers (years)	49.9	47.1	Section 2.1 Figure 2.1-2
Average size of producer households (number of members)	10.4	9.2	Section 2.1 Figure 2.1-5
Average percentage of producer households involved with cashew	50%	48%	Section 2.1 Figure 2.1-6
Average annual household income (FCFA)	1,124,695	870,018	Section 2.1 Figure 2.1-7
Average percentage of annual household income derived from cashew	23.7%	22.7%	Section 2.1 Figure 2.1-8
Percentage of producers that invested cashew income in food crops	61%	65%	Section 22.1
Average number of separate cashew plantations	1.6	1.5	Section 2.2.1 Figure 2.2-1
Average total size of producers' cashew plantations (ha)	4.1	3.6	Section 2.2.1 Figure 2.2-2
Average number of producers' producing cashew trees summed over all plantations	703	488	Section 2.2.1 Figure 2.2-5
Average <i>overall</i> density of productive cashew trees (trees/ha)	143	124	Section 2.2.1 Figure 2.2-8
Average <i>overall</i> spacing between cashew trees (m)	11.7	12.9	Section 2.2.1 Figure 2.2-9
Percentage of producers that intercrop their cashew trees with other crops in the last 5 years	8%	8%	Section 2.2.2
Percentage of producers that have other types of trees in their cashew plantations	75%	76%	Section 2.2.2
Average estimated production of RCN* (kg) (producer level average)	697	466	Section 2.3.1 Figure 2.2-15
Average cashew yield per tree (kg/tree)	2.81	2.80	Section 2.3.2 Figures 2.3-2 Figure 2.3-3
Average cashew yield per hectare (kg/ha)	225	199	Section 2.3.2. Figures 2.3-4 Figure 2.3-5
Average percentage of produced RCN that was sold (<i>Percentage over all producers that produced some RCN</i>)	68%	64%	Section 2.3.3
Percentage of surveyed producers with non-zero cashew farming expenses	75%	69%	Section 2.4 Table 2.4-1
Average total expense for surveyed producers that had non-zero cashew farming expense (FCFA) and total reported expenses ;less than FCFA 3,000,000	150,704	106543	Section 2.4. Table 2.4-1
Average number of separate sales of RCN	1.9	2.4	Section 2.5.1 Figure 2.6-1

Key Result	BeninCaju Producer Value	Control Producer Value	Report Section Where Presented
Average income from sale of RCN (producers that reported sales income only) (FCFA)	220,770	157,090	Section 2.5.2 Figure 2.5-6
Average in-kind income imputed from the value of produced but unsold RCN (FCFA)	116,490	92,196	Section 2.5.2 Figure 2.5-7
Average total income from cashew calculated from producers that reported each type of income) (FCFA)	304,282	223,419	Section 2.5.2 Figure 2.5-8
Average net income from cashew for producers that reported positive gross incomes from cashew (FCFA)	208,461	163,913	Section 2.5.2 Figure 2.5-9
Average net income <i>per tree</i> from cashew for producers that reported positive gross incomes from cashew (FCFA)	862	1014	Section 2.5.2 Figure 2.5-10
Average net income <i>per hectare</i> from cashew for producers that reported positive gross incomes from cashew (FCFA)	75,389	79,238	Section 2.5.2 Figure 2.5-12
Percentage of producers that received direct (face-to-face) training on Good Agricultural Practices (GAP) for cashew between 2010-2016	39%	32%	Section 2.6.1
Percentage of surveyed producers that received <i>indirect</i> training and/or other information about GAP for cashew	63%	70%	Section 2.6.1
Percentage of surveyed producers' plantations in which the cashew trees have been pruned at least once	84%	76%	Section 2.6.1 Figure 2.6-5
Percentage of surveyed producers' cashew plantations that have been weeded in the last 12 months	87%	87%	Section 2.6.1 Figure 2.6-7
Percentage of surveyed producers' cashew plantations that have been protected against bushfires	87%	84%	Section 2.6.1
Percentage of surveyed producers' cashew plantations that have been burned by bushfires at least once	42%	44%	Section 2.6.1
Percentage of surveyed producers' cashew plantations in which pests were noticed on trees	77%	80%	Section 2.6.1 Figure 2.6-9
Percentage of surveyed producers' cashew plantations treated against pests	19%	13%	Section 2.6.1 Figures 2.6.11, 2.6-12
Percentage of surveyed producers that received direct training on harvest/post harvest (HPH) methods for cashew in 2010-2016	33%	30%	Section 2.6.2
Percentage of surveyed producers that separate the cashew nut and apple with a nylon string	2%	1%	Section 2.6.2
Percentage of surveyed producers that dry RCN before packaging them	56%	56%	Section 2.6.2
Percentage of surveyed producers that have listened to radio programs about cashew since 2010	55%	67%	Section 2.6.3
Percentage of surveyed producers that think that the 2016 cashew harvest <i>quantity</i> was better than in previous years	8%	4%	Section 2.7.1 Figure 2.7-1

Key Result	BeninCaju Producer Value	Control Producer Value	Report Section Where Presented
Percentage of surveyed producers that think that the 2016 cashew harvest <i>quality</i> was better than in previous years	51%	54%	Section 2.7.1 Figure 2.7-4
Percentage of surveyed households that have at least one member in a producer association or cooperative	24%	22%	Section 2.8.1 Figure 2.8-1
Percentage of surveyed producers that reported the availability of credit in their home village	77%	72%	Section 2.9
Percentage of surveyed producers that have received credit since 2011	40%	35%	Section 2.9 Figure 2.9-2
Members of Producer Groups			
Average age of surveyed producer group members (years)	46.9	47.2	Section 3.3.1 Table 3.3-1
Average number of years producing cashew	14.5	16.2	Section 3.3.1 Table 3.3-1
Average number of separate cashew plantations	1.6	1.8	Section 3.3.1 Table 3.3
Average (self-reported) number of producing cashew trees	362	390	Section 3.3.1 Table 3.3
Average number of years belonging to their current producer group	4.5	6.8	Section 3.3.1 Table 3.3
Processor Employees			
Percentage of surveyed employees that are female	49%		Section 5.1
Average age of surveyed employees (years)	30.7		Section 5.1
Percentage of surveyed employees that have been with their current employer no more than 1 year	33%		Section 5.1 Figure 5.1-6
Percentage of surveyed employees that have been with their current employer no more than 2 years	50%		Section 5.1 Figure 5.1-6
Percentage of surveyed employees that thought that their assigned workload was about right	73%		Section 5.1 Figure 5.1-10
Percentage of surveyed employees that express overall satisfaction or are very satisfied with their current job	74%		Section 5.2 Figure 5.2-1
Percentage of surveyed employees that are actively looking for another job	31%		Section 5.2
Percentage of employees that applied for a job with another employer in the previous 6 months	24%		Section 5.2

* RCN = Raw Cashew Nuts

Part I. Introduction

1.1 Background

This report presents the key results from the Baseline Study of the BeninCaju (Cashew Integration & Acceleration Program - CIAP) conducted in May-June 2016.

This Baseline study was primarily implemented using questionnaires developed from reviews of pertinent literature relating to other projects on cashew and other surveys of organizational management and employee satisfaction. Specifically, the *producer questionnaire* is largely based on the Baseline and yield survey questionnaires primarily developed by this author for the African Cashew initiative (ACi) and used in Benin, Cote d' Ivoire, Burkina Faso, Ghana, and Mozambique and on the assessments and analyses of the collected data by this same author. The *producer group* questionnaire was derived primarily from other questionnaires and focus group discussions guidelines developed in large part by this author for ACi, the Competitive African Cotton Initiative (COMPACI), and the Coffee Partnership for Tanzania (CPT). However, the section of group management (good governance) borrowed heavily from *The Good Governance Test* found at: https://www.surveymonkey.com/r/The_Good_Governance_Test_Fall_2011. Finally, the *processor employee questionnaire* was developed in part by this author based on similar work on the above-named projects and also borrowed from *The Employee Satisfaction Survey* (Scott Smith PhD, February 2013, at: <https://www.qualtrics.com/blog/employee-satisfaction-survey/>).

The survey training for the producer and producer groups surveys was jointly conducted by the Baseline Coordinator (this author) and the Deputy Baseline Coordinator in Parakou, Benin and included two days of “classroom” training on the individual questions and the expected answers and also on the use of handheld GPS devices used for measuring the size (area) of the surveyed producers’ cashew plantations. The organization responsible for implementing these surveys (with in the field BeninCaju team oversight during the entire surveys) was *Programme Analyse de Politique Agricole* (PAPA), using enumerators from the Beninese cashew producers association (*Federation Nationale des Producteurs d'Anacarde du Benin (FENAPAB)*) and some additional enumerators familiar to PAPA. These organizations were selected by BeninCaju for these surveys because of their directly applicable experience in implementing the annual Africa Cashew initiative (ACi) yield surveys in Benin. The TNS BeninCaju team implemented the processor key informant interviews and the survey of processor employees.

The BeninCaju Baseline Study was, in its entirety, conducted through the use of quantitative surveys, key informant interviews, and Focus Group Discussions (FGD). This report details the findings of the quantitative surveys of producers, producer group members, and processor employees as well as the data

collected from key informants regarding the processors. The results in this report will be analyzed by the BeninCaju Team and put to three primary purposes:

1. The values of various key indicators calculated from the data collected in these surveys will serve as *benchmarks* to which endline values of the same parameters will be compared to determine outcomes and impacts of the BeninCaju project.
2. These collected data will also be analyzed for the purpose of looking for refinements and/or enhancements to the BeninCaju interventions that would better focus them on needs identified from these data.
3. While the quantitative data contained in this report can answer questions of *how much* or *how many*, they cannot answer questions of *why* or *why not*. Therefore, questions that are not fully answered in the collected quantitative data will form the basis for the FGDs to be conducted as the qualitative follow-up to these surveys. The target groups for these FGDs will be identified through analyses of the results presented here, but are expected to include at a minimum women producers, CPA producer groups, and women producer groups.

1.2 Benin 2016 Cashew Campaign

Overview: The Benin 2016 RCN harvest campaign began in December 2015. The total quantity harvested, per various estimates, did not exceed ~100,000 MT with the harvest starting around the first week of January with very small quantities. Overall production output was lower than in 2015 (around 10%-15%) in West Africa and, more specifically, approximately 10% lower in Benin. This was primarily due to delayed/low rains in almost all cashew regions resulting in a spike in demand. Production was not only low in overall quantity but also in quality; on average, *outturn*¹ in Benin dropped from 48 lbs down to 45 lbs (outturn).

Pricing impact: The 2016 RCN campaign was marked with stark price volatility; with RCN prices reaching unprecedented levels. The minimum RCN reference price set by the Government of Benin was FCFA 250/ kg; however, very little or almost no trading was noticed in this price range.

¹ *Outturn* is the amount of usable kernels after de-shelling the nut and is a measure of cashew quality. It is expressed in *lbs quality*, which is calculated as the weight of useful kernels (lbs) n per 80 kg of raw nuts (RCN). 48 lbs quality and above is standard grade. Buyers normally prefer 48 – 54 lbs quality. Less than 43 lbs quality is a poor grade and is usually rejected. (Definition based on material at: https://www.sustainabilityxchange.info/filesagri/Flipchart_Quality%20of%20Cashew%20nut_what%20you%20need%20to%20know%20about%20it.pdf)

The average traded price at farm-gate started around FCFA 350/ kg during January but quickly jumped to CFA 450 - 500/ kg by late January/early February. This range also was the range in which almost 50-60% quantity was traded. However, as the demand picked up and exporter bids started coming in, RCN prices during latter half of the season reached new heights; touching around FCFA 600 – 650/ kg at farm gate/ village level.

There are multiple factors for the spike in RCN prices: both domestic and internationally.

Internationally, there are two key reasons for the increased demand and high bids for Benin RCN.

Firstly, as Cote d'Ivoire (CIV) increased their RCN export tax to ~FCFA 83/ kg of RCN, many international traders and processors reduced their purchase from CIV and came to Benin where there are no RCN taxes levied (as an additional benefit, traders obtained better quality nuts as Benin quality is considered better in the region). Secondly, the Government of India, in their budget for 2016 introduced a new Customs Tariff code which levies a 9.36% duty on all RCN imports, but exempts it for Least Developing Countries (LDC's). Benin falls under this category (unlike Cote D'Ivoire, Ghana, etc). Therefore, Indian processors had another added benefit of targeting procurement of Benin RCN over CIV & Ghana RCN. These two policies jointly gave ~310 USD (180,000 FCFA) competitiveness to traders in Benin and negatively impacted local processing.

Meanwhile **domestically**, due to the lack of regulation of activity, traders were able to procure excessive quantities of RCN and just strategized to delay sales, thereby creating huge supply shortages and spiking up prices. In 2016 intermediate traders made the maximum profits.

1.3 Sampling Considerations

The sample sizes and sampling procedures for this Baseline Study varied according to the target population being considered and the available sample frame(s). The sample of producers selected for the producer part of this baseline study was selected as a true random sample. While it is currently expected that the BeninCaju Endline survey will interview the same producers that were interviewed at Baseline, this decision has not been taken by TNS and/or USDA. Therefore, in order to not burden the Baseline study with the much larger sample sizes that a longitudinal study with Treatment (BeninCaju) and Control groups using double-difference evaluation methods would require, the Baseline Coordinator (this author) determined the sample size based on ensuring that with 95% confidence, for any continuous or pseudo-continuous variable such as yield, income, percentage of producers adopting any particular good agricultural practice, etc, the average value calculated from the sample of producer responses would be within $\pm 7\%$ of the “true” average value that would have been obtained if all possible producers had been

surveyed. The value of 7% was selected as a compromise between 5% which would have required a much larger sample size with significant cost implications, and 10% which would have provided results deemed to be too imprecise. Two-stage sampling was used to minimize logistical and costs and survey implementation time. With these constraints, the minimum required sample size was determined to be 375 producers.

Since it is possible (although not yet decided) that at Endline the same BeninCaju and Control producers interviewed at Baseline may again be interviewed, 20% oversampling was done to ensure that, with attrition, at least 375 of the same producers would be available for interviews at both Baseline and Endline. This led to an overall target sample size of 450 BeninCaju and 450 Control producers. Note that if the sample size had been designed for an assured double-difference evaluation, the overall sample size would have been roughly double this size. If at Endline, the decision is made to interview the same producers in both the Treatment and Control groups, a larger Endline sample size may be required.

As noted, for logistic and economic reasons, two-stage sampling was used, meaning that a subset of villages was first selected from the list of all possible target villages in the target communes. The Baseline Coordinator decided that the 450 interviews for both BeninCaju and Control producers would be generated by selecting 15 producers from 30 of the appropriate villages. The specific villages were selected using *probability-proportional-to-size* (PPS) where the “size” of each village was determined by the number of agricultural households in that village as given in a Government of Benin report. (Prior to selecting the villages to be surveyed, the numbers and names of cashew producers in each village were not known, so the number of agricultural households in the villages was used as a proxy for the number of cashew producers.)

Once the BeninCaju and Control survey villages were selected, lists of names of the cashew farmers in each selected village were obtained and the farmers to be included in the survey sample were chosen by random selection. Finally, 10 “replacement” farmers were also randomly selected for each survey village to be interviewed if any of the planned sample farmers were unavailable or preferred to not participate in the survey.

In order to have the possibility of correlating results from the producer survey with those from the producer group survey, and in the interests of cost-effectiveness, the decision was made to conduct the producer group survey with group members in villages already selected for the producer survey. It was not possible to get lists of producer group members in advance to select a random sample of producer group members. Therefore, the sample of producer group members to interview were selected by asking interviewed producers if they were members of any producer groups and, if so, to name the other group members in their villages who were then identified and approached for the group member survey. This

resulted in a non-random total of 205 group members in BeninCaju villages and 198 group members in Control villages being interviewed for the producer group survey.

Because only six (6) cashew processors are working with BeninCaju, all six of them were approached to provide key data about their size, operations, etc. The data provided by these processors is presented in Part III of this report.

Finally, employees of all six of the BeninCaju-related cashew processors were surveyed. Again, it was not possible to get advance lists of employees and managers in each section of the processor factory, so instead, for each processor, in each section the first employee encountered was interviewed. A form of “nearest neighbor selection” with suitable skips was used to randomize the selection of the next employee to interview throughout that processor section was then used to select a total of ten (10) workers in each section (that had at least 10 employees) including the manager of that section. The manager of each work section in each processor was systematically included in the sample.

Please see Annex 6 for a full description of methodology and anti-contamination strategy.

1.4 Report Protocols

Several conventions and protocols were followed and used throughout this entire report. These are:

- For ease of reviewing some of the results, all percentages in the figures and tables of results have (usually) been rounded off to the nearest whole percent. That means that occasionally the sum of percentages in a table row or column or discussion in the text will not add up to exactly 100%.
- Unless otherwise explicitly stated, missing cases and clearly erroneous outliers have been excluded from the tables and figures. There are two reasons for this: (1) to avoid statistical distortion of the results due to unrealistically large and/or small values, and; (2) to improve the clarity and details in some figures by reducing the ranges of the data considered. The accompanying text will indicate the ranges of the variables considered valid as well as the number and/or percentage of the total number of surveyed producers, members of producer groups, or processor employees that are represented in these tables and figures.
- Some other numbers presented in the various tables throughout this report that have smaller magnitudes may be rounded off to either the nearest whole number or nearest one-tenth percent.
- For ease of exposition, the terms “*producers*” and “*surveyed producers*” will be used interchangeably. In all cases the term “producer” refers in this report to those producer surveyed for this Baseline Study unless explicitly stated otherwise. Further, in the context of this report, a “household” will be defined to include all of those people that regularly eat together.

- The various figures refer to both *surveyed producers* and *surveyed households*. This is because some of the collected data refer specifically to just the cashew farmers and other data more properly refer to the household as a whole. While these terms are sometimes used interchangeably in this report, the meaning should be clear from the associated context.
- Some figures and tables refer to the percentage of “*reporting (or responding) surveyed producers*.” This is meant to convey to the reader that the percentages in such tables and figures are calculated from the base of only those producers that gave valid answers to the questions being addressed or to whom the questions are applicable. Thus, such phrasing implies that missing responses are *not* included and so *the calculated percentages are based on the subset of the total sample of producers that gave valid responses to the question(s) being analyzed*.
- Because many of the variables of those parameters shown in tables and figures are *continuous variables*, their ranges cannot easily be put into discrete and distinct bins. So, whereas the numbers of counted cashew trees are discrete integers and can be put into non-overlapping bins (e.g., 1-100, 101-200, 201-300, etc), this cannot easily be done for continuous variables such as *the estimated number of cashew trees* which, due to the calculation method may not be an integer value but may have some decimal component. The same is true for *measured plantation size* or *yield*. Therefore, the convention used in this report is to consider the minimum value of any interval to be *open* and the maximum value of any specified interval to be *closed*. Thus, in mathematical notation, the interval from A-B would be written (A, B]. This means that any value *strictly greater* than A but *less than or equal* to B is included in the interval. This convention avoids overlapping range bins.
- The text in the body of this report and in figure and table titles sometimes refers to “producers,” “BeninCaju producers,” and/or “Control producers.” In the context of this report, unless otherwise explicitly stated, these terms should be understood to refer to “*surveyed producers*,” “*surveyed BeninCaju producers*,” and/or “*surveyed Control producers*.”
- Because the project name changed from the “Cashew Integration and Acceleration Program (CIAP)” to “BeninCaju” while this report was being written, both terms appear in this report and are used interchangeably.

The figures and tables are largely self-explanatory and so no extensive discussions of many of them are provided here. In any case, note that any explanation of the results presented here in terms of conditions on the ground will necessarily have to come from TNS/CRS who implement the BeninCaju and whose

subcontractor (PAPA/FENAPAB) implemented the Baseline study by conducting all of the producer interviews and doing all of the fieldwork measurements in the surveyed producers' cashew fields.

The results of the data analysis, presented as figures and tables, are organized into the remaining report sections as follows:

Part II: Surveyed Cashew Producers

- Section 2.1: Demographics
- Section 2.2: Cashew Plantations and Holdings
- Section 2.3: Cashew Production, Yield, and Disposition:
- Section 2.4: Cashew Expenses
- Section 2.5: Cashew Sales and Income
- Section 2.6: Cashew Production Training and Practices
- Section 2.7: Changes in Cashew Harvest Quantity and Quality
- Section 2.8: Producer Associations/Cooperatives
- Section 2.9: Availability, Access to, and Use of Credit
- Section 2.10: Poverty Scorecard
- Section 2.11: Gender and Income from Cashew

Part III: Surveyed Members of Producer Groups

- Section 3.1: General Producer Group Information
- Section 3.2: Producer Group Details
- Section 3.3: Reasons for Joining The Group and Provided Services
- Section 3.4: Producer Group Management

Part IV: Surveyed Processors

- Section 4.1: Processor Statistics

Part V: Processor Employees

- Section 5.1: Employee Profile
- Section 5.2: Employee Satisfaction

Annexes

- Annex 1: Producer Questionnaire
- Annex 2: Producer Group Questionnaire
- Annex 3: Cashew Processor Data Collection Form
- Annex 4: Processor Employee Questionnaire
- Annex 5: Disaggregated Values of Key BeninCaju Parameters

Part II: Surveyed Cashew Producers

2.1. Demographics

This section presents demographic details about the surveyed producers and their households. Figure 2.1-1 presents data on the percentages of surveyed producers that live in the different BeninCaju operational communes. This figure shows that, while the overall numbers of BeninCaju and Control producers are roughly equal (452 vs. 448), the numbers of these producers in the different communes are not so equal across the different communes.

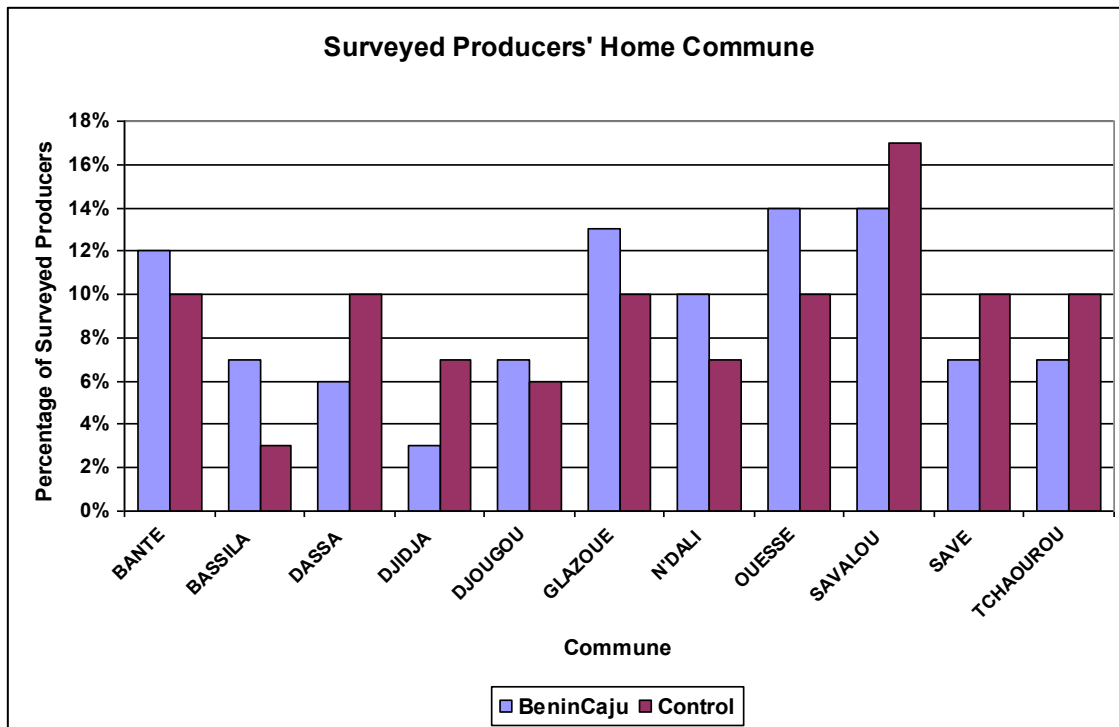


Figure 2.1-1: Surveyed producers' home communes

The distributions of the BeninCaju and Control producers' ages are also very similar as seen in Figure 2.1-2. The average age of the surveyed BeninCaju producers was 49.9 years compared to the average age of 47.1 years for the surveyed Control producers.

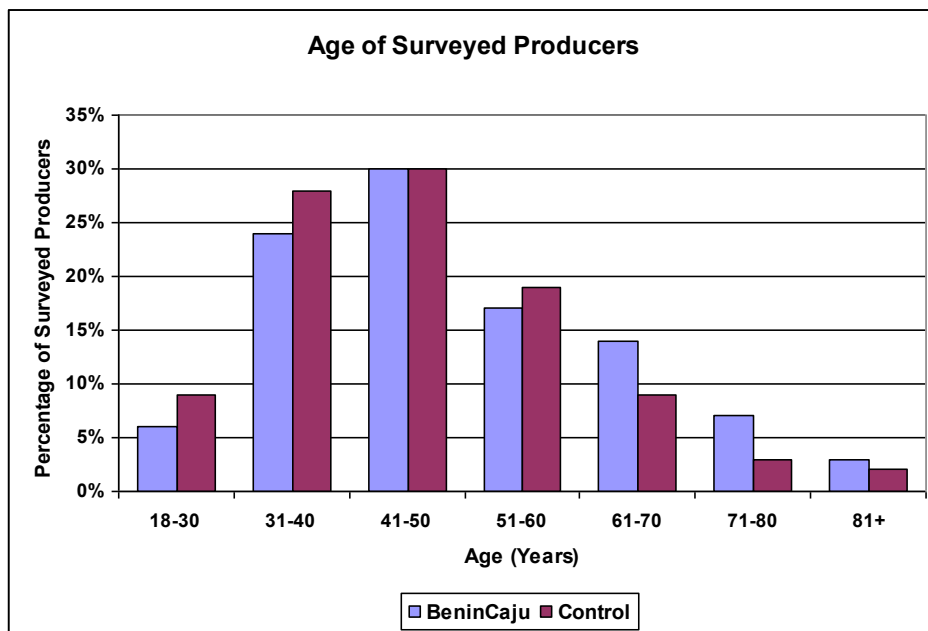


Figure 2.1-2: Age of surveyed producers

The surveyed producers were asked about their level of literacy; this may be an important factor in determining the extent to which written materials vs graphic materials are used in the BeninCaju training. These results are presented in Figure 2.1-3. “Literacy” in this figure refers only to French and not to any local languages.

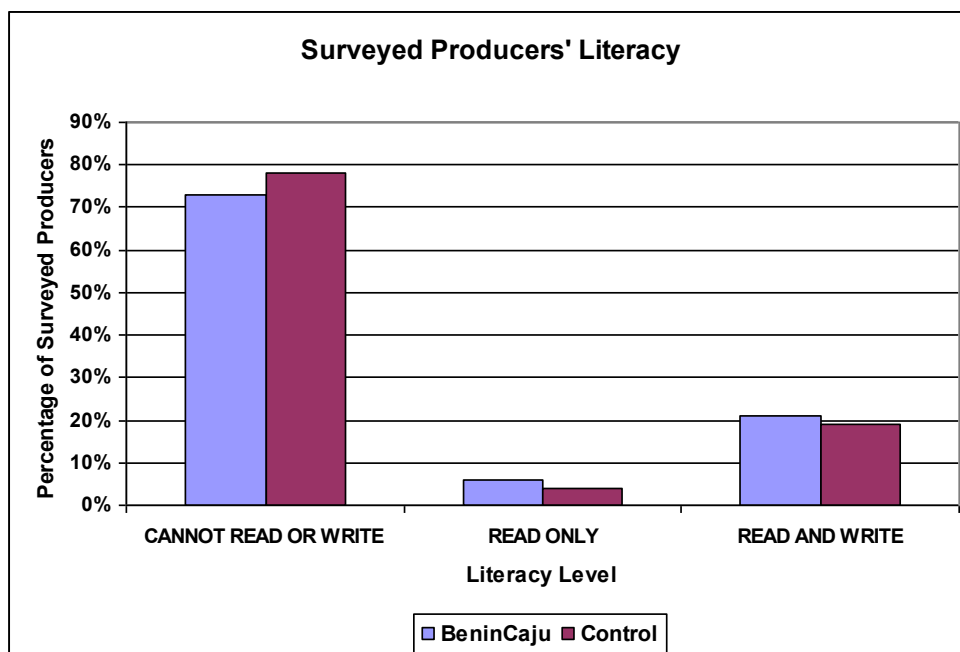


Figure 2.1-3: Surveyed producers' literacy rates

Related to the producer literacy rates are the highest levels of education reached by the surveyed producers, as this too may influence the nature of the BeninCaju training provided to the producers and the sophistication of the training materials. The highest education levels reached by the surveyed producers are shown in Figure 2.1-4. Note that well over half (60%) of the surveyed producers have had *no* formal education, consistent with the large percentages (70%-80%) of surveyed producers unable to read or write (French). These results jointly suggest that the training materials developed for BeninCaju should depend more on graphics than on written instructions.

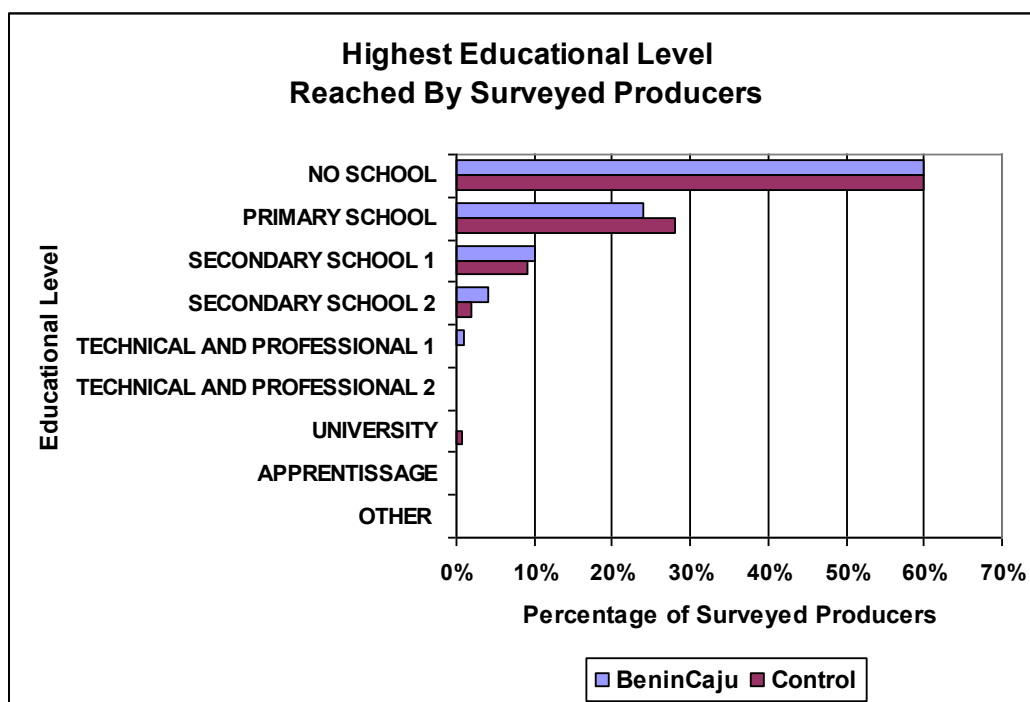


Figure 2.1-4: Surveyed producers' educational level

The sizes of the surveyed households varied from just one member (the producer) to more than 25 members as shown in Figure 2.1-5. The average household size was 10.4 members for BeninCaju households compared to 9.2 members in Control households.

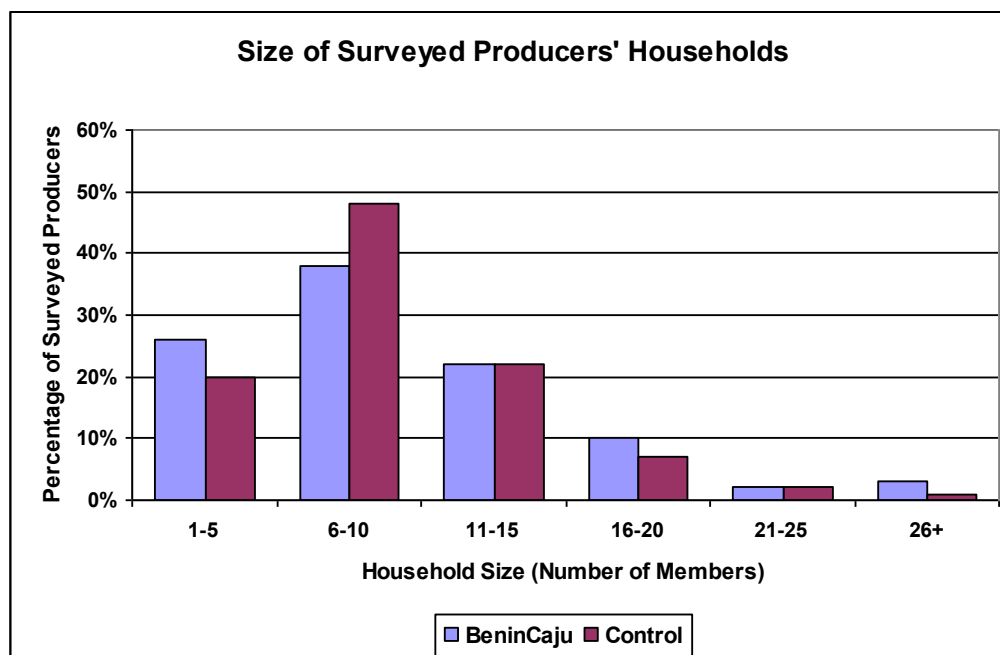


Figure 2.1-5: Size of surveyed producers' households

The percentages of members of the producers' households that are involved with cashew production also varies considerably but are quite similar overall between BeninCaju and Control households as seen in Figure 2.1-6; the average percentage of BeninCaju household members involved with cashew is 50% compared to 48% for surveyed Control households.

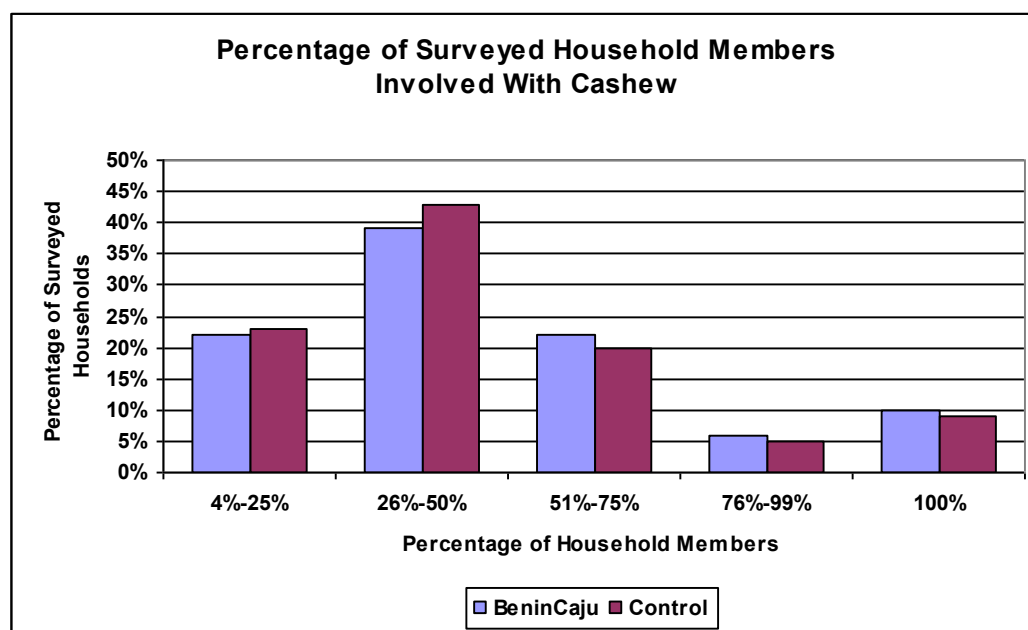


Figure 2.1-6: Percentage of surveyed household members involved with cashew

The two groups of surveyed households have similar distributions of (self-reported) annual household income as shown in Figure 2.1-7, but because of a handful of BeninCaju households with very high incomes (relative to the Control households) the average annual income of the surveyed BeninCaju households (FCFA 1,124,695- USD 1901) is notably higher than that of the Control households (FCFA 870,018 –USD 1472)². These income distributions are presented in Figure 2.1-7.

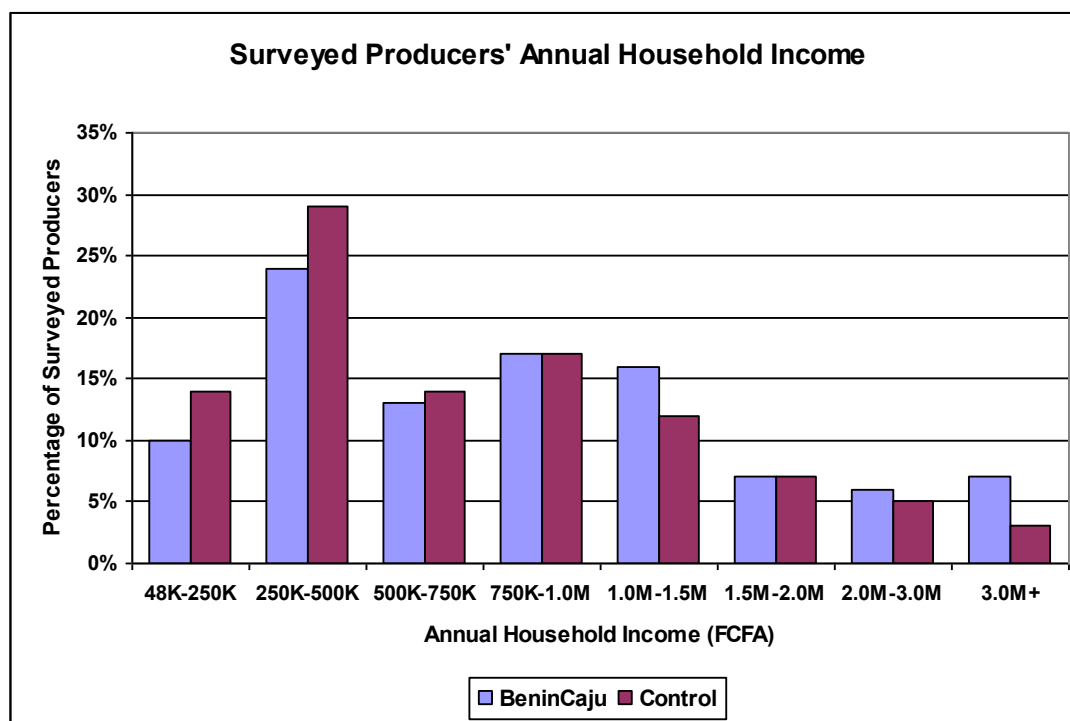


Figure 2.1-7: Surveyed households' total annual income

The surveyed households derive different percentages of their overall annual household income from cashew; however, on average, the two surveyed subgroups of producers are highly comparable in this regard. The surveyed BeninCaju households derive, on average, 23.7% of their annual income from cashew compared to an average of 22.7% for the surveyed Control households. These results are presented in Figure 2.1-8.

² Conversion of FCFA to USD done using the conversion rate of FCFA 591.72 = USD 1 given by <http://themoneyconverter.com/XOF/USD.aspx>

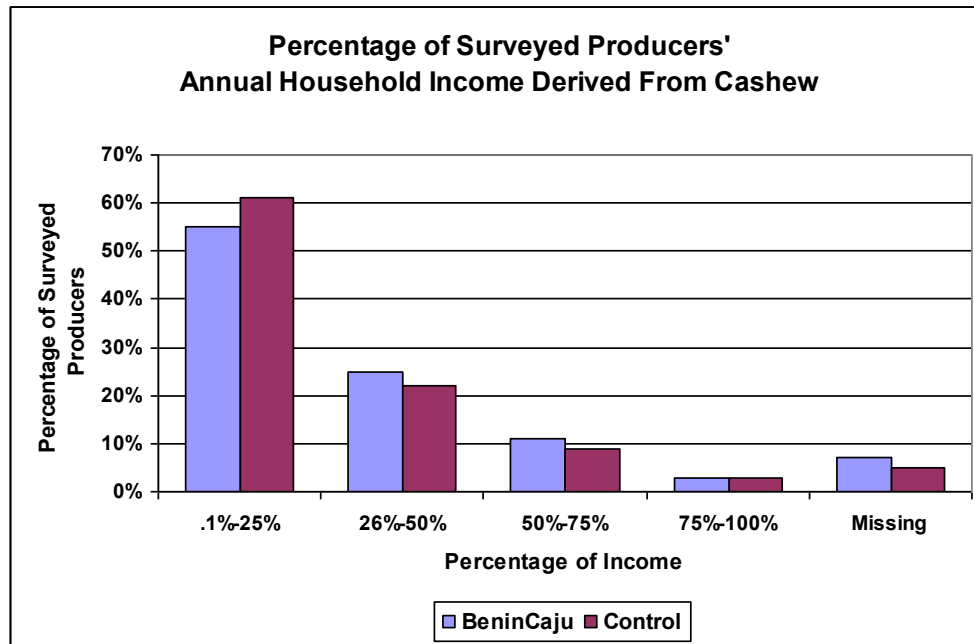


Figure 2.1-8: Percentage of household income derived from cashew

The surveyed households were asked if they invested income from cashew in food crops; 61% of surveyed BeninCaju producers and 65% of surveyed Control producers reported doing so. The specific food crops in which notable percentages of surveyed producers reported invested cashew income are listed in Figure 2.1-9 and show great similarity between BeninCaju and Control producers.

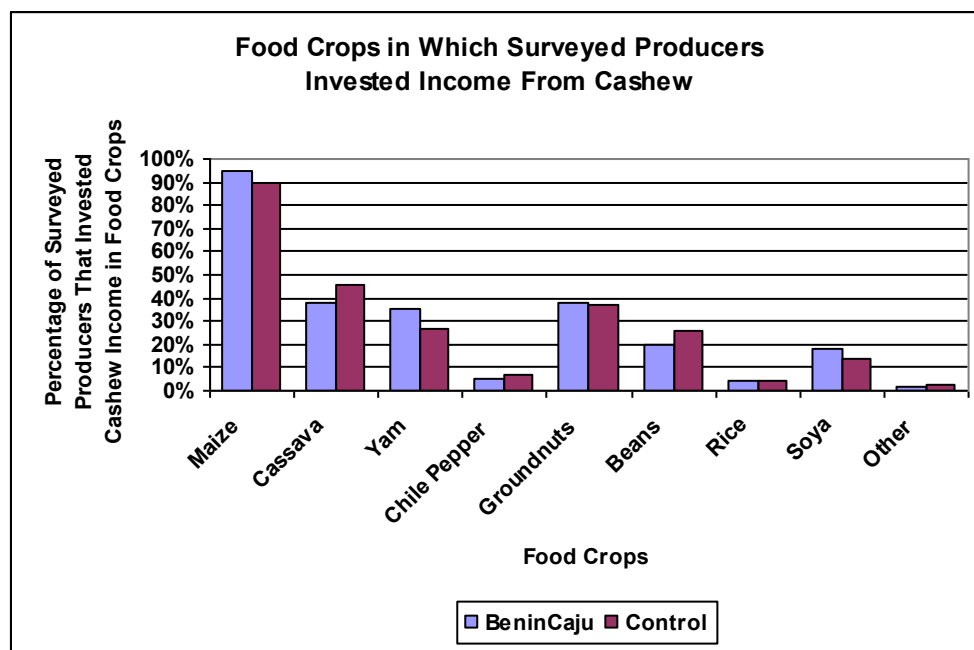


Figure 2.1-9: Primary food crops in which surveyed producers invested cashew income

The surveyed producers were asked what impact they thought the effect of their investment of cashew income had on their production of food crops. Their responses are presented in Figure 2.1-10. These responses suggest that over half of both surveyed BeninCaju and surveyed Control producers feel that their income from cashew had a notable and significant influence on food crop production and thus on household food security.

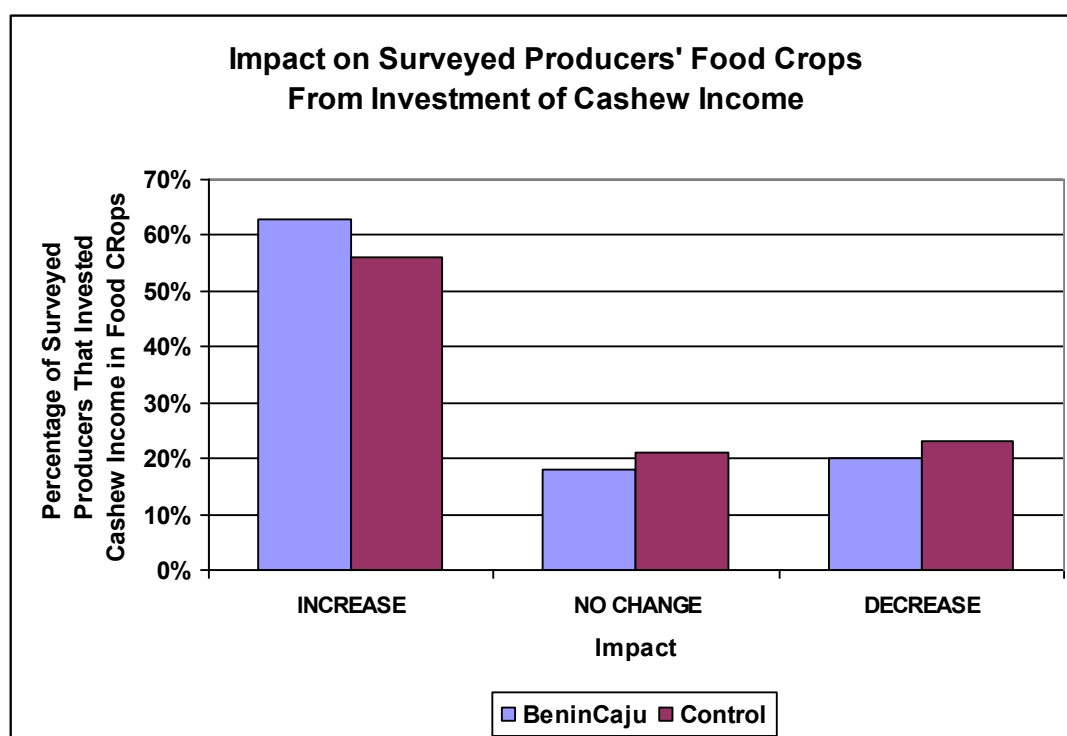


Figure 2.1-10: Impact on food crop production from investment of cashew income

A separate small study by this author for the African Cashew initiative (ACi) in 2011 showed that cashew, despite being a cash crop, has an outsize influence on household food security in Benin by allowing smallholder households to use income from cashew to buy food at a time when few if any other income sources are available to them. This study also estimated the number of Beninese cashew farming households that would have improved food security if they adopted some or all of the cashew farming good agricultural practices (GAP) being promoted by ACi.

The surveyed households that reported a perceived change in food crop production were also asked to estimate the magnitude of the change resulting from the investment of cashew income; half of both the BeninCaju and Control producers did not have even an estimate of this and the remaining data do not appear to be statistically robust and so are not presented here.

2.2 Cashew Plantations and Holdings

2.2.1 Numbers of Plantations and Cashew Trees

The surveyed producers often have more than one cashew plantation, and so the surveyed producers were asked how many separate cashew areas (plantations) they had. On average, surveyed BeninCaju producers had 1.6 separate areas compared to an average of 1.5 for surveyed Control producers. The specific percentages of surveyed producers having different numbers of cashew plantations are shown in Figure 2.2-1. This figure shows that the two subgroups are quite similar in their ownership of different numbers of cashew areas.

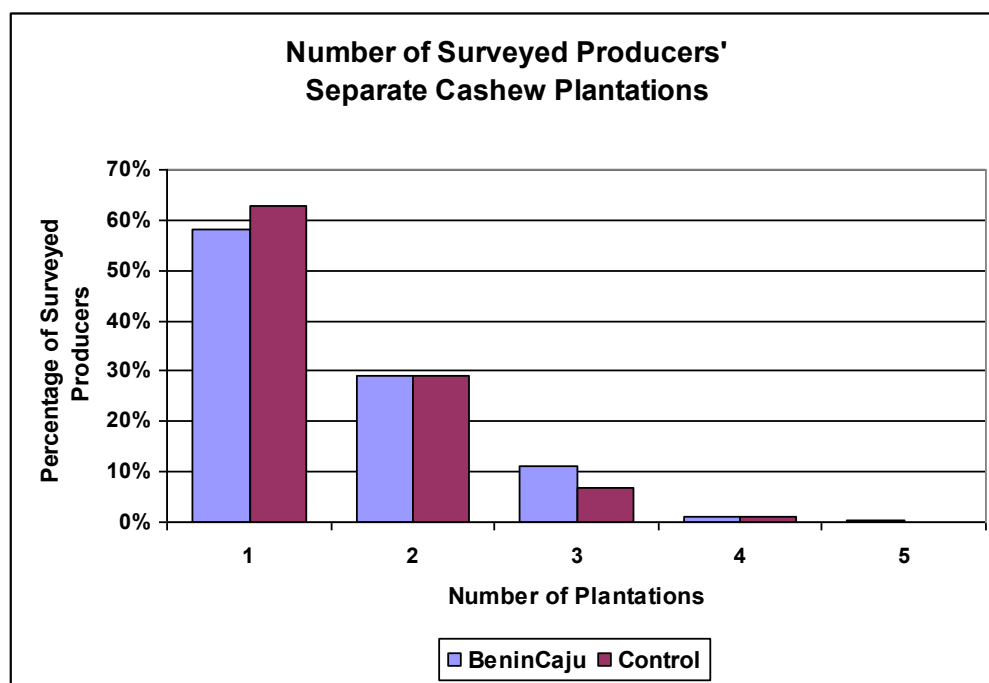


Figure 2.2-1: Numbers of surveyed producers' separate cashew plantations

The average size of these plantations was also investigated. The survey enumerators used hand-held GPS devices to measure the areas of all of the surveyed producers' cashew plantations. The total, summed sizes of all of the surveyed producers' cashew plantations are presented in Figure 2.2-2. The sum total size of all cashew areas is a more useful measure than the size of producers' individual plantations.

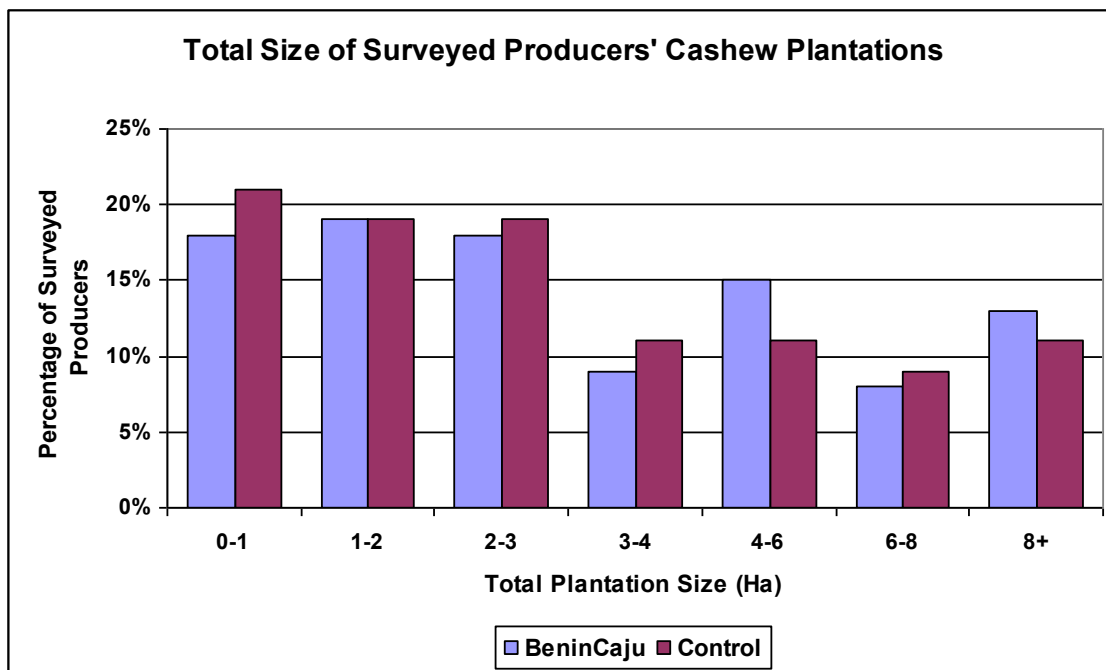


Figure 2.2-2: Surveyed producers' total cashew area

Some of the size data in the data base appear to be either measured incorrectly and/or entered into the database incorrectly in that they showed individual plantations of over 20 ha in size. These data from 20 plantations were considered erroneous and so were omitted from Figure 2.2-2 and from the calculation of the average *total* plantation size of 4.1 ha for surveyed BeninCaju producers and 3.6 ha for surveyed Control producers.

The surveyed producers were also asked how many producing cashew trees they had on each of their reported plantations. The plantation-level results from the surveyed producers are presented in Figure 2.2-3. (The distribution of the total number of counted/estimated trees for each surveyed producer is presented in Figure 2.2-4).

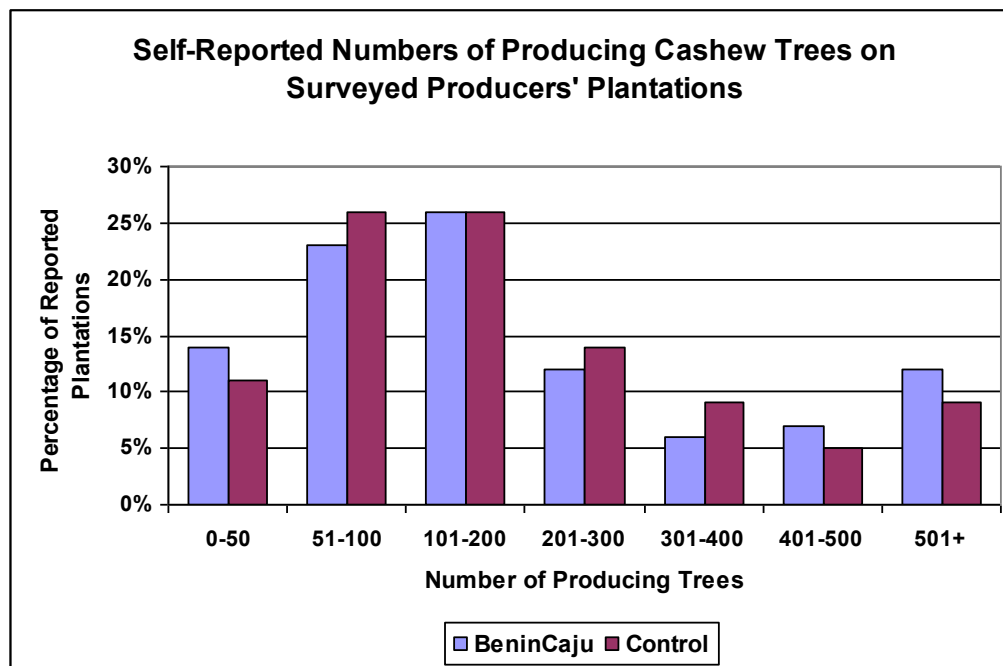


Figure 2.2-3: Self-reported numbers of surveyed producers' cashew trees

Additionally, the numbers of producing trees on each plantation were counted for plantations of less than 1 ha of measured size, and estimated for larger plantations (> 1 ha). For these 965 (72%) larger than 1 ha plantations, the estimation procedure consisted of measuring “representative” sub-areas of the plantations approximately 0.25 ha in size and counting all of the trees in the sub-area(s). From the measured size of the entire plantation and the measured size(s) of the sub-area(s), a scale factor was calculated and that was used to scale up from the total number of counted trees in the sub-area(s) to the *estimated* total number of trees in the plantation.

These measured and/or estimated numbers of producing cashew trees in each plantation were then totaled for each surveyed producer. The distributions of estimated numbers of trees for the two surveyed sub-groups are presented in Figure 2.2-4. The average number of productive trees for BeninCaju producers was estimated using the above method to be 703 vs 488 for Control producers.

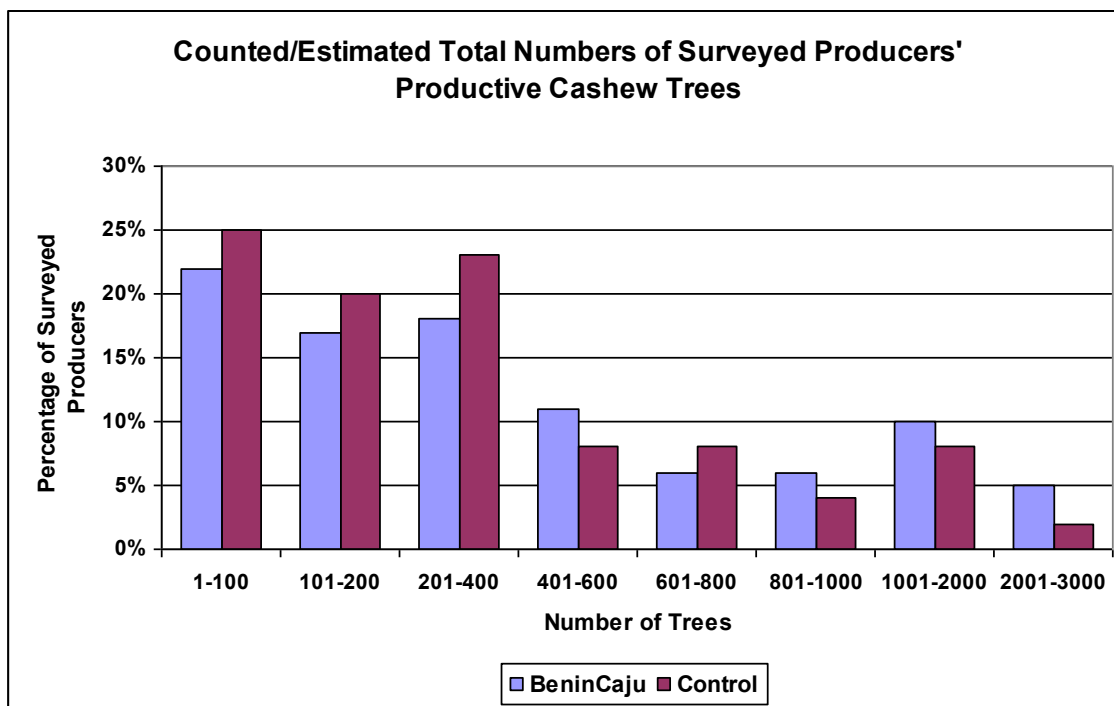


Figure 2.2-4: Total numbers of surveyed producers' productive cashew trees

The surveyed producers were also asked the approximate age of *most of* the productive cashew trees in each of their plantations. Their plantation-level responses are summarized in Figure 2.2-5.

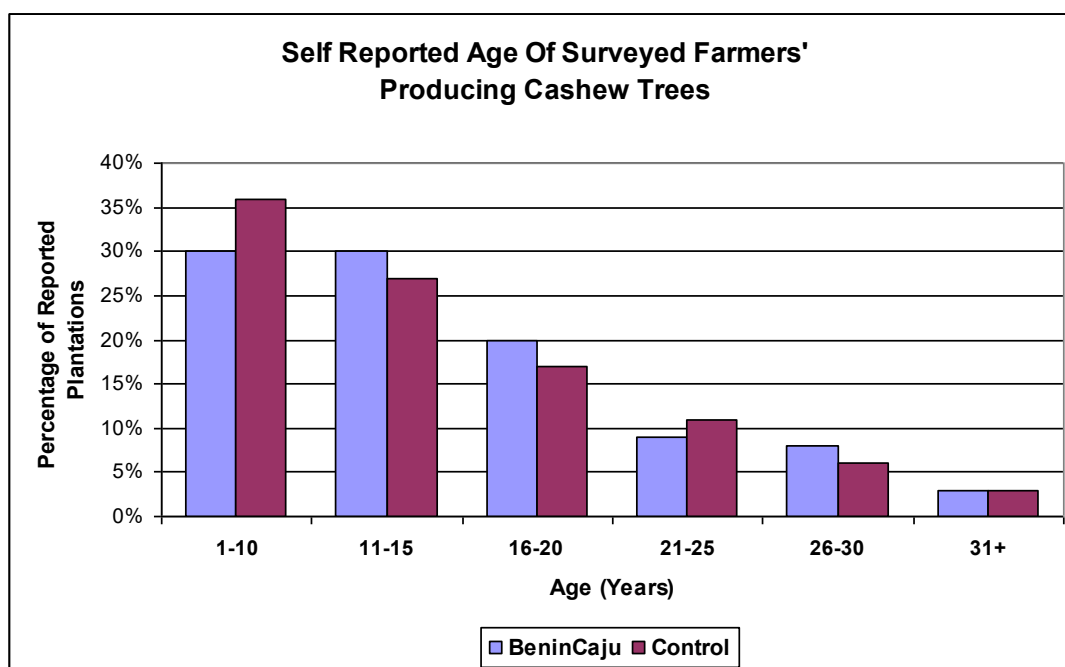


Figure 2.2-5: Ages of “most” of the productive cashew trees in surveyed producers' plantations

Because cashew nuts grow on the outside of the tree canopy which must be exposed to sunlight, cashew tree density (trees/ha) and the spacing between trees (m) are important. From the total measured sizes of all of the surveyed producers' cashew plantations and the counted (or estimated) numbers of productive trees, the tree density was calculated for each of the surveyed producers' separate plantations. These density distributions are presented in Figure 2.2-6.

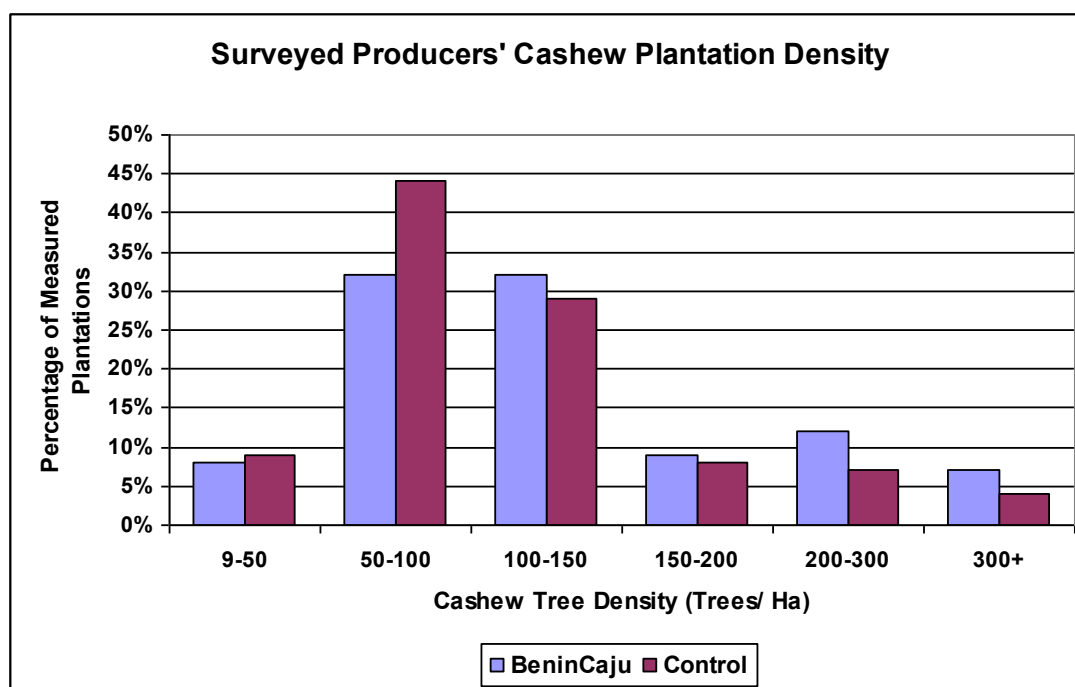


Figure 2.2-6: Plantation level cashew tree density in surveyed producers' plantations

Additionally, cashew tree density was calculated as an *overall* statistic for each surveyed producer (rather than at the plantation level). On average, the surveyed BeninCaju producers had 143 trees/ha compared to an average of 124 trees/ha for the surveyed Control producers. These producer-level density distributions are presented in Figure 2.2-7.

Note that in comparing Figures 2.2-6 and 2.2-7, that the distributions are quite similar although not identical.

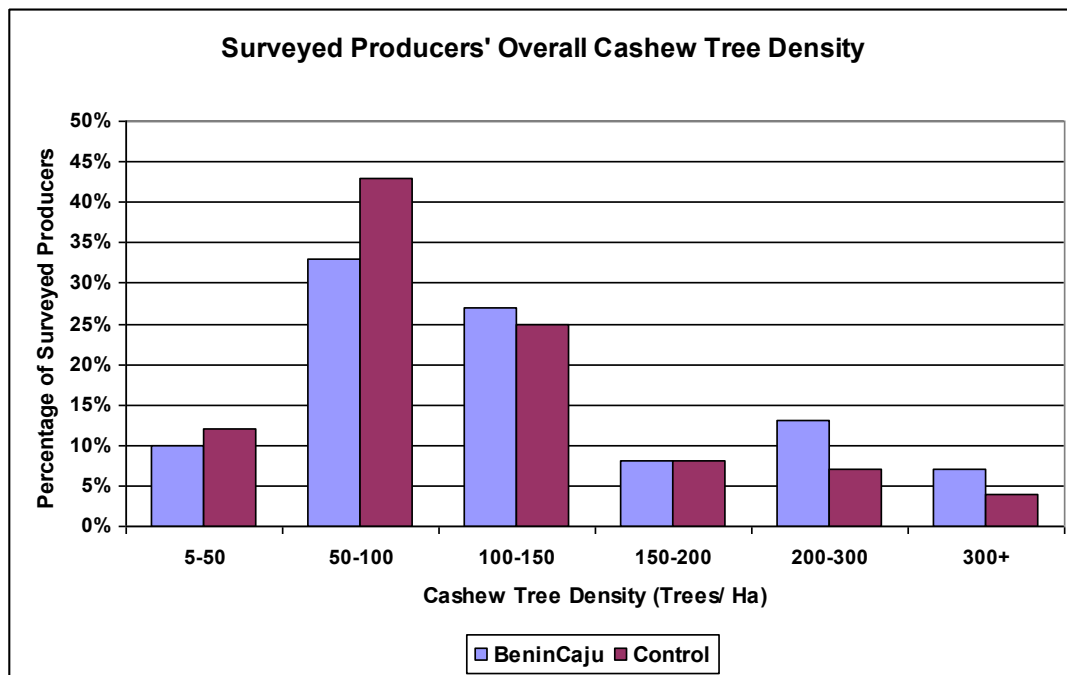


Figure 2.2-7: Overall cashew tree density in surveyed producers' plantations

From the tree density, the average spacing between trees can now be estimated. For most varieties of cashew trees, spacing of 10-12 meters between trees is recommended to ensure that the outside of the tree canopy receives enough sunlight, thereby increasing yield. The estimation of tree spacing used here is based on the following equation (that implicitly considers the plantation to be square):

$$\text{Average Tree Spacing} = 100 / (\sqrt{[\text{Tree Density}] - 1}) \quad \text{Equation (1)}$$

Where tree density is given in units of trees/ha and the resultant average tree spacing is given in meters/tree. Through the use of Equation (1) average overall tree spacing was calculated for each surveyed producer. These results are presented in Figure 2.2-8. The average estimated spacing for surveyed BeninCaju producers was 11.7 m vs 12.9 for the surveyed Control producers.

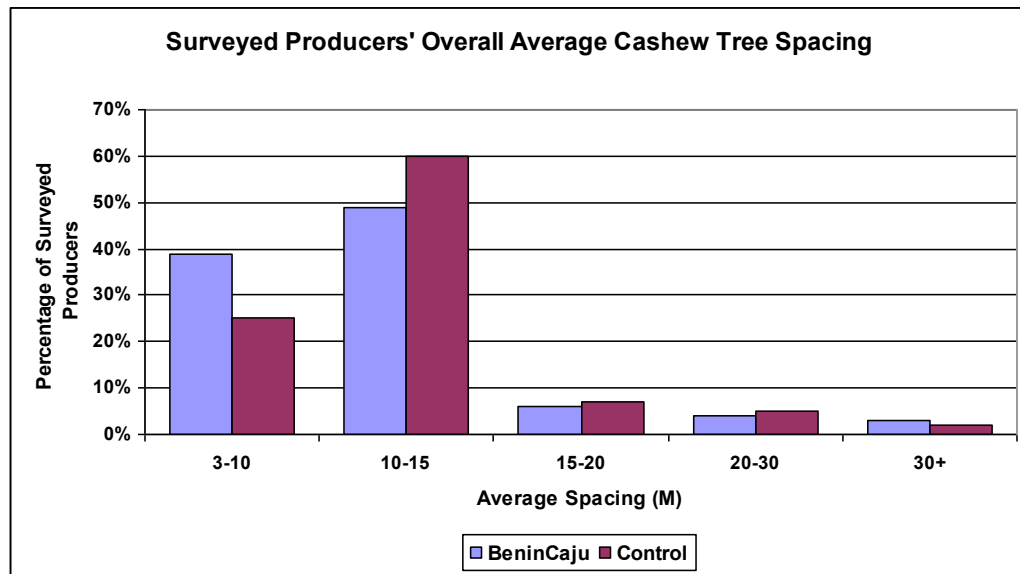


Figure 2.2-8: Overall cashew tree spacing

2.2.2 Plantation Intercropping and Other Trees

The surveyed producers were also asked about intercropping other crops and types of trees with their cashew trees. Only 8% of surveyed BeninCaju and 8% of surveyed Control farmers reported intercropping their cashew trees with other crops (questions about intercropping with other types of trees were asked separately). Figure 2.2-9 shows the most recent year in which the producers that did intercropping did this. *Only the 8% of intercropped plantations are included in this figure; all percentages shown in the figure are calculated from the base of just these 8% of plantations.*

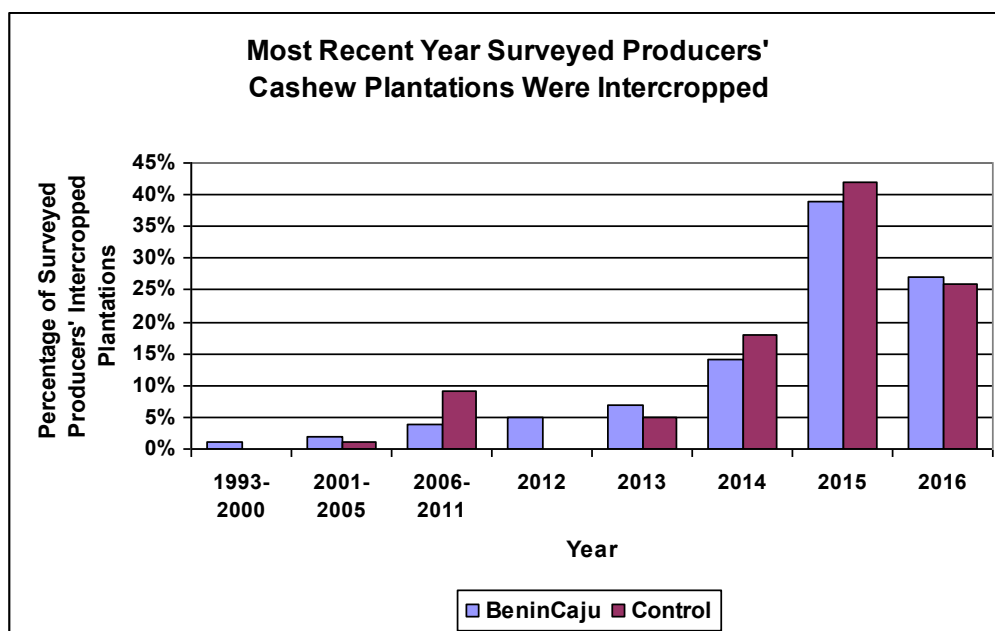


Figure 2.2-9: Most recent year that surveyed producers intercropped their cashew trees

The crops that were intercropped with cashew trees are listed in Figure 2.2-10. Note that the percentages shown in this figure are based on just those plantations on which intercropping was done.

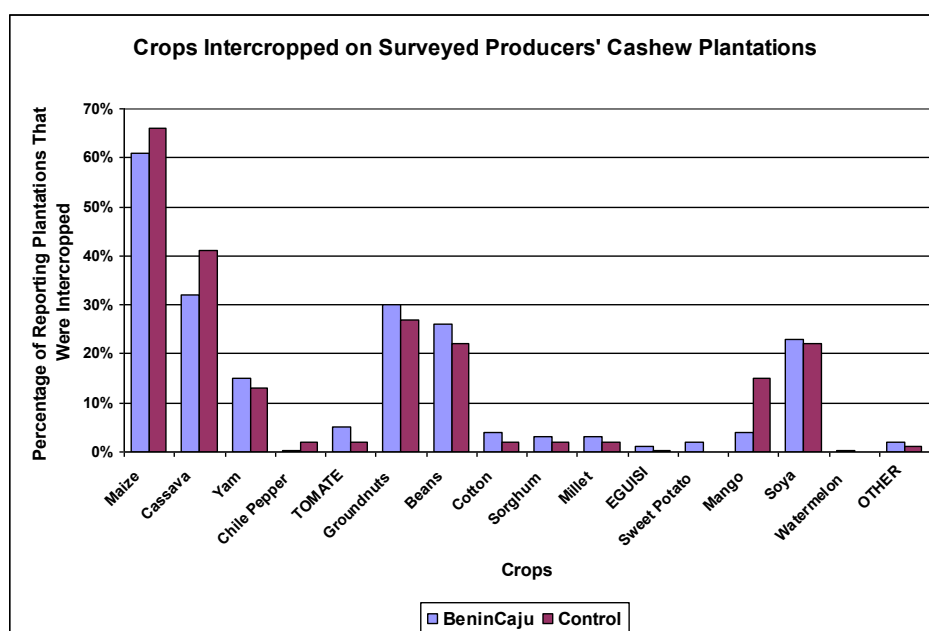


Figure 2.2-10: crops intercropped on surveyed producers' cashew plantations

Even though intercropping cashew with other crops is not practiced by many of the surveyed producers, 75% of the surveyed BeninCaju producers and 76% of the surveyed Control producers have other types of trees on their cashew plantations. The types of trees are shown in Figure 2.2-11.

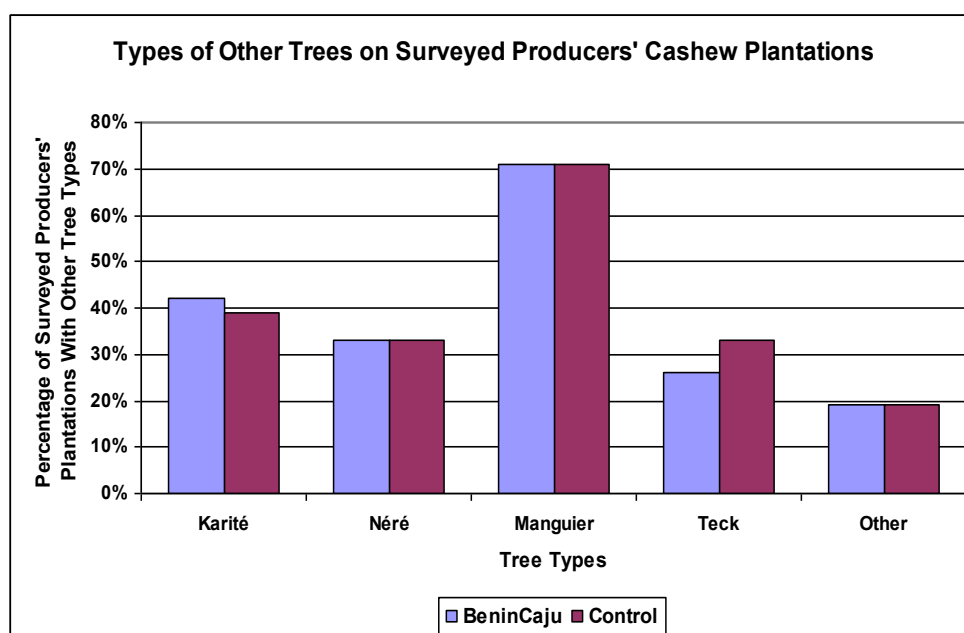


Figure 2.2-11: Other types of trees on surveyed producers' cashew plantations

The primary reason stated for keeping these other types of trees is for the sale or consumption of the fruit, mentioned by 88% of surveyed BeninCaju producers and 81% of surveyed Control producers.

The surveyed producers were asked where they got their cashew planting materials and what types of materials they used on each of their plantations. These results are presented in Figures 2.2-12 and 2.2-13, respectively. Because multiple responses were allowed, some percentages total more than 100%.

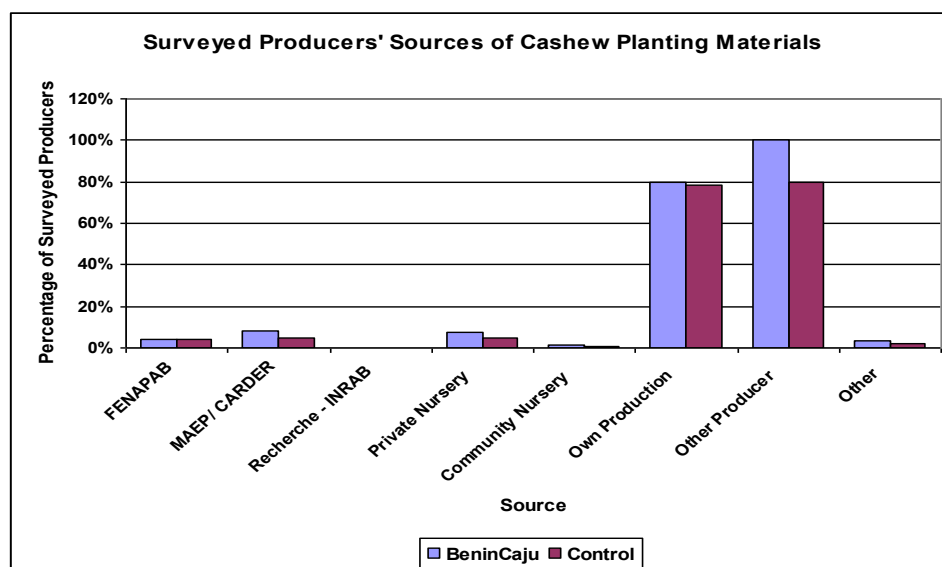


Figure 2.2-12: Surveyed producers' sources of cashew planting materials

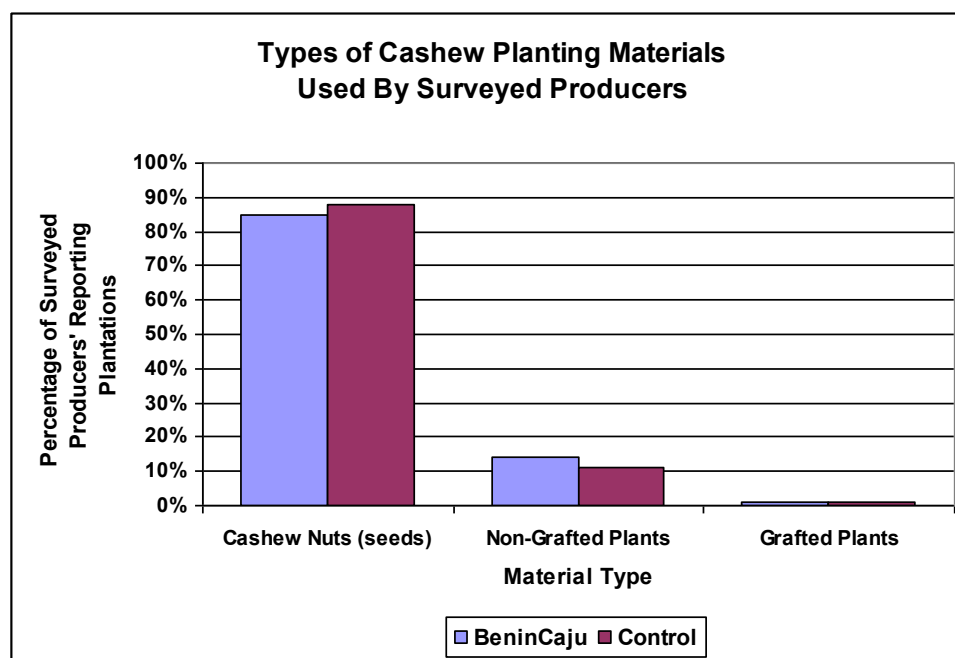


Figure 2.2-13: Types of cashew planting materials used by surveyed producers

2.3 Cashew Production, Yield, and Disposition

This section presents the Baseline findings regarding production of cashew by the BeninCaju and Control producers, the yield or productivity of their cashew farming, and the disposition of their raw cashew nuts (RCN) to sales or for other purposes.

2.3.1 Cashew Production

The total amount (kg) of RCN produced by the surveyed producers is estimated, for this report, to be the sum total of all RCN reported sold and the amounts of RCN reported used for other purposes plus those estimated to have been lost to theft and/or animal intrusion into the cashew plantations or remaining in stock. The producers' total estimated production, as defined above, averaged 697 kg for BeninCaju producers vs 466 kg for Control producers. This difference mirrors the difference in the average numbers of productive cashew trees reported by these two subgroups. The distributions of the estimated RCN production of these two subgroups are presented in Figure 2.3-1.

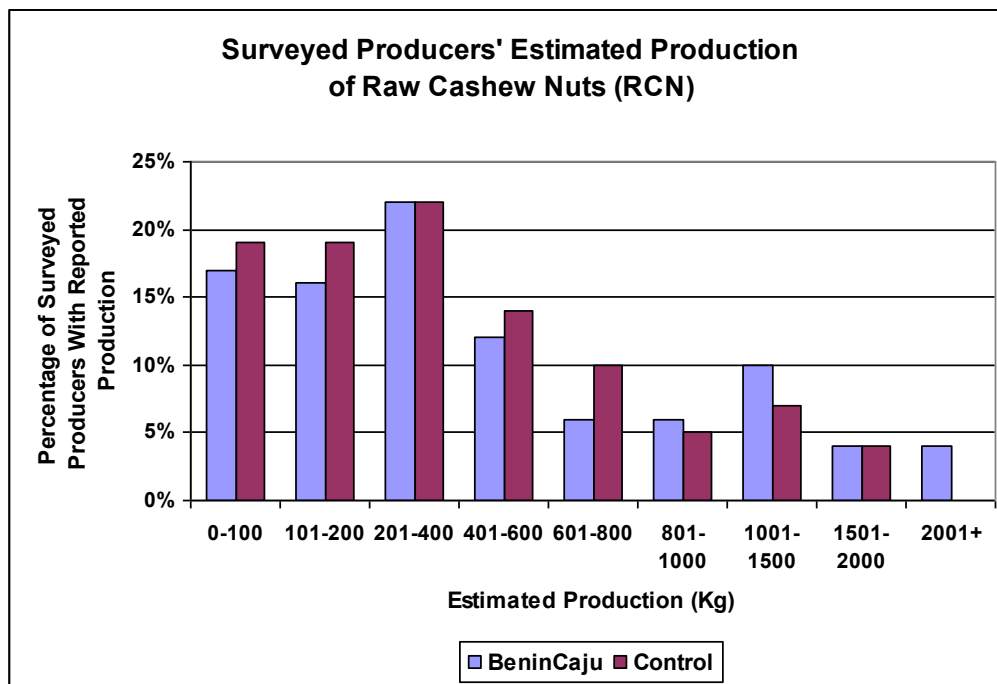


Figure 2.3-1: Surveyed producers' estimated RCN production

2.3.2 Cashew Yield

Cashew yield, or productivity, is measured as production per unit of production. *Yield*, or “productivity,” can be calculated for tree crops either in terms of *production (kg) per unit area (ha)* or *production (kg) per producing tree*. While measuring yield as *production per unit area (kg/ha)* is a standard measure for field crops, it can present some problems for tree crops. The principal problem for this stems from the fact that for smallholder producers, the tree density (the number of trees per unit area) can vary considerably from one producer to the next, thus making yield, calculated as kg/ha, highly dependent on this density - which may be a result of legacy cashew farming and may not be directly related to good agricultural practices (GAP) for cashew. In other words, cashew yield measured in terms of kg/ha may vary considerably due solely to tree density and thus say nothing about the producer’s farming practices. However, because for larger plantations, *tree counts* are sometimes necessarily estimated rather than actually counted, this too can to errors. Therefore, both measurements of yield are presented here. On average, BeninCaju producers obtained yields of 2.81 kg/tree and 225 kg/ha compared to Control producers that obtained overall average yields of 2.80 kg/tree and 199 kg/ha).

Therefore, the “units of production” considered in this report are *area (ha)* and *productive cashew tree*. Yield is measured in this report in units of *kg/hectare (kg/ha)* and *kg/productive tree*. In order to put the yield calculations into the context of plantation size and plantation tree density, the yield results presented in this section are presented for different overall numbers of trees and overall tree densities.

Figures 2.3-2 and 2.3-3 present the distributions of yield in units of kg/tree for different overall numbers of trees and densities, respectively. Figures 2.3-4 and 2.3-5 present the distributions of yield in units of kg/ha for different overall numbers of trees and densities, respectively. Note that all of these figures represent yield calculated with the *total* estimated RCN production, *total* counted/estimated number of productive cashew trees, and the *overall* calculated tree density rather than having these calculations and results at the individual plantation level.

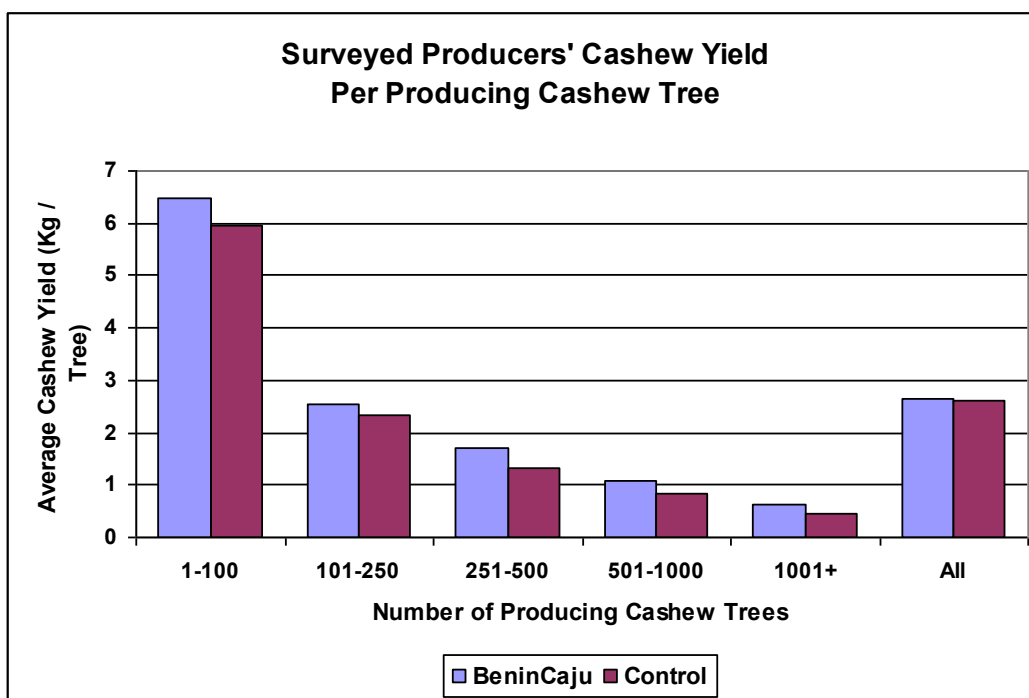


Figure 2.3-2: Surveyed producers' cashew yield per tree for different plantation sizes

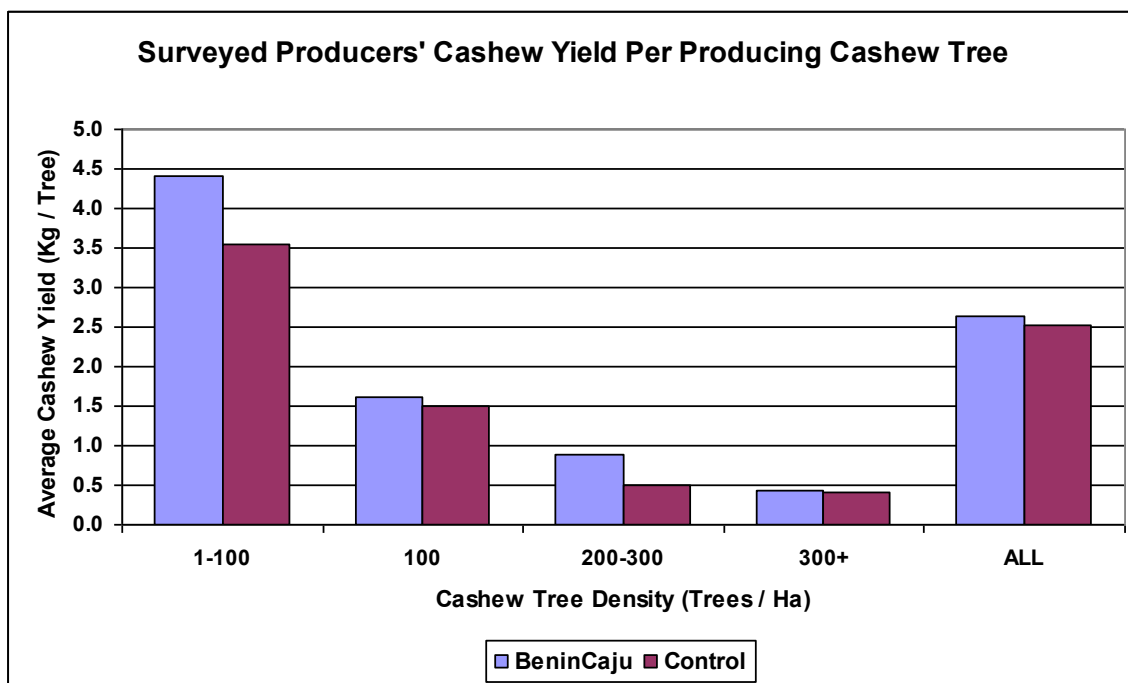


Figure 2.3-3: Surveyed producers' cashew yield per tree for different plantation densities

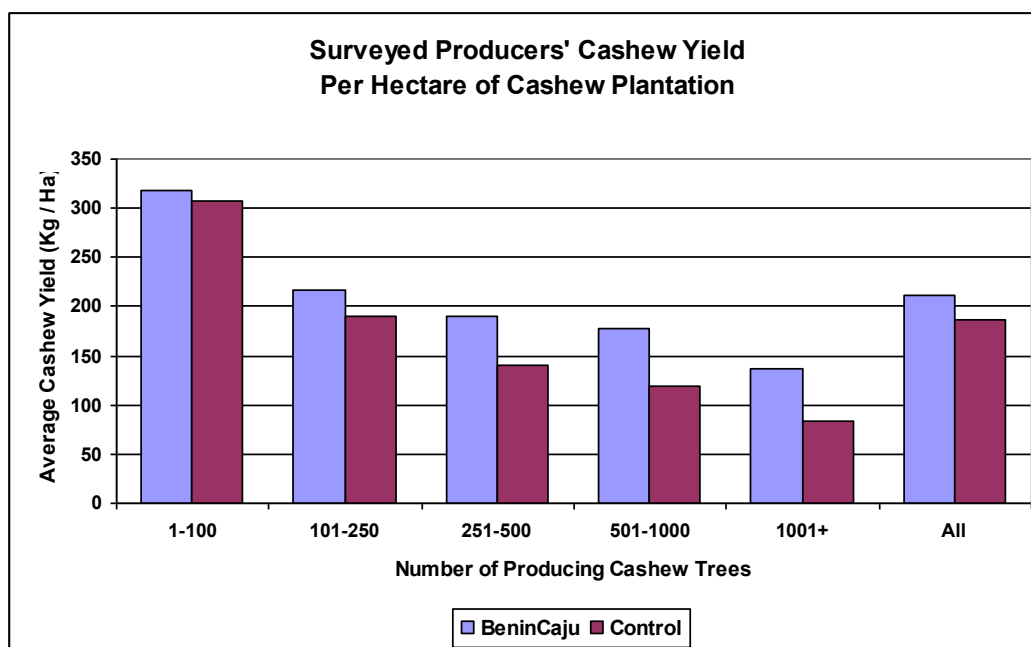


Figure 2.3-4: Surveyed producers' cashew yield per hectare for different plantation sizes

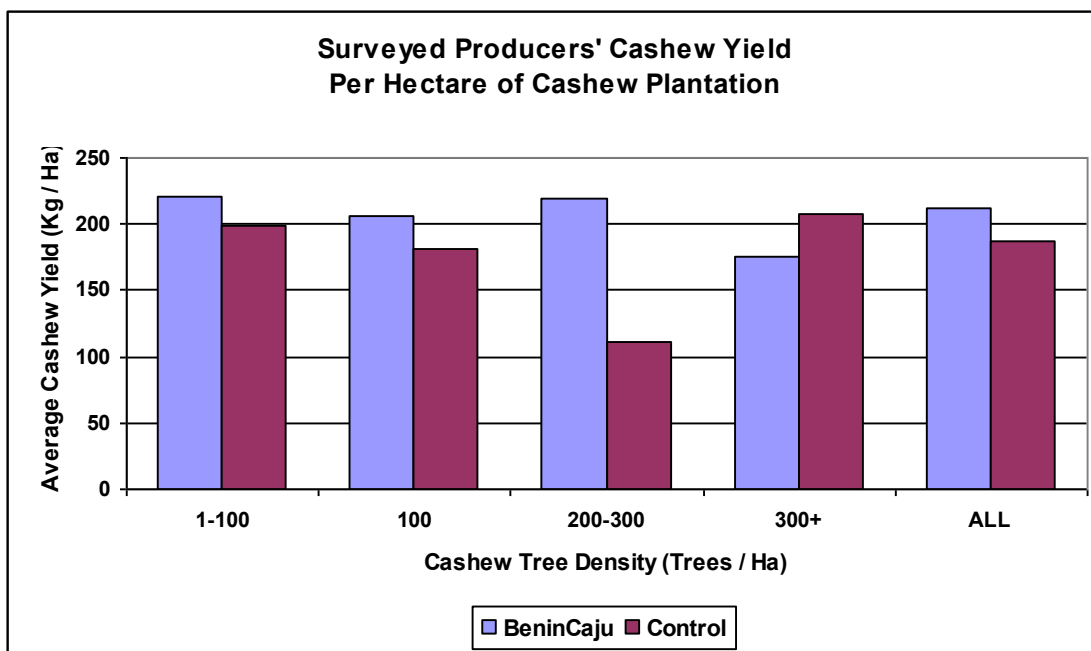


Figure 2.3-5: Surveyed producers cashew yield per hectare for different plantation densities

2.3.3 Disposition of Raw Cashew Nuts (RCN)

Apart from selling raw cashew nuts (RCN), the surveyed producers also used RCN for other purposes such as payment for labor, gifts, paying debts, etc. In addition to these deliberate dispositions of RCN,

some of the surveyed producers also reported the loss of RCN due to theft and/or intrusion of animals (cattle) into their cashew plantations. Some of the surveyed producers also reported still having some RCN in stock.

Cumulatively, the total amounts (kg) of RCN produced but not sold can be substantial for some producers. Overall, based on the reported sales and amounts of RCN otherwise disposed of, BeninCaju producers sold, on average, 68% of the RCN produced (kg) compared to 64% for the Control producers.

Most of these various dispositions were only incurred by relatively few surveyed producers. Table 2.3-1 presents these data.

Table 2.3-1: Other dispositions of surveyed producers' RCN

Disposition of RCN	BeninCaju		Control	
	Percentage With This Disposition	Average Kg of RCN Used For This Purpose*	Percentage With This Disposition	Average Kg of RCN Used For This Purpose*
Compensate workers	24%	123	31%	94
Used as gifts	12%	72	12%	46
Pay debts	13%	216	12%	139
Pay landowner	1%	68	1%	86
Last due to theft	68%	99	65%	83
Lost due to animal intrusion	57%	77	60%	72
RCN still in stock	2%	3	2%	7
Other dispositions	2%	24	0%	N/A

* Percentage calculated from base of only those producers that disposed of RCN for this purpose

Overall, 20% of BeninCaju producers and 16% of Control producers reported *no* other dispositions of RCN. For the remaining 80% of BeninCaju producers and 84% of Control producers, the average total amounts of RCN disposed of in at least one of these other ways or lost to theft or animal intrusion or still in stock were 226 kg for BeninCaju producers and 179 kg for Control producers. These quantities of unsold RCN represent, on average, *for just those producers with unsold RCN*, 38% of BeninCaju producers' total production of RCN compared to 40% of total production for Control producers. These figures appear somewhat high and reflect what may be the estimated estimates of some of the amounts of RCN used for other purposes and/or lost to theft and/or animal intrusion.

2.4 Cashew Expenses

Many of the surveyed producers incurred different types of expenses for cashew farming. These expenses mainly involved chemicals to deal with weeds and pests and for hired labor for different tasks associated with cashew farming. These expenses are summarized in Table 2.4-1. Note in this table that there were a few cases reported expenses for different expense types believed to be unrealistically high (or entered incorrectly into the database. Those few data considered to be outlier values that were believed to be in error were not included in the data in this table. The limits imposed on credible amounts for the different types of expenses are presented as footnotes to this table.

Table 2.4-1 Surveyed producers' cashew farming expenses

Cashew Farming Expense	BeninCaju					Control				
	% With Expense	% Paid Cash	% Paid In-kind	% Paid Cash and In-kind	Average Amount (FCFA) (% With Expense)	% With Expense	% Paid Cash	% Paid In-kind	% Paid Cash and In-kind	Average Amount (FCFA) (% With Expense)
Herbicide ¹	25%	100%	---	---	7,001	19%	99%	1%	---	4,276
Insecticide	10%	100%	---	---	2,624	6%	100%	---	---	1,460
Hired labor for building fire-break ²	41%	99%	1%	---	20,066	40%	90%	5%	5%	14,058
Hired labor for pruning cashew trees ³	32%	90%	10%	---	15,460	29%	91%	5%	4%	12,847
Hired labor for weeding ⁴	50%	95%	5%	---	33,346	49%	91%	3%	6%	26,289
Hired labor for harvesting cashew	26%	43%	52%	5%	15,833	29%	45%	52%	2%	14,566
Other expense	2%	89%	11%	---	452	2%	67%	33%	---	112
TOTAL EXPENSES⁵	75%	N/A	N/A	N/A	107,405	69%	N/A	N/A	N/A	73,487

1. Maximum value allowed for expense for herbicide: FCFA 150,000

2. Maximum value allowed for expense for labor for fire-break: FCFA 400,000

3. Maximum value allowed for expense for pruning: FCFA 300,000

4. Maximum value allowed for expense for weeding: FCFA 800,000

5. Maximum value allowed for total expenses: FCFA 2,000,000

While table 2-4-1 summarizes the various cashew farming expenses for the BeninCaju and Control producers as subgroups. But, cashew farming expenses will very clearly vary according to the total plantation size and the numbers of trees. Accordingly, Tables 2.4-2 and 2.4-3 present these expense data disaggregated by *total plantation size* and *total number of producing cashew trees*, respectively.

Table 2.4-2 Surveyed producers' cashew farming expenses disaggregated by total plantation size

Total Plantation Size (Ha)	Average Expense (FCFA) For Producers With This Expense											
	BeninCaju						Control					
	Herbicide	Insecticide	Labor for Firebreak	Labor for Pruning	Labor for Weeding	Labor for Harvesting	Herbicide	Insecticide	Labor for Firebreak	Labor for Pruning	Labor for Weeding	Labor for Harvesting
0-1	2211	11883	59214	19350	58361	18154	1565	10000	19931	21333	32135	22500
1-2	6056	16563	31179	31636	33129	29813	2714	25000	23818	25929	37364	23100
2-3	7779	26000	31656	44308	39457	27106	5507	8750	29131	35548	44794	35133
3-4	17028	35000	45350	54313	62333	70800	8581	23667	41000	54563	49875	47333
4-6	7947	10600	56438	56421	89931	97958	5963	15500	39563	61429	85107	56300
6-8	4720	16900	58444	75133	87361	42831	6227	36500	49500	61458	96087	59538
8+	23448	58500	226145	471750	233044	103902	7412	39250	54185	67674	68259	82467
All	9751	26358	75795	127940	85060	60650	4983	24222	35583	42951	56083	52170

Table 2.4-3 Surveyed producers' cashew farming expenses disaggregated by total number of producing cashew trees

Total Number of Productive Trees	Average Expense (FCFA) For Producers With This Expense											
	BeninCaju						Control					
	Herbicide	Insecticide	Labor for Firebreak	Labor for Pruning	Labor for Weeding	Labor for Harvesting	Herbicide	Insecticide	Labor for Firebreak	Labor for Pruning	Labor for Weeding	Labor for Harvesting
1-100	6476	15422	57214	24130	53286	25618	2311	11667	22059	24056	30239	17909
101-250	7055	26450	28171	35147	35304	27500	4024	11833	25728	37713	40824	31991
251-500	17211	17288	43500	57652	62694	71503	5007	14111	40069	37962	79380	55487
501-1000	14104	22750	55740	79121	75145	40505	11250	32333	42143	54438	65000	61688
1001+	7187	55000	190141	396121	190115	120448	4389	43750	60000	76706	75593	80077

Because different expenses were borne by different subsets of the producers, trying to get overall expense totals in these tables would be confusing and ambiguous. Therefore, *total cashew farming expenses*, averaged over *all* BeninCaju and Control producers and disaggregated by total number of trees and total plantations size, are presented in Tables 2.4-4 and 2.4-5, respectively.

Table 2.4-4: Total average cashew farming expenses for *all* surveyed producers by *total number of trees*

Total Number of Producing Trees	Average Total Cashew Farming Expenses (FCFA)	
	BeninCaju	Control
1-100	68530	27600
101-250	53781	52313
251-500	100195	99339
501-1000	115833	108714
1001+	373077	135981
All	140277	73746

Table 2.4-5: Total average cashew farming expenses for *all* surveyed producers by *total plantation size*

Total Plantation Size (ha)	Average Total Cashew Farming Expenses (FCFA)	
	BeninCaju	Control
0-1	59667	27674
1-2	43196	34083
2-3	67864	60462
3-4	124073	92819
4-6	116722	106712
6-8	125338	127066
8+	479895	145973
All	139878	73487

2.5 Cashew Sales and Income

This section of the report presents results related to the sales of Raw Cashew Nuts (RCN) and the income accrued by the surveyed producers from those sales plus the imputed in-kind income from RCN that were produced and (mostly) harvested but not sold.

2.5.1 RCN Sales

This subsection of the report presents the baseline findings regarding the sales of RCN by the surveyed producers. Some months before the actual Baseline survey - but after the initial sample lists were developed, the target producers were given a form on which they agreed to record all sales of RCN from that point forward. The data to be recorded included the date of the sale, the amount (kg) of RCN sold, the amount of money received (FCFA), and the type of buyer for that sale. From these data, the price paid per kg of RCN was calculated for each sale. Because this process was only able to begin well into the harvest and buying season (April, 2016), the survey enumerators asked the farmers to recall all RCN sales that had already taken place this season and the above details for each sale.

These data allowed a somewhat detailed assessment of the sales patterns of the surveyed producers for the 2016 harvest season. The first such detail is the average number of separate RCN sales reported for the BeninCaju and the Control producers. The average number of separate RCN sales for BeninCaju producers was 1.9 compared to 2.4 for the Control producers. The distributions of numbers of RCN sales by these two subgroups are presented in Figure 2.5-1.

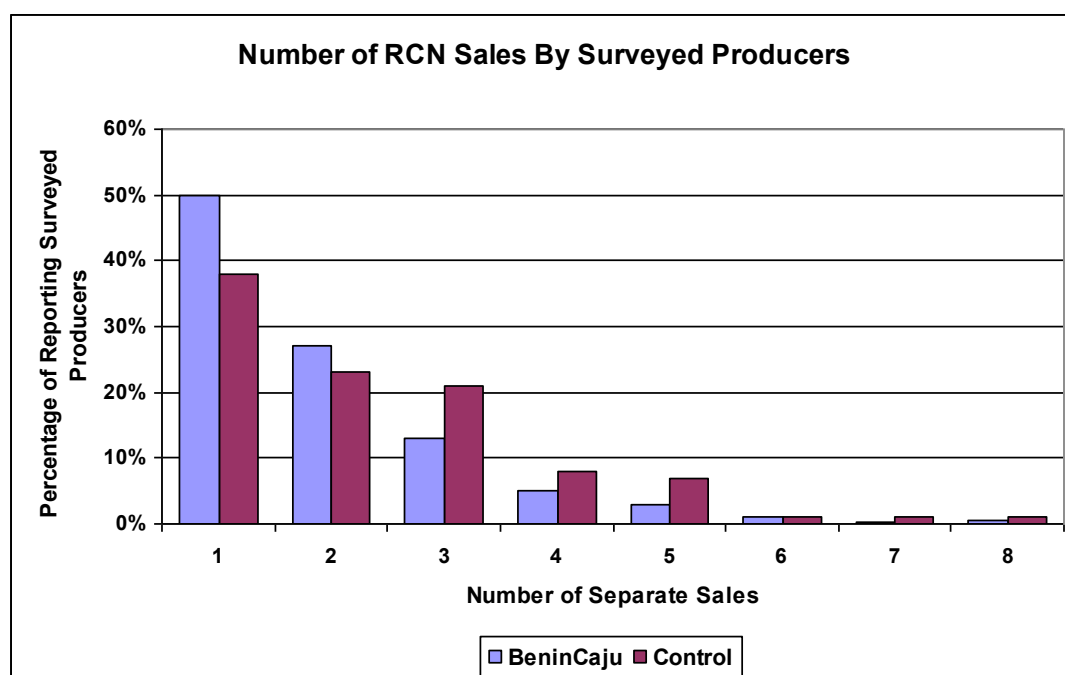


Figure 2.5-1: Number of separate sales of RCN by surveyed producers

As with most agricultural commodities, the price paid per unit amount (FCFA/Kg) varied over the buying season along with the variation in the amounts of RCN available at any given time. Figure 2.5-1 presents the data for the price paid per kg of RCN over the entire buying season. Over the entire buying season, the overall average price averaged over the 1754 total valid sales reported by the surveyed producers was FCFA 515.47 per kg of RCN. The variation in this price over the buying season, presented in half-month intervals, is shown in Figure 2.5-2.

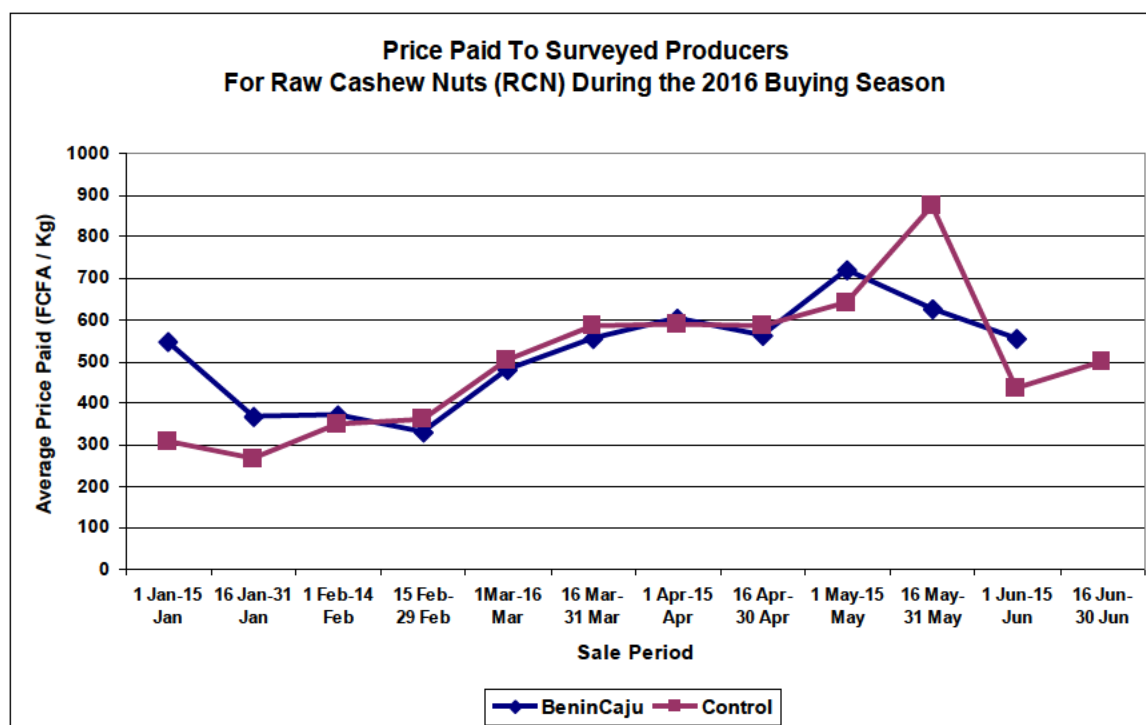


Figure 2.5-2: Average price paid to surveyed producers for RCN over the buying season

The number of separate sales of RCN that occurred during the buying season varied substantially over the season. Also, as the cashew matured on the trees and were collected by the surveyed producers, the average amount (kg) of RCN sold in each separate sale also varied considerably over the buying season. These two sets of results are presented in Figures 2.5-3 and 2.5-4, respectively.

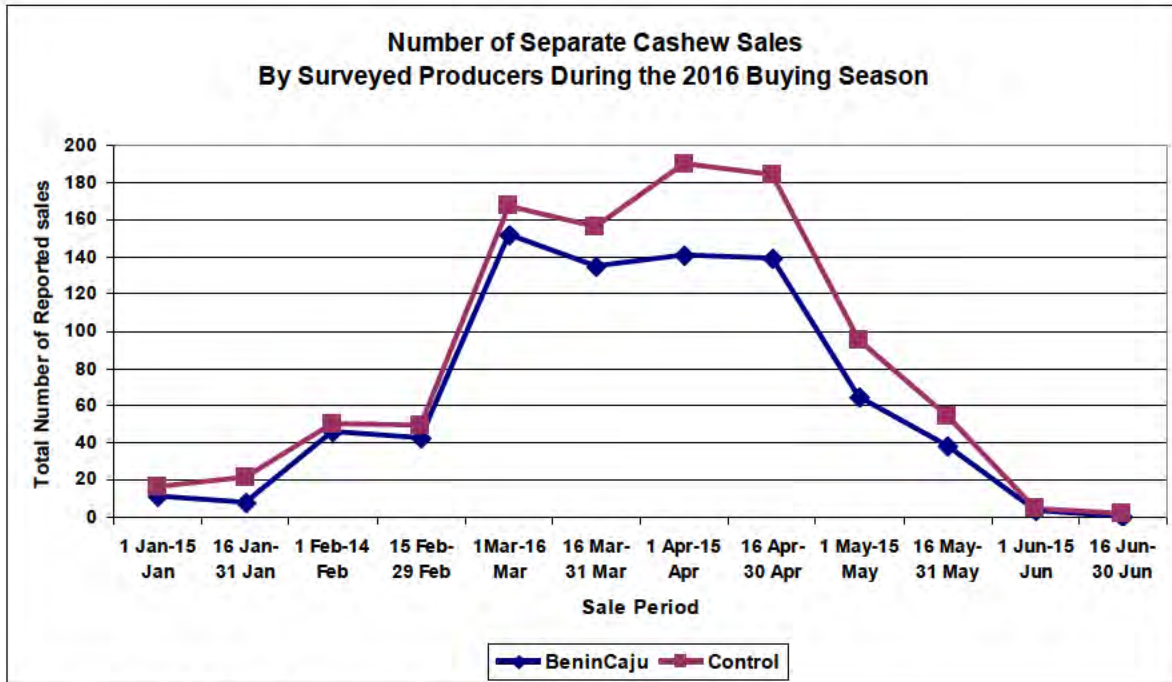


Figure 2.5-3: Number of RCN sales by surveyed producers

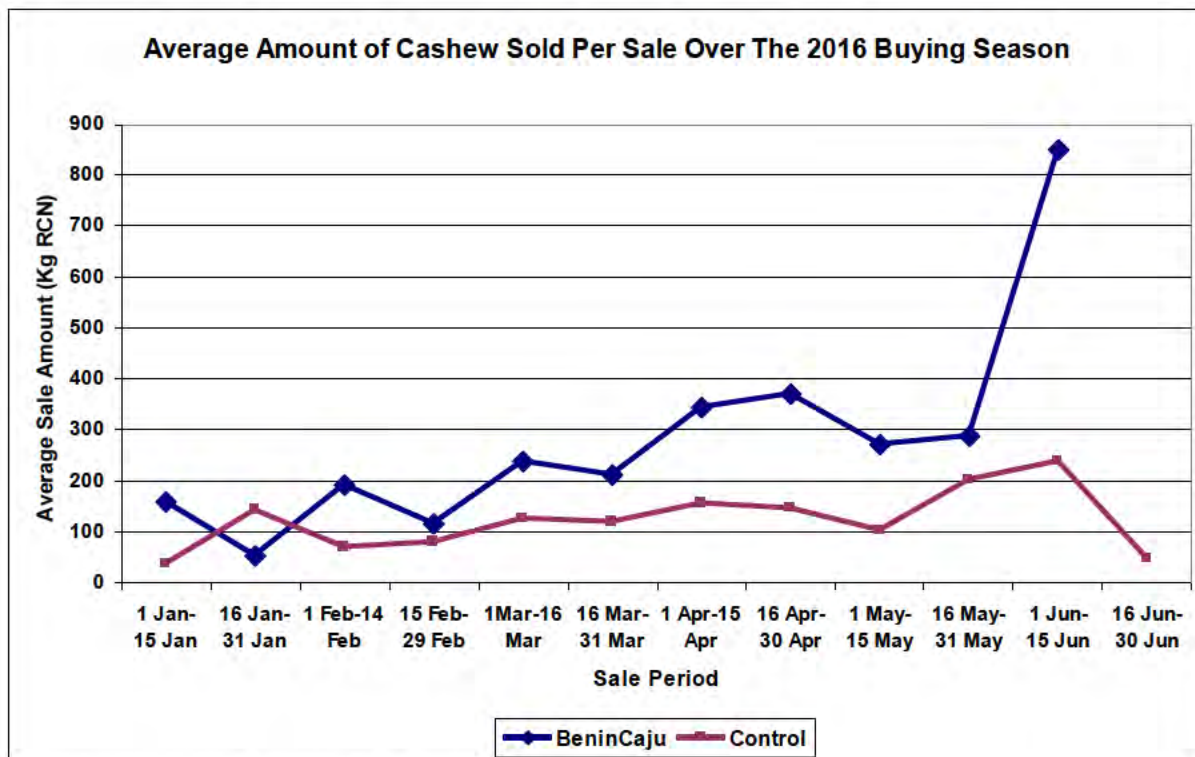


Figure 2.5-4: Average RCN amount (kg) per sale

Figure 2.5-5 shows the variation in the average amount of money received by the surveyed producers for each sale over the 2016 buying season. (Note that the data for 1-15 June are based on only 3 sales by BeninCaju producers and 4 by Control producers.)

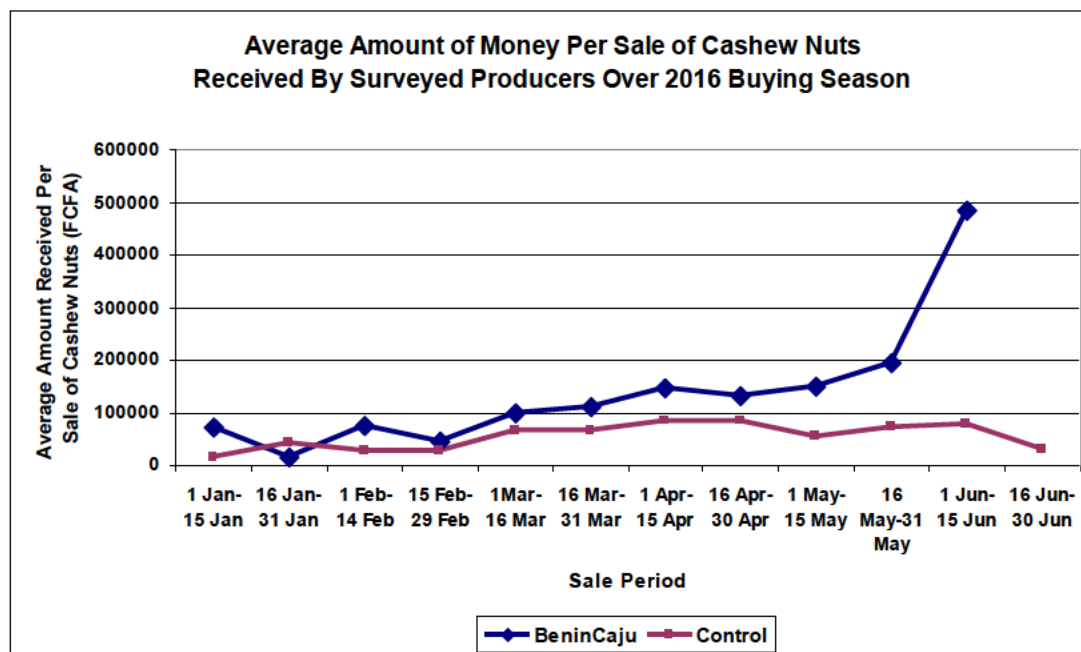


Figure 2.5-5: Average amount (FCFA) received by the surveyed producers per RCN sale

Finally, Figure 2.5-6 shows the percentages of sales to each of the principal types of buyers of RCN. Note that village level buyers are the overwhelming most common type of buyer to whom the surveyed producers sold RCN; this may be due to the relative of convenience of doing this more than anything else.

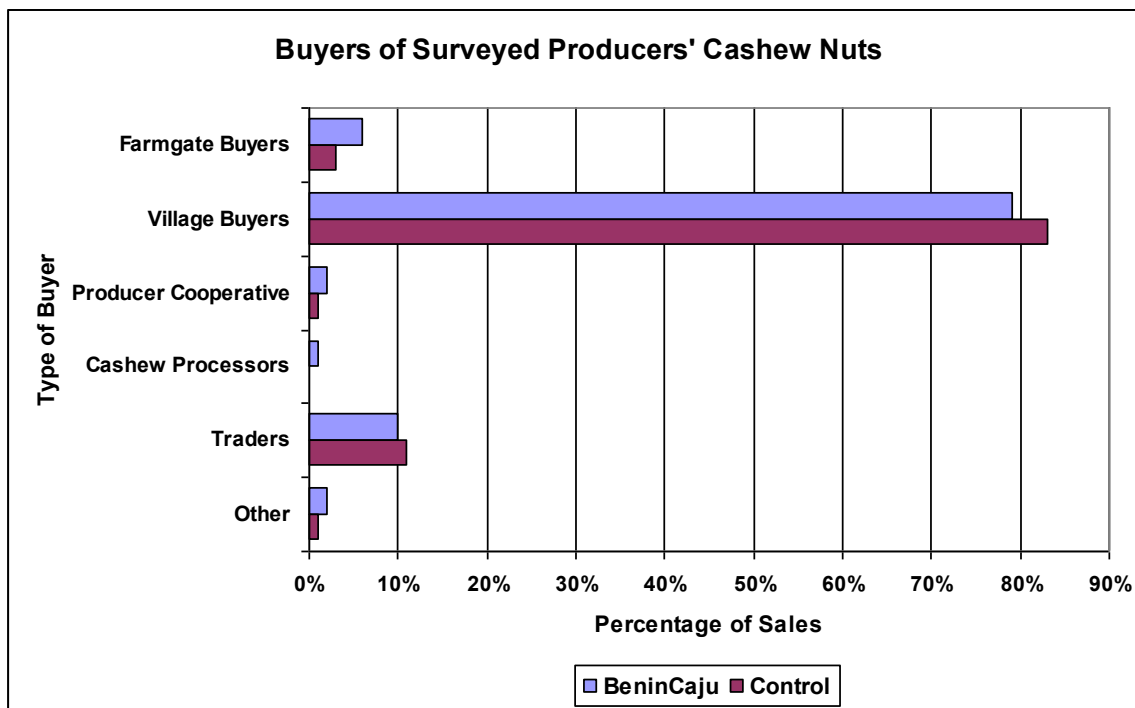


Figure 2.5-6: Types of buyers for surveyed producers' RCN

The average prices paid per kg of RCN by the different types of buyers are presented in Figure 2.5-6. Note that some of the different buyer types were involved in relatively few sales and so the calculated average price they paid is based on relatively few data points and so should be viewed with that in mind when comparing these average prices. For example, according to the sales records recorded and reported by the surveyed producers, only 7 sales (for BeninCaju and Control producers combined) were made to cashew processors compared to village buyers who were involved in 1423 of the recorded sales.

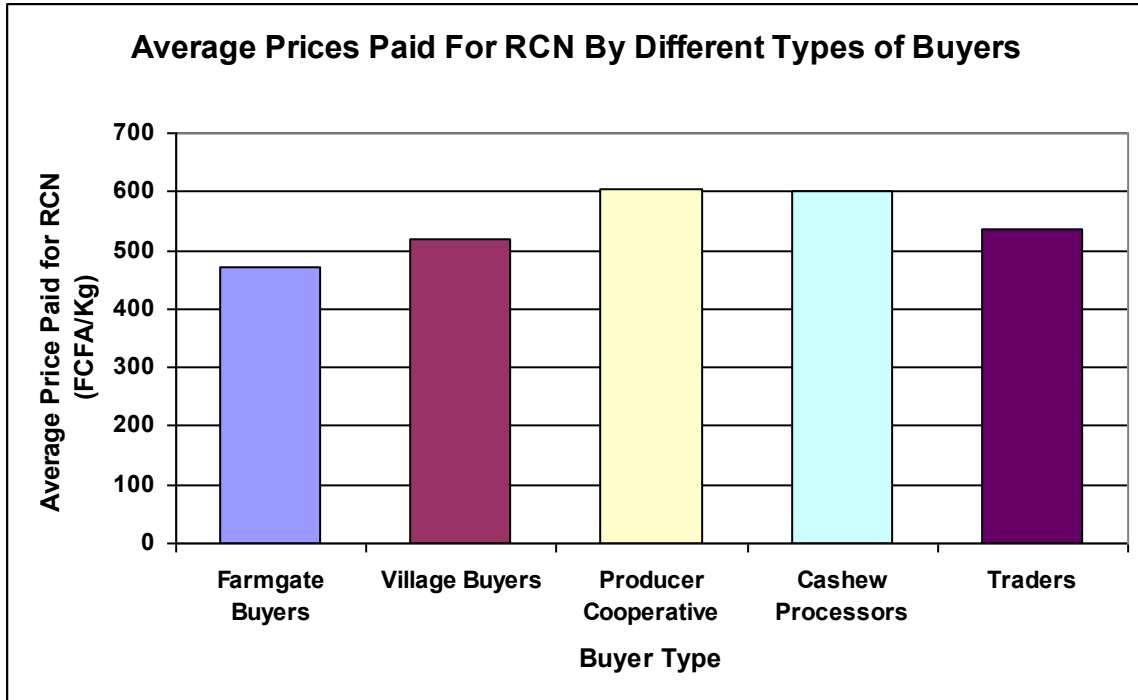


Figure 2.5-6: Prices paid for RCN by different types of buyers

2.5.2 Income from Cashew

The surveyed producers earned income from the sale of RCN, but for this study, the in-kind value of RCN that was produced but not sold (i.e., was either disposed of in other ways or lost to theft or animal intrusions), or was still in stock was also included in the producers' overall income from cashew, consistent with what was done in the African Cashew initiative (ACi) yield surveys in Benin and elsewhere. The method by which this amount of in-kind income was calculated was simply to use the average price over all 1754 reported sales by the surveyed producers as the imputed in-kind value of each kg of RCN that was produced but not sold. As noted in section 2.4.1, that amount was calculated to be FCFA 515.5 per kg of RCN.

The preponderance of income from cashew came, of course from sales of RCN. The average value of this real income from RCN sales, averaged over all surveyed producers that reported these amounts, was FCFA 220, 770 for BeninCaju producers compared to FCFA 157,090 for Control producers. The distributions of the amounts of this income earned by the surveyed producers are presented in Figure 2.5-7.

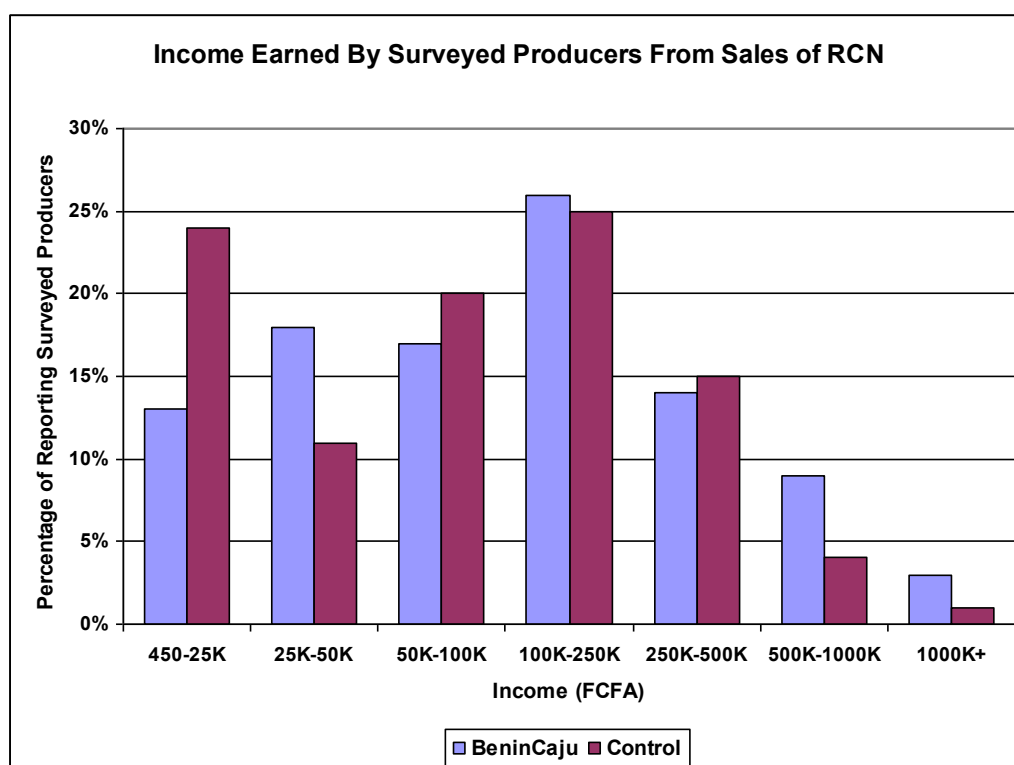


Figure 2.5-7: Surveyed producers' income from sale of RCN

In-Kind income was only imputed to those producers that reported disposing of RCN in ways other than sales, or that reported theft or loss to animals, or had some quantity of RCN still in stock. The value of these produced but unsold RCN was calculated as discussed above. Eighty percent (80%) of the

BeninCaju producers and 84% of the Control producers reported having some unsold RCN per the above definition. When the value of this RCN was calculated *for just those producers that reported having unsold RCN*, the average in-kind income from cashew for BeninCaju producers was found to be FCFA 116,490 compared to an average in-kind income of FCFA 92,196 for Control producers. The distributions of these amounts are presented in Figure 2.5-8.

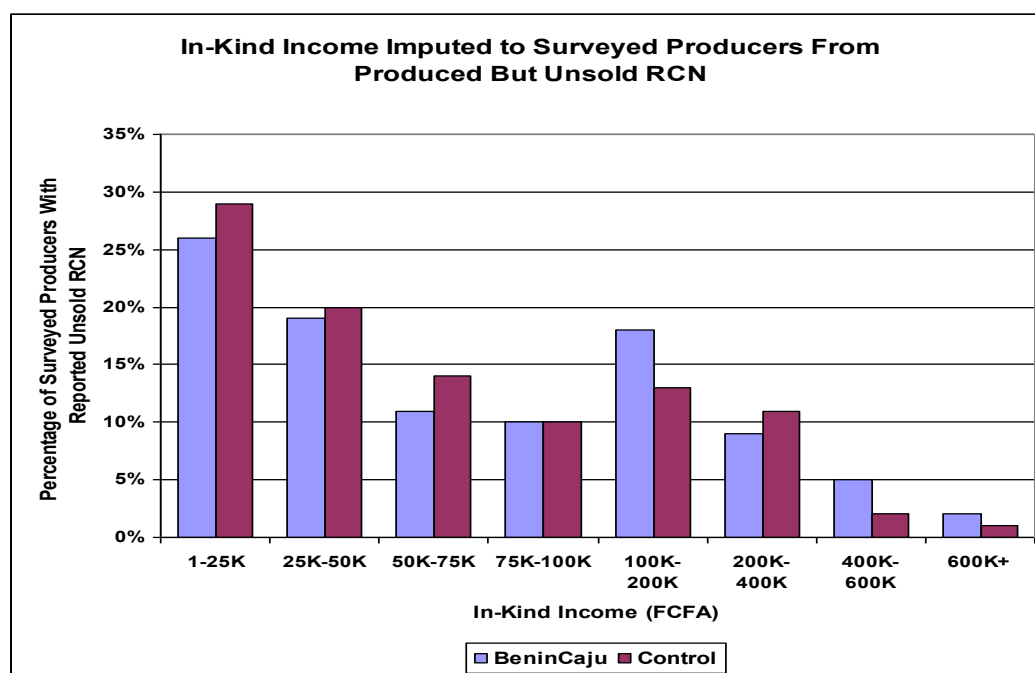


Figure 2.5-8: In-kind income from value of unsold RCN

When both types of income from cashew are combined, the total amount of gross income from cashew can be calculated. Note that some producers only reported sales income while others reported unsold RCN, other producers reported no income data at all, and others reported both kinds of income. This disparity in the numbers and specific producers reporting each type of income means that *average gross income* cannot be accurately estimated as the sum of *average income from sales* and *average in-kind income*. However, when the total amount of gross income from cashew is calculated the average for BeninCaju producers was found to be FCFA 304,282 compared to FCFA 223,419 for Control producers. The distribution of gross income from cashew for only those surveyed producers that reported some gross income from cashew were included in these calculations and results, presented in Figure 2.5-9.

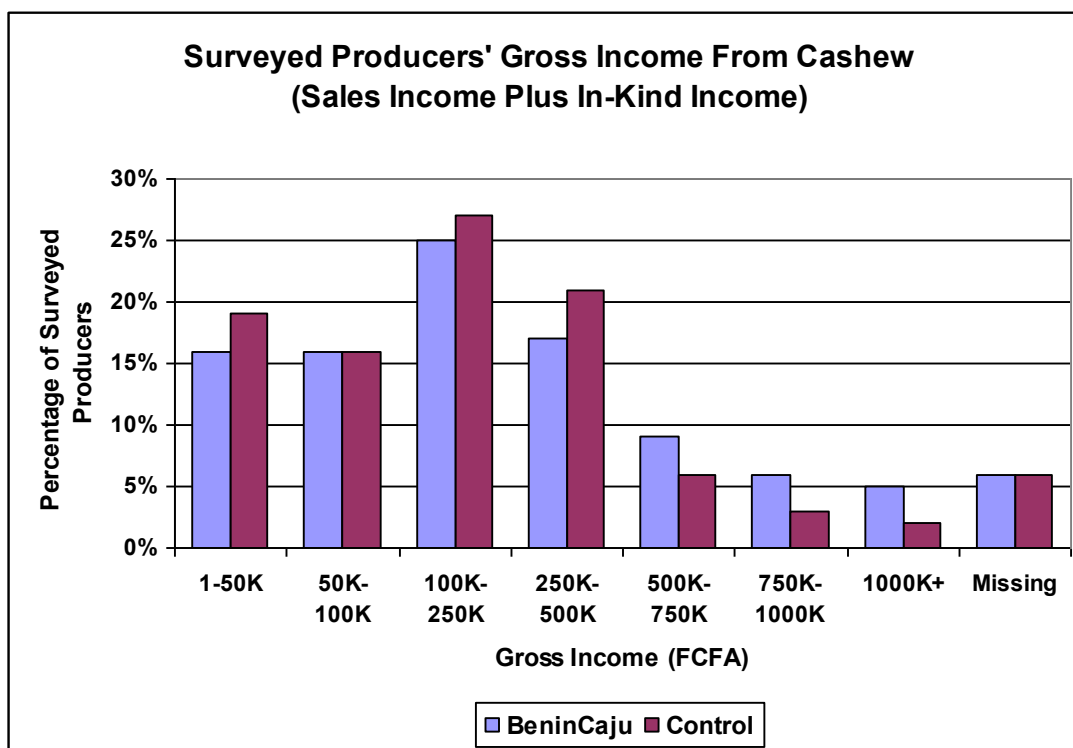


Figure 2.5-9: Surveyed producers' gross income from cashew

Once *gross income from cashew* and *reported cashew farming expenses* are known, *net income from cashew* can be calculated. However, because of many cases in which no gross income was reported (i.e., the producer did not want to answer or genuinely earned no income from cashew), only those cases with some non-zero gross income were included in the following calculations of net income. This decision was made to avoid deducting real, non-zero cashew expenses from unreported gross income (for which gross income was set = FCFA 0), resulting in excessively large negative values of calculated net income, i.e., *losses from cashew farming*. While it is certainly possible, and even likely, that some of the surveyed producers lost money on their cashew farming, excessively large calculated losses were considered erroneous and were also omitted from these calculations. Thus, only net incomes larger than FCFA - 5,000,000 (i.e., losses of FCFA 5,000,000) were included in these figures and average values.

The average overall net income for those producers that met the above constraints was FCFA 208,461 for BeninCaju producers and FCFA 163,913 for Control producers. These net income distributions are presented in Figure 2.5-10. Note in this figure that, according to the responses given by the surveyed producers, approximately 18% of BeninCaju producers and 14% of Control producers *lost money on their cashew farming in 2016*.

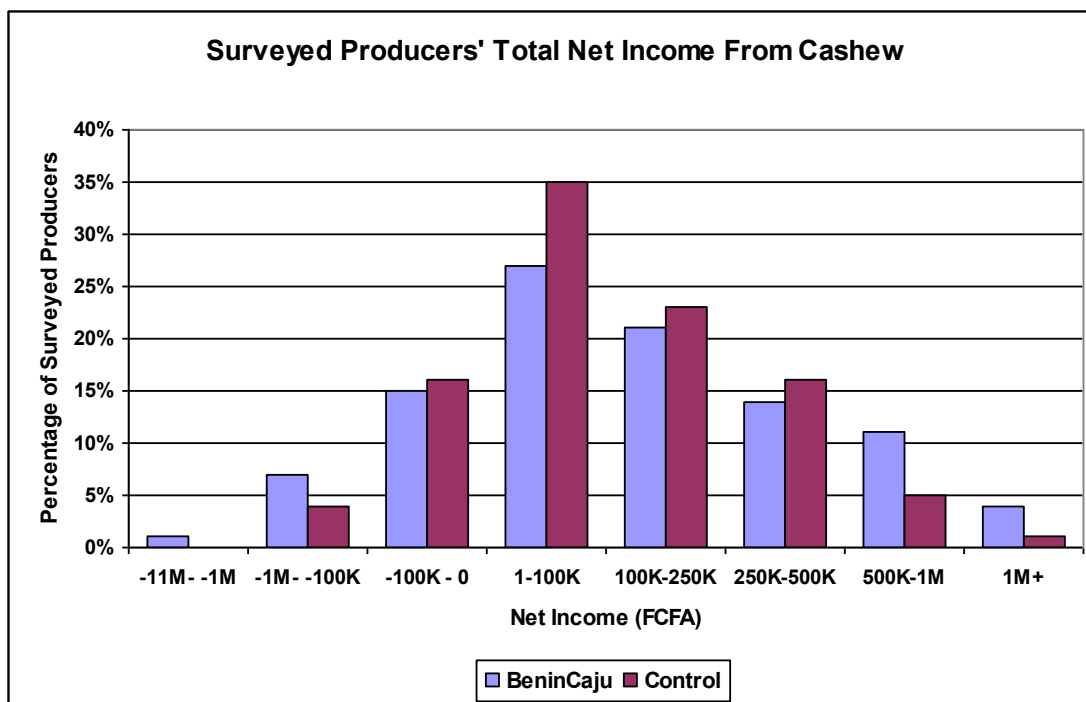


Figure 2.5-10: Surveyed producers' net income from cashew

Obviously, gross or net income depend critically on the number of producing cashew trees, so it is useful to consider *net income per producing tree* as was done for Figure 2.5-11. The average amount of net income earned per producing trees was FCFA 862 for BeninCaju producers and FCFA 1014 for Control producers.

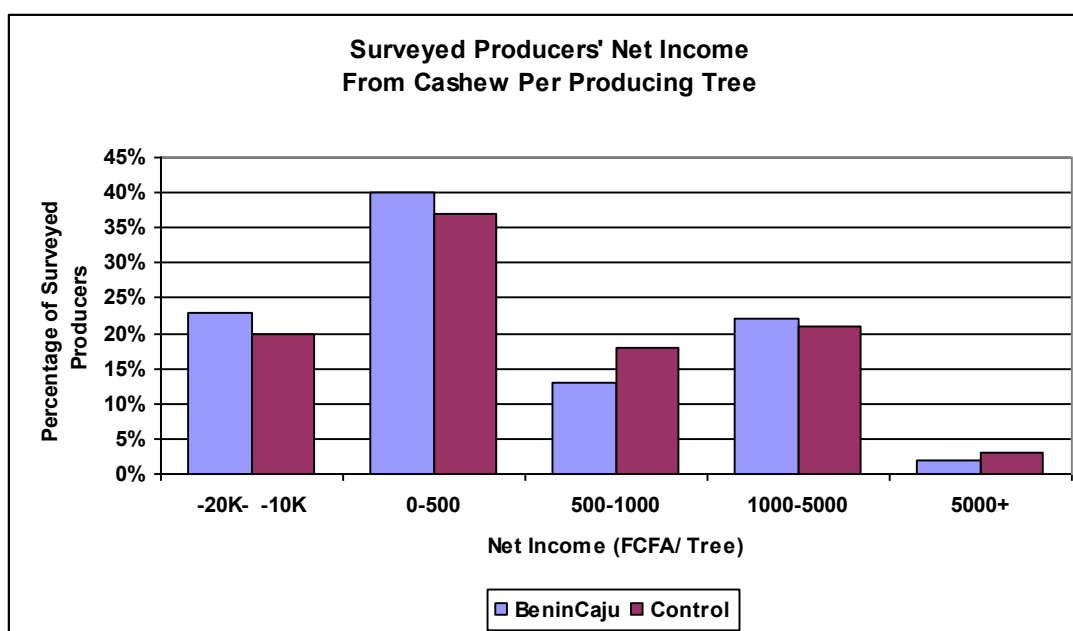


Figure 2.5-11: Net income per producing cashew tree

In order to put the results from the above figure into context, the number of trees needs to also be considered since, as has been seen for other tree cash crops, as the total number of trees increases, yield and income per tree decreases. Figure 2.5-12 shows the distribution of *net income per tree* for different total numbers of producing cashew trees and shows that as the overall number of trees increases, income per tree *decreases* for both producer subgroups. This counter-intuitive finding is possibly the result of limits on household labor, or to an economic decision to accept a lower gross income per tree - since there are more trees and the overall amount of income will be higher - and to prioritize other crops (principally the staple food crop) for investment of household labor and/or money.

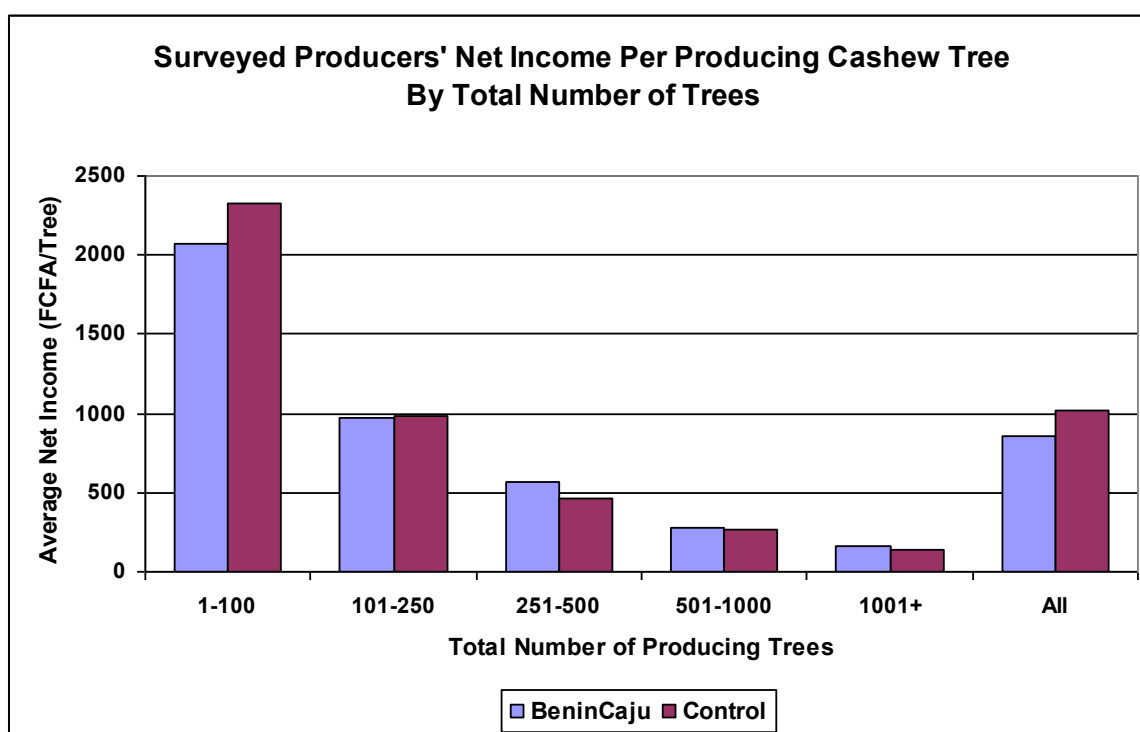


Figure 2.5-12: Net income per tree disaggregated by total number of producing trees

Another dimension that is useful to consider is *net income per hectare of cashew plantation*. The distributions of these data are presented in Figure 2.5-13. These data were generated by considering the total area of each surveyed producers' cashew areas together, as a single area. The average net income per hectare of cashew plantation was found to be FCFA 75,389 for BeninCaju producers vs FCFA 79,238 for Control producers. As with *net income per tree*, *net income per hectare of cashew* can also be disaggregated, but in this case by the *total plantation size*. These results are presented in Figure 2.5-14

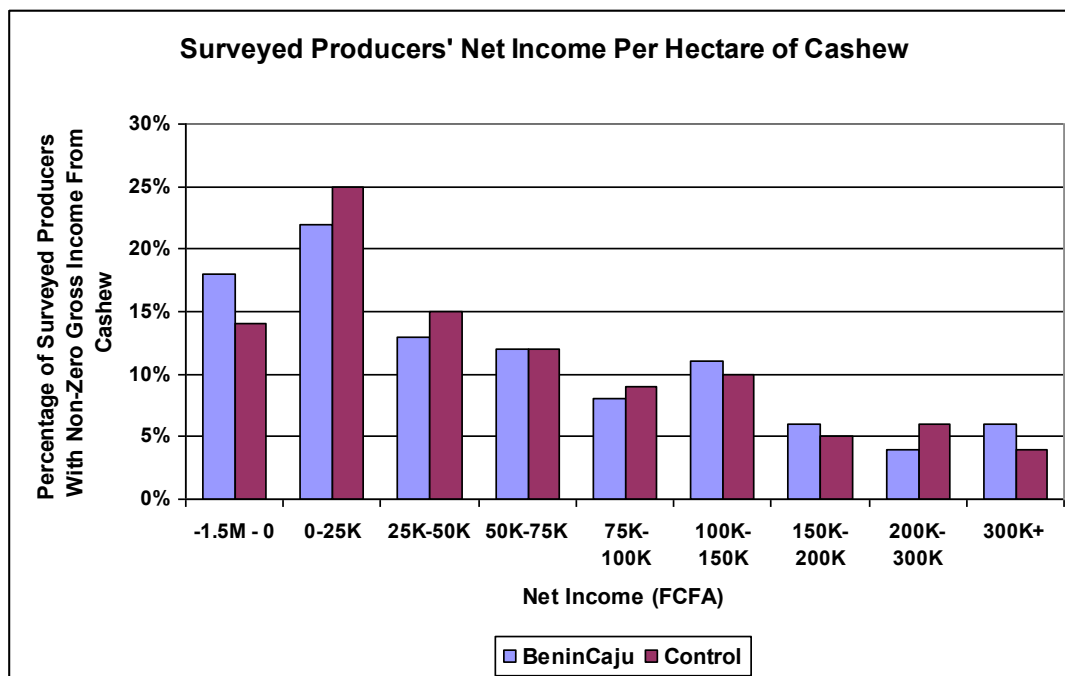


Figure 2.5-13: Net income per hectare of cashew

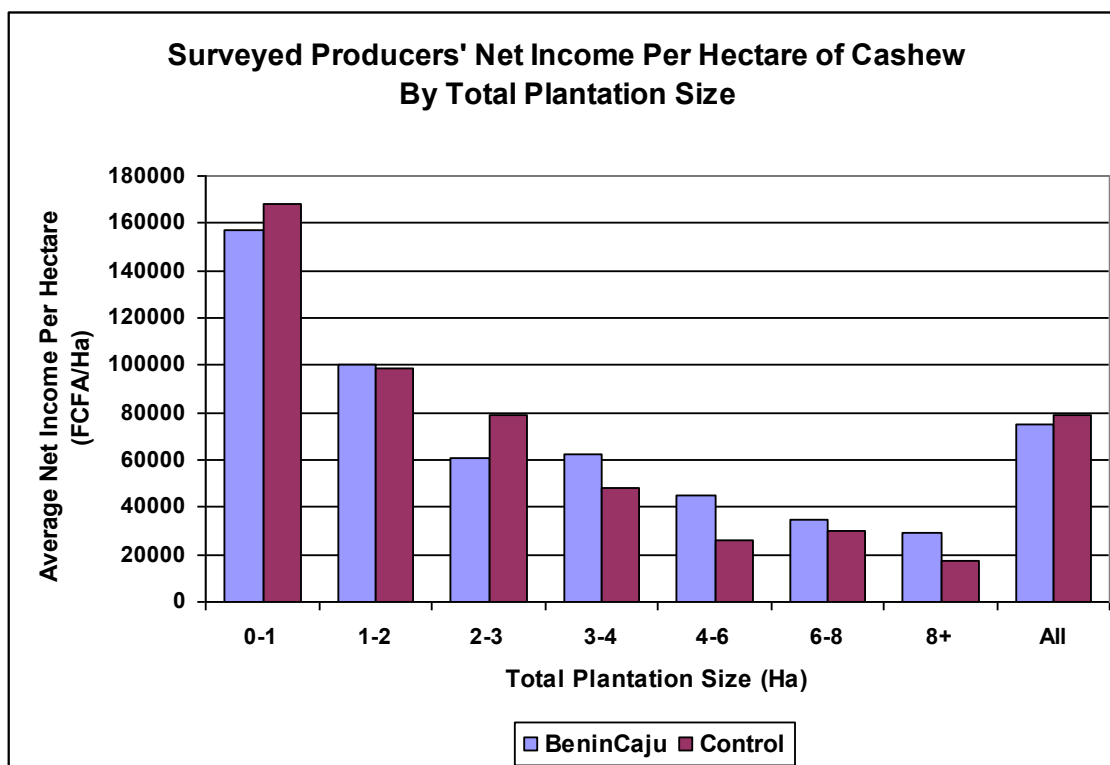


Figure 2.5-14: Net income per hectare of cashew disaggregated by total plantation size

2.6 Cashew Production Training and Practices

2.6.1 Good Agricultural Practices (GAP) for Cashew

The surveyed producers were asked a number of questions about any *direct* (face-to-face) and/or *indirect* training they may have had on Good Agricultural Practices (GAP) for cashew from 2010-2016. Thirty-Nine percent (39%) of the BeninCaju producers reported receiving such training compared to 32% of the Control producers. The sources of this training are shown in Figure 2.6-1; note that the percentages shown in this figure are calculated from the base of just those producers that reported receiving this training. Note also that the producers could name more than one source of this training so the percentages may total more than 100%.



Figure 2.6-1: Surveyed producers' sources of direct training on GAP

Note that roughly 5% of the producers that received this training reported receiving it from sources other than those listed. There were a diverse group of other sources listed, only one of which were named by more than a very few farmers. That one source was the DEDRAS (NGO), named by 4% of BeninCaju producers and 5% of Control producers.

The most recent year in which most of the surveyed producers received this training was 2015 as shown in Figure 2.6-2.

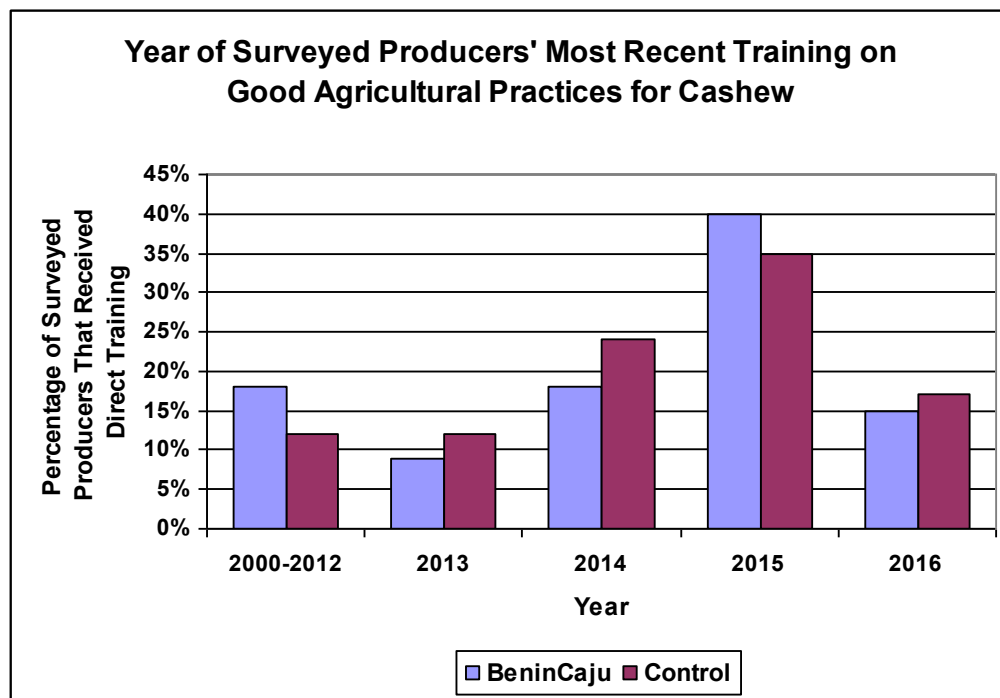


Figure 2.6-2: Most recent year of surveyed producers' direct training on GAP

The surveyed producers were also asked whether they had received any *indirect* training or gotten any other information on GAP for cashew; sixty-three percent (63%) of the BeninCaju producers and 70% of the Control producers reported having receiving indirect training and/or other information about GAP for cashew. The primary sources of this indirect training and/or information are presented in Figure 2.6-3.

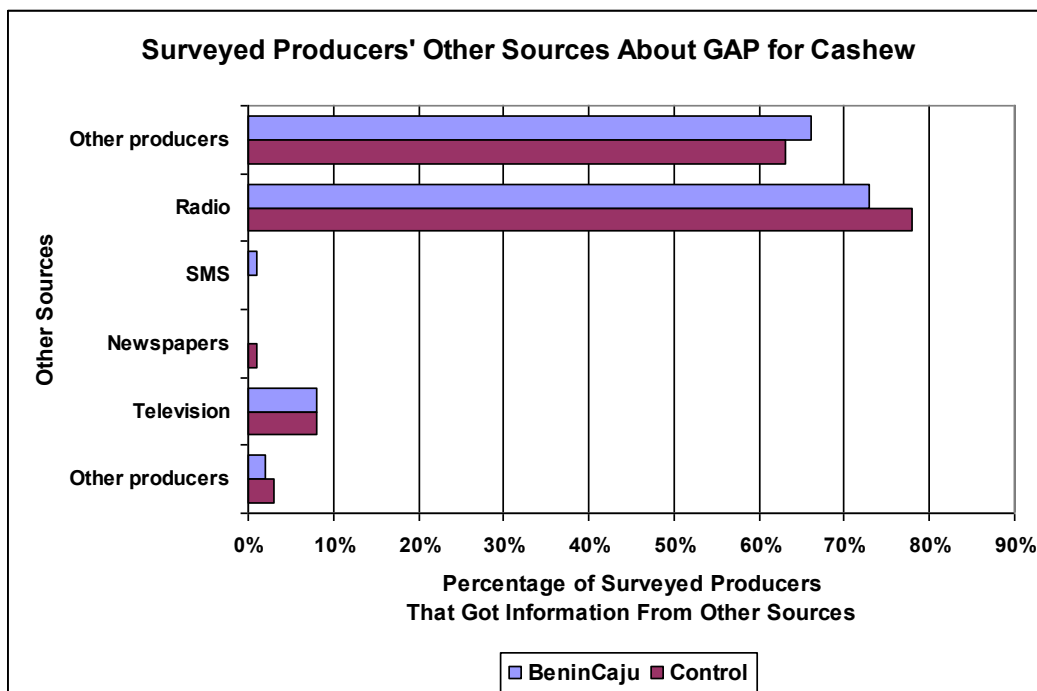


Figure 2.6-3: Surveyed producers' other sources for information about GAP for cashew

The specific GAP topics learned about from these various indirect sources are presented in Figure 2.6-4.

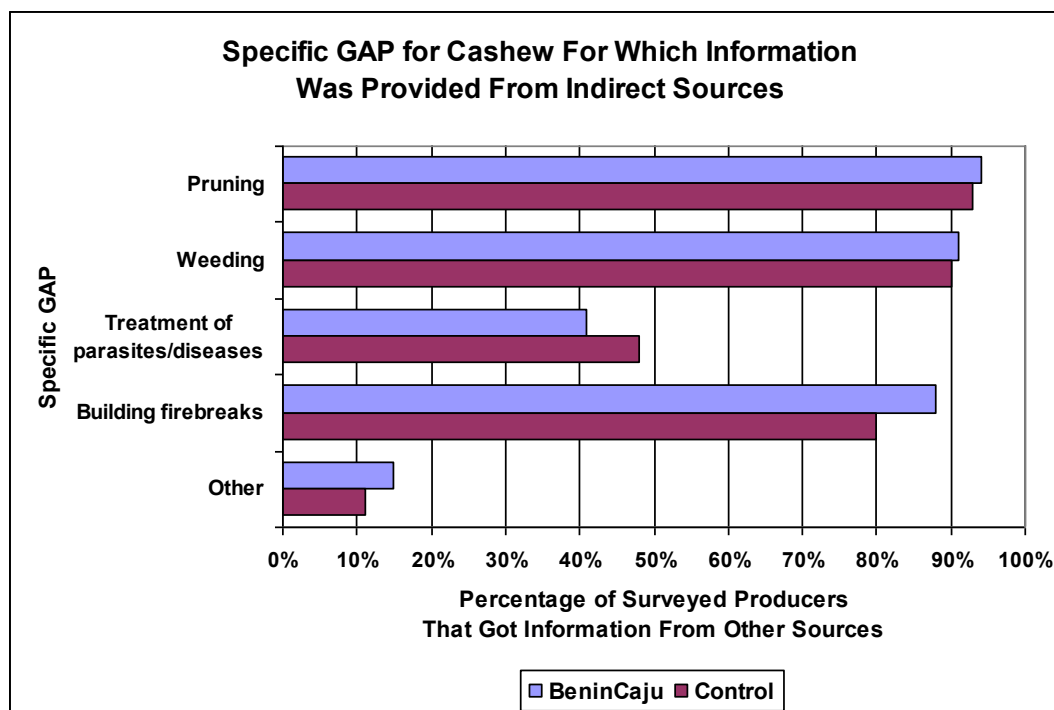


Figure 2.6-4: Specific GAP for cashew for which surveyed producers got information from indirect sources

The producers were asked a series of questions about different specific GAP for cashew; the specific GAP mentioned include *pruning*, *weeding*, *protection of the plantations against bushfires*, and *protecting cashew trees against pests and diseases*. In response to questions about *pruning*, 84% of the BeninCaju producers' plantations and 76% of the Control producers' plantations had been pruned at some time. The most recent times that these plantations were pruned are shown in Figure 2.6-5.

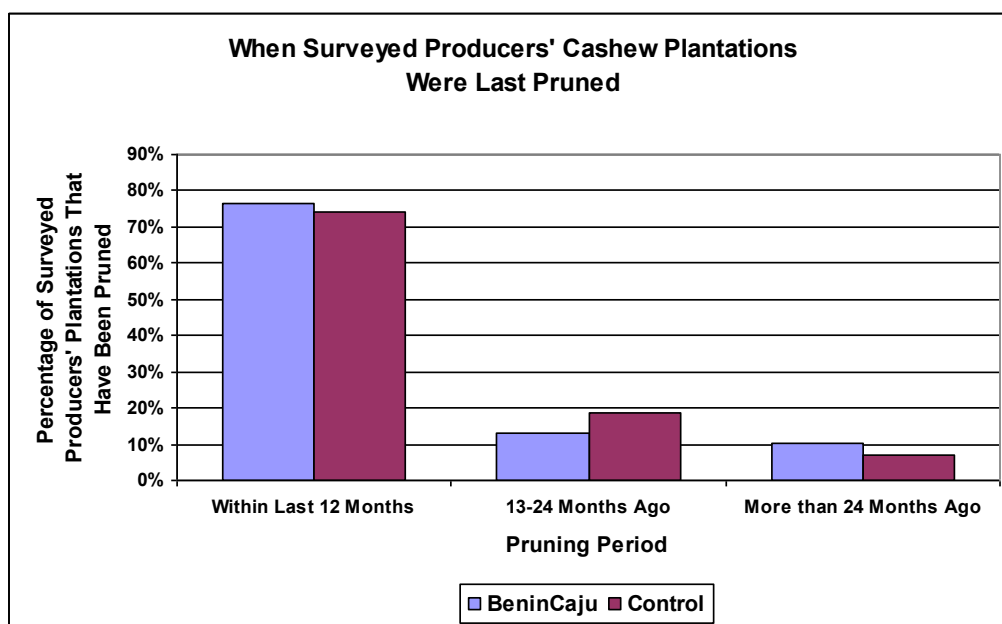


Figure 2.6-5: Most recent time surveyed producers' cashew trees were pruned

When the producers were asked the reasons that some of their plantations had not been pruned, the most common reason given was that pruning was not necessary. The most common responses given for the different plantations not having been pruned are shown in Figure 2.6-6.

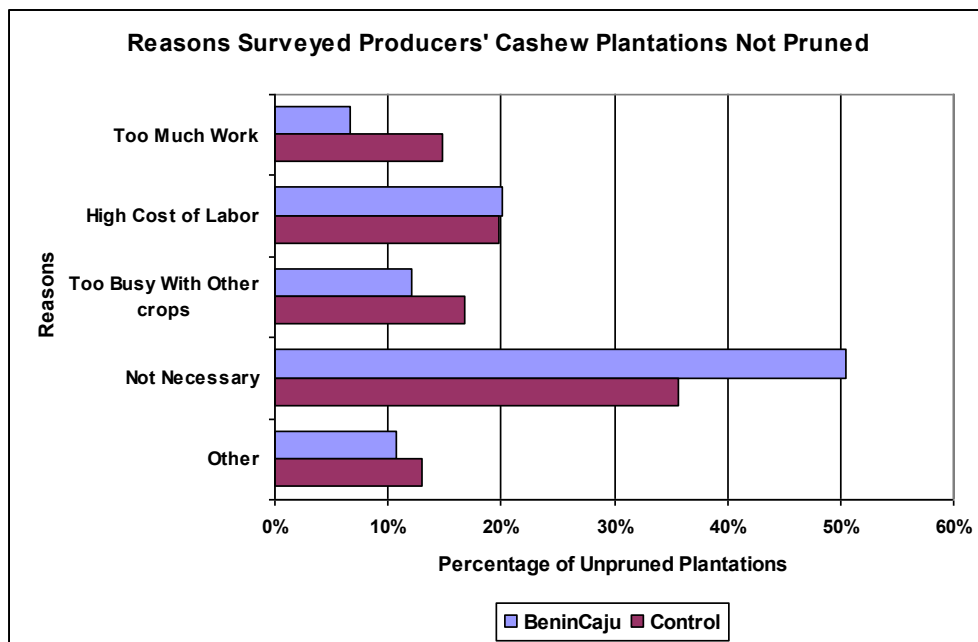


Figure 2.6-6: Reasons cashew plantations were not pruned

The surveyed producers were also asked about *weeding*. For both BeninCaju and Control producers, 87% of their plantations had been weeded within the last 12 months. The numbers of times these plantations had been weeded during this period are shown in Figure 2.6-7.

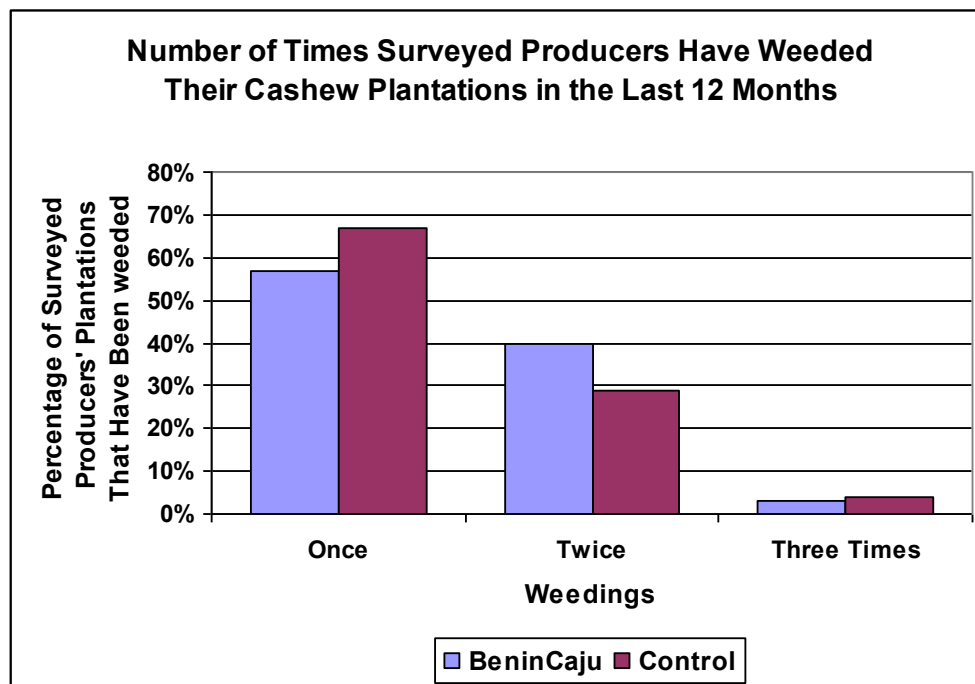


Figure 2.6-7: Number of weedings in the last 12 months

The producers were also asked how they disposed of the weeds that resulted from weeding their cashew plantations. Their responses are shown in Figure 2.6-8. Note that the most common disposition was to leave the uprooted/cut weeds where they were.

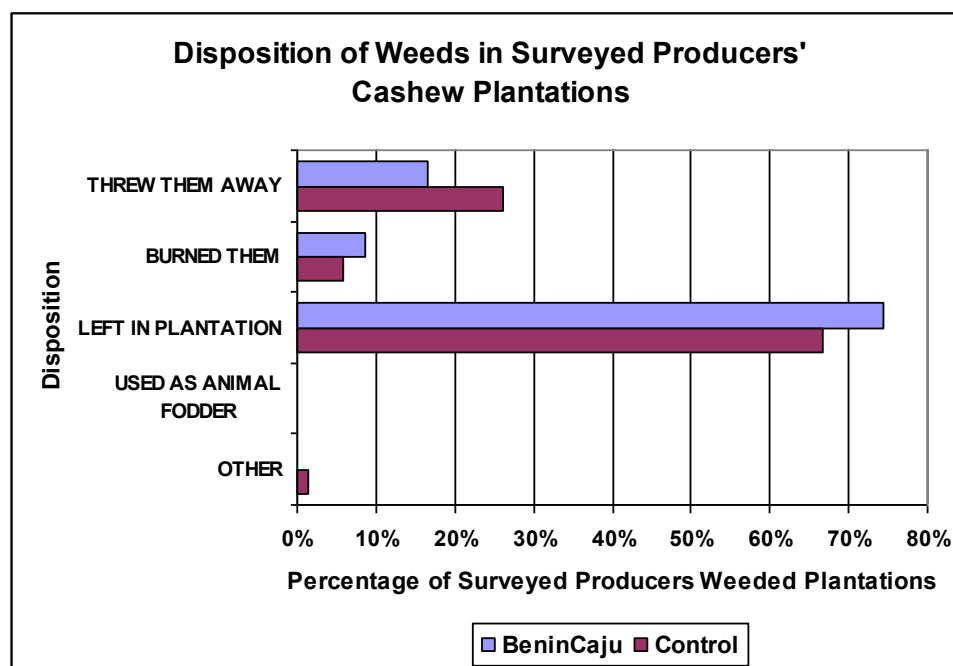


Figure 2.6-8: Disposition of weeds resulting from weeding cashew plantations

Despite the producers reporting that over 40% (BeninCaju: 42%, Control: 44%) of their total cashew plantations had been burned by bushfires at least once, only 87% of BeninCaju producers' cashew plantations and 84% of Control producers' plantations were protected against bushfires. The reasons given for not protecting the other plantations are shown in Figure 2.6-9. Again, the most commonly given reason was that, for these plantations, at least, it was not necessary.

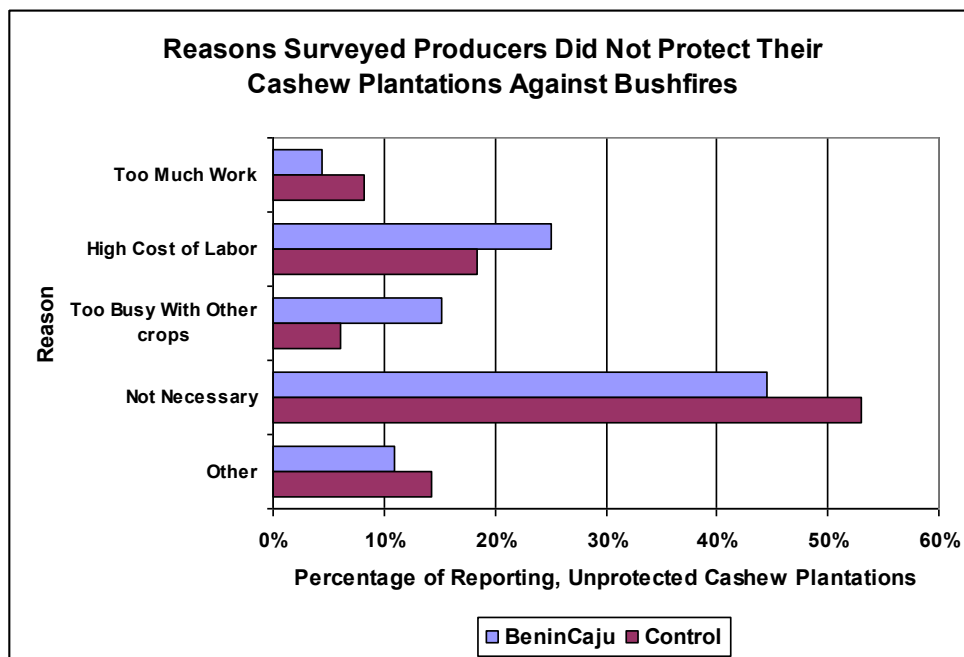


Figure 2.6-9: Reasons given by surveyed producers for not protecting plantations against bushfires

The surveyed producers were asked about pests; on over three-quarters (77%) of the BeninCaju producers' plantations, pests were noticed on the cashew trees compared to 80% of Control producers' plantations. The overall numbers of trees that were reported affected in the different plantations are shown in Figure 2.6-10.

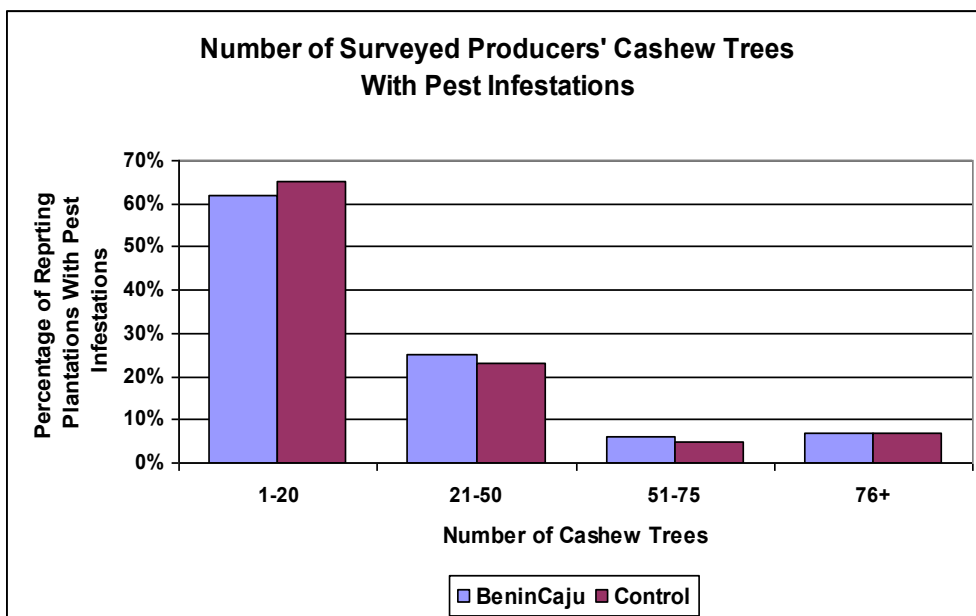


Figure 2.6-10: Numbers of surveyed producers' cashew trees with pest infestations

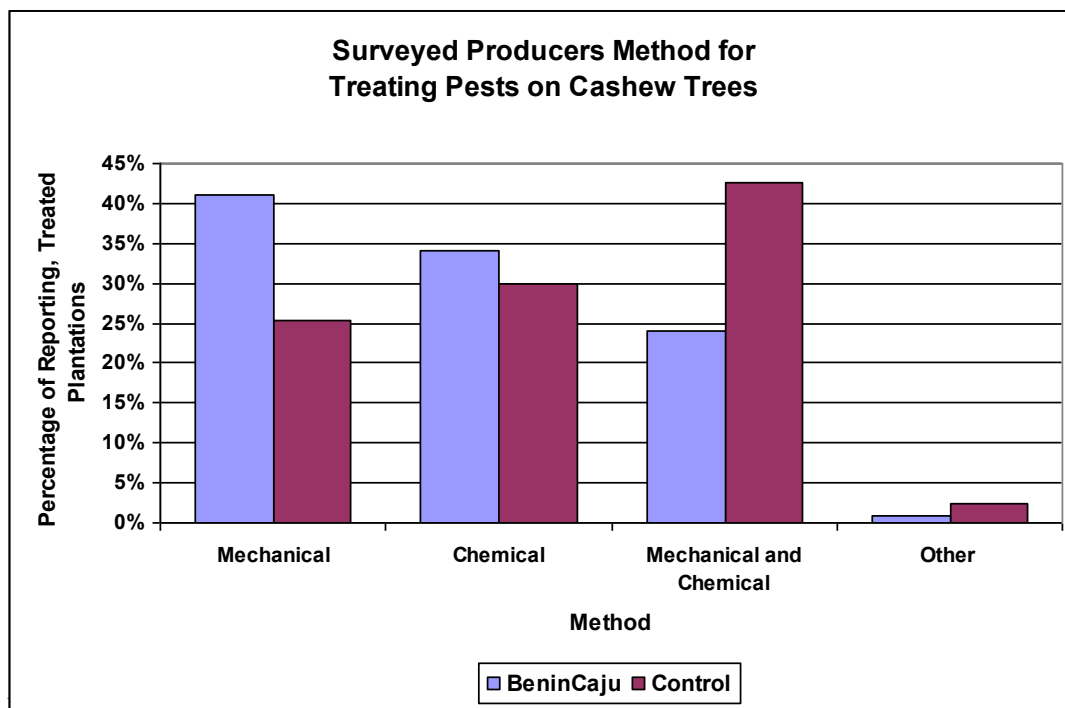


Figure 2.6-11: Surveyed producers methods for treating cashew trees against pests

Only 19% of BeninCaju producers' plantations and 13% of Control producers' plantations were treated against pests, either as a prophylaxis or curative measure. The means by which these cashew plantations were treated are shown in Figure 2.6-11; the numbers of times they were treated are shown in Figure 2.6-12.

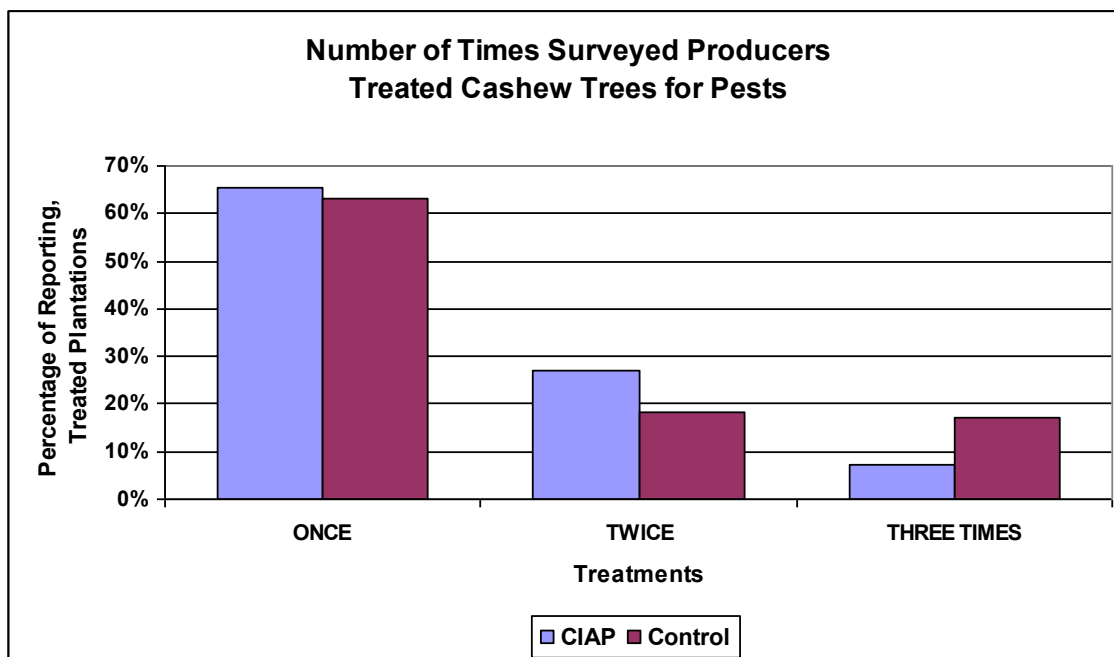


Figure 2.6-12: Number of times cashew plantations were treated against pests

Finally, the reasons surveyed producers gave for not treating the untreated cashew plantations are presented in Figure 2.6-13. Note that many of the producers reported not knowing which products to use, something that BeninCaju training can address (for BeninCaju producers).

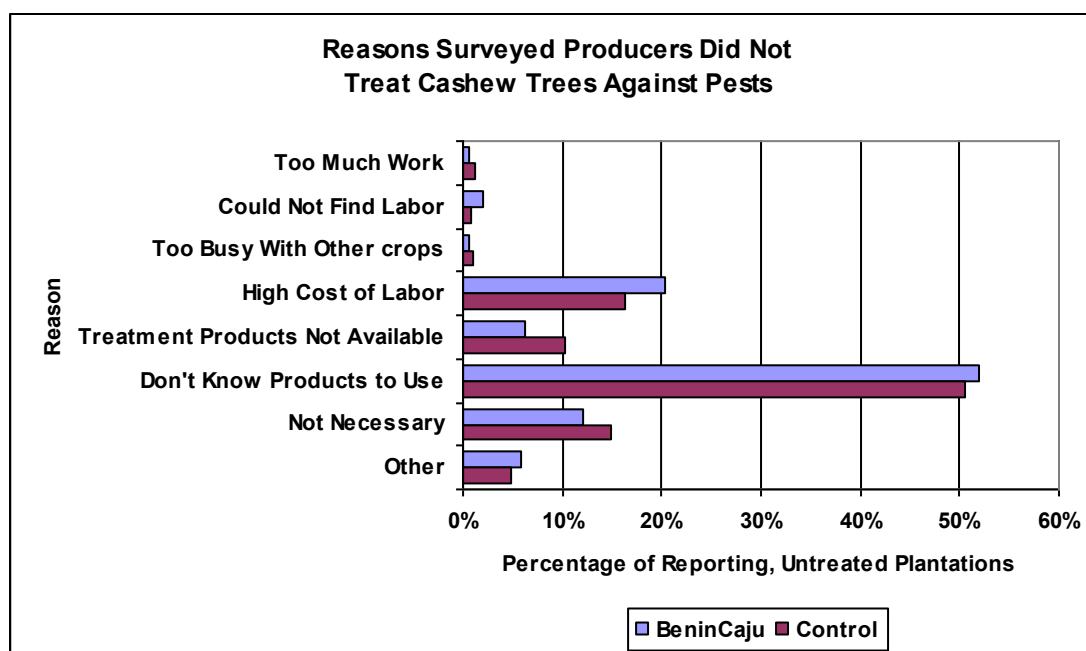


Figure 2.6-13: Reasons given for not treating cashew plantations against pests

2.6.2 Harvest and Post Harvest (HPH) Training and Methods for Cashew

An analogous series of questions were asked about harvest and post-harvest (HPH) training and practices. Thirty-nine percent (39%) of the BeninCaju producers and 32% of the Control producers reported receiving training on HPH methods between 2010 and 2016. The producers' sources of this direct training on HPH methods are shown in Figure 2.6-14.

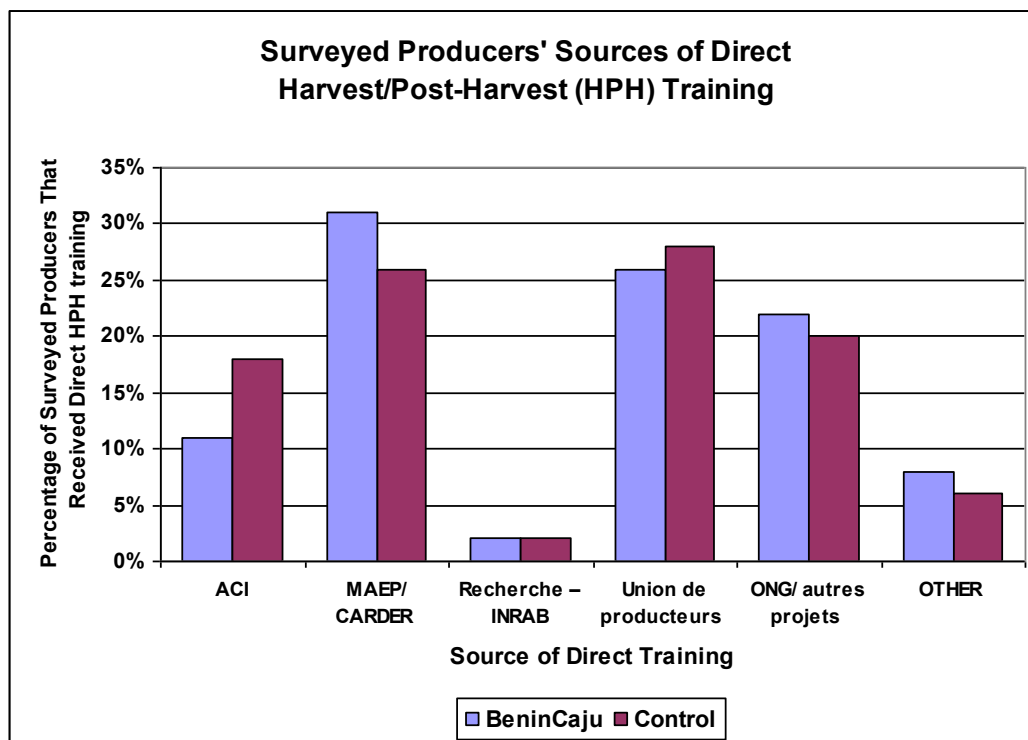


Figure 2.6-14: Surveyed producers' sources of direct training on HPH methods

Again, the only "other" source mentioned by a significant percentage of the producers was DEDRAS ONG. Most of the producers that received this direct training on HPH most recently received it in 2014-2016 as shown in Figure 2.6-15.

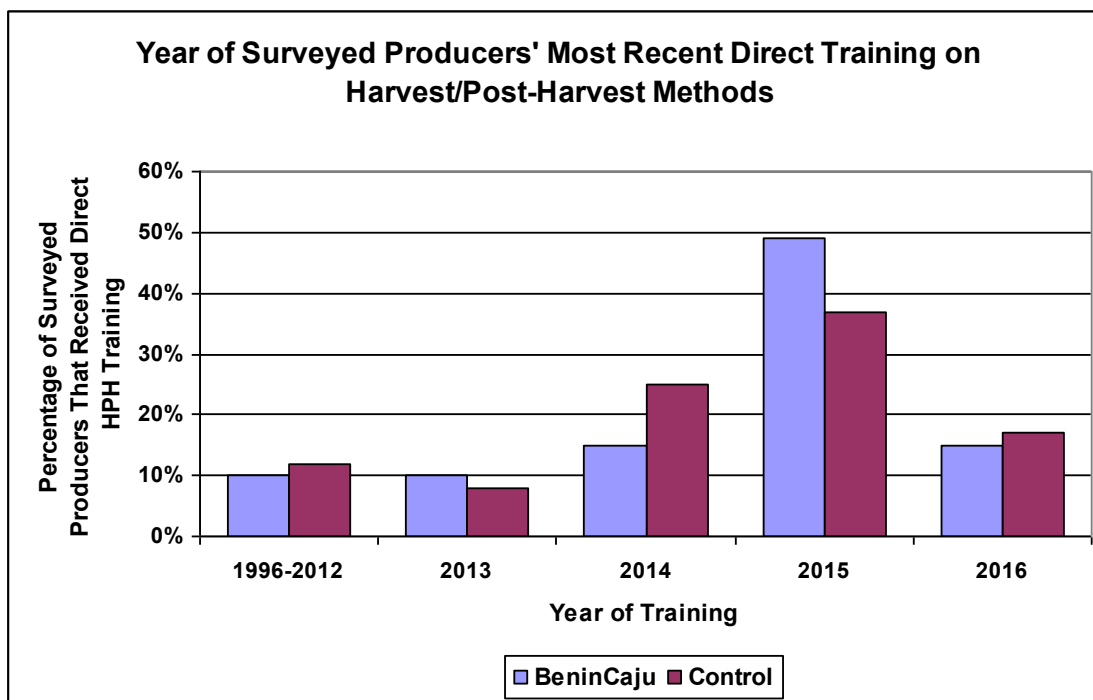


Figure 2.6-15: Year of surveyed producers' most recent direct training on HPH methods

Additionally, 56% of BeninCaju producers and 65% of Control producers received information about HPH methods for cashew from *indirect* sources, as shown in Figure 2.6-16.

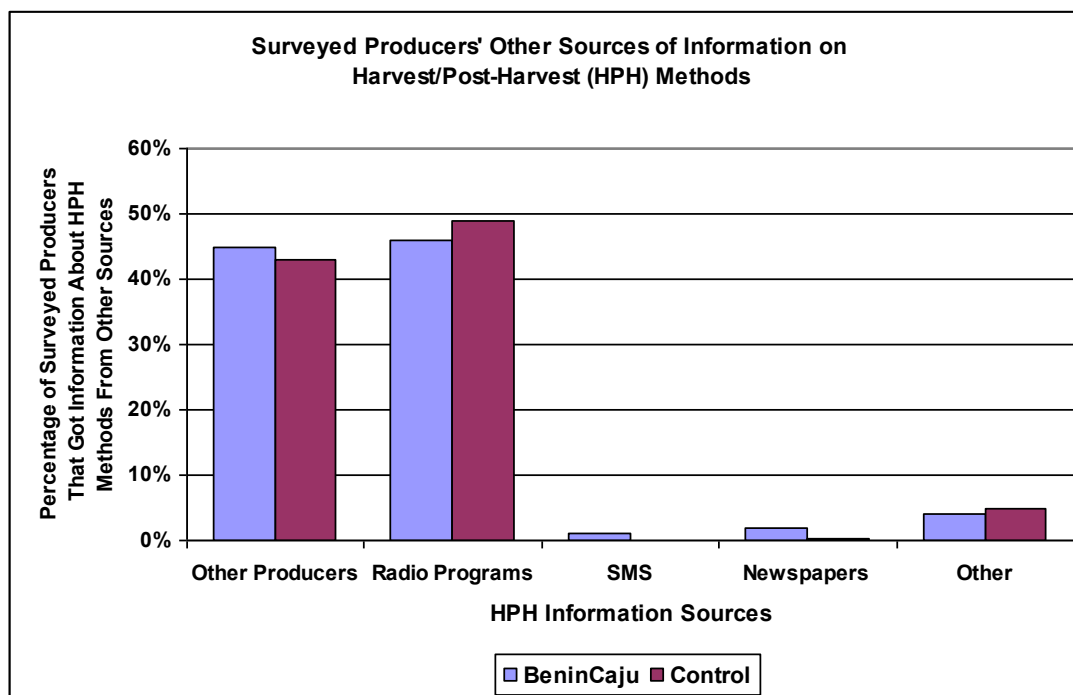


Figure 2.6-16: Surveyed producers' indirect sources of information about HPH methods for cashew

The surveyed BeninCaju producers collected their RCN an average of 7.9 times per month during harvest season compared to 8.5 times per month for Control producers. The distributions of collection frequency for these two sub-groups are presented in Figure 2.6-17.

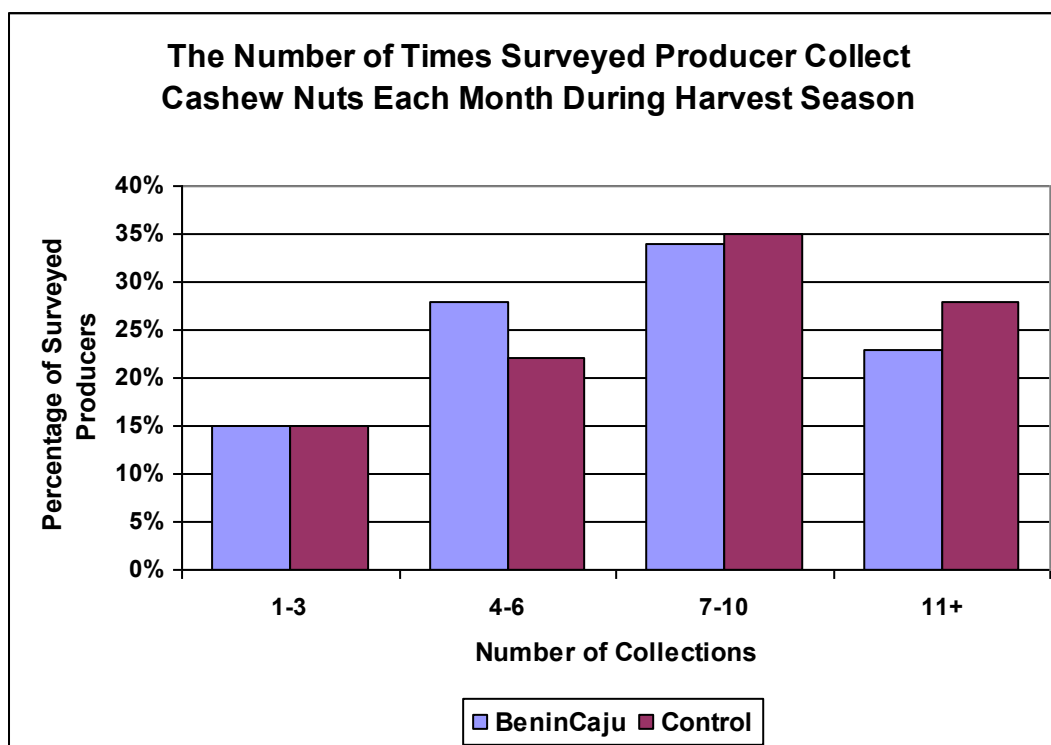


Figure 2.6-17: Number of times per month RCN are collected during harvest season

Almost all of the surveyed producers collect their RCN by picking up the nuts that fall from the trees rather than by pulling them off the trees (BeninCaju: 97%; Control: 97%). Further, almost all of the surveyed producers separate the cashew nut from the cashew apple by twisting the nut off rather than with the use of a nylon string as promoted by ACi to reduce/eliminate the chance for disease to enter the separated nut. “Twisting” is used by 98% of the BeninCaju producers and 97% of the Control producers. Only 2% of the former and 1% of the latter report using nylon string for this purpose. The reasons that the surveyed producers give for not using nylon string are presented in Figure 2.6-18. Note in this figure that the primary reason given for this is that the producers don’t know the practice, something that BeninCaju can address as part of the program interventions.

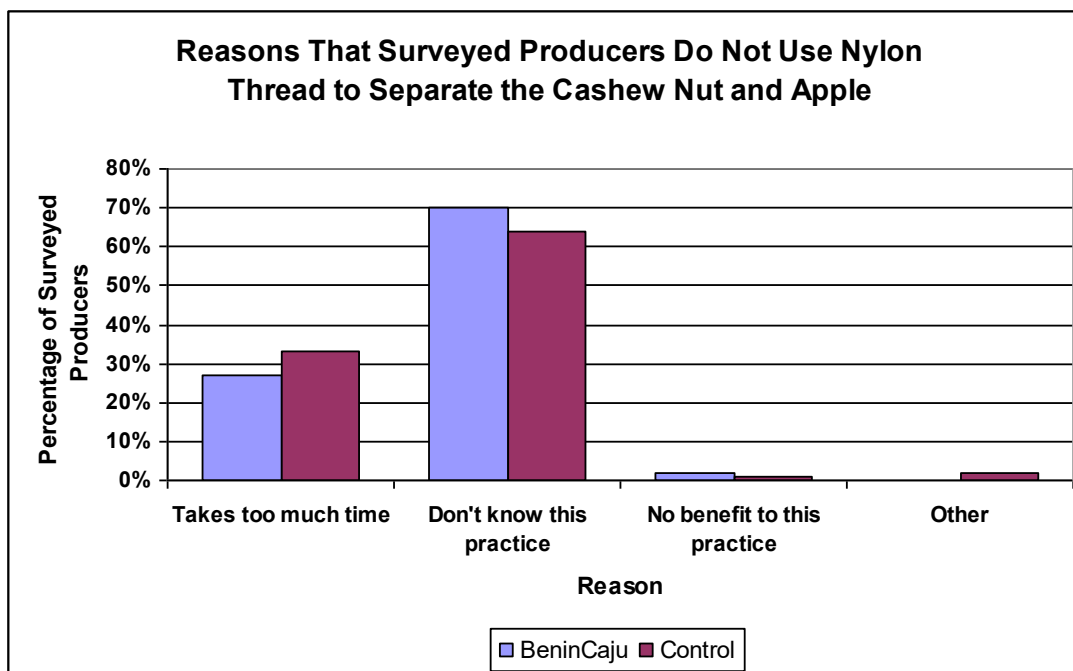


Figure 2.6-18: Surveyed producers' reasons for not using nylon string to separate the cashew nut and apple

Fifty-six percent (56%) of both BeninCaju and Control producers reported drying their RCN before packaging them. The methods they use to know when the RCN are fully dry are shown in Figure 2.6-19.

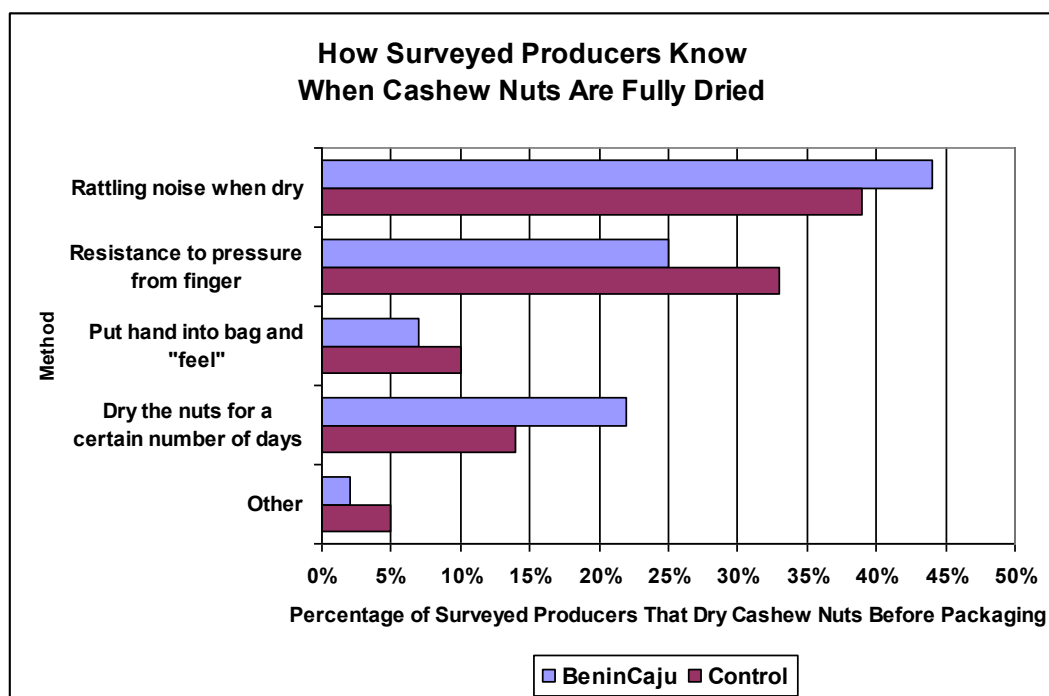


Figure 2.6-19: How surveyed producers know when RCN are fully dried

The various locations used by the surveyed producers to dry their RCN are presented in Figure 2.6-20.

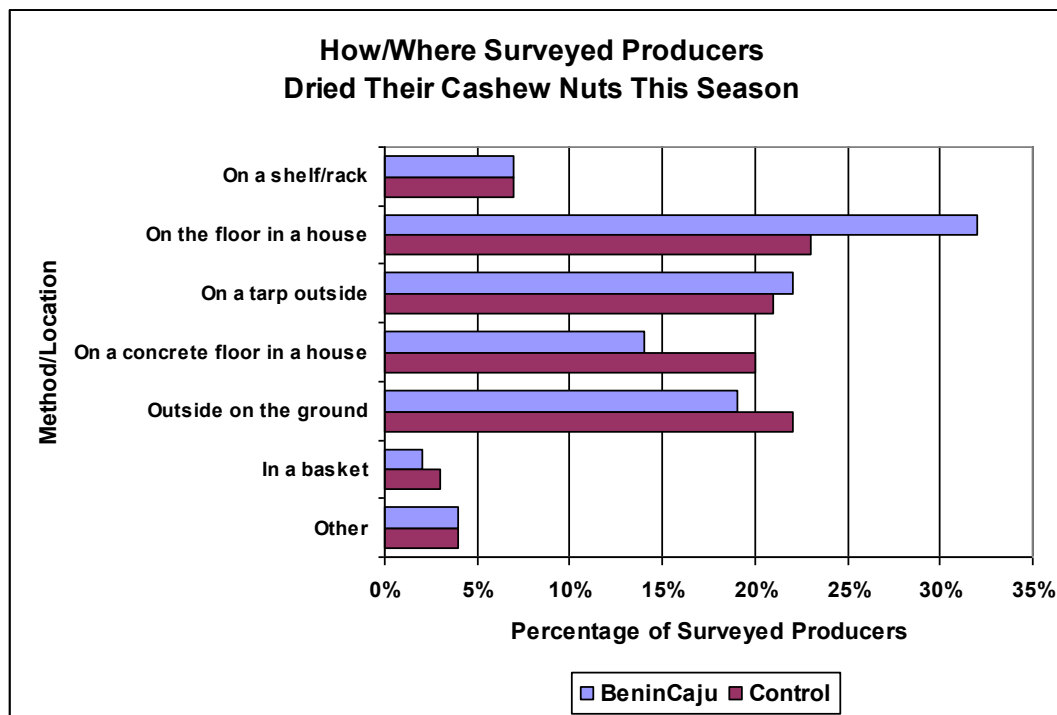


Figure 2.6-20: RCN drying locations used by surveyed producers

The materials used by the surveyed producers to package their RCN are shown in Figure 2.6-21. Note that jute bags are the preferred material recommended for packaging RCN. The reasons that some of the surveyed producers do *not* use jute bags for this purpose are given in Figure 2.6-22. Note that the percentages given in this figure are percentages of just those surveyed producers that do *not* use jute bags

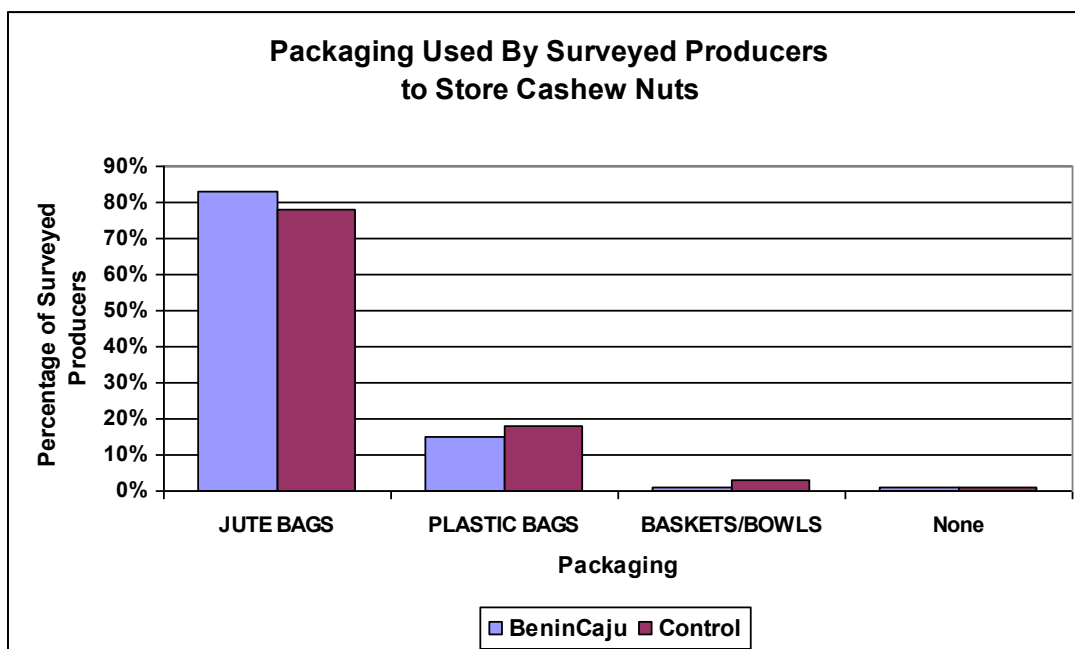


Figure 2.6-21: Materials used by surveyed producers to package RCN

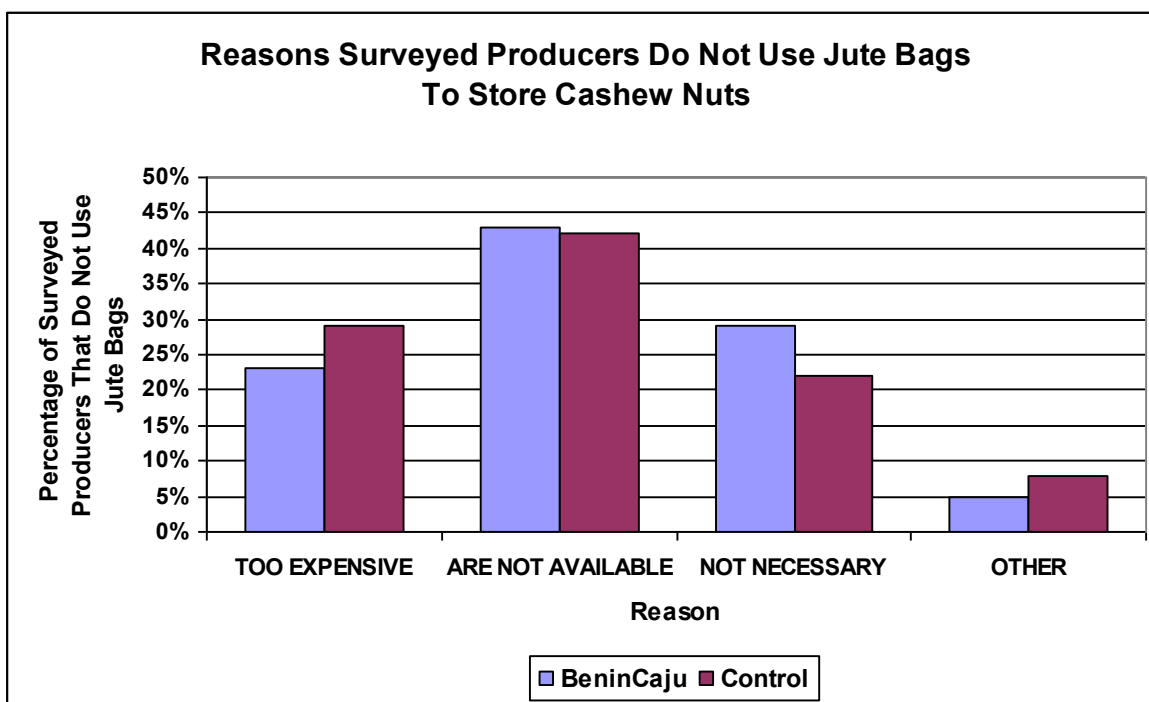


Figure 2.6-22: Reasons surveyed producers do *not* use jute bags to package RCN

The surveyed producers were asked whether they knew the criteria used by cashew buyers to assess the quality of RCN; 47% of the BeninCaju producers and 61% of the Control producers reported know what

these criteria are. The criteria they mentioned are listed in Figure 2.6-23. Note that the producers could name up to three separate criteria, so the percentages of producers that named the various criteria may total more than 100%.

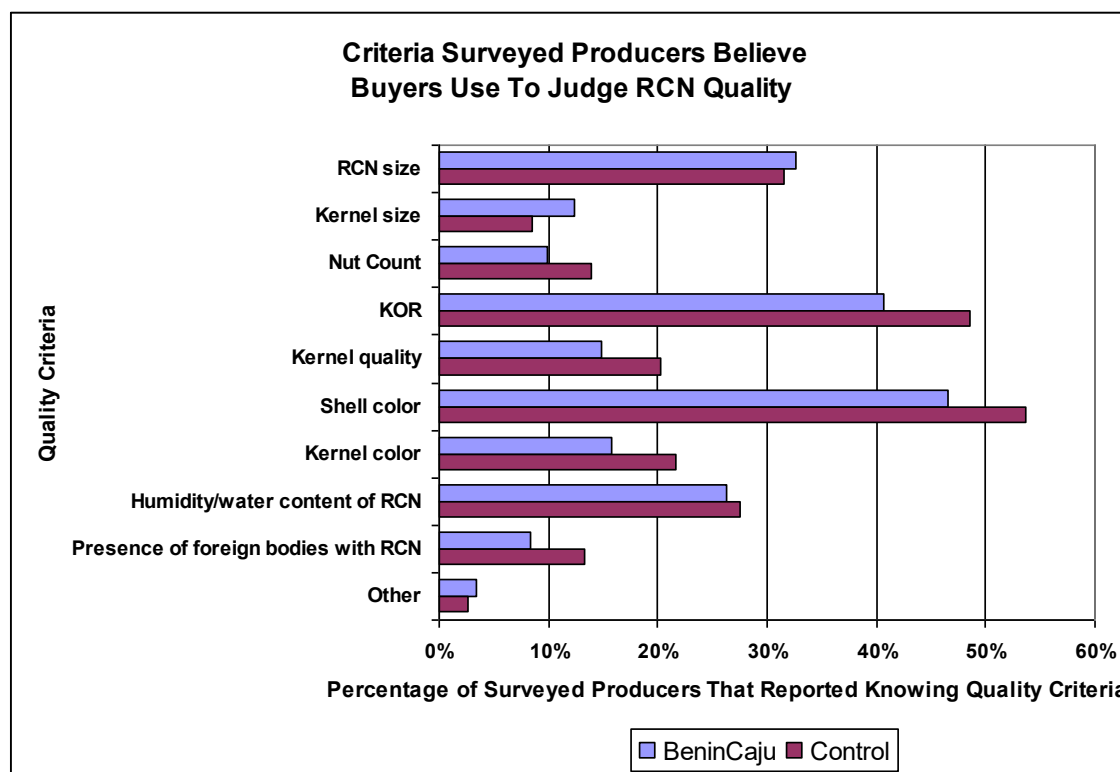


Figure 2.6-23: Surveyed producers knowledge of RCN quality criteria used by cashew buyers

2.6.3: Use of Radio and Mobiles for Cashew

The surveyed producers were asked about their use of radio programs and mobiles to get information about cashew production and marketing. Of the BeninCaju producers, 55% reported having listened to radio programs about cashew GAP since 2010; a greater percentage, 67%, of the Control producers reported listening to radio programs about cashew since 2010. The specific messages/topics regarding cashew are listed in Figure 2.6-24. Almost all of the surveyed producers that reported listening to radio programs about cashew also reported applying at least one of the messages about cashew they heard on the radio (BeninCaju: 96%; Control: 95%).

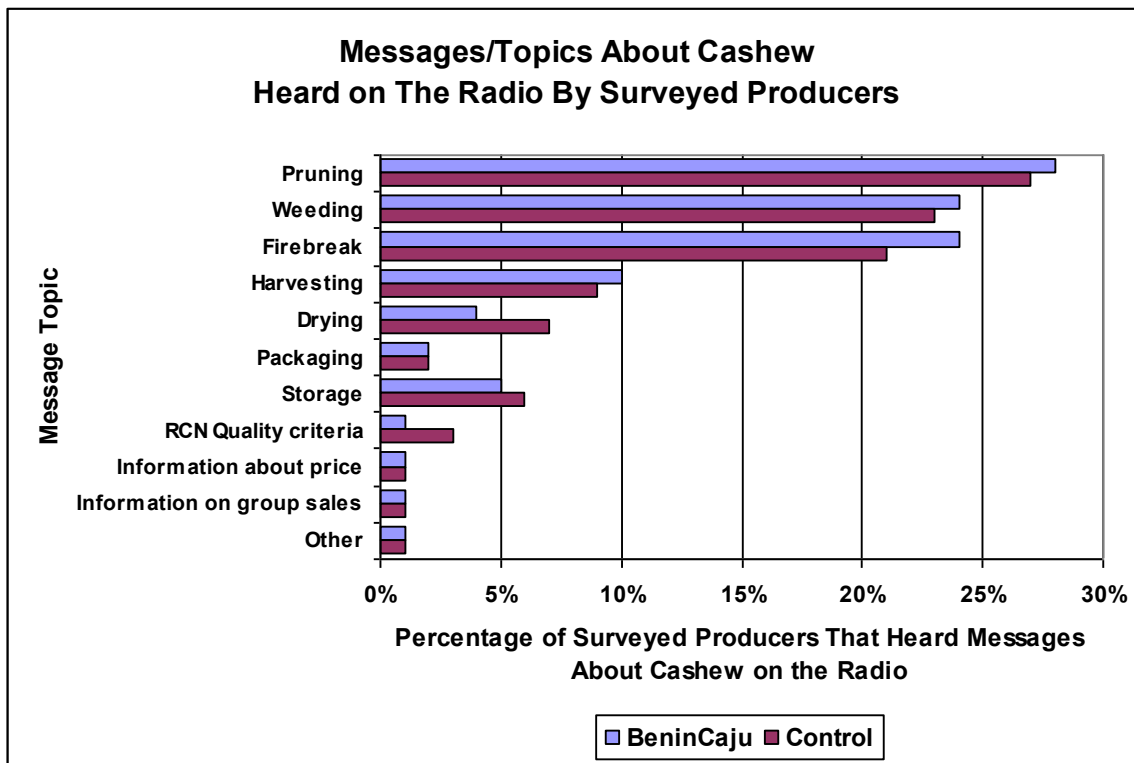


Figure 2.6-24: Messages/topics about cashew heard on the radio by surveyed producers

Producers were asked about their use of mobiles to get information about cashew since 2010; 19% of BeninCaju producers and 25% of Control producers reported doing this. The cashew-related uses to which they put their mobiles are shown in Figure 2.6-25

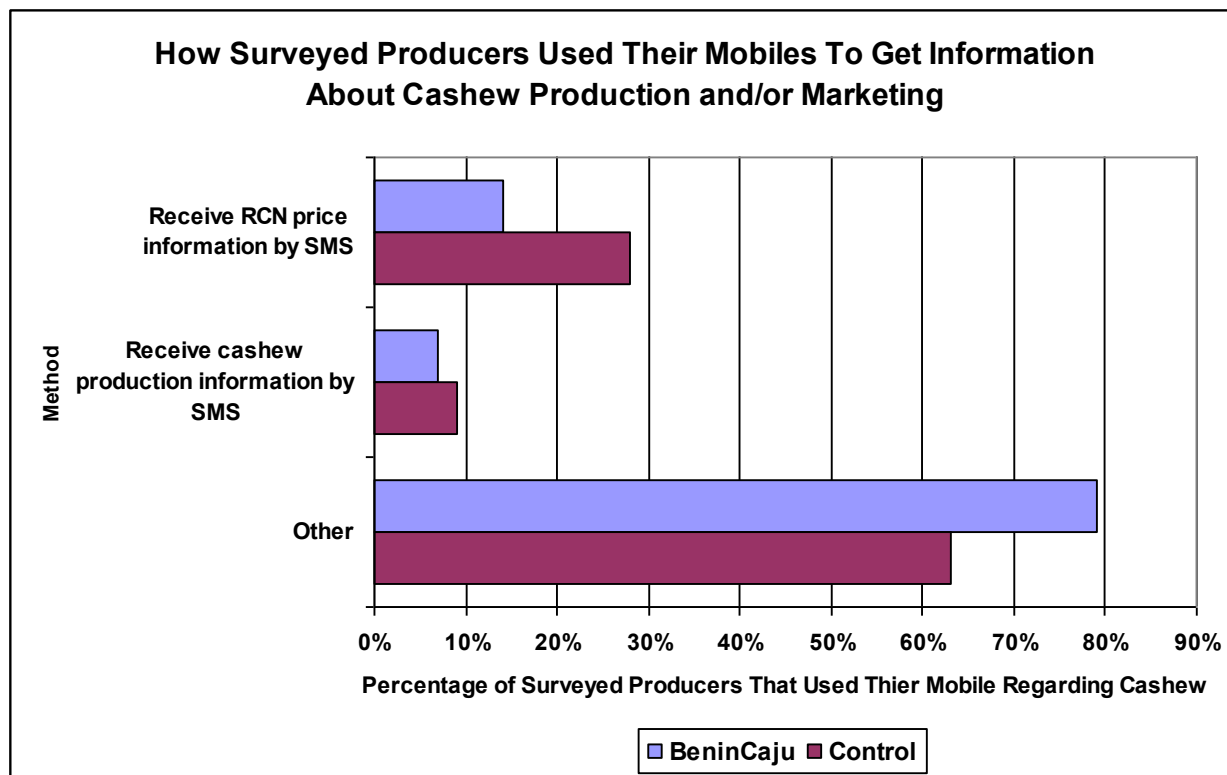


Figure 2.6-25: Surveyed producers' uses of mobile to get information related to cashew

Note that most of the surveyed producers that used their mobiles for cashew used them in ways other than just getting price or other cashew information by SMS. Most of these other uses involved calls to cashew buyers and other calls.

Finally, the surveyed producers were asked if they had any other sources of information about cashew other than radio or mobiles. The principal other sources named by the surveyed producers were "other producers" (BeninCaju: 20%; Control: 31%) and "Buyers" (BeninCaju 3%; Control: 2%).

2.7 Changes in Cashew Harvest Quantity and Quality

The surveyed producers were asked to compare the 2016 cashew harvest quantity and quality with the quantity and quality of previous harvest, and to also give their opinion on the primary reason for perceived changes in quantity and/or quality (if any).

2.7.1 Harvest Quantity

Asked about the change from recent years in the *quantity* of the cashew harvest, the preponderance of opinion, as seen in Figure 2.7-1, is that overall quantity of harvested RCN (kg) has decreased. Roughly 90% of both subgroups of surveyed producers share this opinion with very few producers believing that the harvest quantity has remained the same or increased.

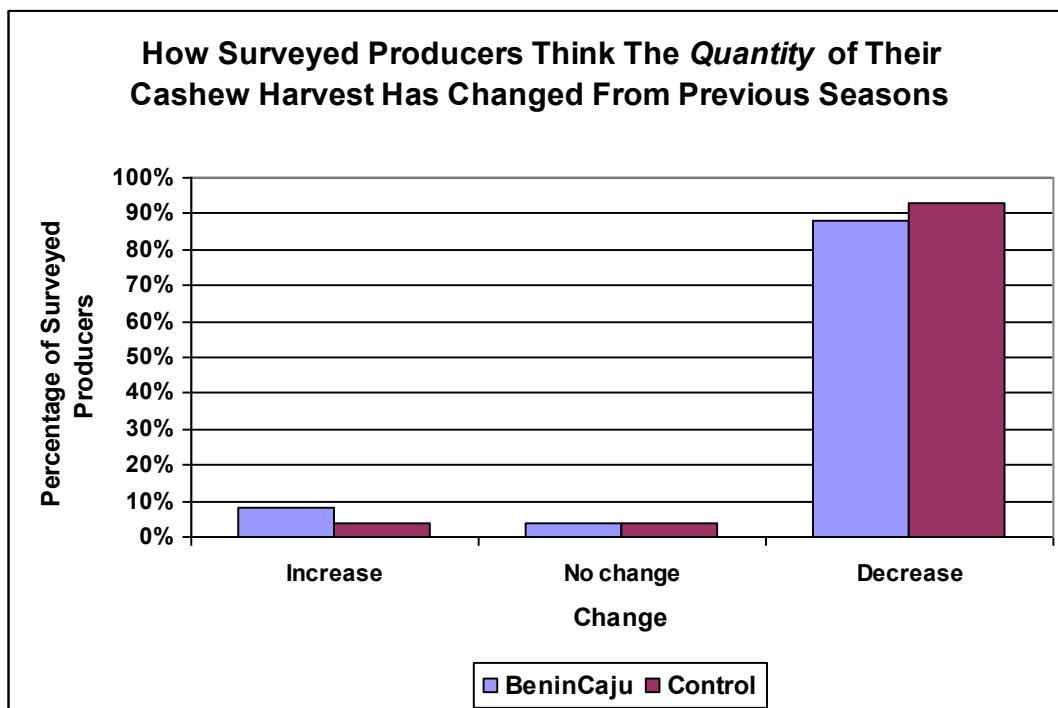


Figure 2.7-1: Surveyed producers perception of change in the harvest *quantity*

For the 8% of surveyed BeninCaju producers and 4% of surveyed Control producers that think that the harvest quantity has *increased*, the most commonly given explanation is that the producers attribute the increase to “good climate/weather” as seen in Figure 2.7-2

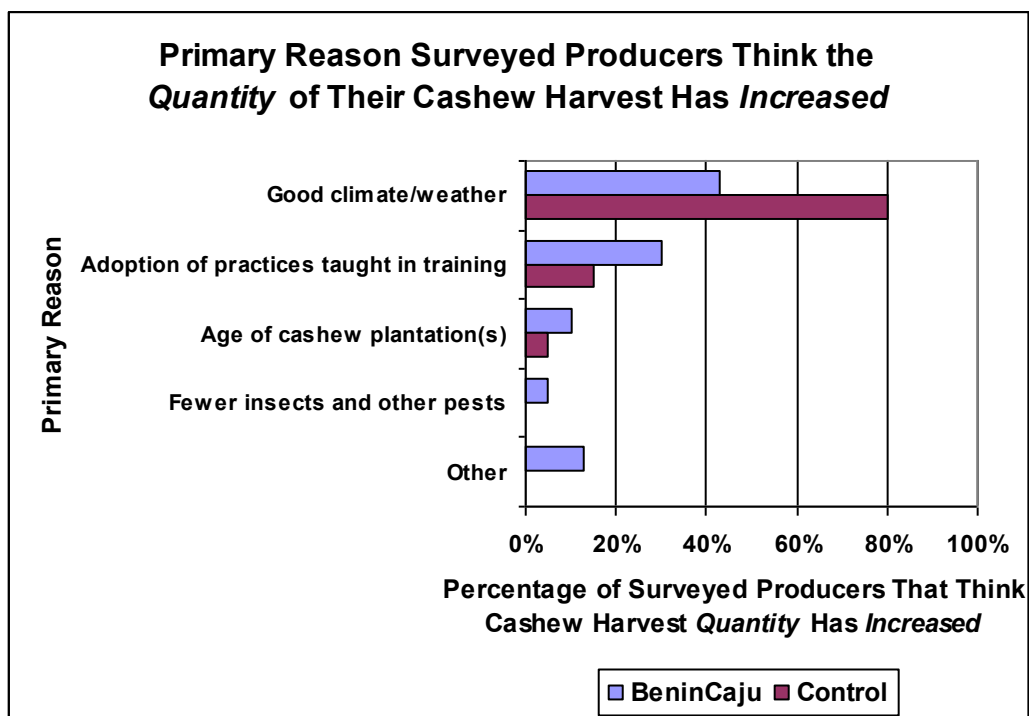


Figure 2.7-2: Reasons given by surveyed producers for perceived recent *increase* in harvest *quantity*

This notion is substantially at odds with the overwhelming majority of surveyed producers who believe that the harvest quantity has decreased; almost all of these producers attribute the decrease to “bad climate/weather” as seen in Figure 2.7-3. Unless the climate/rainfall in the BeninCaju communes is very highly localized, it is difficult or impossible to reconcile these two sets of responses.

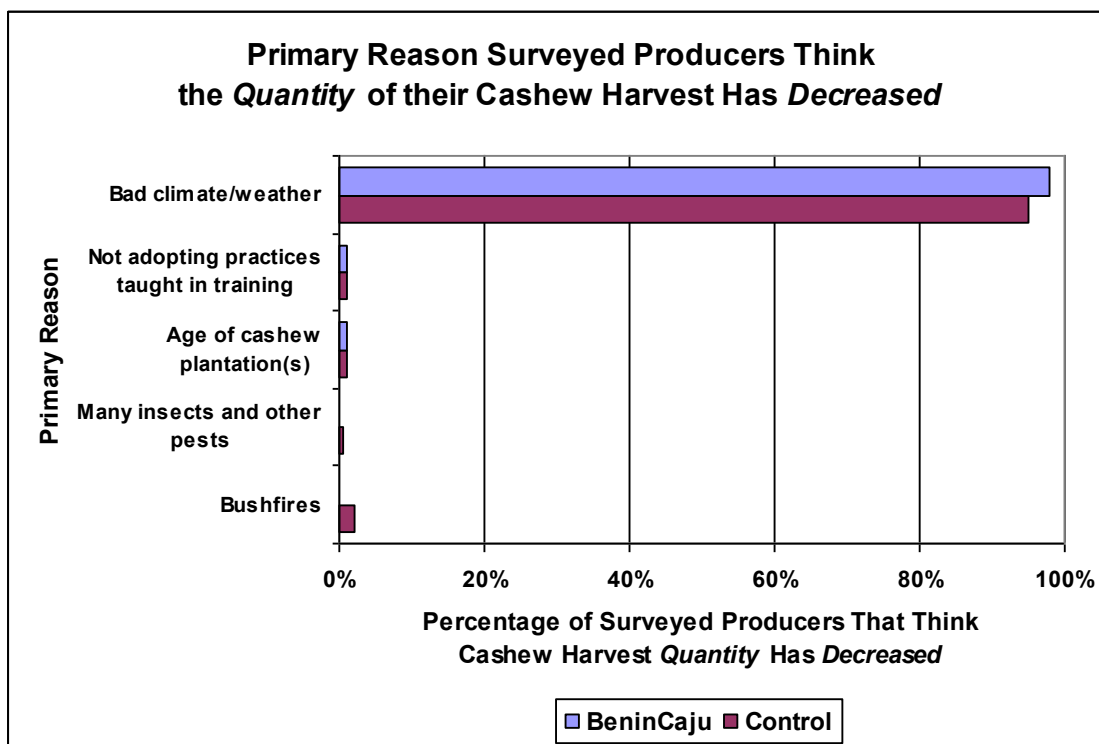


Figure 2.7-3: Reasons given by surveyed producers for perceived recent *decrease* in harvest *quantity*

2.7.2 Harvest Quality

When asked about any recent change in the *quality* of their 2016 cashew harvest from previous years, the producers' responses were still primarily negative although not so strongly negative as when asked about harvest *quantity*. When referring to any change in harvest quality, just slightly more than half of the surveyed producers reported that 2016 harvest quality was *worse* than previous years (BeninCaju: 51%; Control: 54%). See Figure 2.7-4.

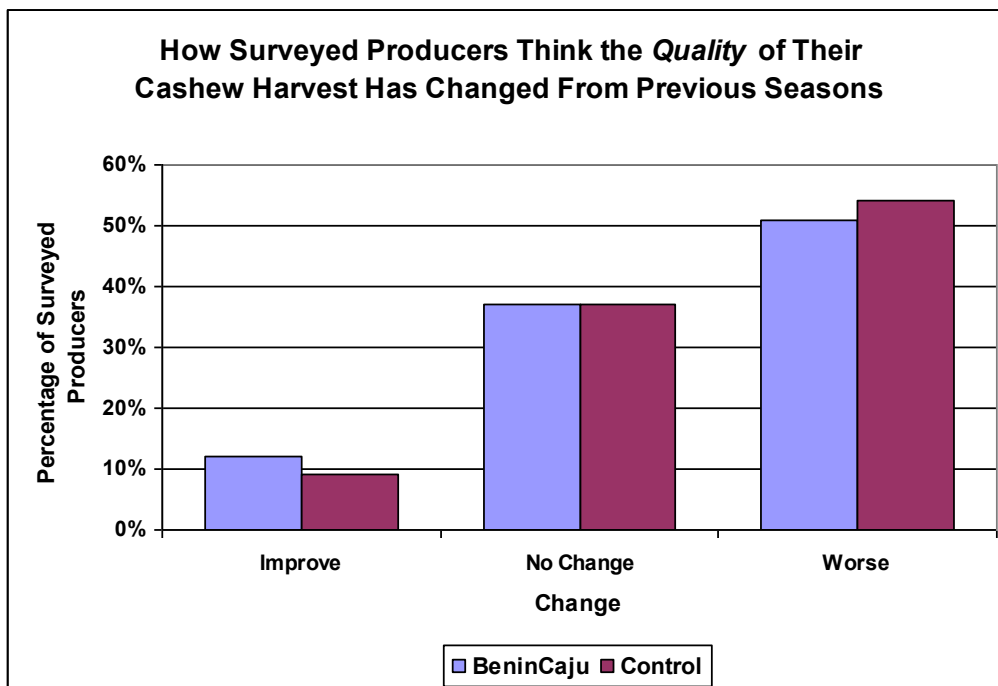


Figure 2.7-4: Surveyed producers perception of change in the harvest *quality*

For the relatively small percentages of surveyed producers that reported that harvest quality had improved (BeninCaju: 12%; Control: 9%), once again most of them attributed to the improvement in harvest quality to “good climate/weather.” However, a substantial percentage of these small subgroups of surveyed producers attribute the quality improvement to “adoption of the practices taught in the training.” These results are shown in Figure 2.7-5.

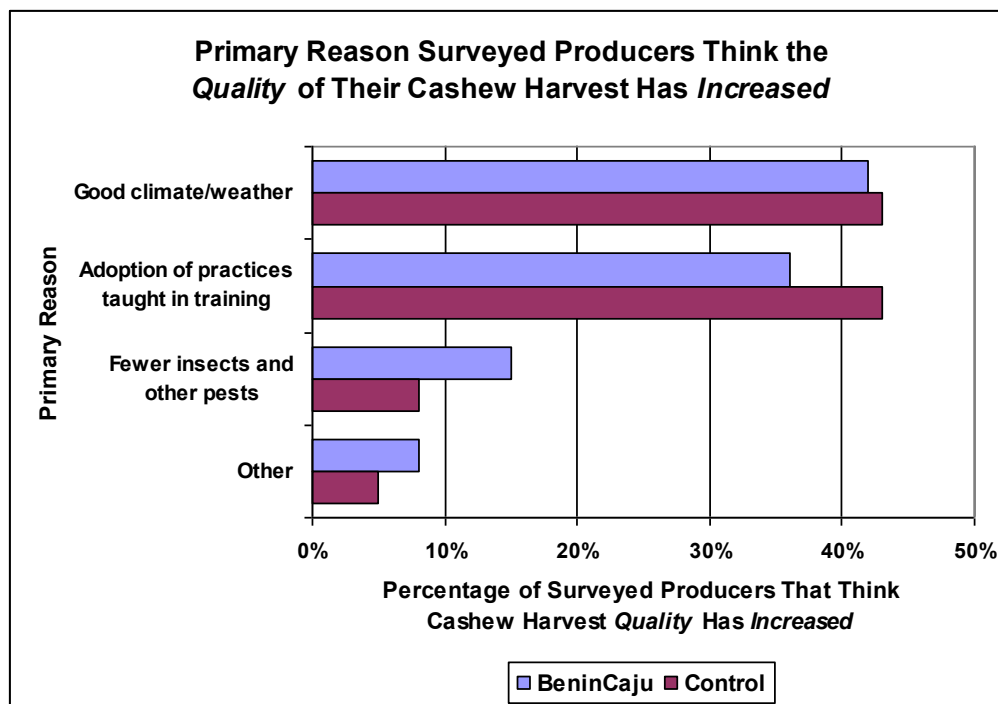


Figure 2.7-5: Reasons given by surveyed producers for perceived recent *increase* in harvest *quality*

And, again, the majority of those producers that believe that harvest quality has decreased attribute this change to “bad climate/weather.” See Figure 2.7-6. So, in terms of both harvest quantity and quality, improvements and declines are *simultaneously* attributed to climate and weather.

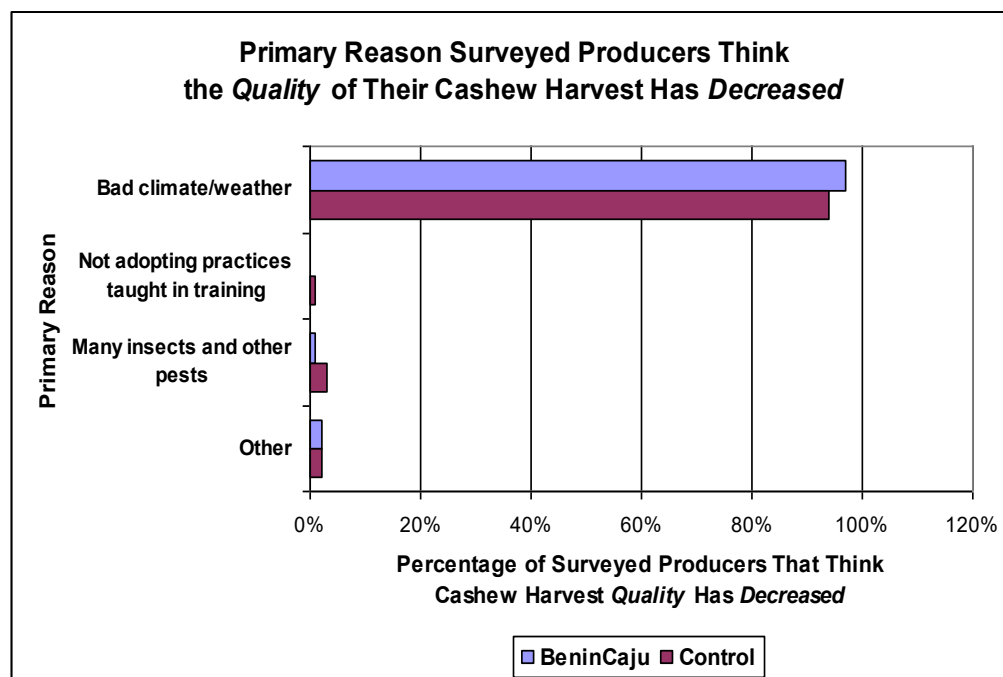


Figure 2.7-6: Reasons given by surveyed producers for perceived recent *decrease* in harvest *quality*

2.8 Producer Associations/Cooperatives

The surveyed producers were asked about their involvement with any producers' association and/or cooperative (PA/C). Note that the producers whose responses are presented here were chosen as part of the random sample of producers, not purposefully as members of any producer group as was done for the Producer Group survey discussed in Part III of this report. While the producer group survey was done in villages that had been selected for the Producer survey, and while there is some overlap between the two sets of respondents, many of the producer respondents were *not* members of any producer group. In fact, 73% of the surveyed BeninCaju producers and 78% of the surveyed Control producers reported not being in any producer association or cooperative as shown in Figure 2.8-1.

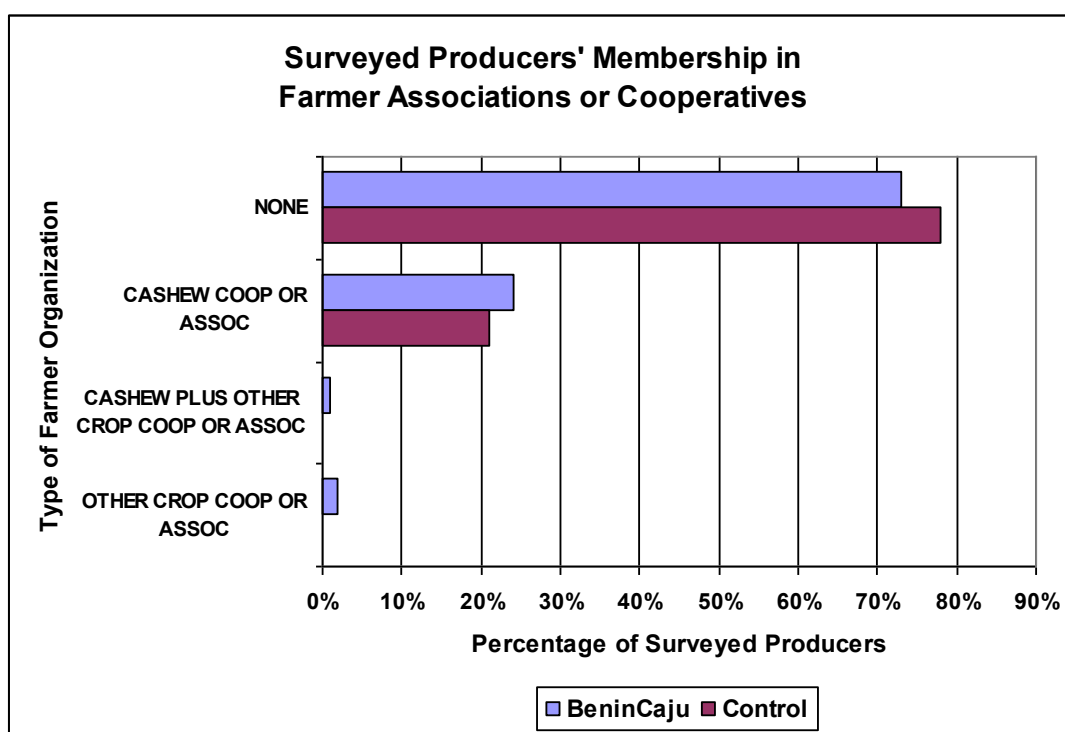


Figure 2.8-1: Surveyed producers' membership rates in producer organizations

In most of the surveyed households where any member is in a PA/C, it is the head of the household (which almost always means the surveyed producers) as seen in Figure 2.8-2. The surveyed producers were able to name up to three household members that were members of PA/C, so the percentages may total more than 100%.

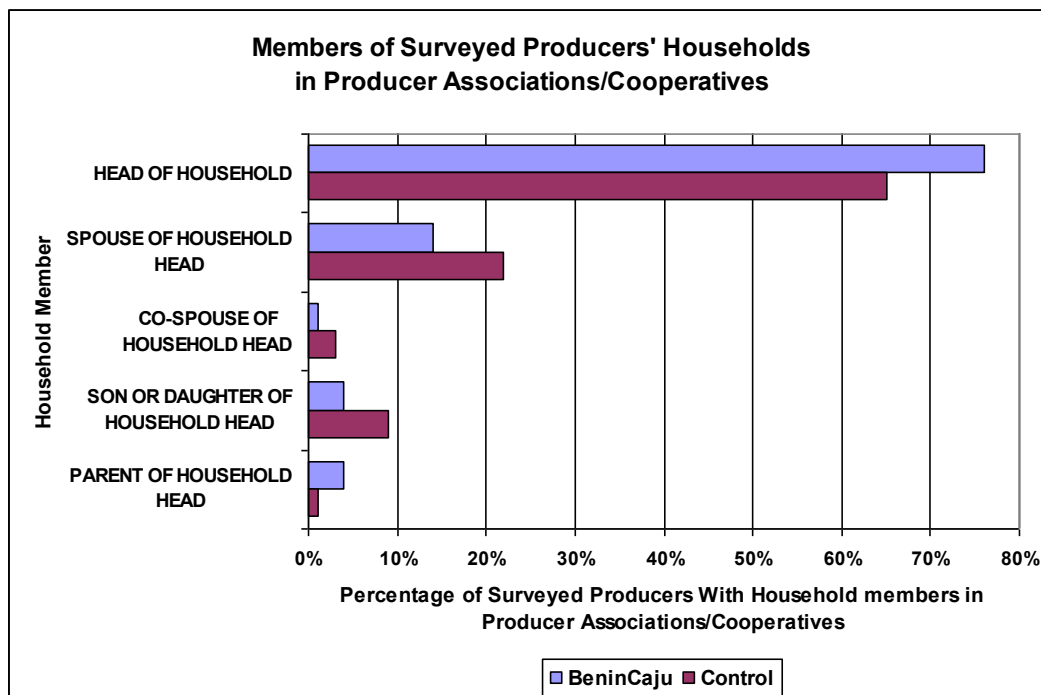


Figure 2.8-2: Members of surveyed households in producer associations or cooperatives

For the most part, the members of the surveyed producer households are just members of their producer group and so not have any management or administrative function as seen in Figure 2.8-3.

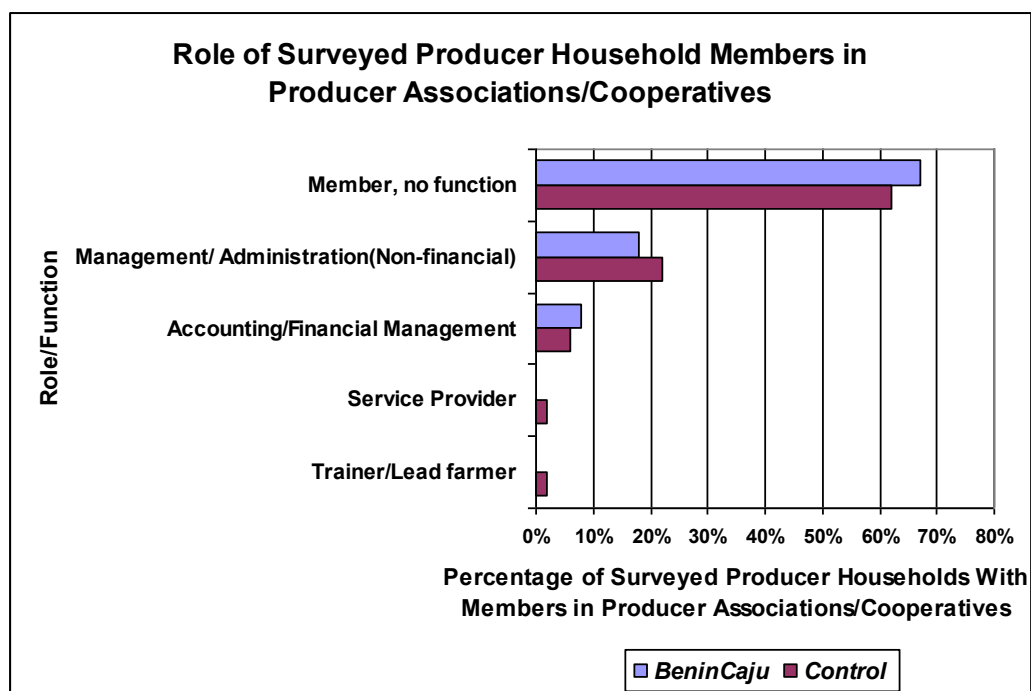


Figure 2-8-3: Role of surveyed household members in their farmer group

The members of the surveyed producer households have been joining PA/Cs for a number of years, going back more than 20 years, as shown in Figure 2.8-4. Note that up until about 2011, more Control producer household members than members of BeninCaju producer households were joining these group.

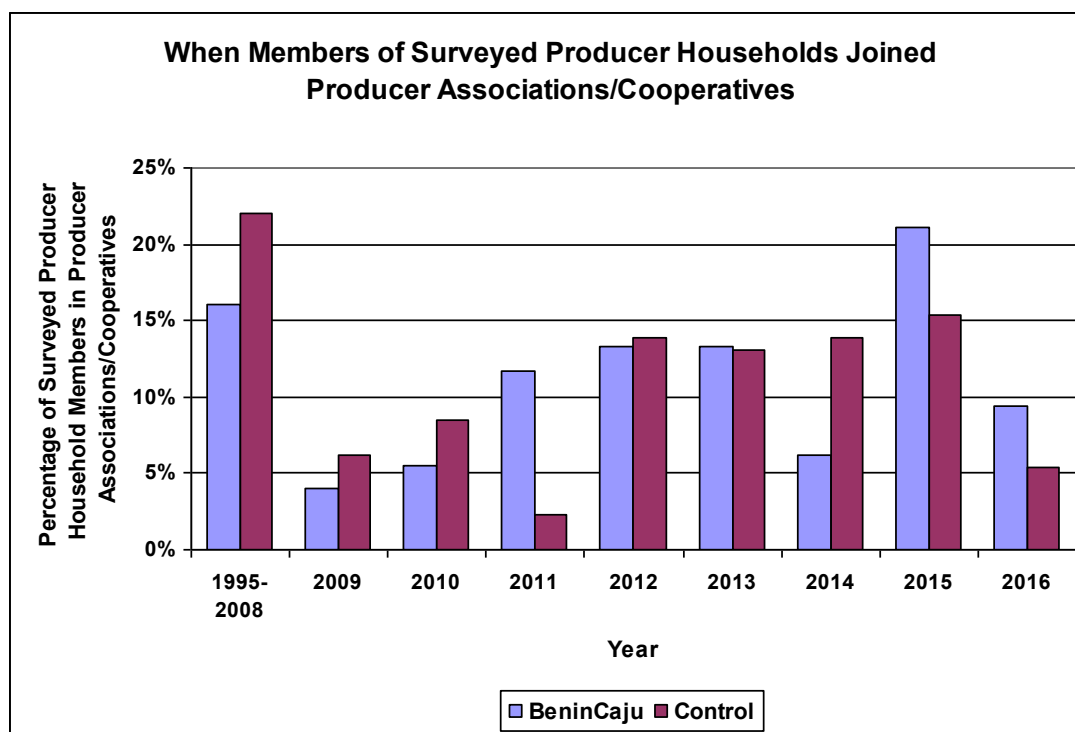


Figure 2.8-4: Year that surveyed producer household members joined their producer group

The surveyed producers with household members in a PA/C were asked their reasons for joining their group. The percentages of respondents that mentioned different reasons are shown in Figure 2.8-5. Because the respondents could give multiple reasons, the percentages of producers exceed 100%.

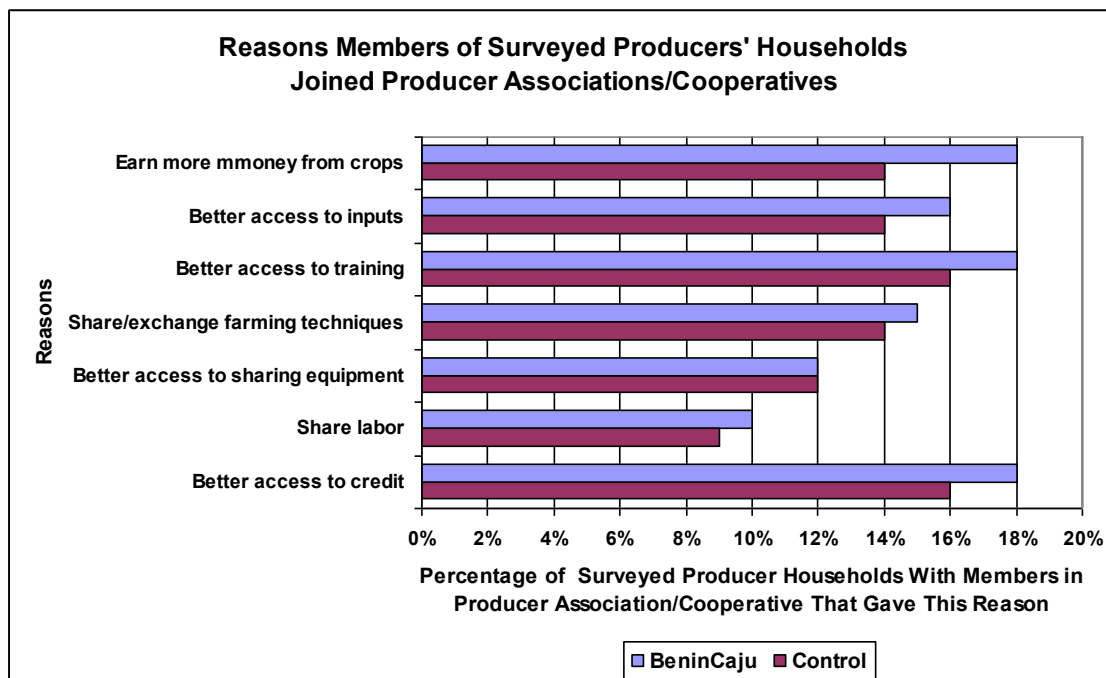


Figure 2.8-5: Reasons members of surveyed producer households joined producer groups

Those surveyed producers that did *not* have any household members in a producer group were asked to give their reasons for *not* joining. The primary reasons mentioned are presented in Figure 2.8-6.

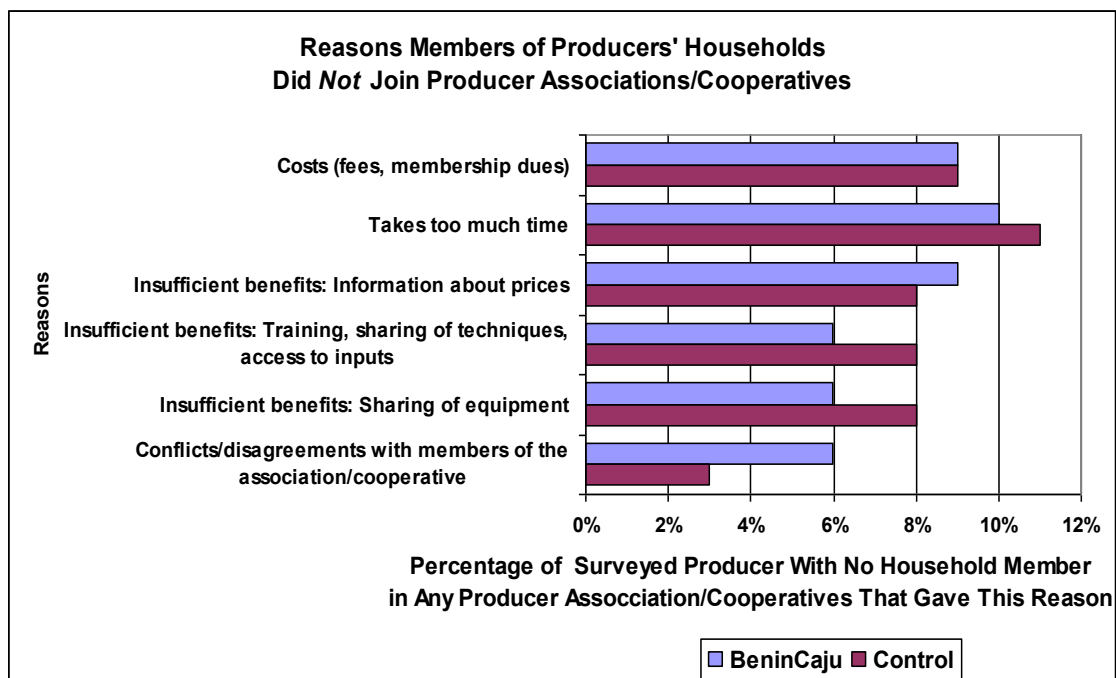


Figure 2.8-6: Reasons surveyed producer household members did *not* join any producer group

Another reason that some of the surveyed producer households had no members in any PA/C is that no such organizations, or in some cases organizations focused solely on cashew, existed in their villages. Since the villages to be surveyed were picked from a list of villages where such associations existed at one time, those surveyed villages found to have *no* such association represent cases where the associations have become defunct for one reason or another. However, *lack of an available* association was offered as the reason for not being a member by several BeninCaju and Control respondents along with less common one-off reasons.

2.9 Availability, Access to, and Use of Credit

When asked if sources of credit were available in their home village, 77% of CAP producers and 72% of Control producers reported that credit was available to them in their villages. Further, 62% of the BeninCaju producers and 57% of the Control producers reported being able to get credit if they wanted it. The sources of credit available to the surveyed producers are shown in Figure 2.9-1. Note that the respondents could name several credit sources and so the percentages in this figure may total more than 100%.

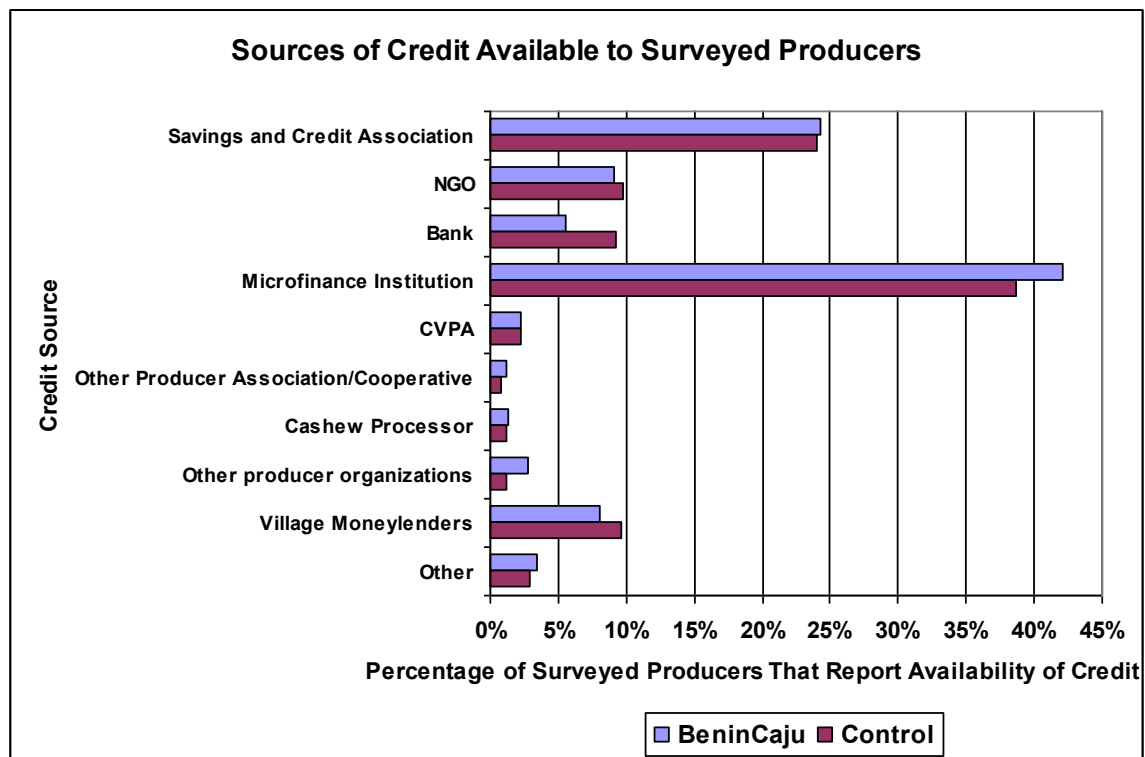


Figure 2.9-1: Surveyed producers' sources of credit

The numbers of times the surveyed producers actually did get credit since 2011 are shown in Figure 2.9-2. Despite the relatively widespread *reported* availability of credit, only 40% of the surveyed BeninCaju producers and 35% of the surveyed Control producers have *actually* received credit since 2011. This means that over half of both the surveyed BeninCaju respondents and the surveyed Control respondents did not receive any credit since 2011.

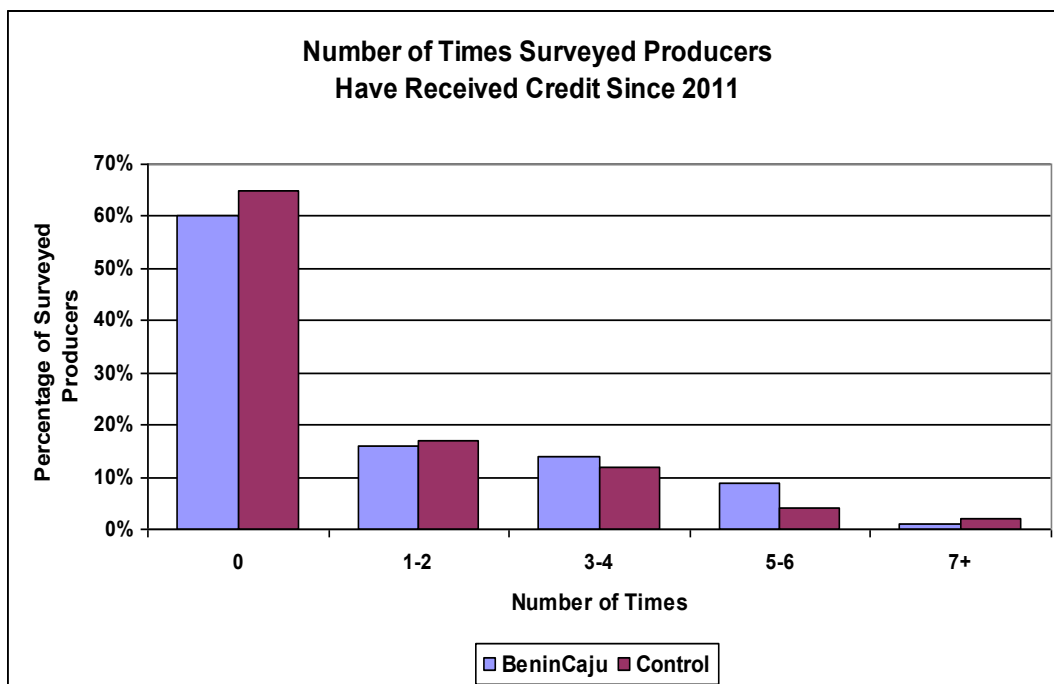


Figure 2.9-2: Number of times surveyed producers received credit since 2011.

Figure 2.9-3 shows the total amount of credit received by the surveyed producers since 2011. Note that most of the surveyed producers that received any credit since 2011 received less than FCFA 250,000 (approximately USD 500) spread across however many separate loans they received.

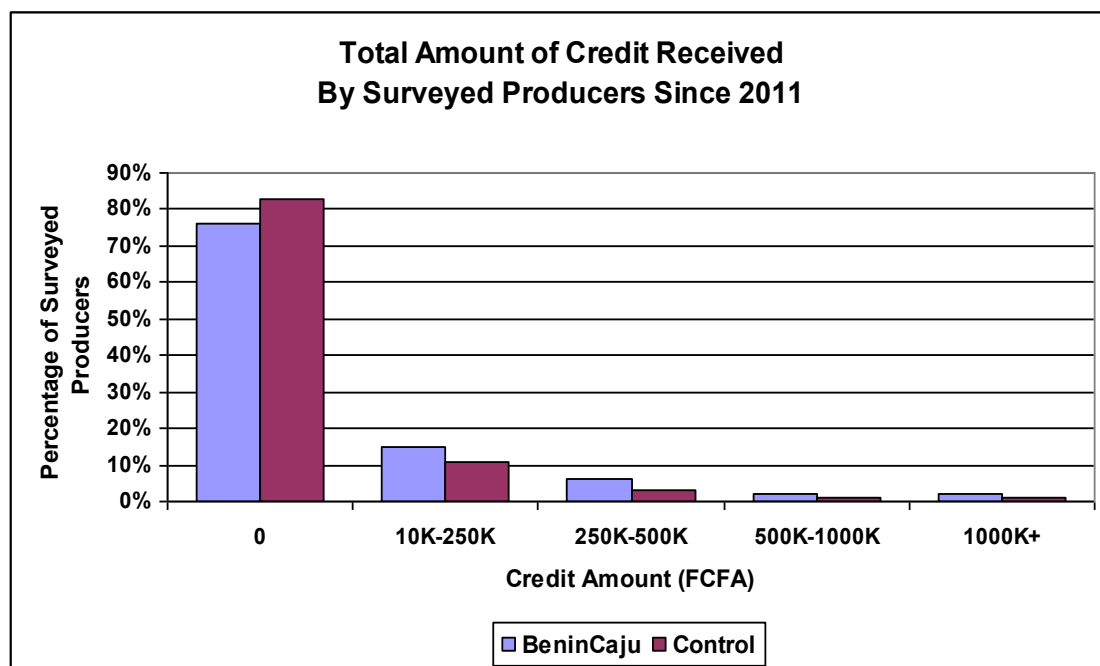


Figure 2.9-3: Total amount of credit received by surveyed producers since 2011

The primary uses to which this credit was put are listed in Figure 2.9-4. It is significant that in this figure the most frequently cited use for this credit was “cashew production expenses” (BeninCaju: 36% of producers that got credit; Control: 33% of producers that got credit).

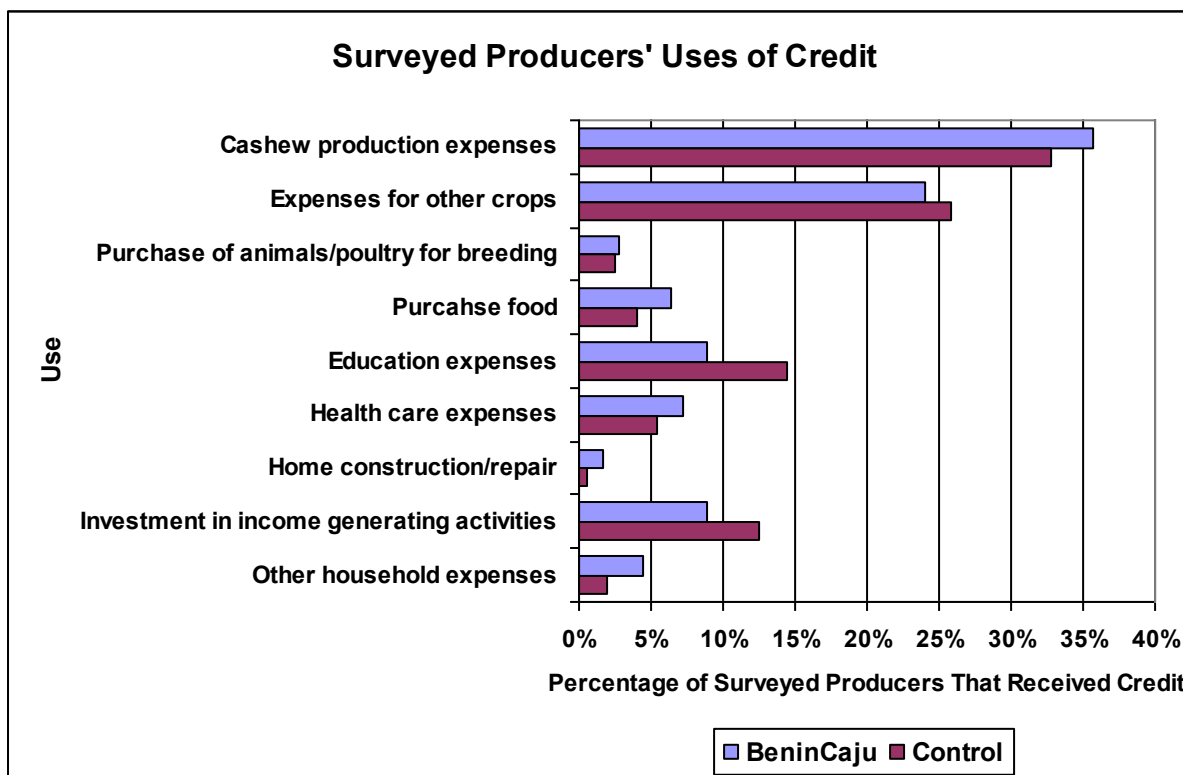


Figure 2.9-4: Surveyed producers' primary uses of received credit.

The distribution of the (estimated) percentage of the total credit received used by the surveyed producers for cashew production is presented in Figure 2.9-5. On average, Surveyed BeninCaju producers used 52% of their total received credit for cashew production vs 47% for the surveyed Control producers.

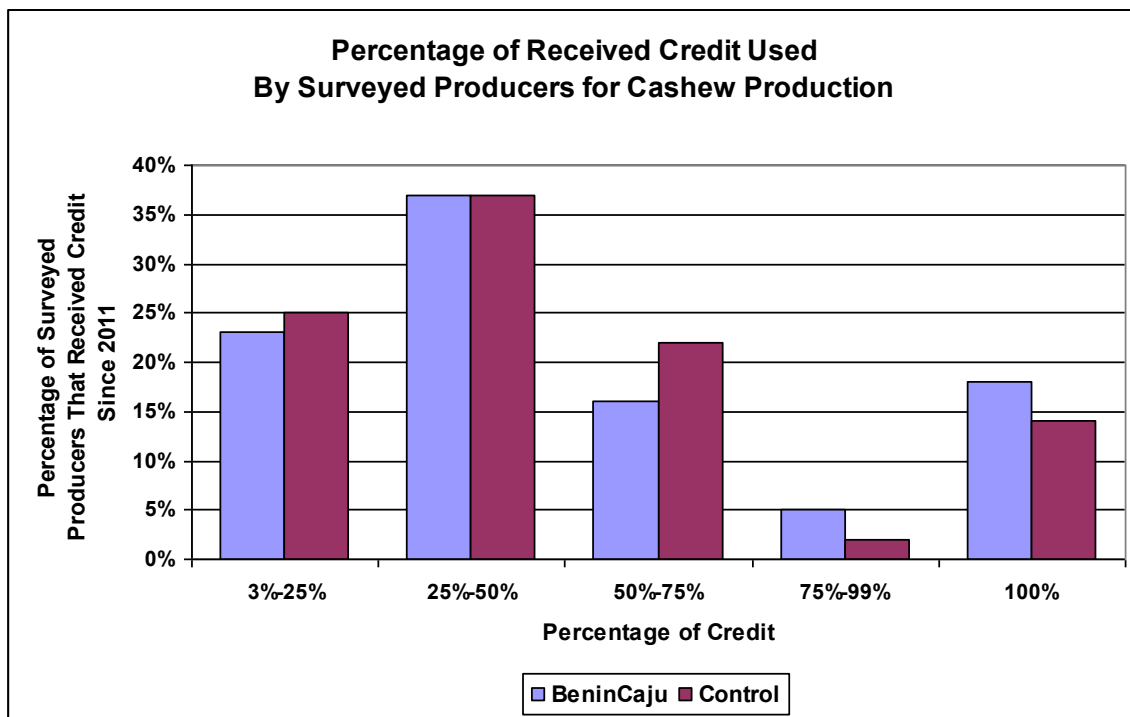


Figure 2.9-5: Percentage of received credit used by surveyed producers for cashew production

Finally, 35% of the surveyed BeninCaju producers and 31% of the surveyed Control producers reported having difficulty repaying this credit.

2.10 Poverty Scorecard

In order to try to assess the overall impact of the BeninCaju on poverty reduction, questions from a short “Poverty Scorecard” were included in the BeninCaju Baseline questionnaire. The origin of this set of questions is that it was developed by “Progress Out of Poverty.” The website for this organization and more information about the scorecard is: <http://www.progressoutofpoverty.org/fr>

This scorecard and its associated set of questions and the normed (weighted and scored) responses were the answers to 10 questions about a household’s characteristics and asset ownership are scored to compute the likelihood that the household is living below the poverty line – or above by only a narrow margin. The questions used come from: http://www.simplepovertyscorecard.com/BEN_2010_ENG.pdf The scoring of the different answers to the different questions is such that higher scores represent better-off socio-economic status while lower scores represent lower socio-economic status. Relative scoring for the different questions can be seen in Figure 2.10-1 which presents a scanned copy of this scorecard.

Simple Poverty Scorecard for Benin

Entity	Name	ID	Date (DD/MM/YY)
Member:			Date joined:
Field agent:			Date scored:
Service point:			Household size:

Indicator	Response	Points	Score
1. Department (as observed)	A. Littoral	0	
	B. Mono	1	
	C. Zou, Atlantique, or Collines	3	
	D. Couffo	4	
	E. Plateau	7	
	F. Ouémé	11	
	G. Donga, or Borgou	12	
	H. Alibori	13	
	I. Atakora	14	
2. Main material of the exterior walls of the main building (as observed)	A. Earth, stone, wood/planks, palm leaves/bamboo, or other	0	
	B. Mud plastered with cement	1	
	C. Bricks	4	
3. How many household members are there?	A. Eight or more	0	
	B. Seven	6	
	C. Six	10	
	D. Five	14	
	E. Four	20	
	F. Three	30	
	G. Two	40	
	H. One	48	
4. Does the female head/spouse know how to read and write with understanding in French?	A. No	0	
	B. Yes	3	
	C. There is no female head/spouse	3	
5. What is the main source of energy for lighting in your household?	A. Kerosene	0	
	B. Electricity, LPG, oil, solar energy, electric generator (community or private), or other	4	
6. Out of all the rooms available to your household, how many do household members use for sleeping?	A. One	0	
	B. Two	2	
	C. Three or more	5	
7. What is the main cooking fuel used in your household?	A. Firewood, or straw	0	
	B. Charcoal, electricity, LPG, kerosene, or other	3	
8. Does your household have a motorcycle, scooter, or automobile?	A. No	0	
	B. Yes	5	
9. How many mobile telephones does your household have?	A. None	0	
	B. One	2	
	C. Two or more	9	
10. Has the household owned (including as an inheritance) or rented any sub-divided, developed, or irrigated land in the past 12 months?	A. Does not own etc.	0	
	B. Does own etc., but land is not sub-divided, developed, or irrigated	2	
	C. Does own etc., and some land is sub-divided, developed, or irrigated	5	

Figure 2.10-1: Simple Poverty Scorecard for Benin

The ten questions indicated on the above scorecard were included in the BeninCaju Baseline questionnaire. The average “scores” (per the scorecard) for each of these questions are presented in Figure 2.10-2. Note that the way the answers to the various questions are scored means that higher scores represent higher economic status and that the higher the overall, summed, score, the better-off the household is economically.

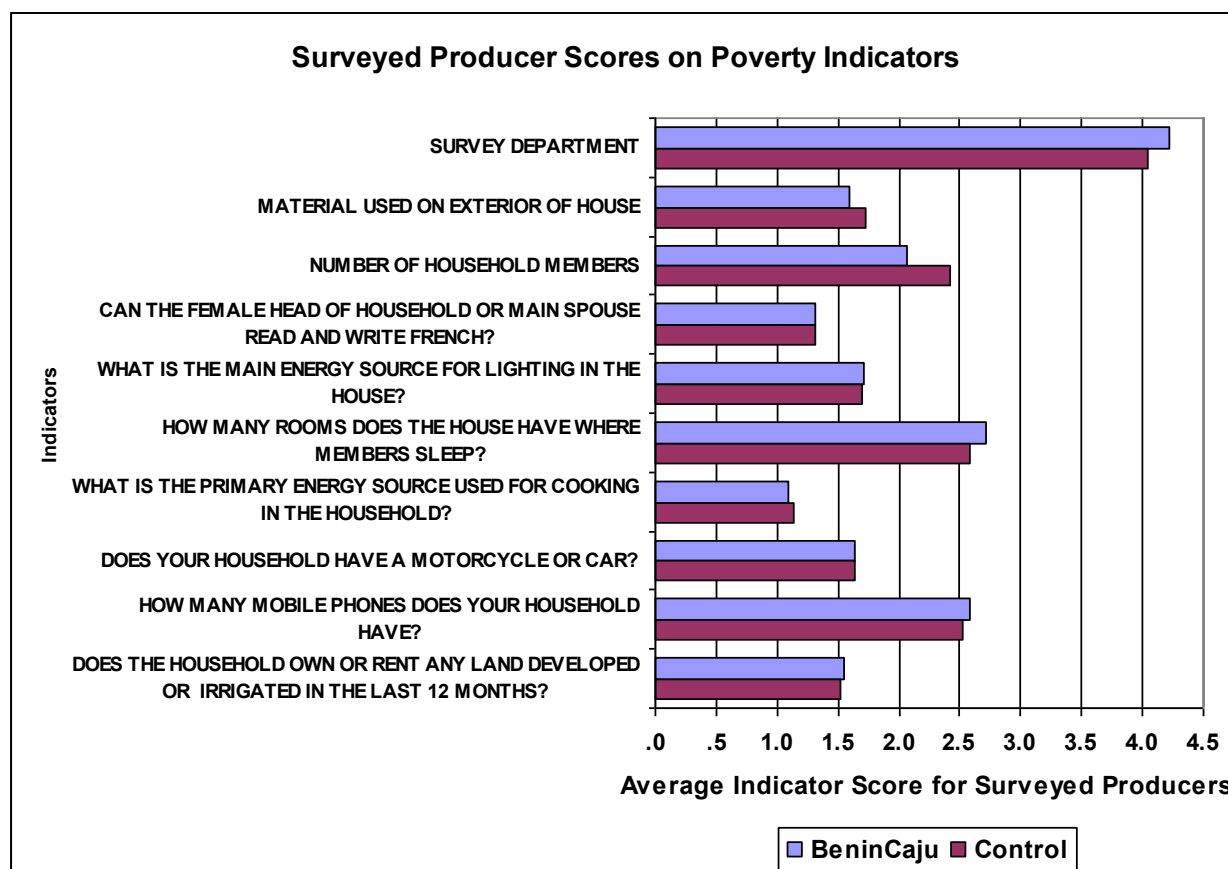


Figure 2.10-2: Poverty scorecard question scores for surveyed producer households

Looking at Figure 2.10-2, it is clear that for every one of the ten questions, the BeninCaju and Control households have virtually the same scores. The summed, overall poverty scores are therefore also almost exactly equal; the total scores were 20.46 for surveyed BeninCaju producer households and 20.60 for surveyed Control households.

The same questions from this poverty scorecard should be included in the Endline survey and the double-difference evaluation method applied to the Baseline and Endline scores for surveyed BeninCaju and Control households. This will enable the analysts involved with the Endline study and the BeninCaju impact assessment to determine the relative change in poverty scores for the two subgroups and if any of the (hoped for positive) change can be properly attributed to the BeninCaju interventions.

2.11 Gender and Income from Cashew

A key component of the CIAP interventions will focus on female cashew producers and ensuring that they reach parity with male producers in terms of *income from cashew*. In order to assess the gaps between male and female producers in terms of cashew income, the income data were disaggregated by gender and by CIAP status (CIAP or Control). Additionally, in order to try to pinpoint at least some of the root cause(s) of any income disparity that might exist between male and female producers, some of the parameters that might affect cashew income were also so disaggregated. These results are presented in Table 2.11-1.

The rows with the key income parameters are shaded for the reader's convenience.

Table 2.11-1: Cashew income parameters disaggregated by producer gender

Parameter	BeninCaju			Control		
	Male Producers	Female Producers	Percentage Difference ¹	Male Producers	Female Producers	Percentage Difference ¹
Total net income from cashew (FCFA)	197002	152944	22%	157521	124621	21%
Net income per producing cashew tree (FCFA)	785	630	20%	920	1021	-11%
Percentage of household members involved in cashew	49%	54%	-10%	48%	45%	6%
Annual household income (FCFA)	1130238	1092276	3%	914150	667009	27%
Percentage that received direct training on GAP	40%	29%	27%	31%	34%	-10%
Percentage that received direct training on HPH methods	34%	23%	32%	29%	31%	-7%
Total expense for cashew farming	149506	83568	44%	75916	62313	18%
Percentage with at least one household member in a registered formal farmer association/cooperative	33%	18%	45%	22%	24%	-9%
Total amount of RCN sold (kg)	511	254	50%	300	228	24%
Total amount of money received for RCN sales	212258	146659	31%	151202	123308	18%
Percentage of RCN produced that were sold	68%	67%	1%	66%	59%	11%
Total real plus in-kind gross income from cashew (FCFA)	315900	236512	25%	231372	186933	19%
Total number of (counted/estimated) producing cashew trees	745	463	38%	522	330	37%
Cashew yield (kg/producing tree)	2.76	1.98	28%	2.57	2.86	-11%
Cashew yield (kg /hectare of cashew)	217	176	19%	172	253	-47%
Overall Poverty Scorecard score	20.52	20.09	2%	20.78	19.80	5%

1. Percentages calculated as (Male-Female) /Male, so *positive* percentages mean that the Male parameter value is *greater* than the Female parameter value and *negative* percentages mean that the Male parameter value is *smaller* than the Female parameter value

The results in Table 2.11-1 show that for both BeninCaju and Control female cashew producers, male producers earn, on average, about 20% higher net income. This is certainly due in large part to the fact that, on average, male BeninCaju and Control producers have about 37% more producing cashew trees than do their female counterparts. However, when *net income per producing tree* is considered, the male BeninCaju producers earn about 20% more than their female counterparts while male Control producers earn about 11% *less* than their female counterparts.

In the case of the BeninCaju producers, the male producers are on average 45% more likely to have at least one household member in a formal farmers' association while for Control producers, the male producers are 9% *less likely* to have a member in such an association. Also, BeninCaju male producers are 27% *more* likely to have direct training on good agricultural practices (GAP) for cashew and 32% *more* likely to have received direct training on harvest and post-harvest (HPH) methods for cashew than their female counterparts. In contrast to this, for the Control producers, male producers are 10% *less* likely to have direct training on good agricultural practices (GAP) for cashew and 7% *less* likely to have received direct training on harvest and post-harvest (HPH) methods for cashew than their female counterparts.

These preliminary results suggest that, in view of the relatively higher *income per tree* of the female Control producers than their male counterparts compared to the reverse situation for BeninCaju producers, that membership in formal farmers' associations and getting direct training on the promoted methods for cashew production (GAP) and HPH methods may be significant factors in explaining the income disparity between male and female producers. Other data in Table 2-11-1 suggest other factors but do not seem as unambiguous as direct training and membership in these organizations in their likely role in determining cashew income per tree.

The BeninCaju team will assess these data in order to determine which of these factors can be affected by the planned BeninCaju interventions or by refinements to them. For example, BeninCaju can ensure that training done under this project on GAP and/or HPH include a disproportionately large percentage of female producers. Similarly, the BeninCaju interventions with the producer groups can actively encourage higher levels of female participation and membership.

BeninCaju interventions can also try to improve female producers' access to, and acquisition of, cashew seedlings and will also consider other ways to increase the female producers' numbers of producing cashew trees.

Part III: Surveyed Members of Producer Groups

This part of the Baseline Study report presents the results and findings of the survey conducted with members of producer groups. Recall from the introduction in Part I that these producer group members were all in villages that were part of the producer survey and were chosen because they have producer groups in them. However, the specific respondents could not be chosen in a true random fashion due to the lack of available sample frames from which the sample of respondents could be randomly selected. Therefore, although the specific group members to be interviewed were not purposefully chosen, the set of respondents can only be considered to be a “pseudo-random sample.”

A total of 205 producer group members from BeninCaju villages and 198 producer group members from Control villages were interviewed as part of this survey. This section will refer to them as “BeninCaju” or “Control” group members according to the status of their village.

3.1 General Producer Group Information

Because the focus of this section is on the group rather than on the specific group members, many of the findings in this section are presented in simple table format with average values rather than presenting detailed distributions of parameters relating to the group members themselves. The demographic profiles of the surveyed BeninCaju and Control producer group members are presented in Table 3.1-1.

Table 3.1-1: Demographic profile of surveyed producer group members

Parameter	BeninCaju Producer Group Members	Control Producer Group Members
Percentage of female group members interviewed	22%	17%
Average age of surveyed group members (years)	46.9	47.2
Average number of years producing cashew	14.5	16.2
Average number of separate cashew plantations	1.6	1.8
Average (self-reported) number of producing cashew trees	362	390
Average number of years in the present producer group	4.5	6.8

As Figure 3.1-1 shows, the BeninCaju and Control surveyed producer group members are not equally distributed among the BeninCaju operational communes.

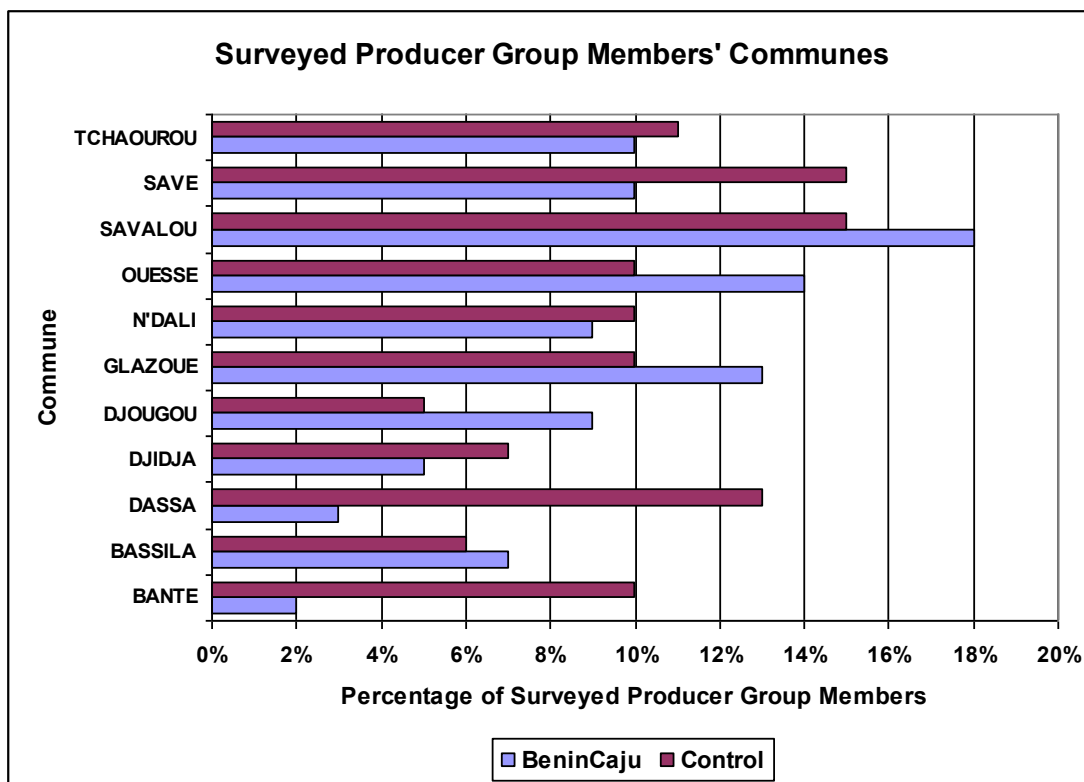


Figure 3.1-1: Surveyed producer group members' home communes

Most (89%) of the surveyed BeninCaju producer group members belong to a CVPA group compared to 99.5% of the surveyed Control group members. Six percent (6%) of the BeninCaju group members belong to a Women group compared to 0.5% of the surveyed Control group members, and 5% of the surveyed BeninCaju group members belong to some other type of producer group. Virtually all of the surveyed group members would recommend to other cashew producers that they join their (the respondent's) producer group (BeninCaju: 99%; Control: 97%).

As Figure 3.1-2 shows, while most of the surveyed group members were ordinary members of the group with no other group function, a significant percentage of the group members had management, financial, or other roles in their producer group.

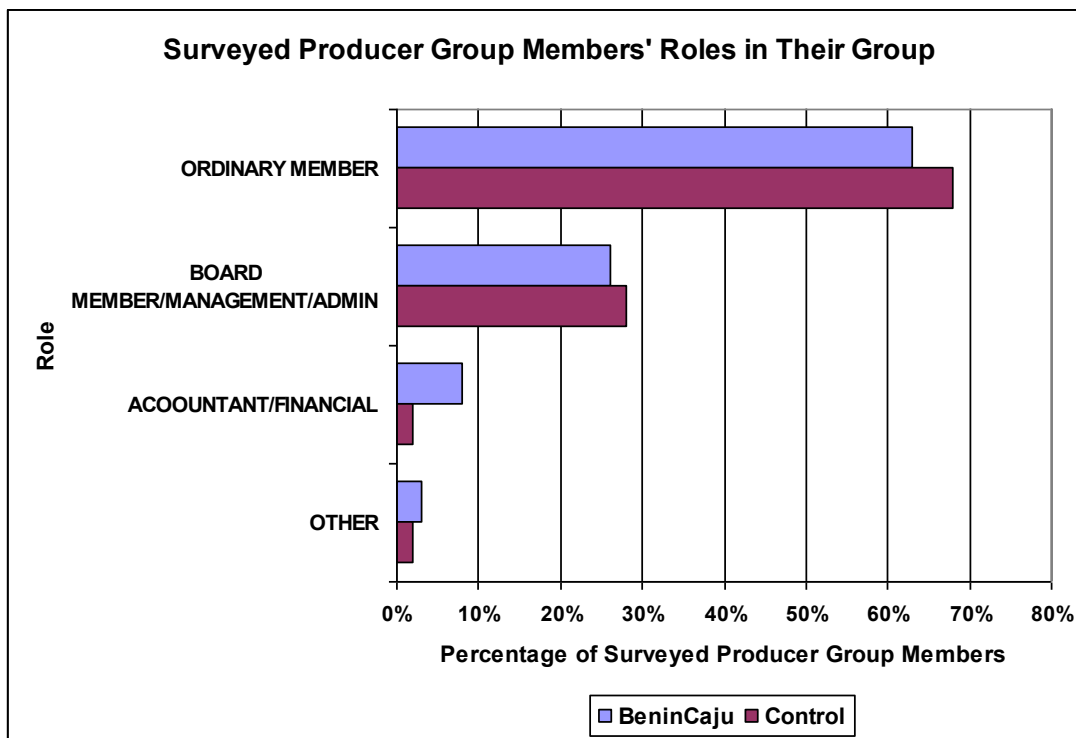


Figure 3.1-2: Surveyed producer group members' roles in their group

3.2 Producer Group Details

This section presents some of the details about the different producer groups. Because individual members of the same groups often gave conflicting accounts of some of the details regarding group size, Board size, frequency of meetings, etc, *average* values (averaged over the responses given by surveyed group members) for some of the parameters are presented. Thus, the data in this section represents *group member* responses rather than “*official*” *group* responses which were generally not available during the survey. However, because these averages were calculated separately for BeninCaju and Control producer groups, the impacts and outcome of BeninCaju interventions will still be measureable at the BeninCaju/Control level of disaggregation at BeninCaju Endline. These results are presented in Table 3.2-1.

Table 3.2-1: Producer group details

Parameter	Average Value Given By Respondents	
	BeninCaju Producer Group	Control Producer Group
Length of time producer group has been in existence (years)	4.7	8.3
Total Group Membership (number of members)	29.9	31.8
• Male members	21.3	21.8
• Female members	7.3	9.9
Total Board Membership (number of members)	6.6	8.3
• Male Board members	5.3	6.4
• Female Board members	1.7	1.6
Group Joining Fee (FCFA)	3273	3917
Share of Company Fee (FCFA)	5966	6483
Yearly Group Membership Fee (FCFA)	2900	2217

3.3 Reasons for Joining the Group and Provided Services

The surveyed producer group members were asked why they had joined their particular producer group. The results are presented as a table in Figure 3.3-1. Note that the respondents could mention as many of the listed reasons as were applicable, so the percentages total more than 100%.

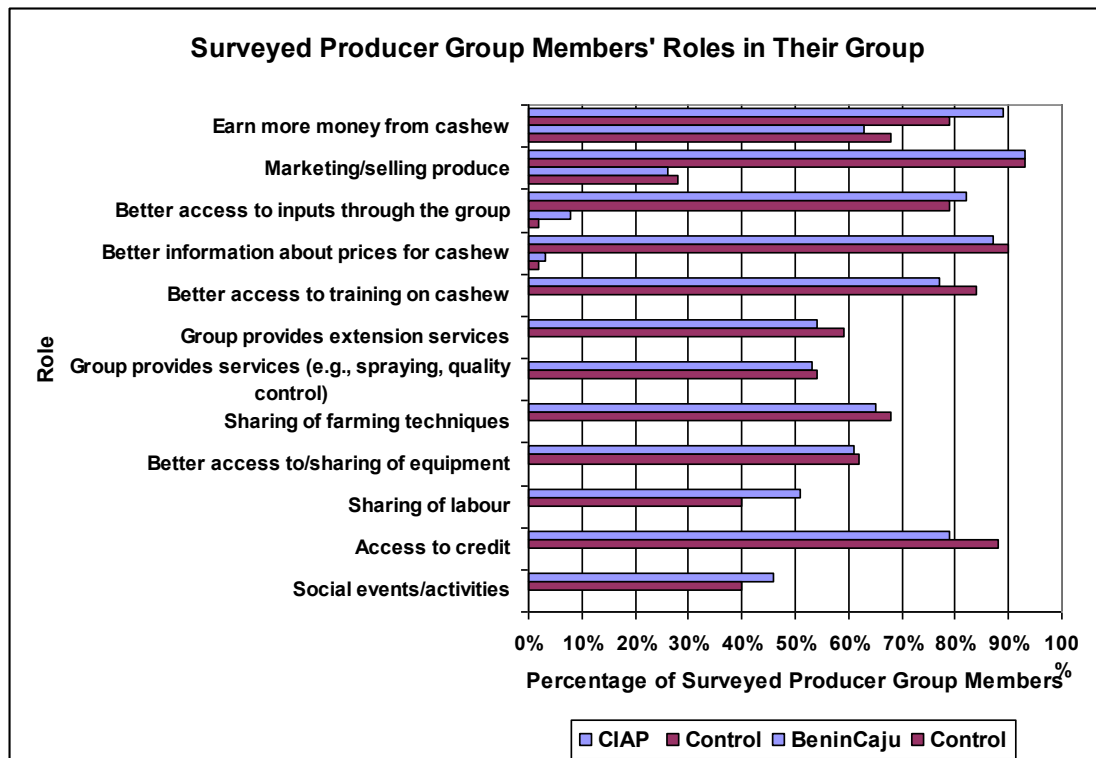


Figure 3.3-1: Reasons surveyed producer group members joined their group

The surveyed producer group members were also asked what services they would like to see improved in their group. These results are summarized in Figure 3.3-2.

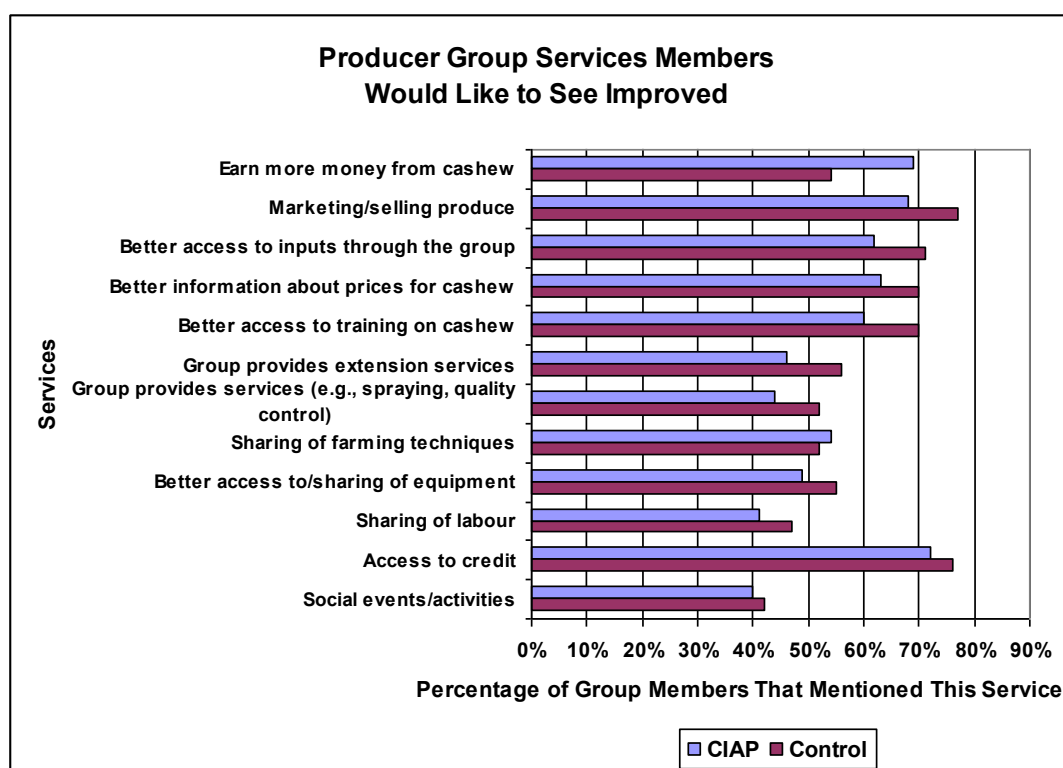


Figure 3.3-2: Producer group services that surveyed producer group members would like to see improved

3.4 Producer Group Management

The surveyed producer group members were asked whether or not they agreed with a series of statements made about the management style and actions of managers of their producer group, and how strongly they agreed or disagreed with each statement. The results are presented in Table 3.4-1.

Table 3.4-1: Surveyed producer group members opinions on the management of their group

Statement About Producer Group	Percentage of Surveyed Producer Group Members That Agree	
	BeninCaju	Control
Currently all Board positions are filled	78%	79%
The Board always recruit more candidates than there are vacancies whenever elections are held	48%	49%
The Board holds General Assembly meetings at least once per year to set goals and priorities for the coming year	76%	89%
The Board communicates regularly with Producer Group members about group activities and plans	73%	75%
The Board holds regular board meetings	67%	71%
The Board has a reputation among members for being fair, responsive and accountable	77%	85%
The Board calls regular members' meetings, but only when they're needed	75%	70%
Board members are elected by the Producer Group members	87%	90%
Meeting agendas are shared with members in advance	43%	46%
Members receive advance information on matters requiring decisions at	57%	47%
Producer Group financial statements shared with members during the meetings	77%	66%
All members are encouraged to participate in discussions during the meetings	89%	82%
All decisions taken in the meetings are announced to all attending members	84%	80%
Meetings usually include social activities	41%	29%
Meetings usually include an education component relating to cashew	69%	59%

These results will be compared to the comparable results obtained in the BeninCaju Endline in order to see if the BeninCaju interventions focused on the producer groups have improved the management, openness, and good governance of these BeninCaju-supported producer groups.

Part IV Surveyed Processors

The six processors that are working with and are part of BeninCaju (“BeninCaju partner processors”) were all asked to provide key pieces of information about their size, staff size, capacities, operations, etc. Because there are only six processors, the quantitative data have not been aggregated and averaged, but are all presented in Table 4.1. These data will be compared to comparable data at BeninCaju Endline in order to assess changes and improvements in these processors operations and business models. Note that there is no differentiation among these six processors with regard to BeninCaju vs Control, as this disaggregation does not apply to the processors.

The blue colored cells in this table indicate data that were not provided to BeninCaju by the processors.

Note that many of the BeninCaju interventions are focused on the processors; the principal such interventions are:

- Trainings of processors staff in business management skills and processing techniques and technologies
- Trainings on quality standards
- Marketing trainings conducted for processors
- Facilitate buyer-seller relationship
- Introduce processors to buyers
- Infrastructure for post-harvest processing
- Access to credit trainings
- Funds dispersed from innovation and Enterprise Development Fund (managed by TNS)
- Capacity building for industry association

The data in this table will inform those interventions to make them more effective and efficient and, as noted, will serve as benchmarks for comparison to similar and analogous results assessed over the life of BeninCaju. For example, the data in Table 4-1 show that all but one of the partner processors have had training in *business management skills*, all but one have had training in *processing techniques and technologies*, and all of them have had training in *quality standards*. However, 3 (50%) of the partner processors report that their most recent training on *processing techniques and technologies* took place in 2011 or 2012, suggesting that refresher training might be appropriate and would be well-received.

These results suggest that the partner processors already have a strong base of training and the training done under BeninCaju can therefore skip over most of the basics and be more advanced, addressing more sophisticated issues. In contrast to this, only 3 (50%) of the partner processors have had training on *marketing*, suggesting an area where training provided by BeninCaju would be well received and extremely useful for the processors.

Similarly, while the partner processors have attended different numbers of international trade events, the numbers of contracts resulting from these events have been uneven and typically low. This result suggests that processors could benefit from training and other support that shows them how to get better results from their attendance at these results.

Also, 4 (67%) of the partner processors report that potential buyers have asked for improvements in the processors' (post-harvest) operations. Some of the specific requests made by these buyers may require improved infrastructure for post-harvest processing; something that falls squarely into the BeninCaju planned interventions for processors.

Table 4.1: Summary of BeninCaju partner processors

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Respondent Position With Processor	PDG	CEO	PLANT MANAGER	DIRECTEUR GENERAL	FACTORY MANAGER	
Start Year Of Operation	2011	2011	2011	2011	2015	2006
Percentage Domestic Market	2%	0%	10%	0%	0%	3%
Percentage Export Market	98%	100%	90%	100%	100%	97%
Involved In Other Businesses?	Yes	Yes	Yes	No	Yes	Yes
What Other Businesses And Start Year 1	RCN PROCUREMENT 1994-1995	RCN PROCUREMENT - 1994-1995	Marketing of nuts since 1996	N/A	Cotton seed oil- 20 years	Shea sater since 2013
What Other Businesses And Start Year 2	SHEA NUT PROCUREMENT	Other food crops - 1994-1995	Marketing of shea kernels since 1998	N/A	Shea butter oil	
What Other Businesses And Start Year 3	SOYA BEAN PROCUREMENT			N/A	Soya oil	
Does Respondent Handle All Operations Personally?	No	No		Yes	Yes	
Entrust A Manager But Am Onsite	Yes	Yes	Yes	Yes		Yes
Entrust A Manager But Am Offsite	No	No		Yes		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Not Involved At All	No	No		NO		
Percentage Of Time In Cashew Plant	25 to 50%	50 to 100%	50 to 100%	50 to 100%	50 to 100%	50 to 100%
Rating Of Management Team	Acceptable, still need some support or training	Acceptable, still need some support or training	Acceptable, still need some support or training	Highly qualified and experienced	Highly qualified and experienced	Acceptable, still need some support or training
Industry Trade Activity - CNCT?	Yes	Yes	African women entrepreneurs	Yes	Yes	Yes
Industry Trade Activity - ACA?	Yes	Yes	Yes	Yes	Yes	Yes
Industry Trade Activity - Other?	BENIN GOLD	BENIN GOLD	AGOA OUA	NO		
Installed RCN Capacity In Mt-2013	1,500	1,500	600	1,500		
Installed RCN Capacity In Mt-2014	2,000	1,500	1,000	2,500		1,500
Installed RCN Capacity In Mt-2015	2,500	1,500	1,000	2,500	10,000	1,500
Installed RCN Capacity In Mt-2016	2,500	1,500	1,000	4,000		1,500
Utilized RCN Capacity In Mt-2013	1,000	800	20	1200		
Utilized RCN Capacity In Mt-2014	1,000	800	20	1900		200
Utilized RCN Capacity In Mt-2015	3,000	163	5	2100	50	1,000
Utilized RCN Capacity In Mt-2016	3,000	1,000		3000		1,500
Value Of Purchased RCN -2013	360	360	350	900,000		
Value Of Purchased RCN -2014	360	360	500	1.5 million		
Value Of Purchased RCN -2015	650	650	600	2.1 million		
Value Of Purchased RCN -2016	800		800	3.8 million		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Productivity / Person/Day, Kg, Manual, 2015: Shelling	55	60	50	15	27	
Productivity / Person/Day, Kg, Manual, 2015: Peeling	14	11	10	10	4	
Productivity / Person/Day, Kg, Manual, 2015: Recovery	6	7		NA		
Productivity / Person/Day, Kg, Manual, 2015: Grading	50	70	35	90	45	
Productivity / Person/Day, Kg, Machine, 2015: Shelling	400	100		15 KG hr	50	
Productivity / Person/Day, Kg, Machine, 2015: Peeling	2,000	1		185 KG hr	250	
Productivity / Person/Day, Kg, Machine, 2015: Recovery				NA		
Productivity / Person/Day, Kg, Machine, 2015: Grading				NA	1,000	
Percentage Of Task Mechanized: Shelling	70%	60%	10%	50%	90%	70%
Percentage Of Task Mechanized: Peeling	80%	40%		80%	60%	70%
Percentage Of Task Mechanized: Recovery		0%		NA	60%	70%
Percentage Of Task Mechanized: Grading	15%	0%		100%	60%	
Number Of 2015 Workers: Shelling	120	90	120	201	90	
Number Of 2015 Workers: Peeling	80	60	120	163	150	
Number Of 2015 Workers: Recovery	12	30	80	NA	20	
Number Of 2015 Workers: Grading	24	30	60	40	60	
Number Of 2015 Workers: Other	8	30		118		300

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Number Of 2015 Workers: Total	244	240		522		
Number Of 2015 Female Workers: Shelling	116	72	80	10		
Number Of 2015 Female Workers: Peeling	79	48	80	155		
Number Of 2015 Female Workers: Recovery	12	24	40	NA		
Number Of 2015 Female Workers: Grading	24	24	30	38		
Number Of 2015 Female Workers: Other		24				75
Number Of 2015 Female Workers: Total	231	192		251		
Percentage Of 2015 Female Workers: Shelling	96%	80%	80%		100%	
Percentage Of 2015 Female Workers: Peeling	98%	80%	80%		100%	
Percentage Of 2015 Female Workers: Recovery	100%	80%	80%		100%	
Percentage Of 2015 Female Workers: Grading	100%	80%	80%		100%	
Percentage Annual Labor Turnover In 2015	20%	40%		39%		30%
Do You Use RCN Shell?	Yes	Yes	Yes	Yes	Yes	Yes
If You Use RCN Shell, Where Do You Use It?	1. Burning for production operations		1. Burning for production operations	Burning for process	2. CNSL production	1. Burning for production operations
Do You Generate Revenue From Shell?	No	Yes	No	NO	Yes	Yes
If You Generate Revenue From Shell, How Much (FCFA)				N/A		
How Do You Dispose Of Surplus Shell?	1. Burning as waste	1. Burning as waste	1. Burning as waste	1. Burning as waste		2. Throwing away

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Do You Trace Costs Of Processing RCN?	Yes	No	Yes	Yes	Yes	Yes
Cost Of Processing Per Mt Of RCN: 2013	175			1.30		
Cost Of Processing Per Mt Of RCN: 2014	170			1.20		
Cost Of Processing Per Mt Of RCN: 2015				1.10		
Do You Know Your Competitors' Processing Costs	No	No	No	Yes	Yes	
How Much Equity Do You Have (USD)?		500,000		68,776,699		
Do You Have Access To Finance?	Yes	Yes	No	Sort of	Yes	Yes
How Much Financing (USD) Did You Get In 2013?		375000000		1 million		
How Much Financing (USD) Did You Get In 2014?		375000000		1.5 million		
How Much Financing (USD) Did You Get In 2015?		375000000		3 million		
How Much Financing (USD) Did You Get In 2016?		375000000		180 USD		
What Interest Rates Are You Paying - Working Capital?	12%	12%	13%	10%		
What Interest Rates Are You Paying - CAPEX?	12%	12%	13%	10%		
What Interest Rates Are You Paying - Other?			13%	N/A		
Who Are Your Financiers?	BOA- RESPONSABILI TY-OIKO- CREDIT-ROOT CAPITAL	BOA-ROOT CAPITAL-OIKO CREDIT	ROOT CAPITAL; BOA	TRIODOS, ROOT CAPITAL, DIAMOND BANK, BSIC; ECOBANK; ORABANK;		SHARCHADDY

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
				ABET; SERVICE FIRST		
Have You Received Training On: BUSINESS MANAGEMENT SKILLS?	Yes	Yes	Yes	No	Yes	No
Have You Received Training On: MARKETING?	Yes	Yes	Yes	No		No
Have You Received Training On: QUALITY STANDARDS?	Yes	Yes	Yes	Yes	Yes	Yes
Have You Received Training On: ACCESS TO CREDIT?	Yes	Yes	Yes	No		No
Have You Received Training On: PROCESSING TECHNIQUES AND TECHNOLOGY?	Yes	Yes	Yes	Yes	Yes	No
Who Provided The Training On BUSINESS MANAGEMENT SKILLS	Institution	Root Capital	ICA	N/A	Own	
Who Provided The Training On MARKETING?	Institution	Institution CCI	PADA	N/A		
Who Provided The Training On QUALITY STANDARDS?	NGO project	CTB	CTB & TechnoServe	Own	TGI/India	CTB
Who Provided The Training On ACCESS TO CREDIT?	Institution	Institution CCI	APIEX	N/A		
Who Provided The Training On PROCESSING TECHNIQUES AND TECHNOLOGY?	NGO project	TechnoServe	TechnoServe	Own and Technoserve	India	
Was The Training Quality Enough: BUSINESS MANAGEMENT SKILLS?	Yes	Yes	No	NO		
Was The Training Quality Enough: MARKETING?	Yes	Yes	No	NO		
Was The Training Quality Enough: QUALITY	Yes	Yes	No	NO		Yes

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
STANDARDS?						
Was The Training Quality Enough: ACCESS TO CREDIT?	No	Yes	No	No		
Was The Training Quality Enough: Processing Techniques And Technology?	Yes	Yes	No	No		
Was The Training Duration Enough: BUSINESS MANAGEMENT SKILLS?	No	Yes	Yes	No		
Was The Training Duration Enough: MARKETING?	No	No	Yes	No		
Was The Training Duration Enough: QUALITY STANDARDS?	No	Yes	Yes	No		Yes
Was The Training Duration Enough: ACCESS TO CREDIT?	No	No	Yes	No		
Was The Training Duration Enough: PROCESSING TECHNIQUES AND TECHNOLOGY?	No	Yes	Yes	No		
Year Of The Most Recent Training: BUSINESS MANAGEMENT SKILLS	2014	2015	2014	Never		
Year Of The Most Recent Training: MARKETING	2014	2016	2015	Never		
Year Of The Most Recent Training: QUALITY STANDARDS	2,015	2,016	2,015	2,016		2,015
Year Of The Most Recent Training: ACCESS TO CREDIT	2015	2016	2014	Never		
Year Of The Most Recent Training: PROCESSING TECHNIQUES AND TECHNOLOGY	2012	2012	2011	2016		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
How Many Of The Practices Promoted In The Most Recent Training Have You Adopted In Your Processing Plant? BUSINESS MANAGEMENT SKILLS	3	3	2	None. Never received training		
How Many Of The Practices Promoted In The Most Recent Training Have You Adopted In Your Processing Plant? MARKETING	1	3	1	None. Never received training		
How Many Of The Practices Promoted In The Most Recent Training Have You Adopted In Your Processing Plant? QUALITY STANDARDS	2	3	4	All of them	3	3
How Many Of The Practices Promoted In The Most Recent Training Have You Adopted In Your Processing Plant? ACCESS TO CREDIT	1	3	1	None. Never received training		
How Many Of The Practices Promoted In The Most Recent Training Have You Adopted In Your Processing Plant? PROCESSING TECHNIQUES AND TECHNOLOGY	4	3	4	All of them	3	
Rate The Technical Assistance Given On: BUSINESS MANAGEMENT SKILLS	2	2	1	N/A		
Rate The Technical Assistance Given On: MARKETING g	1	1	1	N/A		
Rate The Technical Assistance Given On: QUALITY	2	2	3	2	2	2

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
STANDARDS						
Rate The Technical Assistance Given On: ACCESS TO CREDIT	1	1	1	N/A		
Rate The Technical Assistance Given On: PROCESSING TECHNIQUES AND TECHNOLOGY	2	2	2	2	2	
Have You Received Any Support On Technology Advisory?	Yes	Yes	Yes	No	Yes	Yes
Have You Received Any Support On Farmer Linkage?	Yes	Yes	Yes	Yes		Yes
Have You Received Any Support On General Technical Assistance?	Yes	Yes	Yes	No		Yes
Have You Received Any Support On Access To Finance?	Yes	Yes	Yes	No		Yes
Have You Received Any Support On Business Development Services?	No	No	Yes	No		Yes
Have You Received Any Support On Food Safety?	Yes	Yes	Yes	Yes	Yes	Yes
Who Provided That Support: Technology Advisory?	NGO Project	NGO Project	TechnoServe	N/A		
Who Provided That Support: Farmer Linkage?	NGO Project	Institution	ICA	ACi		
Who Provided That Support: General Technical Assistance?	TechnoServe	NGO Project	TechnoServe	Technoserve		
Who Provided That Support: Access To Finance?	Institution	Institution	TechnoServe	N/A		
Who Provided That Support: Business Development Services?			ICA	N/A		ICA
Who Provided That Support: Food Safety?	NGO Project	NGO Project	CTB	Institution		CTB
Was The Quality Of That Support	Yes	Yes	Yes	No		Yes

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Enough: Technology Advisory?						
Was The Quality Of That Support Enough: Farmer Linkage?	No	Yes	Yes	No		Yes
Was The Quality Of That Support Enough: General Technical Assistance?	Yes	Yes	Yes	No		No
Was The Quality Of That Support Enough: Access To Finance?	No	Yes	Yes	No		Yes
Was The Quality Of That Support Enough: Business Development Services?			Yes	No		Yes
Was The Quality Of That Support Enough: Food Safety?	Yes	Yes	Yes	Yes		Yes
Was The Duration Of That Support Enough: Technology Advisory?	No	No	Yes	No		Yes
Was The Duration Of That Support Enough: Farmer Linkage?	No	Yes	Yes	No		Yes
Was The Duration Of That Support Enough: General Technical Assistance?	No	Yes	Yes	No		No
Was The Duration Of That Support Enough: Access To Finance?	No	No	Yes	No		Yes
Was The Duration Of That Support Enough: Business Development Services?			Yes	No		Yes
Was The Duration Of That Support Enough: Food Safety?	No	Yes	Yes	Yes		Yes
Rate The Delivered Technical Assistance: Technology Advisory	2	2	3	0 because N/A	2	2
Rate The Delivered Technical Assistance: Farmer Linkage ¹	1	2	2	3		2

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Rate The Delivered Technical Assistance: General Technical Assistance ¹	2	2	3	3		2
Rate The Delivered Technical Assistance: Access To Finance ¹	1	1	2	0 because N/A		2
Rate The Delivered Technical Assistance: Business Development Services ¹			2	0 because N/A		1
Rate The Delivered Technical Assistance: Food Safety ¹	3	3	3	2	2	2
Are You Currently Receiving Support From Any Organization: Technology Advisory?	No	No		No		Yes
Are You Currently Receiving Support From Any Organization: Farmer Linkages?	No	No		Yes		Yes
Are You Currently Receiving Support From Any Organization: General Technical Assistance?	No	No	Yes	No		Yes
Are You Currently Receiving Support From Any Organization: Access To Finance?	No	No		No		No
Are You Currently Receiving Support From Any Organization: Business Development Services?	No	No		No		No
Are You Currently Receiving Support From Any Organization: Food Safety?	Yes	Yes	Yes	No		Yes
If Yes, From Which Organization: Technology Advisory?				No		
If Yes, From Which Organization: Farmer Linkages?				Aci, Self Help Africa, Intersnack		
If Yes, From Which Organization:			PADA	No		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
General Technical Assistance?						
If Yes, From Which Organization: Access To Finance?				No		
If Yes, From Which Organization: Business Development Services?				No		
If Yes, From Which Organization: Food Safety?	CTB	CTB	CTB	No		CTB
If Yes, What Year Is That Support Supposed To End: Technology Advisory?				N/A		
If Yes, What Year Is That Support Supposed To End: Farmer Linkages?				Dec 2016		2016
If Yes, What Year Is That Support Supposed To End: General Technical Assistance?			2016	N/A		
If Yes, What Year Is That Support Supposed To End: Access To Finance?				N/A		
If Yes, What Year Is That Support Supposed To End: Business Development Services?				N/A		
If Yes, What Year Is That Support Supposed To End: Food Safety	2016	2016	2017	N/A		2016
Rate The Technical Assistance: Technology Advisory				0		
Rate The Technical Assistance: Farmer Linkages				3		
Rate The Technical Assistance: General Technical Assistance			3	3		
Rate The Technical Assistance: Access To Finance				0		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Rate The Technical Assistance: Business Development Services				0		
Rate The Technical Assistance: Food Safety	3	3	3	2		
What Challenges To A Profitable Cashew Processing Business Do You Face 1?	difficulty for procurement due to high KCN	procurement (RCN)	Raw material supply	Non-controlling the cost of the raw material	no government control on cashew availability to processor	Access to finance
What Challenges To A Profitable Cashew Processing Business Do You Face 2?	Access to finance (high interest rates)	Labor	Energy	Govt policy and regulation		Value chain or procurement
What Challenges To A Profitable Cashew Processing Business Do You Face 3?	High cost of production	Power (electricity)	Financing on due dates	Access to finance at reasonable interest rates for RCn and equipment expansion	government support to processing of discourage RCN export	Technical capacity

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
What Challenges To A Profitable Cashew Processing Business Do You Face 4?	difficulty to start by product production for value addition	Financing	Work force	Supporting businesses. Like box suppliers, equipment suppliers etc.		Sparc post
What Challenges To A Profitable Cashew Processing Business Do You Face 5?			Profitability	Access to technology, trainings	Low interest of workers. Difficulty in improve manual efficacy	
How Is Competition Between RCN Exporters And RCN Processors Managed In Your Country?	there is an existing system to procure before exporters(for processor but not really efficient)	Competition is very high. There is a mechanism set by CNTC to procure at a low price which is not efficient coz of low volume	No management. Exporters are blazing the price and processors are missing	It isn't. Sort of a free for all. Processors supposed to have 2 weeks "free" time to source their needs. That is a joke	very tough environment for processors	Fierce
How Is Competition Between RCN Exporters And RCN Processors Managed In Your Country?	(ROOT-OIKO)	2-(Root capital and Oiko credit) BOA credit system was not the right one	Root capital is trying. But any			2
Are There Any Concessional Loan Facilities Available For Cashew Processing?	No	No	Any	No		yes

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Number Of Farmers Directly Linked 2015	1,000	2,000	3,000	2,383		
Number Of Farmers Directly Linked Plan For 2016		2,000	4,000	2,383		
Comments On Linkage						
Number Of Female Farmers Directly Linked 2015	20	1,200	100	715		
Number Of Female Farmers Directly Linked PLAN FOR 2016		1,200	110	715		
Comments On Female Farmer Linkages						
RCN directly purchased, Mt of RCN 2015	300	500		991		
RCN directly purchased, Mt of RCN 2016		700		Not sure		
COMMENTS ON RCN direct purchases						
Price paid, Mt of RCN on direct purchases 2015	310,000	650,000	600	\$800		
Price paid, Mt of RCN on direct purchases 2015		800,000	800			
COMMENTS ON PRICE PAID						
Total Number Of Workers Employed 2014	244	240	120	501		100
Total Number Of Workers Employed 2015	150	240	80	522	200	250
Total Number Of Workers Employed 2016			40	465	350	310
Total Number Of Female Workers Employed 2014	94	192	80	225		570
Total Number Of Female Workers Employed 2015	98	192	60	251		200
Total Number Of Female			25	186		250

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Workers Employed 2016						
Average Salaries Paid To Workers In 2015 In Shelling	35,000	25,000	50,000	40,000		
Average Salaries Paid To Workers In 2015 In Peeling	30,000	20,000	35,000	40,000		
Average Salaries Paid To Workers In 2015 In Recovery	30,000	25,000		N/A		
Average Salaries Paid To Workers In 2015 In Grading	38,000	27,000	33,000	40,000		
Average Salaries Paid To Workers In 2015 In Other	30000	30000		45000		
Annual Labor Turnover In Shelling	30%	40%		10%		
Annual Labor Turnover In Peeling	10%	40%		10%		
Annual Labor Turnover In Recovery	0%	40%		10%		
Annual Labor Turnover In Grading	0%	40%		10%		
Annual Labor Turnover In Other				10%		
What Social Programs Do You Have For Workers? CRCECHE	Yes	Yes	No	Yes	Yes	Yes
What Social Programs Do You Have For Workers? CRCECHE	No	No		Yes	Yes	
What Social Programs Do You Have For Workers? FREE BREAKFAST	Yes	Yes	Yes	Yes		Yes
What Social Programs Do You Have For Workers? FREE LUNCH	Yes	No		Yes		Yes
What Social Programs Do You Have For Workers? TRANSPORT	Yes	Yes		Yes	Yes	Yes

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
What Social Programs Do You Have For Workers? OTHER				Yes		
Are You Involved In Farmers Training Programs?	Yes	Yes	No	Yes		Yes
If Yes, What Are They: 1	Cashew production skills (marching fund)	GNP		Technical support and financial contribution		FMS/ ACI
If Yes, What Are They: 2	GHP (CTB)	GMP		Training		
If Yes, What Are They: 3		production techniques		Better farming practices		
If Yes, What Are They: 4				Hands-on learning		
If Yes, What Are They: 5				Pre-finance		
What Are The Main Markets Where You Sell Your Kernels? Specify How Many End Buyers 1	American (Caro nut)	American (Caro- Fernandes Brothers)	Etats-Unis (Caro nut)	TDI	USA - Just started @	Europe-1
What Are The Main Markets Where You Sell Your Kernels? Specify How Many End Buyers 2	local (Benin Lux cajou)		Suisse(Gebana)	INTERSNACK	E.U - Yet to start	
What Are The Main Markets Where You Sell Your Kernels? Specify How Many End Buyers 3				Sunrise Commodities		
What Are Buyers' Expectations From You? 1	No	Yes	Yes	Sell them quality kernels and ship on time?	Yes	Yes
Do You Have Any Credible Sources Of Market Information?	internet	Cashew info	Cashew week	Yes	Own, Cashew week journal, India	Market report/patterns

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
If Yes, Source For Market Information	based on buyer proposal with negotiation	Price compared to information from cashew info	the prices are not good because it is the buyers who set prices	ACA market reports, cashew weekly reports My own market knowledge	Regular interactions with India, Dubai, Local processors	Bench marking
Is There Any Price Reference For African Kernels Which You Know?	No	No	No	Yes	Yes	
If Yes, Source 1 For Price Reference				Cashew weekly	Cashew info weekly	
If Yes, Source 2 For Price Reference				Clients and my own company in the US trading kernels	India Spot Market	ACA
What resistance do you find in different export markets like Europe and the USA to buying your processed cashew?	none	none	Certification	none	Difficulty in selling pieces	Certification
If Yes, Resistance 1	None	None		NONE		
If Yes, Resistance 2	None	None		NONE		
If Yes, Resistance 3	None	None		NONE		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Are There Worries About Sanitation And/Or Quality?	None	None		Sanitation Infrastructure Failure	Yes Local Culture Of Sanitation Habits Are Concern. But The Unit Hiring Story Strategy To Outcome	Sanitation / Certification
Sanitation Worry 1	None	None		Need a wall		
Sanitation Worry 2	None	None		NA		
Sanitation Worry 3	None	None		NA		
Have Potential Buyers Asked For Improvements And/Or Changes In Your Operations:	Yes. Moisture And They Have To Revise Down The Moisture Content In Kernels	Accuracy With Kernels Grades		Scraping Rate	Not Much. A Story Design, Layout Of Implementation Of Haccp Requirements Is An Added Advantage For Us. Still Lot To Do On Workers Education On Sanitation	
Operations Improvement 1	None	None		NA		
Operations Improvement 2	None	None		NA		
Operations Improvement 3	None	None		NA		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD & CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Have You Attended At International Trade Fairs/Conference/Trade Mission In The Last 5 Years?	Yes	Yes	Yes	Yes	Yes	Yes
If Yes, How Many Such Events?	3	10	10	3		1
Event 1	Aca Conf	Aca Conference	Aca	Trade show in Morocco	World Cashew Conf 2015 Dubai	Aca Conference Cotonou
How Many Purchase Contracts Resulting From Event 1?	0		5	0		
Event 2	Sietta-Conf Ivc	Sietta	Vinacas	Paris trade show	World Cashew Conf 2016 Dubai	
How Many Purchase Contracts Resulting From Event 2?	0		0	0		
Event 3	World Cashew Conf-Dubai	World Cashew Conference	Siam	Morocco show again	Vinacas; Vietnam 2015-2016	
How Many Purchase Contracts Resulting From Event 3?	0		1	0		

PROCESSOR NAME	KAKE 5 INDUSTRY SA	LUMIERE	NAD &CO	TOLARO GLOBAL	FLUDOR	AFOKANTAN BENIN CASHEW
Event 4	Vinacash Conf- Vietnam	Salon Agriculture France	Dubai	NA	Cepc Conference 2015	
How Many Purchase Contracts Resulting From Event 4?	0		0	0		
Event 5		Salon Agriculture Kenya	Afrique Du Sud	NA		
How Many Purchase Contracts Resulting From Event 5?	0		0	0		

1: Ratings of support and training used a scale of 1-3 where: 3-exceed expectation, 2-meet expectations, 1 below expectations

Part V Processor Employees

This last major part of the Baseline Study report summarizes the result of a survey conducted with employees of the different BeninCaju partner processors. As mentioned earlier in Section 1.2 of this report, employees of all six of the BeninCaju-related cashew processors were surveyed. As it was not possible to get advance lists of employees and managers in each section of the processor factory, for each processor, in each section the first employee encountered was interviewed. A form of “nearest neighbor selection” with suitable skips³ was then used to randomize the selection of the next employee to interview throughout that processor section; a total of ten (10) workers in each section (that had at least 10 employees) was selected to be interviewed including the manager of that section. The manager of each work section in each processor was thus purposefully included in the sample.

5.1 Employee Profile

This section presents a work-related profile of the surveyed processor employees. A total of 150 employees from the six partner processors were interviewed. Almost one-half (49%) were female, and the average age of all of them was 30.7 years. The employees work for all of the different processors included as shown in Figure 5.1-1. Note that these employees are not evenly distributed across the six processors; employees from Tolaro are over-represented while employees from Lumière are under-represented. At BeninCaju baseline, only Tolaro, Fludor, and Afokantan were in operation, with the other processors having only a basic staff in place.

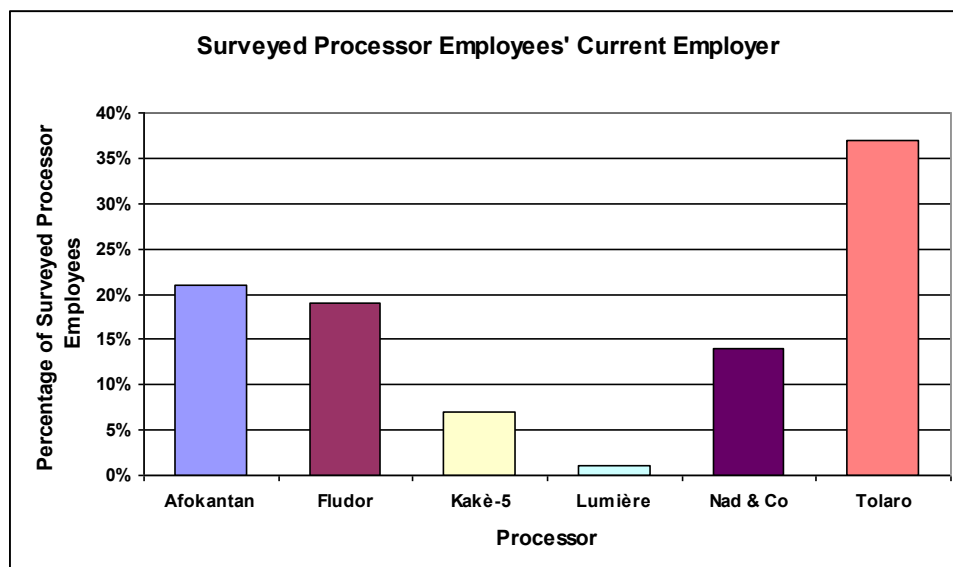


Figure 5.1-1: Surveyed processor employees current employer

³ The number of “skips” was determined by taking the total number of workers in the section and dividing by 10 to get the number of skips

The distribution of the ages of the surveyed employees is presented in Figure 5.1-2. Although the average age (of these employees that stated their age) is 30.7, this figure shows that almost one-fifth (19%) of these employees are 36 years or older.

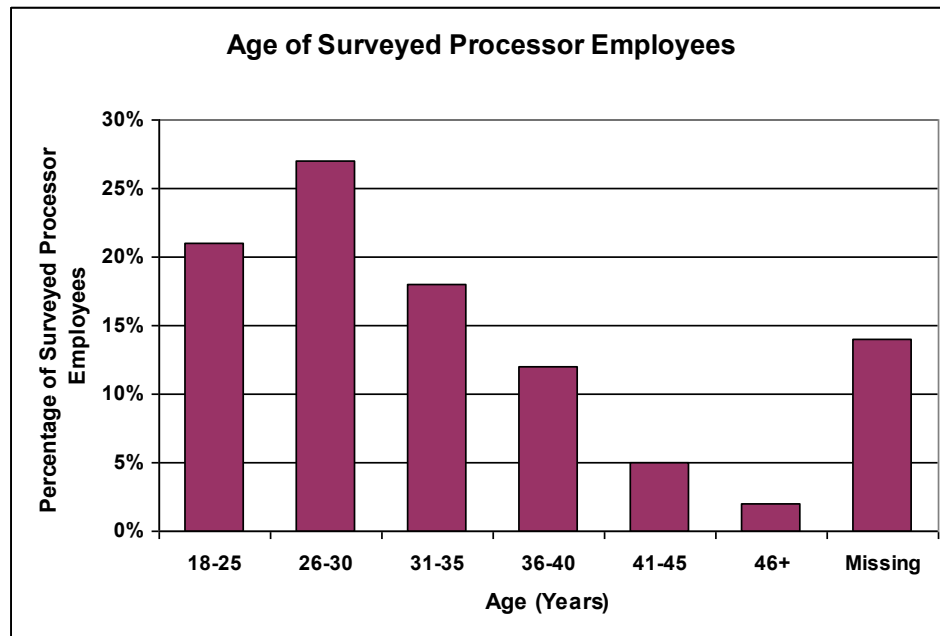


Figure 5.1-2: Ages of surveyed processor employees

Figure 5.1-3 shows that the surveyed employees are currently assigned to many different sections of the processor facilities. The overall levels (status) of their positions are presented in Figure 5.1-4.

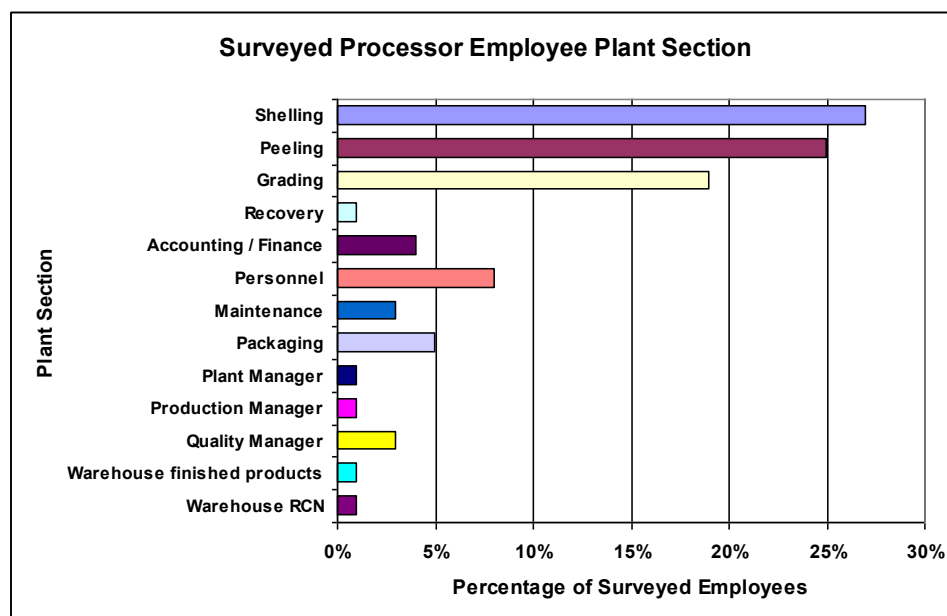


Figure 5.1-3: Surveyed processor employees assigned section

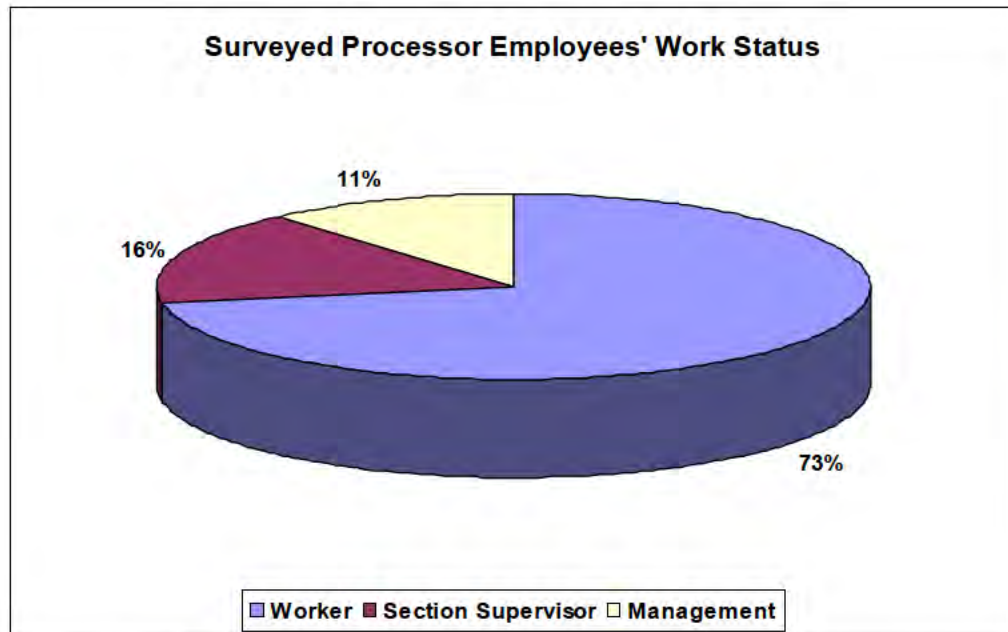


Figure 5.1-4: Surveyed processor employees current position status

Figure 5.1-4 shows that although almost three-quarters (73%) of the surveyed employees are workers, significant percentages are section supervisors (16%) or in plant management (11%). The lengths of time that the surveyed employees have been with their current employer are shown in Figure 5.1-5. This figure shows that one-third (33%) have been with their current employer no more than one year and half (50%) have been with their current employer for no more than two years. (Note: Fludor has only been operational since 2015, so this explains some of the short *times with current employer*.)

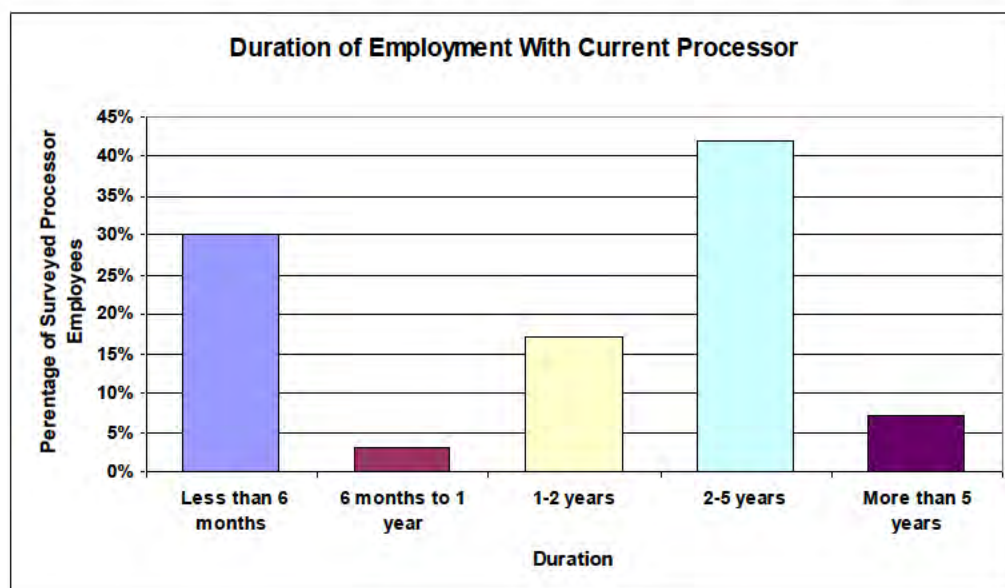


Figure 5.1-5: Surveyed employees time with their current employer

The amounts of time these employees have spent in their current position are shown in Figure 5.1-6.

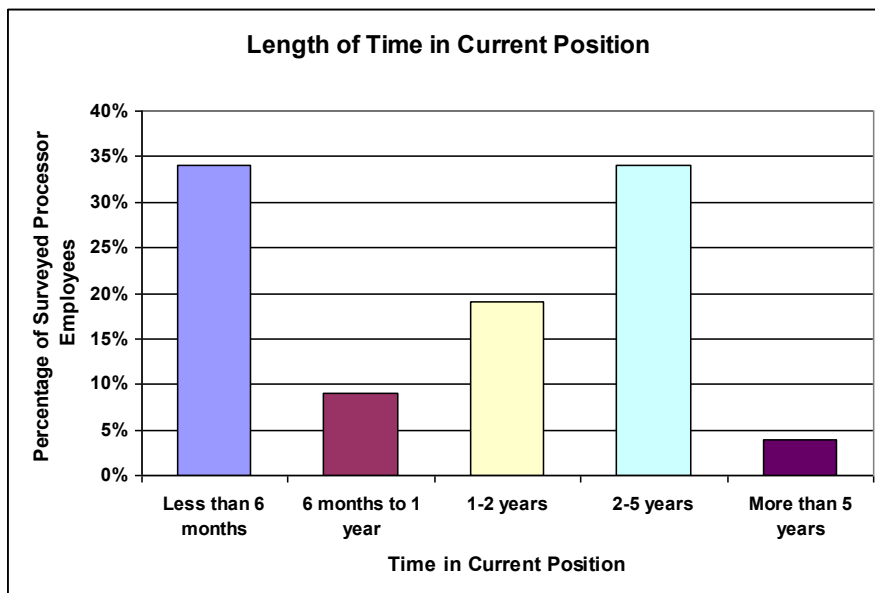


Figure 5.1-6: Surveyed employees length of time in their current position

Figures 5.1-5 and 5.1-6 jointly suggest that the surveyed employees have not as a group enjoyed much job advancement or mobility with their current employers. This is somewhat borne out by Figure 5.1-7 which compares *time with current employer* to *time in current position*. Note that many bits of data needed to complete this table were not provided by the respondents so percentages of employees in their position for different lengths of time do not sum to 100%.

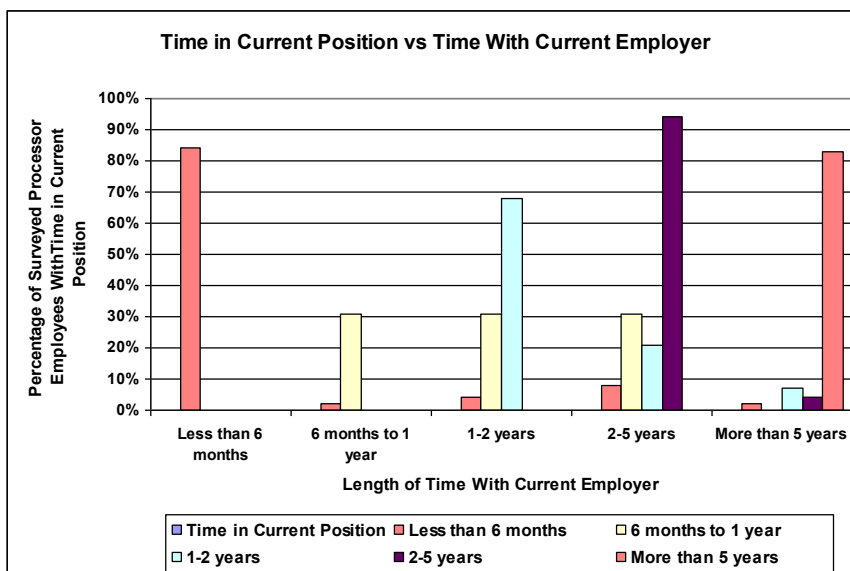


Figure 5.1-7: Surveyed employees' *time with current employer vs time in current position*

Figure 5.1-7 shows that most employees have been in their current position for as long as they have been with their current employer. For example, of the employees that have been with their current employer for 1-2 years, 68% of them have been in their current position for 1-2 years. Similarly, 94% of the employees that have been with their current employer for 2-5 years have been in their current position for 2-5 years and 83% of employees that have been with the current employer for more than 5 years have been in their current position for more than 5 years.

These data suggest that the employees are, for the most part, hired into a position where they largely remain. Figure 5.1-8 shows that all levels- workers, section supervisors, and managers - have been with their current employer for anywhere from 6 months or less up to more than 5 years.

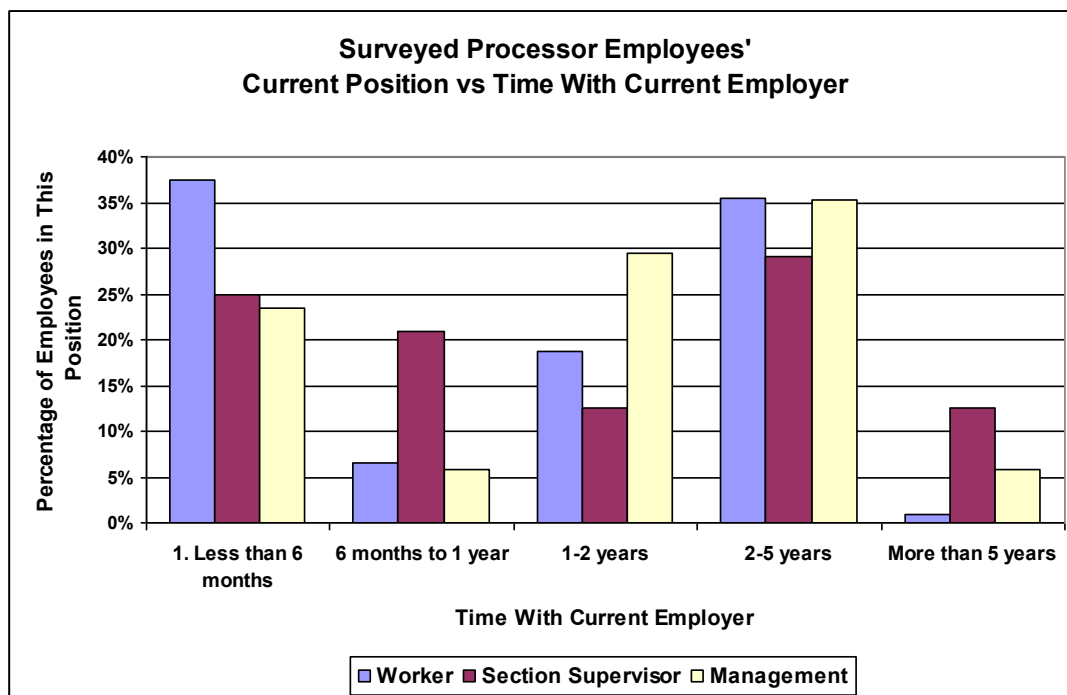


Figure 5.1-8: Processor employee position vs time with current employer

The surveyed employees were asked what they thought about their current workload. As shown in Figure 5.1-9, almost three-quarters of them thought that their workload was about right.

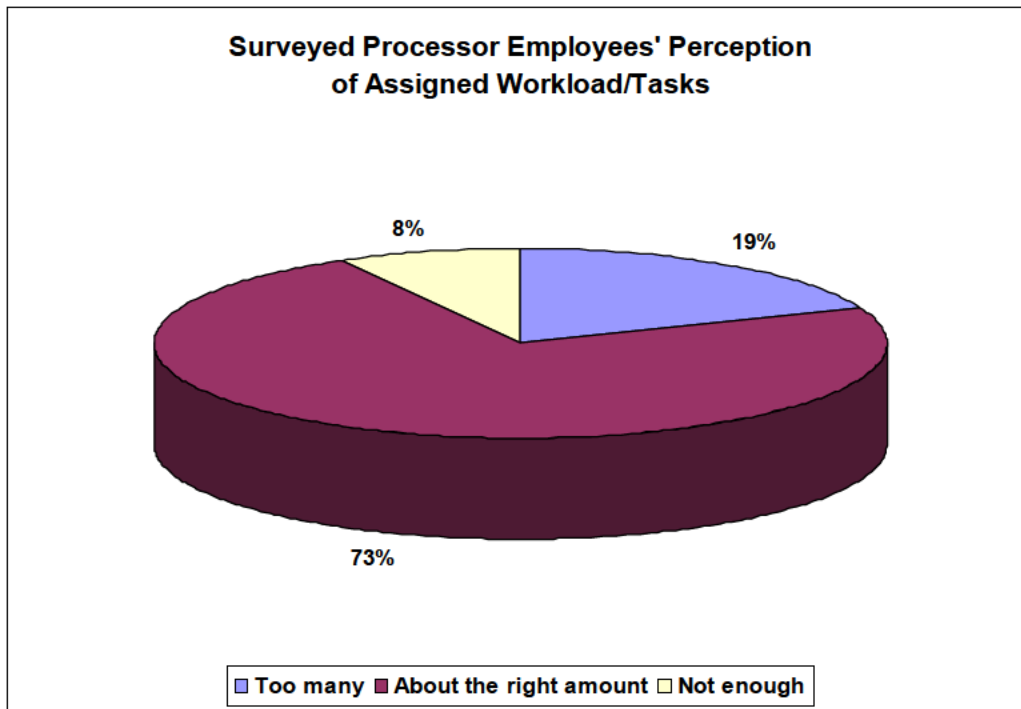


Figure 5.1-9: Surveyed employee assessment of their workload

5.2 Processor Employee Satisfaction

The surveyed processor employees were read a number of statements that reflect their level of satisfaction with different aspects of their current job and current employer. The surveyed employees were asked the extent to which they agreed with the statement or were satisfied with their employer regarding the issue being queried.

The surveyed employees' responses are self-explanatory, so these results are provided in Figures 5.2-1 to 5.2-11 without explanation or discussion. Note, however, that from Figure 5.2-1 the conclusion is that 73% of the surveyed employees are *satisfied* or *very satisfied* overall with their job.

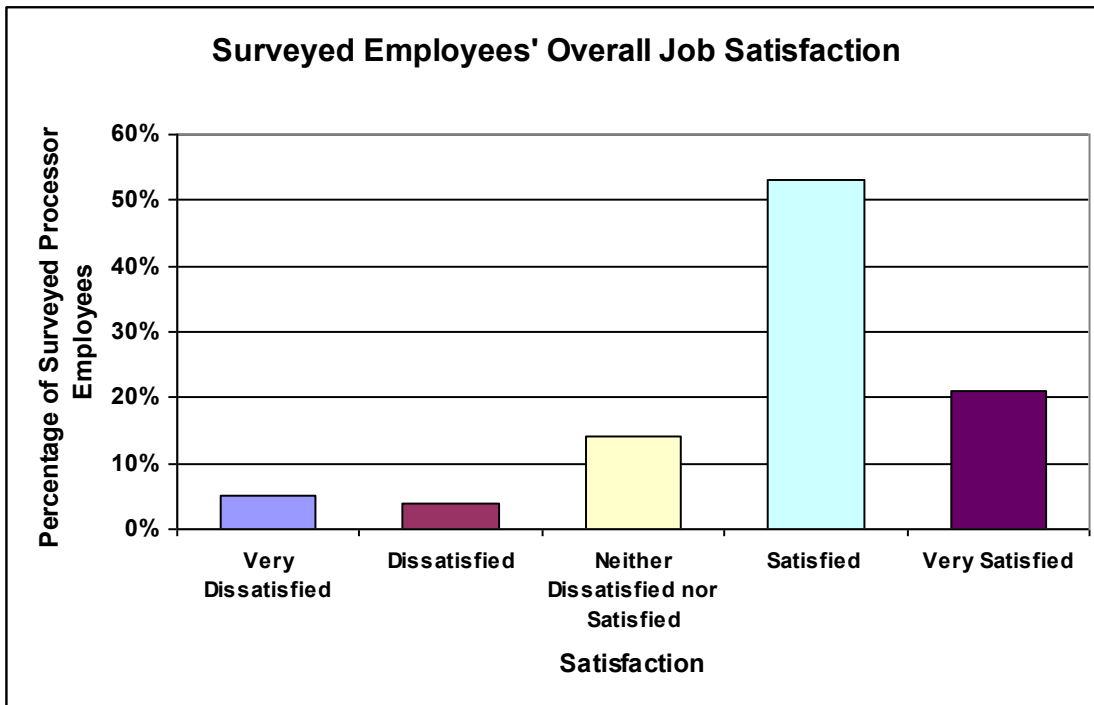


Figure 5.2-1: Surveyed employees' overall job satisfaction

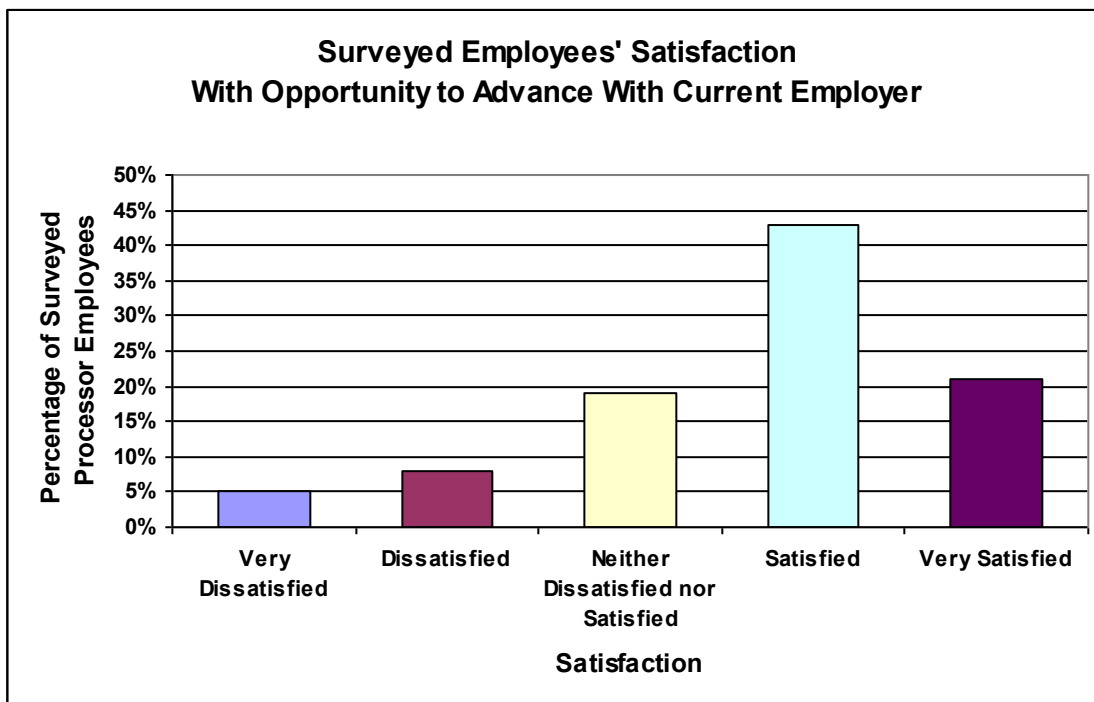


Figure 5.2-2: Surveyed employees' satisfaction with the opportunity for advancement

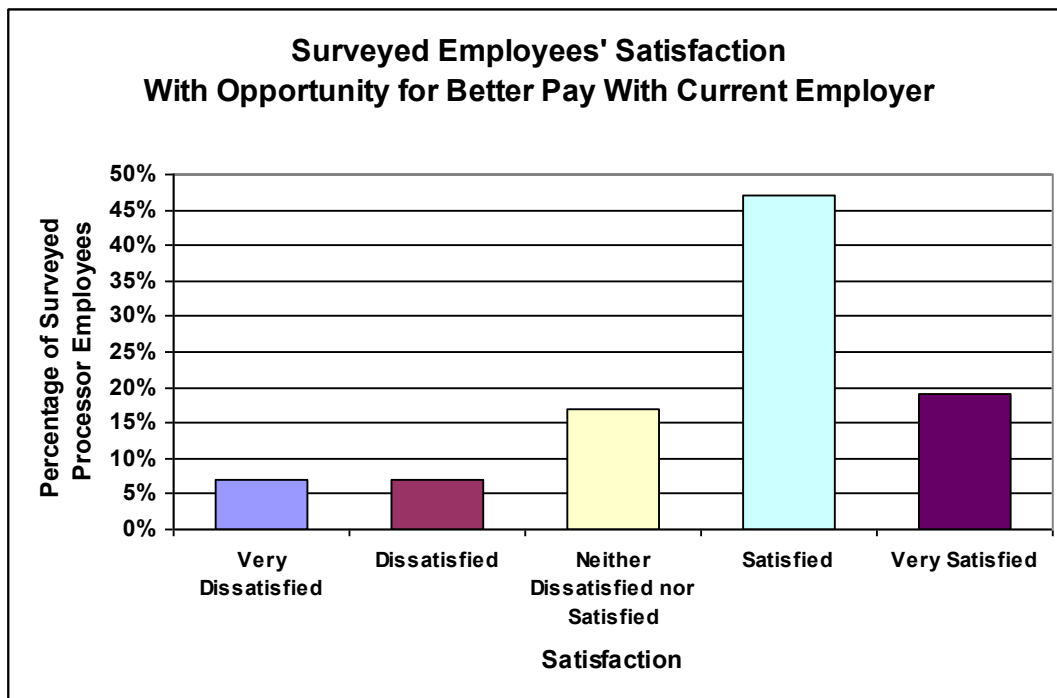


Figure 5.2-3: Surveyed employees' satisfaction with opportunity to receive better pay

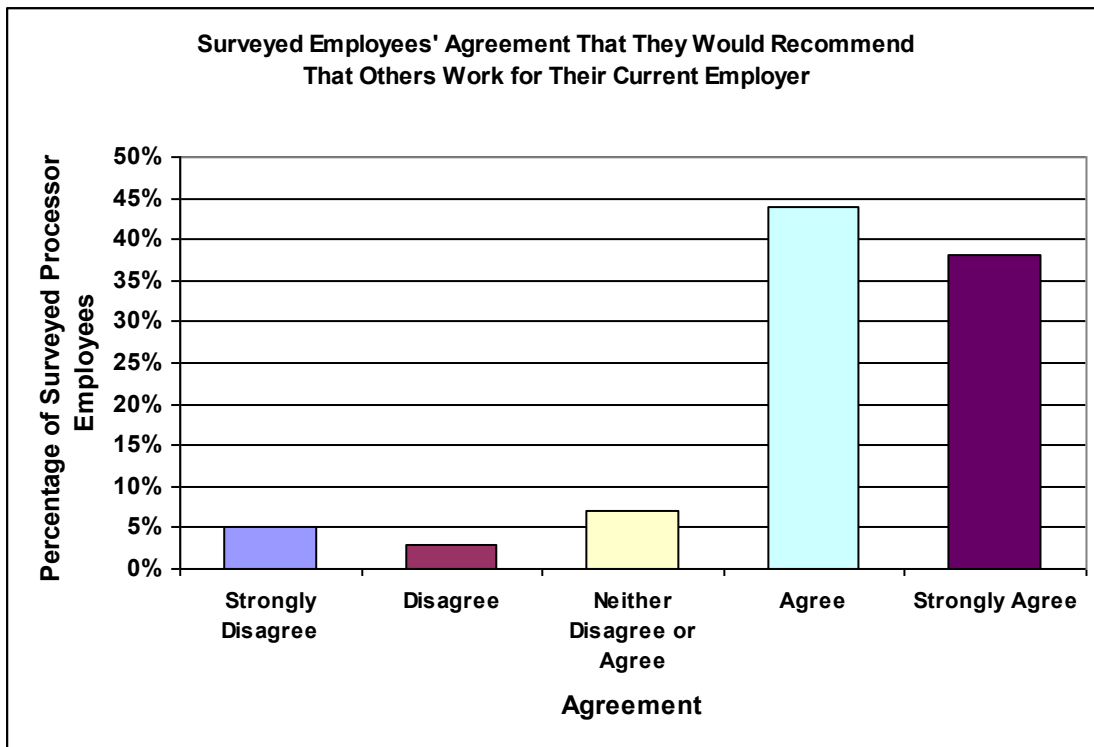


Figure 5.2-4: Surveyed employees' agreement that they would recommend their current employer to others

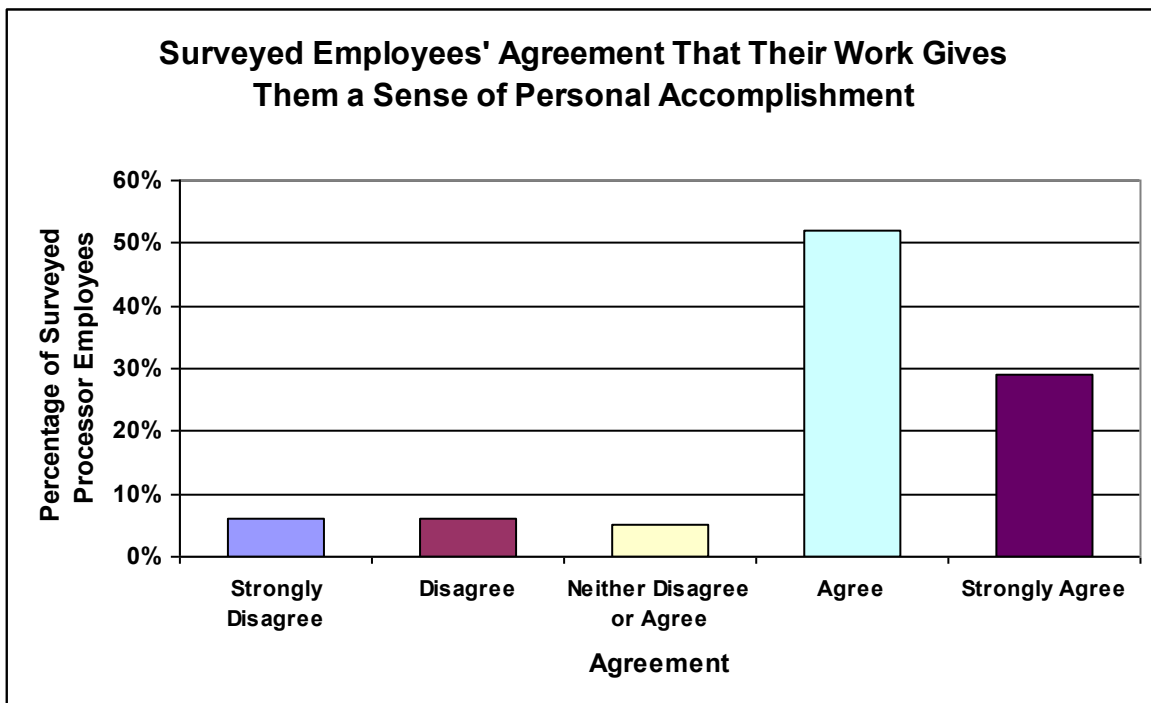


Figure 5.2-5: Surveyed employees agreement that their work gives them a sense of accomplishment

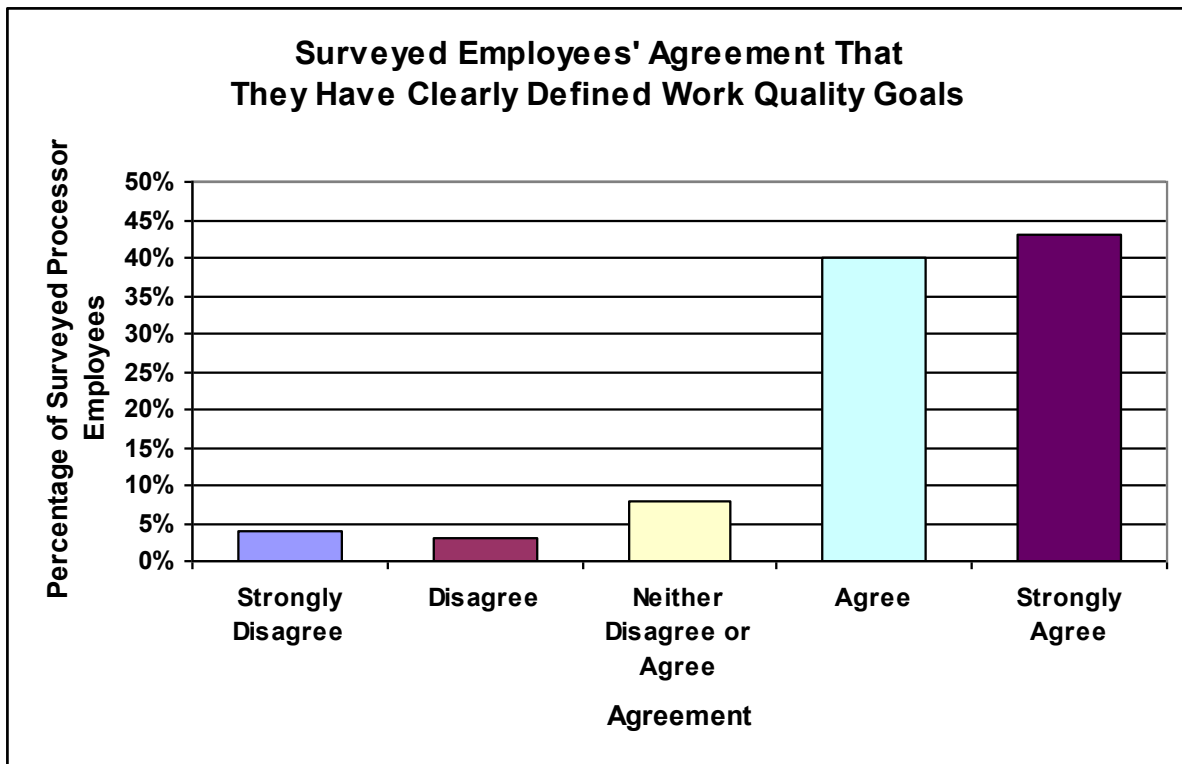


Figure 5.2-6: Surveyed employees' agreement that they have clearly defined work quality goals

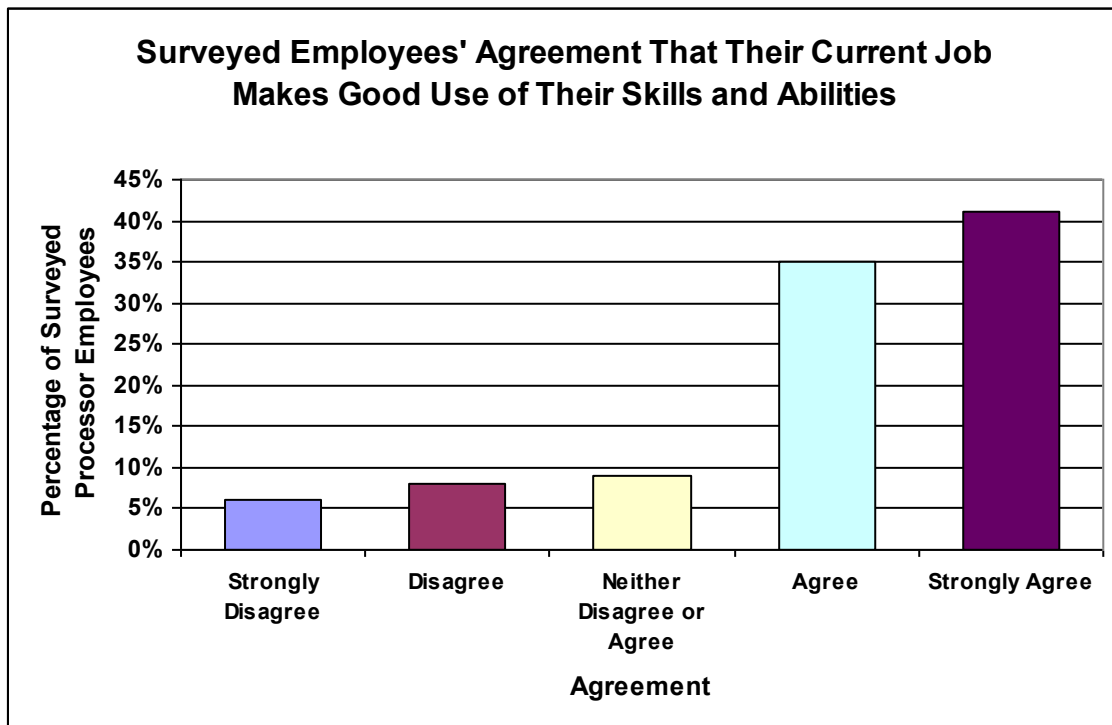


Figure 5.2-7: Surveyed employees' agreement that their current job makes good use of their skills and abilities

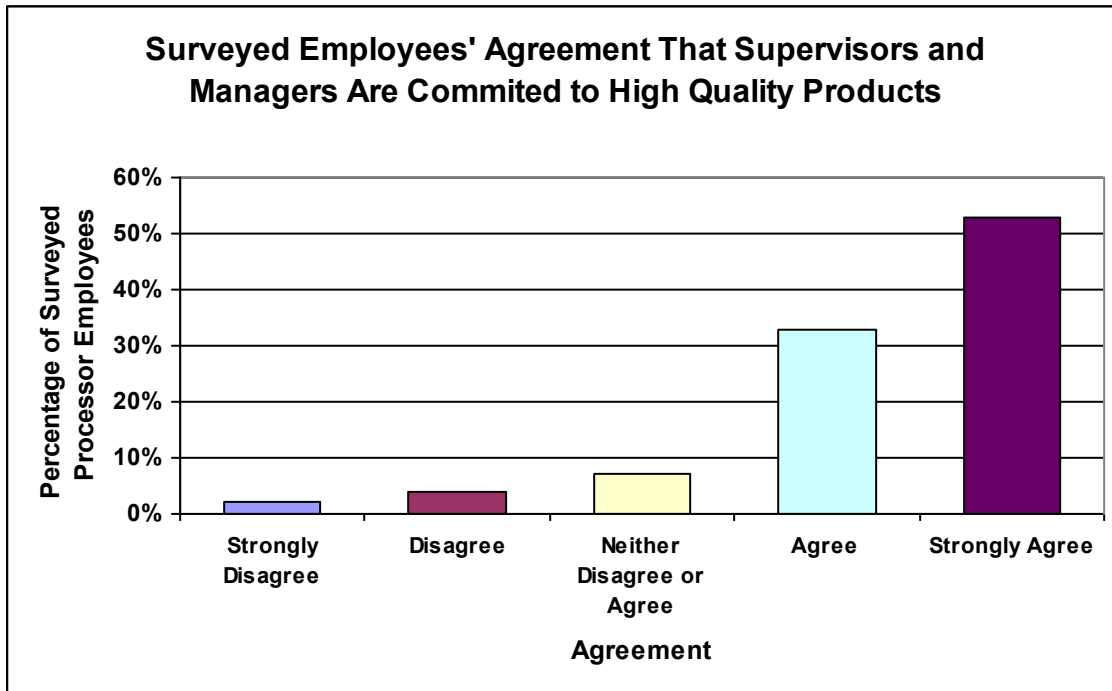


Figure 5.2-8: Surveyed employees' agreement that supervisors and managers are committed to quality products

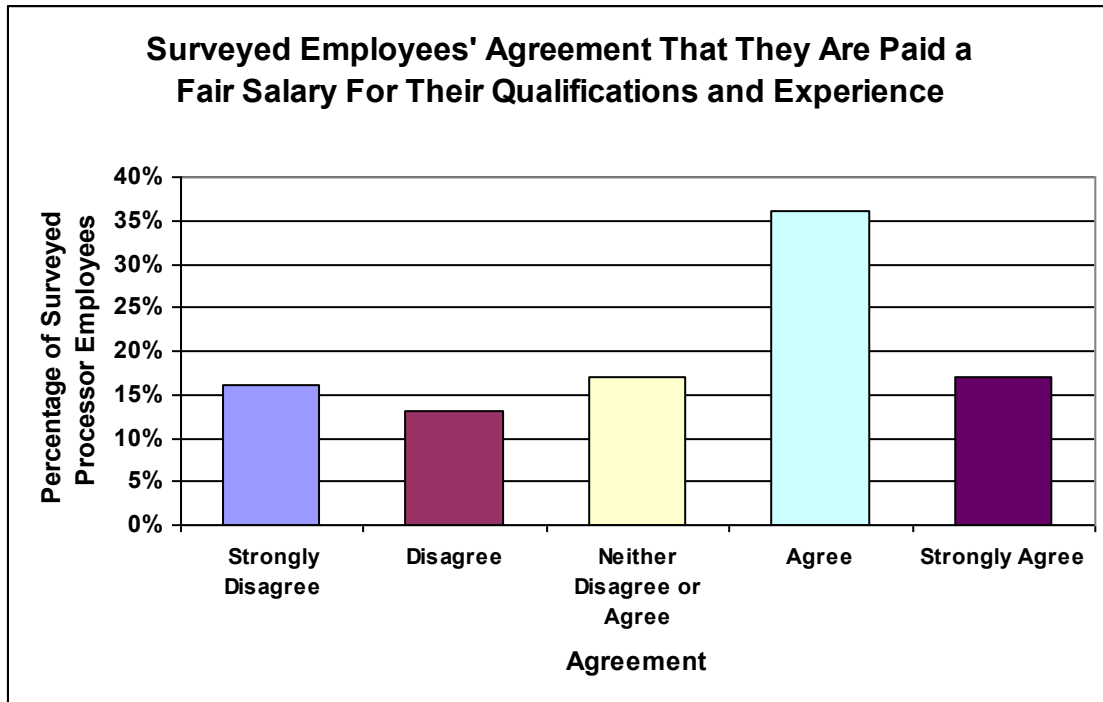


Figure 5.2-9: Surveyed employees agreement that they are paid a fair salary

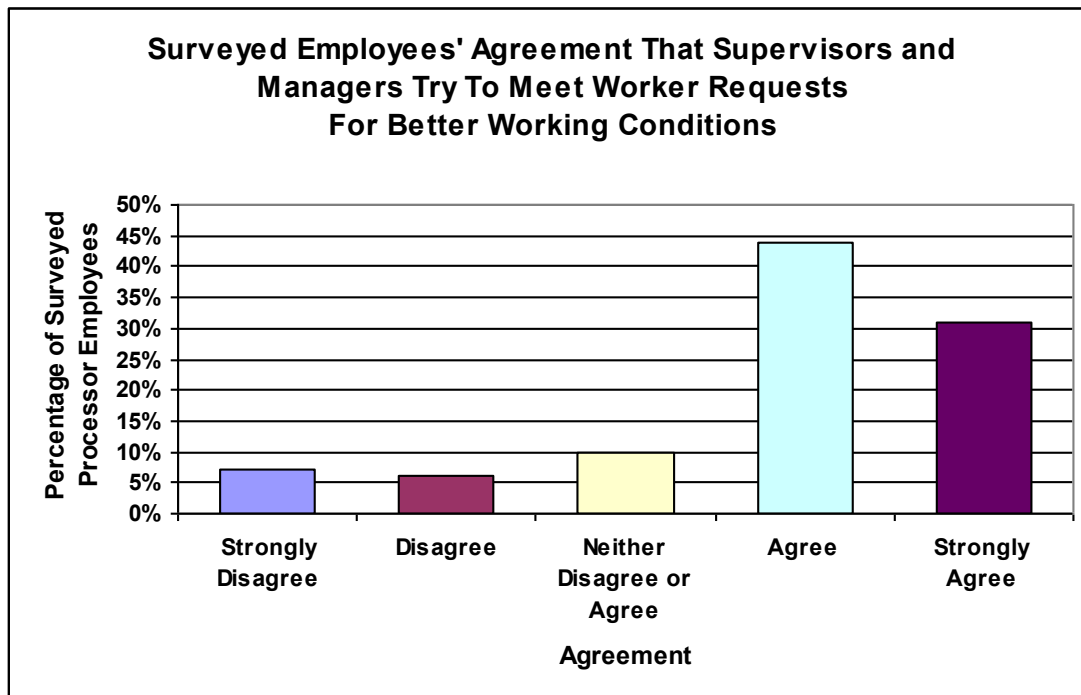


Figure 5.2-10: Surveyed employees' agreement that supervisors and managers try to meet requests for better working conditions

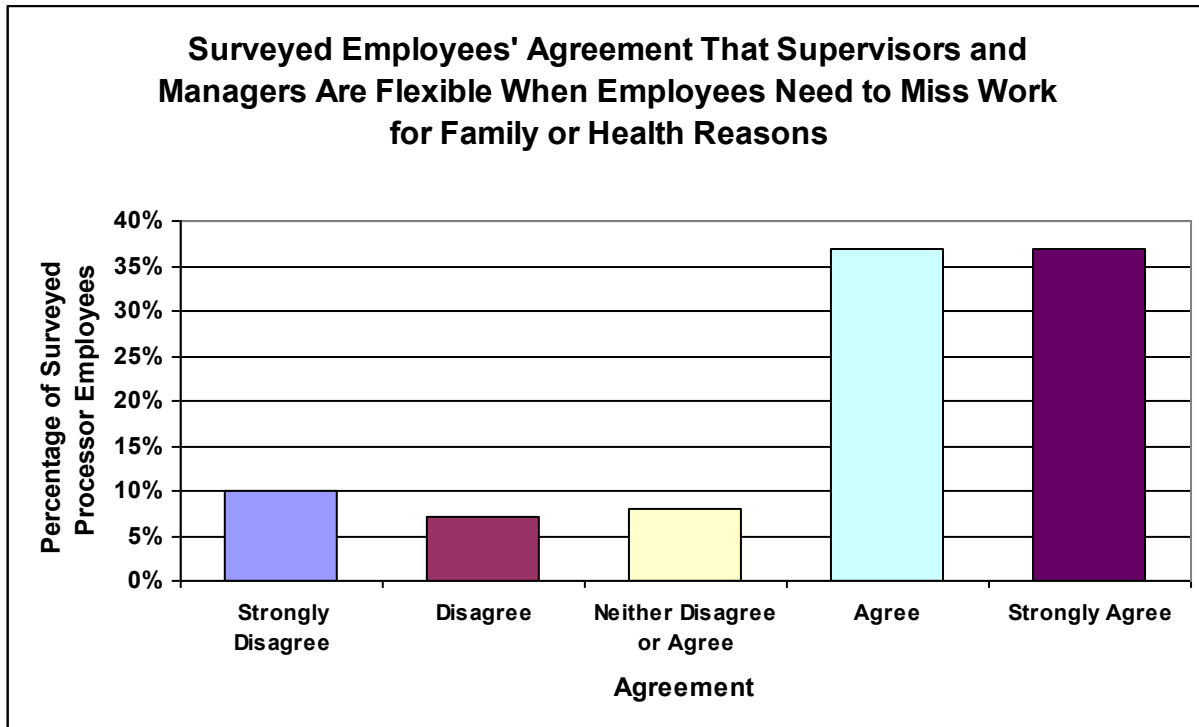


Figure 5.2-11: Surveyed employees agreement that supervisors and managers are flexible when workers need time off

In spite of the generally expressed satisfaction and agreement with positive statements about their current employer, 31% of the surveyed employees are actively looking for another job, and 24% have applied for a job with another employer within the last six months.

Annexes

This section of annexes contains the survey instruments (questionnaires) and data collection forms used to collect the Baseline data. The data collected from the producers, producer groups, and processor employees was collected through the use of *formal questionnaires and interviews*. The processor data was collected through *key informant* interviews with one key individual from each of the six CIAP partner processors.

As already noted in the Introduction, the *producer questionnaire* is largely based on the Baseline and yield survey questionnaires primarily developed by this author for the African Cashew initiative (ACi) and used in Benin, Cote d' Ivoire, Burkina Faso, Ghana, and Mozambique. The *producer group* questionnaire was derived primarily from other questionnaires and focus group discussions guidelines developed in large part by this author for ACi, the Competitive African Cotton Initiative (COMPACI), and the Coffee Partnership for Tanzania (CPT). However, the section of group management (good governance) borrowed heavily from *The Good Governance Test* found at:

https://www.surveymonkey.com/r/The_Good_Governance_Test_Fall_2011. Finally, the *processor employee questionnaire* was developed in part by this author based on similar work on the above-named projects and also borrowed from *The Employee Satisfaction Survey* (Scott Smith PhD, February 2013, at: <https://www.qualtrics.com/blog/employee-satisfaction-survey/>).

Note that all of the interviews were in French since the various respondents were all French speakers. However, the final form of questionnaire for the *processor employees* was not translated into French although it was administered in that language. The *processor data collection form* is in English due to the fact that two of the six key informants are American, some of the others are English-speaking Dutch, and the remaining key informants all speak English. Thus, English was the best choice of language for this particular form.

These questionnaires/data collection forms are presented in the order in which the main components of the Baseline report were organized; they are presented in the following subsections:

- Annex 1: Producer Questionnaire
- Annex 2: Producer Group Questionnaire
- Annex 3: Processor Data Collection Form
- Annex 4: Processor Employee Questionnaire
- Annex 5: Disaggregated Values of Key BeninCaju Parameters

Annex 1: Producer Questionnaire

ETUDE DE REFERENCE DE BENINCAJU (CIAP)

INTRODUCTION ET CONSENTEMENT

Bonjour et merci pour cet entretien. Nous travaillons avec **BeninCajù** (CIAP : *Cashew Integration and Acceleration Program*) un programme qui vise à accroître le revenu des ménages producteurs d'anacarde. Les informations recueillies au cours de cette enquête sont importantes. Elles permettent d'améliorer la politique de soutien apportée aux producteurs de Cajou des communautés locales au Bénin.

Votre participation à cette étude suppose que vous acceptez de fournir les informations sur la vente des noix au cours de cette saison d'une part, et d'autre part de participer aux interviews sur vos anacardières et leur production et enfin de nous permettre de dénombrer vos anacardières.

Votre nom et votre situation géographique resteront confidentiels bien que d'autres informations d'identification, telles que le nom de votre village, peuvent figurer dans les données à partager avec le CIAP. Les informations collectées seront gardées au moins jusqu'en 2020 dans le but de préparer des rapports sur les changements observés chez les producteurs de cajou. Votre participation est totalement volontaire. Vous avez le choix de ne pas répondre aux questions auxquelles vous ne serez pas confortables et vous pouvez ne pas participer à notre enquête à tout moment. Si vous avez des questions concernant l'enquête vous pouvez contacter les services de CIAP : [REDACTED] Tél : [REDACTED]

1.1	NOM DE L'AGRICULTEUR	
1.2	NUMERO CEL AGRICULTEUR	(+229)
1.3	NUMERO DE QUESTIONNAIRE	
1.4	NOM DU VILLAGE	
1.5	NOM DE L'ARRONDISSEMENT	
1.6	NOM DE LA COMMUNE	
1.7	NOM DU DEPARTEMENT	
1.8	NOM DE L'ENQUETEUR	
1.9	DATE DE L'ENQUETE	/ /
1.10	NOM DU SUPERVISEUR	
1.11	DATE DE SUPERVISION	/ /

2.1	Voulez-vous participer à cette enquête ?		1. Oui 2. Non
-----	--	--	------------------

INFORMATIONS PERSONNELLES

3.1	Sexe	☐	1. Homme 2. Femme
3.2	Age:	☐ ☐ ☐	(années)
3.3	Niveau d'éducation le plus élevé atteint	☐	1. Aucune école 2. Primaire 3. Secondaire 1 4. Secondaire 2 5. Technique et Professionnel 1 6. Technique et Professionnel 2 7. Université 8. Apprentissage 9. Autres (préciser).....
3.3a	Niveau d'alphabétisation		1. Aucune alphabétisation 2. Peut lire 3. Peut lire et écrire
3.4	Combien des personnes vivent dans votre ménage ?	☐ ☐ ☐	(Nombre des personnes qui vivent dans le même ménage)
3.4a	Combien des membres de votre ménage participent activement à la production de noix de cajou ?	☐ ☐ ☐	(Nombre de personnes vivant dans le ménage qui prennent part à des activités liées à la production de noix de cajou, tels que les bonnes pratiques agricoles, la récolte, ou des méthodes post-récolte ; ce nombre doit être inférieur ou égal à Q3.4)

REVENUS, DEPENSES ET EPARGNES

4.1	Quel est votre revenu net annuel du ménage en argent comptant pendant les 12 derniers mois ?	[	]	FCFA
4.2	Quelle part de votre revenu gagnez-vous par la production de noix de cajou ?	[	]	%
4.3	Avez-vous utilisé des revenus de la production de noix de cajou pour acheter des intrants ou de la main d'œuvre pour la production des cultures vivrières pendant les 12 derniers mois ?	☐	1. OUI 2. NON Si Non → Q4.5	
4.3a	Pour quelles cultures vivrières avez-vous utilisé les revenus de la production de noix de cajou pour acheter des intrants ou de la main d'œuvre ? (fournir les trois principales)	☐ ☐ ☐	1. Maïs 2. Manioc 3. Igname 4. Piment 5. Tomate 6. Arachide 7. Haricots	

			8. Sorgho 9. Mil 10. Riz 11. Egusi 12. Patate douce 13. Mangue 14. Soja 15. Autre (précisez) _____
4.4	Comment les rendements des cultures vivrières ont été affecté par l'investissement que vous avez fait du revenu des noix de cajou ?		1. Augmenté 2. Pas de changement → Q 4.5 3. Diminué
4.4a	Si le rendement de ces cultures vivrières a AUGMENTE ou DIMINUE, s'il vous plaît estimez le pourcentage de combien le rendement a changé !		1. 0 -10% (augmentation) 2. 11 – 20% (augmentation) 3. 21 – 30% (augmentation) 4. Plus que 30% (augmentation) 5. 0 -10% (diminution) 6. 11 – 20% (diminution) 7. 21 – 30% (diminution) 8. Plus que 30% (diminution)
4.5	Pour quel autre fin avez-vous utilisé votre revenu provenant de la production de noix de cajou ? (Nommez les trois utilisations les plus importantes ; si aucune autre utilisation, inscrivez «0»)	 	1. L'investissement dans des cultures de rente 2. Les dépenses de santé 3. Les dépenses pour l'éducation des enfants 4. Pour acheter de la nourriture 5. Autres:

II INFORMATION SUR LES PLANTATIONS DE CAJOU

5.1	Combien de plantations de cajou avez-vous ? (Toutes les plantations y compris celles qui n'ont pas encore produit)		(NB : Prenez le temps de vérifier l'exactitude du nombre de verger) Demandez tout type de plantation (mal entretenu, jeune verger, vieux verger)
-----	--	----------------------	---

NOTE POUR ENQUETEUR : Je vais maintenant vous poser des questions sur vos six principales plantations de Cajou.

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
--	--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	--

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
5.2	Combien d'arbres produisent dans cette plantation ?							
5.3	Quel âge a la plupart de vos arbres qui sont productifs ?							Ecrivez le nombre d'année
5.4	Avez-vous pratiqué la culture d'autres cultures dans votre plantation de Cajou durant les cinq dernières années ?							1. OUI 2. NON Si Non → Q 5.7
5.5	Quand avez-vous pratiqué la culture d'autres cultures dans votre Plantation de noix de cajou la dernière fois ?							S'il vous plaît notez l'année
5.6	Quelles étaient les principales cultures que vous avez intercalées avec votre cajou durant les cinq dernières années (Nommez les trois cultures les plus importantes)	 	 	 	 	 	 	1. Mais 2. Manioc 3. Igname 4. Gingembre 5. Piment 6. Tomate 7. Arachide 8. Haricot 9. Coton 10. Sorgo 11. Mil 12. Riz 13. Egusi 14. Patate douce

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
								15. Mangue 16. Soja 17. Pastèque 18. Autres (préciser) : _____ _____
5.7a	Quelles étaient vos principales sources de matériel végétal pour les arbres de cajou dans cette plantation ? <i>(SVP CLASSER LES TROIS SOURCES PRINCIPALES PAR LEUR IMPORTANCE)</i>	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	1. FENAPAB 2. MAEP/ CARDER (service de vulgarisation) 3. Recherche - INRAB 4. Pépinière privée 5. Pépinière communautaire 6. Propre production 7. Autre producteur 8. Autres (préciser) _____ _____
5.7b	Quel type de plant avez-vous utilisé pour installer votre plantation?	☐	☐	☐	☐	☐	☐	1 Noix Cajou (semence) 2 Plants Non-greffés 3 Plants Greffés 4 Autres (Specifiez _____)
5.8	En dehors de l'anacardier, conservez-vous d'autres arbres dans votre plantation ?	☐	☐	☐	☐	☐	☐	1 OUI 2 NON Si Non → Q 6.1
5.8a	Quels sont les arbres que vous conservez ?	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	1. Karité 2. Néré 3. Manguier 4. Teck 5. Autre (préciser) _____

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
5.8b	Pourquoi conservez-vous ces arbres ?	☐	☐	☐	☐	☐	☐	1. Vente/consommation des fruits 2. Pas le temps de les couper 3. Autre (préciser) _____

NOTE POUR ENQUETEUR : Maintenant, je vais poser des questions sur les formations que vous avez reçues sur la production de noix de cajou.

FORMATION ET BONNES PRATIQUES AGRICOLES

6.1	Avez-vous reçu une formation directe (face à face) sur les bonnes pratiques agricoles (comme l'élagage, désherbage, le traitement contre les parasites et les maladies, ou la fabrication de pare feu) entre 2010 et 2016? UNE SEULE REPONSE	☐	1. OUI 2. NON Si Non → Q 6.2
6.1a	De qui avez-vous reçu votre dernière formation directe (face à face) sur ces bonnes pratiques agricoles ?	☐	1. ICA 2. FENAPAB 3. MAEP/ CARDER (service de vulgarisation) 4. Recherche - INRAB 5. Union de producteurs (préciser) _____ 6. ONG/ autres projets (préciser) _____ 7. Autre (préciser) _____
6.1b	Quand avez-vous reçu votre dernière formation directe (face à face) sur les bonnes pratiques agricoles ?		<i>S'il vous plaît notez l'année</i>
6.2	Avez-vous appris sur les bonnes pratiques agricoles à partir des sources autres que des formations directes (face à face)?	☐	1. OUI 2. NON Si Non → Q 6.3
6.2a	A partir de quelles sources autre que la formation directe (face à face) avez-vous appris sur les bonnes pratiques agricoles ? (Nommez les trois sources les plus importantes)	☐ ☐ ☐	1. L'apprentissage auprès d'autres agriculteurs 2. Les programmes radio 3. Les SMS 4. Les journaux 5. Télévision 6. Autres (à préciser) _____

6.2b	Quelles bonnes pratiques agricoles avez-vous apprises de ces sources?	☐ ☐ ☐ ☐ ☐	1. L'élagage 2. Le désherbage 3. Traitement contre les parasites et les maladies 4. Mise en place du pare feu 5. Autre (précisez) _____
------	---	--	---

NOTE POUR ENQUETEUR:

Je vais continuer maintenant avec les questions sur les pratiques de production que vous pourriez avoir utilisées dans vos champs de cajou.

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
6.3	Avez-vous déjà taillé vos arbres de noix de cajou en enlevant les branches mortes et malades ?	☐	☐	☐	☐	☐	☐	1. OUI 2. NON Si Non → 6.3b
6.3a	Quand avez-vous taillé vos arbres de cajou la dernière fois ?	☐	☐	☐	☐	☐	☐	1. Cette saison (au cours des 12 derniers mois) → Q 6.4 2. La saison précédente (il y a 13 à 24 mois) (pendant les 13 à 24 mois passé) 3. Avant la saison précédente (plus de 24 mois)
6.3b	Pourquoi n'avez-vous pas taillé vos arbres de cajou pendant les 12 dernier mois?	☐	☐	☐	☐	☐	☐	1. Représente trop de travail 2. Coût élevé de la main d'œuvre 3. Trop occupé avec les autres cultures 4. Vérifié et trouvé que pas nécessaire 5. Autre (préciser) _____

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
6.4	Avez-vous désherbé ou coupé les mauvaises herbes dans votre plantation de cajou durant les 12 derniers mois?	☐	☐	☐	☐	☐	☐	1. OUI 2. NON Si Non → Q 6.5
6.4a	Combien de fois avez-vous désherbé votre plantation de Cajou pendant les 12 derniers mois ?	☐	☐	☐	☐	☐	☐	1. UNE FOIS 2. DEUX FOIS 3. TROIS FOIS OU PLUS
6.4b	Que faites-vous des herbes coupées ou désherbées dans votre plantation ?	☐	☐	☐	☐	☐	☐	1. Entassées hors de la plantation 2. Brûlées hors de la plantation 3. Laisées dans la plantation 4. Utilisées comme fourrage pour les animaux 5. Autre (préciser)
6.5	Avez-vous protégé votre plantation contre les feux de brousse en faisant des pare- feu au cours des 12 derniers mois ?	☐	☐	☐	☐	☐	☐	1. OUI Si Oui → Q 6.6 2. NON

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
6.5a	Pourquoi n'avez-vous pas fait des pare-feu au cours des 12 derniers mois ?	☐	☐	☐	☐	☐	☐	1. Représente trop de travail 2. Coût élevé de la main d'œuvre 3. Trop occupé avec les autres cultures 4. Pas nécessaire 5. Autre (préciser)
6.6	Votre plantation a-t-elle été brûlée au moins une fois par un feu de brousse ?	☐	☐	☐	☐	☐	☐	1. OUI 2. NON
6.7	Avez-vous observé la présence d'insectes ravageurs, ou maladies nuisibles au cours des 12 derniers mois ?	☐	☐	☐	☐	☐	☐	1. OUI 2. NON Si Non → Q 6.7b
6.7a	Combien d'arbres sont affectés par les insectes ravageurs, ou maladies nuisibles?	☐	☐	☐	☐	☐	☐	<i>Notez nombre des arbres</i>
6.7b	Avez-vous traité votre plantation contre les insectes, les envahisseurs et les maladies au cours des 12 derniers mois ?	☐	☐	☐	☐	☐	☐	1. OUI 2. NON Si Non → Q 6.7e

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
6.7c	Quels sont les moyens de lutte que vous utilisez ?	☐	☐	☐	☐	☐	☐	1. Mécanique (taille) 2. Chimique 3. Mécanique et Chimique 4. Autre (préciser)
6.7d	Combien de fois avez-vous traité votre plantation contre les insectes, les envahisseurs et les maladies au cours des 12 derniers mois?	☐	☐	☐	☐	☐	☐	1. UNE FOIS 2. DEUX FOIS 3. TROIS FOIS OU PLUS
6.7e	Pourquoi n'avez-vous pas traité votre plantation contre les insectes, les envahisseurs et les maladies ? (Donner seulement la raison principale)	☐	☐	☐	☐	☐	☐	1. Trop de travail 2. N'a pas trouvé la main d'œuvre 3. Trop occupé avec les autres cultures 4. Coûts élevés de l'activité 5. Produits non disponibles 6. Ne connaît pas les produits de traitement 7. Pas nécessaire 8. Autre (Préciser)
6.8	Votre plantation a-t-elle été endommagée au moins une fois par des bœufs au cours des 12 derniers mois ?	☐	☐	☐	☐	☐	☐	1. OUI 2. NON

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F	
6.8a	Que faites-vous pour vous protéger contre les dommages causés par les bœufs ?	☐	☐	☐	☐	☐	☐	1. Pose de fils de fer barbelés 2. Mise en place de haies vives 3. Rien 4. Autre (Préciser) _____

NOTE POUR ENQUETEUR : Maintenant, je vais vous poser des questions sur les différents types d'intrants (chimiques / main d'œuvre, etc.) que vous avez utilisés pour aider vos anacardiens à pousser cette saison. D'abord, je vais vous demander si ces intrants ont été utilisés cette saison. Si OUI, je vais vous demander combien vous avez dépensé au cours de la saison et de quelle manière vous avez payé.

7.1 DEPENSES (INTRANTS, EQUIPEMENT, MAIN- D'ŒUVRE ACHETE)	TYPES D'INTRANT, EQUIPEMEN, MAIN D'OEUVRE (Considérer toutes les plantations présentement en production)	Utilisé au cours des 12 derniers mois? 1 OUI 2 NON	Comment avez- vous payé pour l'intrant? 1 En espèces 2 En nature 3 Tous les deux	Combien avez-vous payé ? <i>(si en nature : estimation de la valeur)</i>
7.1a	Herbicide pour éliminer les mauvaises herbes	☐	☐	FCFA
7.1b	Insecticides contre les insectes	☐	☐	FCFA
7.1c	Main d'œuvres pour établissement des pare-feu	☐	☐	FCFA
7.1d	Main d'œuvres pour la taille des arbres	☐	☐	FCFA
7.1e	Main d'œuvres pour le désherbage	☐	☐	FCFA
7.1f	Main d'œuvre pour la récolte de cajou/ la collecte des noix	☐	☐	FCFA
7.1g	Autres dépenses (préciser) 	☐	☐	FCFA
7.1g bis	Autres dépenses (préciser) 	☐	☐	FCFA

8. FORMATION ET ADOPTION : METHODES DE RECOLTE ET POST-RECOLTES

8.1	Avez-vous reçu une formation directe (face à face) sur les méthodes de récolte et post-récolte, comme la séparation de la noix de la «pomme», le séchage, l'emballage et le stockage entre 2010 et 2015?	☐	1 OUI 2 NON Si Non → Q 8.2
8.1a	De qui avez-vous reçu votre dernière formation directe sur les méthodes de récolte et post-récolte ?	☐	1. iCA 2. MAEP/ CARDER (service de vulgarisation) 3. Recherche – INRAB 4. Union de producteurs (préciser) _____ 5. ONG/ autres projets (préciser) _____ 6. Autres (préciser) _____
8.1b	Quand avez-vous reçu votre dernière formation directe (en personne) sur les méthodes de récolte et post-récolte ?	☐	<i>S'il vous plaît notez l'année</i>
8.2	Avez-vous appris sur les méthodes de récolte et post-récolte d'une autre source que les formations face à face ?	☐	1. OUI 2. NON Si Non → Q 8.3
8.2a	A partir de quelles sources autre que les formations directs (en personne) avez-vous appris à propos de la récolte et les méthodes post-récolte ? (Nommez les trois sources les plus importantes)	☐ ☐ ☐	1. L'apprentissage auprès d'autres agriculteurs 2. Les programmes radio 3. Les SMS 4. Les journaux 5. Télévision 6. Autres (à préciser) _____
8.2b	Quelles bonnes pratiques de récolte et post-récolte avez-vous apprises de ces sources ?	☐ ☐ ☐ ☐ ☐ ☐	1. Récolte 2. Séparation de la noix de la pomme 3. Séchage 4. Emballage 5. Stockage 6. Autre (précisez) _____
8.3	Comment avez-vous récolté la majorité (la plus grande part) de vos noix de cajou pendant la saison de récolte de cette année ?	☐	1. Ramassé les fruits/ noix tombés sur le sol 2. Cueillir les fruits/ noix sur les arbres quand ils sont mûrs 3. Autres (préciser) _____
8.4	En général, Combien de fois par mois avez-vous récolté vos noix/ fruits pendant la période de récolte de cette année ?	☐	<i>Veuillez écrire le nombre de fois par mois</i>

8.5	Comment les ouvriers (travailleurs qui récoltent les noix) ou vous-même avez séparé la noix de la pomme pendant la saison de récolte de cette année ?		1 Torsion de la noix de la pomme 2 Utilisation d'un fil de nylon → Q 8.6 3 Utilisation d'un couteau pour couper le lien 4 Autre (préciser)
8.5a	Pourquoi vous-même ou vos ouvriers n'utilisez pas un fil de nylon ?		1. Ça prend trop de temps 2. Ne connais pas la pratique 3. Trop sale 4. Aucun bénéfice de l'application de cette pratique 5. Autre (précisez)
8.6	Avez-vous séchez la noix avant de l'emballer pendant la saison de récolte de cette année ?		1. OUI 2. NON Si Non → 8.7
8.6a	Comment les avez-vous séchées pendant la saison de récolte de cette année? (Choisir les trois options les plus importantes)	 	1 Séchées sur une étagère/ claie 2 Séchées sur le sol dans une maison 3 Séchées sur une bâche au dehors 4 Séchées sur un sol en ciment dans une maison 5 Séchées par terre dehors 6 Séchées dans un panier 7 Autre (préciser)
8.6b	Comment savez-vous que les noix sont bien séchées ?		1 Bruit de Cliquetis sec 2 Résistance à la pression de l'ongle 3 Met la main dans le sac pour "sentir" 4 Sèche juste pour un nombre donné de jours 5 Autre (préciser)
8.7	Où avez-vous stocké la majorité de vos noix jusqu'à ce que vous les vendiez pendant la saison de récolte de cette année ?		1. Dans une chambre fermée 2. Sous un hangar 3. A l'air libre 4. Autre (précisez)
8.8	Quelles techniques d'emballage avez-vous utilisées pour stocker vos noix pendant la saison de récolte de cette année ?		1 Sacs en jute → Q 8.9 2 Sacs en plastique 3 Paniers/ bols 4 Aucune 5 Autre (préciser)

8.8a	Pourquoi n'avez-vous pas utilisé des SACS EN JUTE pour l'emballage de la majorité de vos noix de cajou pendant la saison de récolte de cette année ?	☐	1 C'est cher 2 Non disponible 3 Ne vois pas la nécessité 4 Autre (préciser)
8.9	Savez-vous comment les acheteurs évaluent la qualité des noix ?	☐	1. OUI 2. NON → Q 9.1
8.9a	Quels sont, selon vous, les critères utilisés par les acheteurs pour évaluer la qualité de vos noix ? <i>(Nommez les trois critères les plus importants)</i>	☐ ☐ ☐	1. La taille des noix 2. La taille de l'amande 3. Comptages des noix (nombre de noix/kg) 4. KOR (ouverture et mesure) 5. Qualité de l'amande 6. Couleur de la coque 7. Couleur de l'amande 8. Humidité/ contenu en eau des noix 9. Présence de corps étrangers avec les noix 10. Autre (préciser)

9. CONNAISSANCE A TRAVERS LES MESSAGES DES RADIOS POUR AGRICULTEURS

9.1	Depuis 2010, avez-vous déjà écouté les programmes de radios sur les bonnes pratiques agricoles de l'anacarde ?	☐	1. 1 OUI 2. 2 NON SI NON → 9.3
9.1a	Quelles sont les messages clés dont vous vous souvenez de ces programmes de radio. <i>(Nommez les trois messages les plus importants)</i>	☐ ☐ ☐	1. Elagage 2. Désherbage 3. Pare feu 4. Technique de récolte 5. Séchage 6. Emballage 7. Stockage 8. Critères de qualité de noix 9. Informations sur les prix 10. Information sur la vente en groupe 11. Autres

9.2	Avez-vous appliqué au moins une des informations ou des messages sur culture de cajou que vous avez entendu à la radio ?	☐	1. OUI 2. NON Si Non → Q 9.3
9.3	Depuis 2010, avez-vous déjà utilisez votre téléphone cellulaire pour obtenir des informations sur la production de noix de cajou ou de marketing ?	☐	1. OUI 2. NON Si Non → Q 9.4
9.3a	Comment avez-vous utilisé votre téléphone cellulaire pour obtenir de l'information sur la production de noix de cajou ou de marketing ?	☐	1. Recevoir des SMS sur les prix de vente 2. Recevoir des SMS avec des informations sur les pratiques de production de noix de cajou (par exemple temps correct pour la taille des arbres) 3. Autres
9.4	Depuis 2010, en dehors de la radio et le téléphone, avez-vous reçu des informations sur la production ou la commercialisation de Cajou par d'autres sources ?	☐	1. OUI 2. NON Si Non → Q 10.1
9.4a	Si oui, quelle autre source ?		

10. EVALUATION DU RENDEMENT

10.1	En général, comment se porte la quantité de votre récolte de noix de cajou cette année comparé aux années précédentes ? Elle était :		1. Plus qu'avant → Q10.1a 2. Autant qu'avant (pas d'effet) → Q 10.2 3. Moins qu'avant → Q10.1b
10.1a	Si plus qu'avant : Quelle est la principale raison pour laquelle vous pensez que la productivité de vos noix de cajou a augmenté cette année ?		1. Bon climat / conditions météorologiques 2. Adoption de pratiques des formations 3. Age de la plantation 4. Peu d'insectes, des parasites et des maladies 5. Autre (précisez) → Q10.2
10.1b	Si moins qu'avant : Quelle est la principale raison pour laquelle vous pensez que la productivité de vos noix de cajou a diminué cette année ?		1. Mauvais climat / conditions météorologiques 2. Non-Adoption des pratiques des formations 3. Age de la plantation 4. Beaucoup d'insectes, des parasites et des maladies 5. Feux de brousse 6. Autre (précisez)
10.2	La qualité de vos noix a-t-elle changé cette année par rapport aux années précédentes ?		1. Mieux qu'avant → Q10.2a 2. Autant qu'avant (pas d'effet) → TERMINER LA SECTION 3. Pire qu'avant → Q10.2b
10.2a	Si mieux qu'avant : Quelle est la principale raison pour laquelle vous pensez que la qualité de vos noix de cajou a augmenté cette année ?		1. Bon climat / conditions météorologiques 2. Adoption de pratiques des formations 3. Moins d'insectes, des parasites et des maladies 4. Autre (précisez)
10.2b	Si pire qu'avant : Quelle est la principale raison pour laquelle vous pensez que la qualité de vos noix de cajou a diminué cette année ?		1. Mauvais climat / conditions météorologiques 2. Non-Adoption des pratiques des formations 3. Beaucoup d'insectes, des parasites et des maladies 4. Autre (précisez)

11. APPARTENANCE AUX ORGANISATIONS PAYSANNES

11.1	Aucun membre du ménage n'appartient-il à une coopérative ou association formelle/enregistrée des producteurs ? 0 NON TERMINER, 1= COOP DES PROD CAJOU, 2= COOP CAJOU & AUTRE CULTURE, 3= COOP AUTRE CULTURE (N'INCLUANT LE CAJOU)					CODES POUR 11.2 a, d, g, 1 CHEF DE MENAGE 2 EPOUSE DU CHEF 3 CO-EPOUSE 4 FILS/FILLE DU CHEF 5 PARENT DU CHEF 9 AUTRE
	Qui dans votre ménage est membre d'une coopérative ou association formelle/enregistrée de producteurs ?	MEMBRE DE MENAGE	CODE MENAGE	FONCTION	ANNEE D'ADHESION	
11.2	Quelle fonction spéciale, la personne a dans l'organisation ? IDENTIFIER JUSQU'A TROIS (3) MEMBRES DU MENAGE	1 ^{ER} MEMBRE DU MENAGE	(a)	(b)	(c)	CODES POUR 11.2 b, e, h 1 MEMBRE, SANS FONCTION 2 GESTION/ .. ADMINISTRATION .. (NON-FINANCIER) 3 COMPTABLE/ .. FINANCIER .. ADMINISTRATION 4 PRESTATAIRE DE SERVICE 5 FORMATEUR PRODUCTEUR PILOTE 9 AUTRE [SPECIFIER]:
		2 ^{EME} MEMBRE DU MENAGE	(d)	(e)	(f)	
		3 ^{EME} MEMBRE DU MENAGE	(g)	(h)	(i)	
11.3	Pour quelles raisons les membres de votre ménage adhèrent-ils à une coopérative ou association formelle/ enregistrée des producteurs ? SI L'ENQUETE MENTIONNE UNE RAISON, MARQUER "1" DANS LE CASIER DE REPONSE ; S'IL NE MENTIONNE RIEN, MARQUER "0"; ET ALLER AU 12					
	NE SAIT PAS					
	REFUSE DE REPONDRE					
(a)	GAGNER PLUS D'ARGENT DE LA CULTURE					
(b)	MEILLEUR ACCES AUX INTRANTS					
(c)	MEILLEURE INFORMATION SUR LES PRIX					
(d)	MEILLEUR ACCES AUX FORMATIONS					
(e)	ECHANGER SUR LES TECHNIQUES CULTURALES					
(f)	MEILLEUR ACCESS AUX/ECHANGE DES EQUIPEMENTS					
(g)	ECHANGER LA MAIN D'OEUVRE					
(h)	ACCES AU CREDIT					

(i)	AUTRE NON LISTE CI-DESSUS, SPECIFIER _____	☐	
11.4	Pour quelles raisons les membres de votre ménage n'adhèrent pas à une coopérative ou association formelle/enregistrée de producteurs ?		
	NE SAIT PAS	☐	
	REFUSE DE REpondre	☐	
(a)	AUCUNE ASSOCIATION DE PRODUCTEURS N'EXISTE DANS LE VILLAGE OU DANS LA	☐	
(b)	COÛTS ELEVES (FRAIS/COTISATION DE MEMBRE)	☐	
(c)	PREND TROP DE TEMPS	☐	
(d)	NE DONNE PAS DES AVANTAGES SUFFISANTS (ENTERME D'INFORMATION SUR PRIX OU PRIX DES CULTURES)	☐	
(e)	NE DONNE PAS DES AVANTAGES SUFFISANTS (EN TERMES DE FORMATION/ECHANGE SUR LES TECHNIQUES CULTURALES, ACCES AUX INTRANTS)	☐	
(f)	NE DONNE PAS DES AVANTAGES SUFFISANTS (EN TERMES D'ECHANGE DES	☐	
(g)	CONFLIT/DESACCORD AVEC LES MEMBRES DE LA COOPERATIVE/ASSOCIATION	☐	
(i)	AUTRE NON LISTE CI-DESSUS, SPECIFIER _____	☐	

12 ACCES AU CREDIT

12.1	Si vous souhaitez obtenir de crédit, existe-t-il des sources de crédit dans votre village ou commune ?	☐	1. OUI 2. NON SI NON → TERMINEZ LA SECTION
12.2	Quelles sources de crédit sont disponibles dans votre village ou commune ? <i>(Choisir les trois options les plus importantes)</i>	☐ ☐ ☐	1. Association d'épargne et de crédit 2. ONG 3. Banques 4. Institution de Microfinance 5. CVPA 6. Autre coopérative 7. Usine 8. Autres organisations paysannes 9. Usuriers dans le Village 10. Autre (Spécifier: _____)

12.3	Si vous avez besoin de crédit, pouvez-vous l'obtenir ?		1. OUI 2. NON SI NON → TERMINEZ LA SECTION
12.4	Combien de fois avez-vous obtenu de crédit depuis 2011 ?		SI 0 → TERMINEZ LA SECTION
12.5	Quel était le plus grand montant de crédit (FCFA) que vous avez obtenu depuis 2011 ?		
12.6	Sur quoi avez-vous utilisé ce crédit ? (Choisir jusqu'à 3 options)	 	1. Dépenses sur la plantation de cajou 2. Dépenses sur d'autres cultures 3. Achat d'animaux ou de volaille pour élevage 4. Achat d'aliments 5. Dépenses de scolarité 6. Dépenses médicales et de santé 7. Construction/réparation de maisons 8. Investissement dans d'autres affaires/activités génératrices de revenu 9. Autres dépenses de ménage
12.7	Quel montant du crédit obtenu avez-vous utilisé pour la production de cajou (FCFA) ?		
12.8	Avez-vous eu de difficultés à rembourser votre crédit ?		1. OUI 2. NON SI NON → TERMINEZ LA SECTION

13 FICHE ENREGISTREMENT DES RECOLTES ET DES VENTES HEBDOMADAIRES

NOTE POUR L'ENQUETEUR : Veuillez enregistrer toutes les ventes effectuées au cours de la campagne.

13.1	Date (JJ/MM/AA)	VENDU A : 1 = Collecteurs bord champ (pisteur) 2 = Acheteurs villageois (sous-pisteur) 3 = Organisation de producteurs (coopérative) 4 = Unités de transformation 5 = Commerçants (magasin intérieur) 6 = Autre (à préciser)	Quantité de noix (kg)	Somme d'argent reçu (FCFA)
(a)	/ / 16	()		

13.1	Date (JJ/MM/AA)	VENDU A : 1 = Collecteurs bord champ (pisteur) 2 = Acheteurs villageois (sous-pisteur) 3 = Organisation de producteurs (coopérative) 4 = Unités de transformation 5 = Commerçants (magasin intérieur) 6 = Autre (à préciser)	Quantité de noix (kg)	Somme d'argent reçu (FCFA)
(b)	/ / 16	(_____	_ _ _ _ _ _ _	_ _ _ _ _ _ _
(c)	/ / 16	(_____	_ _ _ _ _ _ _	_ _ _ _ _ _ _
(d)	/ / 16	_ _ (_____	_ _ _ _ _ _ _	_ _ _ _ _ _ _
(e)	/ / 16	_ _ (_____	_ _ _ _ _ _ _	_ _ _ _ _ _ _
(f)	/ /16	_ _ (_____	_ _ _ _ _ _ _	_ _ _ _ _ _ _
(g)	/ / 16	_ _ (_____	_ _ _ _ _ _ _	_ _ _ _ _ _ _
(h)	/ / 16	_ _ (_____	_ _ _ _ _ _ _	_ _ _ _ _ _ _

NOTE POUR L'ENQUETEUR : Maintenant, je vais recueillir des détails sur les noix qui n'étaient pas vendues mais utilisées à d'autres fins ou ont été perdues.

13.2	Indiquez la quantité de noix utilisée pour compenser les ouvriers	[] KG
13.3	Indiquez la quantité de noix utilisée comme cadeau	[] KG
13.4	Indiquez la quantité de noix utilisée pour rembourser des dettes	[] KG
13.5	Indiquez la quantité de noix utilisée comme paiement au propriétaire du terrain	[] KG
13.6	Quantité estimée perdue par vol	[] KG
13.7	Estimation de la quantité perdue à l'intrusion des animaux (par exemple, les bovins qui sont entrés dans la ferme et ont mangé des pommes avec des écrous attachés)	[] KG

13.8	Avez-vous eu des utilisations de votre cajou autres que celles mentionnées ci-dessus (SI OUI, veuillez préciser)	☐	1 OUI 2 NON Si Non → 14
a.		[	] KG
b.		[	] KG
c.		[	] KG
13.9	Indiquez la quantité des noix restante dans le stock (pas encore vendue)	[	] KG

14. Question PPI (Tableau de bord Simple de la pauvreté)

Indicateurs	Réponse	
14.1. Départements (tel que observés)	1. Littoral 2. Mono 3. Zou, Atlantique ou Collines 4. Couffo 5. Plateau 6. Ouémé 7. Donga ou Borgou 8. Alibori 9. Atacora	
14.2. Matériel principal du mur extérieur du bâtiment principal (tel qu'observé)	1. Terre, Pierre, Bois/planche, Feuilles de palm/Bambou ou Autre 2. Argile mélangée au ciment 3. Briques	
14.3. Combien de membres de ménage sont là ?	1. Huit ou plus 2. Sept 3. Six 4. Cinq 5. Quatre 6. Trois 7. Deux 8. Un	
14.4. La femme chef/épouse ménage sait-elle lire, écrire avec compréhension en Français ?	1. No 2. Oui 3. Pas de femme chef/épouse	
14.5. Quelle est la source principale d'énergie pour la lumière dans votre ménage ?	1. Pétrole 2. Electricité, Gaz, Huile, énergie solaire, électricité par groupe électrogène (communautaire ou privé), ou Autre	
14.6 De toutes les chambres disponibles dans votre ménage, combien utilisent les membres de votre ménage pour se coucher ?	1. Un 2. Deux 3. Trois ou plus	
14.7. Quelle la principale énergie utilisée pour faire la cuisine dans votre ménage ?	1. Bois de chauffe ou Paille 2. Charbon, Electricité, Gaz, Pétrole ou autre.	

14.8. Votre ménage dispose-t-il de moto ou de voiture ?	1. Non 2. Oui	
14.9. De combien de téléphones mobiles dispose votre ménage ?	1. Aucun 2. Un 3. Deux ou plus	
14.10. Est-ce que le ménage a possédé (y compris en héritage) ou loué toute terre morcelée, développée ou irriguée au cours des 12 derniers mois ?	1. Ne possède pas etc. 2. En possède etc., mais la terre n'est pas morcelée, développée ou irriguée 3. En possède etc., la terre (une partie) est morcelée, développée ou irriguée	

NOTE POUR L'ENQUETEUR : Merci d'avoir répondu à toutes ces questions. Maintenant, j'aimerais compter le nombre d'arbres de cajou et mesurer la superficie de votre / vos plantations.

15. COMPTAGE DES ARBRES DE CAJOU ET MESURE DES SUPERFICIES

		Plantation de cajou A	Plantation de cajou B	Plantation de cajou C	Plantation de cajou D	Plantation de cajou E	Plantation de cajou F
15.1	Latitude de la plantation de cajou	N _ _ ° _ _ . _ _ '	N _ _ ° _ _ . _ _ '	N _ _ ° _ _ . _ _ '	N _ _ ° _ _ . _ _ '	N _ _ ° _ _ . _ _ '	N _ _ ° _ _ . _ _ '
15.1a	Longitude de la plantation de cajou	E _ _ _ ° _ _ . _ _ '	E _ _ _ ° _ _ . _ _ '	E _ _ _ ° _ _ . _ _ '	E _ _ _ ° _ _ . _ _ '	E _ _ _ ° _ _ . _ _ '	E _ _ _ ° _ _ . _ _ '
15.2	Mesure de la plantation de cajou (ha) <i>Veillez-vous assurer que le GPS a réinitialisé à zéro avant de commencer à mesurer</i>	_ _ , _ _ _ HECTARES	_ _ , _ _ _ HECTARES	_ _ , _ _ _ HECTARES	_ _ , _ _ _ HECTARES	_ _ , _ _ _ HECTARES	_ _ , _ _ _ HECTARES
15.3	Nombre d'arbres de cajou produisant (A compter si la superficie < 1 ha)	_ _ _	_ _ _	_ _ _	_ _ _	_ _ _	_ _ _
15.4a	SOUS-SUPERFICIE 1	_0_ . _ _ _ HECTARES	_0_ . _ _ _ HECTARES	_0_ . _ _ _ HECTARES	_0_ . _ _ _ HECTARES	_0_ . _ _ _ HECTARES	_0_ . _ _ _ HECTARES
15.4b		_ _ _ NOMBRE D'ARBRES	_ _ _ NOMBRE D'ARBRES	_ _ _ NOMBRE D'ARBRES	_ _ _ NOMBRE D'ARBRES	_ _ _ NOMBRE D'ARBRES	_ _ _ NOMBRE D'ARBRES

15.5a	SOUS-SUPERFICIE 2 (Si la superficie totale est entre 1.0 – 3.0 ha)	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES
15.5b		_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES
15.5a	SOUS-SUPERFICIE 3 (Si la superficie totale est de 3.01 ha ou plus grande)	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES	_0_ . _ _ _ _ HECTARES
15.5		_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES	_ _ _ _ NOMBRE D'ARBRES

Annex 2: Producer Group Questionnaire

BENINCAJU/CIAP

Questionnaire sur les organisations des producteurs

1.0 Général

1.1: Département.....

1.2: Commune.....

1.3: Village.....

1.4: Type d'organisation paysanne.....

1= CVPA

2= Groupement féminin

3= Autre à Préciser.....

1.5: Nom de l'organisation paysanne.....

1.6: Nom du Répondant

1.7: Age du Répondant (années).....

1.8: Genre du Répondant.....

1= Masculin

2= Féminin

1.9: Depuis combien d'années produisez-vous et vendez de cajou (*nombre d'années*) ?.....

1.10: Combien de plantations de cajou avez-vous ?

1.11: Combien d'arbres *productifs* de Cajou avez-vous au total ?

1.12: Depuis combien d'années êtes-vous membre de cette organisation (*années*) ?.....

1.13: Quel est votre rôle dans l'organisation ?.....

1= Membre, aucune autre fonction

2= Membre du Bureau /Gestion ou administration de l'organisation

3= Comptable/financier

4= Autre (Spécifier.....)

1.14: Recommanderiez-vous à d'autres producteurs d'adhérer à cette organisation ?.....

1= Oui

2= Non

2.0 Informations sur l'organisation paysanne

2.1: Depuis combien d'années cette organisation existe-t-elle ?

2.2: Combien de membres compte actuellement cette organisation ?.....

2.2a : Hommes

2.2b : Femmes

2.3: Combien de membres compte le Bureau de cette organisation ?

2.3a : Hommes

2.3b : Femmes.....

2.4: Combien avez-vous payé pour :

2.4a: Frais d'adhésion (FCFA)?.....

2.4b : Part sociale (FCFA)?

2.4c : Cotisation annuelle (FCFA)?.....

3.0 Services de l'organisation paysanne

3.1: Quelles sont les raisons qui vous ont amené à adhérer à cette organisation paysanne ? (Choisir toutes les raisons qui sont valables) Mettez "1" dans le casier de la réponse choisie, "0" pour celle qui n'est pas choisie

1= Gagner plus d'argent de cajou.....	
2= Commercialisation/Vente de produits.....	
3= Meilleur accès aux intrants à travers l'organisation.....	
4= Meilleure information sur les prix de cajou.....	
5= Meilleur accès aux formations sur le cajou.....	
6= Provision de services de vulgarisation.....	
7= Provision de services (ex. pulvérisation, contrôle de qualité)	
8= Echanger des techniques culturales	
9= Meilleur accès aux/ échange des équipements.....	
10= Echange de main d'œuvre.....	
11= Accès au crédit.....	
12= Evénements Sociaux /activités.....	
13= Autre non listé ci-dessus, spécifier	

3.2a: Quels services/bénéfices aimeriez-vous voir assurés et que l'organisation ne procure pas actuellement ? (Choisir toutes les raisons qui sont valables)

Mettez "1" dans le casier de la réponse choisie, "0" pour celle qui n'est pas choisie

1= Gagner plus d'argent de cajou.....	
2= Commercialisation/Vente de produits.....	
3= Meilleur accès aux intrants à travers l'organisation.....	
4= Meilleure information sur les prix de cajou.....	
5= Meilleur accès aux formations sur le cajou.....	
6= Provision de services de vulgarisation.....	
7= Provision de services (ex. pulvérisation, contrôle de qualité)	

- 8= Echanger des techniques culturelles..... ☐
- 9= Meilleur accès aux/ échange des équipements..... ☐
- 10= Echange de main d'œuvre..... ☐
- 11= Accès au crédit..... ☐
- 12= Evénements Sociaux /activités..... ☐
- 13= Autre non listé ci-dessus, spécifier _____

3.2b: Quels services/bénéfices aimeriez-vous voir améliorés et que l'organisation ne procure pas/de façon satisfaisante actuellement ? (Choisir toutes les raisons qui sont valables)

Mettez "1" dans le casier de la réponse choisie, "0" pour celle qui n'est pas choisie

- 1= Gagner plus d'argent de cajou..... ☐
- 2= Commercialisation/Vente de produits..... ☐
- 3= Meilleur accès aux intrants à travers l'organisation..... ☐
- 4= Meilleure information sur les prix de cajou..... ☐
- 5= Meilleur accès aux formations sur le cajou..... ☐
- 6= Provision de services de vulgarisation..... ☐
- 7= Provision de services (ex. pulvérisation, contrôle de qualité) ☐
- 8= Echanger des techniques culturelles..... ☐
- 9= Meilleur accès aux/ échange des équipements..... ☐
- 10= Echange de main d'œuvre..... ☐
- 11= Accès au crédit..... ☐
- 12= Evénements Sociaux /activités..... ☐
- 13= Autre non listé ci-dessus, spécifier _____

3.3: Quelles contraintes ou autres problèmes avez-vous avec votre organisation?

(Choisir toutes les raisons qui sont valables) Mettez "1" dans le casier de la réponse choisie, "0" pour celle qui n'est pas choisie

- 1= Coûts trop élevés (frais/coût de cotisation de membres) ☐
- 2= Prend trop de temps ☐
- 3= Les réunions ont lieu à des endroits trop éloignés de ma maison..... ☐
- 4= Je ne suis pas capable de quitter ma maison pour aller aux réunions..... ☐
- 5= Mon époux/épouse ne me permet pas d'assister aux réunions ou autres événements du groupe. ☐
- 6= La gestion de l'organisation est corrompue/assure une mauvaise gouvernance..... ☐
- 7= Je ne suis pas confortable avec une organisation mixte ☐
- 8= Je préfère habituellement travailler indépendamment plutôt qu'en association. ☐
- 9= Ne fournit d'information suffisante sur les prix..... ☐
- 10= Ne donne pas un prix suffisant pour les cultures..... ☐
- 11= Ne donne pas de formation suffisante/échange des techniques de production ☐

- 12= Ne permet pas un accès suffisant aux intrants de cajou..... ☐
- 13= Ne permet pas un échange suffisant des équipements ☐
- 14= J'ai un conflit/désaccord avec les membres de la Coopérative/association..... ☐
- 15= Autres non listé ci-dessus, spécifier _____

3.4: Votre organisation permet-elle l'accès au crédit ? Si Non aller à la question 3.5

3.4a: Quelles institutions associées donne ce crédit?

Choisir toutes les raisons qui sont valables, Mettez "1" dans le casier de la réponse choisie, "0" pour celle qui n'est pas choisie

- 1= L'organisation paysanne elle-même..... ☐
- 2= Institutions de microfinance ☐
- 3= Banque..... ☐
- 4= Caisses communautaires de crédit/épargne..... ☐
- 5= Groupe de Tontine..... ☐
- 6= Usines et commerçants..... ☐
- 7= Autres (Spécifier _____)

Pour toutes questions Oui/Non utilisez 1=Oui, 0=Non

3.4b: Avez-vous demandé de crédit auprès de l'une de ces sources au cours des 12 derniers mois?..... ☐

1= Oui 2= Non *Aller à la question 3.5*

3.4c: Si vous avez demandé de crédit, en avez-vous obtenu de cette source?..... ☐

1= Oui 2= Non *Aller à la question 3.5*

3.4d: Si vous avez reçu de crédit, quel était le montant (FCFA)?.....

3.5: Quelles autres activités génératrices de revenu votre organisation paysanne appuie ses membres à réaliser? Choisir toutes les raisons qui sont valables. Mettez "1" dans le casier de la réponse choisie, "0" pour celle qui n'est pas choisie

- 1= Transformation avec valeur-ajoutée de cajou ☐
- 2= Canal de commercialisation pour les autres cultures autres que le cajou ☐
- 3= Opportunités pour des transactions informelle..... ☐
- 4= Autre (Spécifier _____)

3.6: Au cours des 12 derniers mois avez-vous reçu d'information sur le marché de cajou de la part de votre organisation?..... ☐

1= Oui 2= Non

4.0 Gouvernance et Gestion de l'Organisation paysanne

4.1 Le bureau/conseil d'administration/comité de gestion de votre organisation paysanne:

4.1a: A t-il actuellement tous les postes pourvus?..... ☐

1= Oui 2= Non

4.1b: Recrute t-il habituellement plus de candidats que de postes vacants lors des élections?..... ☐

1= Oui 2= Non

4.1c: Tient-il au moins une Assemblée Générale annuellement ☐

1= Oui 2= Non

4.1d: Tient-il des réunions de planification au moins une fois l'an pour fixer les objectifs et priorités de l'année suivante?..... ☐

1= Oui 2= Non

4.1e: Communique t-il *régulièrement* avec les membres de l'organisation sur les activités collectives et la planification?..... ☐

1= Oui 2= Non

4.1f: Tient-il des réunions régulières du bureau..... ☐

1= Oui 2= Non

4.1g: A-t-il la réputation parmi les membres d'être équitable, responsable et comptable. ☐

1= Oui 2= Non

4.1h: Tient-il des réunions régulières des membres, mais seulement quand elles sont nécessaires..... ☐

1= Oui 2= Non

4.1i: Les membres du bureau sont-ils élus par les membres de l'organisation paysanne? ☐

1= Oui 2= Non

4.2: Les réunions de l'organisation de producteurs :

4.2a: A quelle fréquence votre organisation tient-elle ses réunions? ☐

1= Au moins une fois par mois

2= Au moins une fois tous les 2 mois

3= Trimestriellement (4 fois par an)

4= Deux fois par an

5= Une fois par an

6= Autre (Spécifier_____)

4.2b: Les ordres du jour des réunions sont-ils partagés avec les membres en avance? ☐

1= Oui 2= Non

4.2c: Les membres reçoivent-ils en avance des informations sur les sujets nécessitant des décisions au cours des réunions?..... ☐

1= Oui 2= Non

4.2d: Les rapports financiers de l'organisation sont-ils partagés avec les membres au cours des réunions?..... ☐

1= Oui 2= Non

4.2e: Tous les membres sont-ils encouragés à participer aux discussions au cours des réunions?..... ☐

1= Oui 2= Non

4.2f: Toutes les décisions prises lors des réunions sont-elles annoncées à tous les membres participants?..... ☐

1= Oui 2= Non

4.2f: Les réunions comprennent-elles habituellement des activités sociales?..... ☐

1= Oui 2= Non

4.2g: Les réunions ont-elles habituellement une composante éducation relative au Cajou?..... ☐

1= Oui 2= Non

Annex 3 : Processor Data Collection Form

BéninCajù - Cashew Integration and Acceleration Project					
Benin, TechnoServe CRS (USDA)					
A	Preliminary/Background questions				
A.1 .	Name and contact details of processor	Name : Address :			
A.2 .	Contact person, designation, email, Phone number	Name : Email : Contact number : Position - Job Title):			
A.3 .	What year did you begin operating your cashew processing business (Start year)				
A.4 .	Do you process for a domestic and/or export market	Domestic () What % ()	Export (), What % ()		
A.5 .	Are you involved in other businesses?	Yes ☐ No ☐ If No → A.7.			
A.6	If yes what are they and how long have you been running Them?	1. 2. 3.			
A.7 .	How involved are you in the day to day operations of your cashew business	1- Handle all operations personally ☐ 2- Entrusted a Manager for that but onsite ☐ 3- Entrusted a Manager for that but offsite ☐ 4- Not involved at all ☐			
A.8	How much of your time to you spend in the factory?	1- 50 to 100% ☐ 2- 25 to 50% ☐ 3- Visit occasionally ☐ 4- Do not visit more than 1-2 times/year ☐			
A.9	How would you rate your management team?	1- Highly qualified and experienced ☐ 2- Acceptable, still need some support or training ☐ 3- Inefficient ☐			

A.10.	What industry activities do you participate in? Trade Associations (for processors), Conferences etc.?	1- CNTC						
		2- ACA						
		3- Other (specify)						
B	Assess current operations							
B.1	What is the installed capacity Mt, RCN/Year	2013	2014	2015	2016 (Plan)			
B.2	What is your utilized capacity, Mt. RCN/Year	2013	2014	2015	2016 (Plan)			
B.3	Value of purchased RCN price	2013	2014	2015	2016 (Plan)			
B.4	Productivity / person/day, Kg, manual, 2015	Shelling	Peeling	Recovery	Grading			
	Productivity / person/day, Kg, machine, 2015	Shelling	Peeling	Recovery	Grading			
	Level of mechanization (% of RCN processed)	Shelling	Peeling	Recovery	Grading			
B.5	Total no. of workers, 2015	Shelling	Peeling	Recovery	Grading	Others	Total	
	Number of female employees (2015)							
	% of female employees							
	Labor Turnover (% of workers that leave in less than one year)							
B.6	Do you use shell?	1- Yes						
		2- -No						
	If yes, Where do you use it?	1- Burning for production operations						
		2- CNSL production						
		3- Other (specify)						
	Do you generate any revenue from shell?	1- Yes	If yes, how much (FCFA)					
		2- No						
	How do you dispose off your surplus of shell?	1- Burning as waste						
		2- Throwing away						
		3- Other (specify)						
B.7	Do you trace costs of processing	1- Yes						
		2- No						
	If yes , What is your cost of processing/Mt of RCN	1- 2013						
		2- 2014						

		3- 2015			
	Do you know processing costs of your competitors' countries?	1- Yes 2- No			
B.8	How much have you invested in Equity (\$)?				
	Do you have access to finance (\$) for your processing plant?	Yes ☒ No ☐ If yes, which amount (USD) was mobilized for investment?			
		2013	2014	2015	2016 (projected)
	What interest rates are you paying (%)?	1- Working Capital 2- Capex 3- Other (specify)			
	Who are your financiers?				

C' PREVIOUS TRAINING

	Training (in Past)	Business Manag. Skills	Marketing	Quality standard	Access to Credit	Processing techniques & technology	
C'1	Have you received any training on these (Yes/NO)?						
C'2	Who provided that training (Institution/individual/NGO Project)?						
C'3	Was that support enough (Quality)?						
C'4	Was that support enough (duration)?						
C'5	What was the most recent year of that training?						
C'6	How many of the practices promoted in the most recent training have you adopted in your processing plant? 1= None 2=Some 3=Most 4=All						
C'7	Rate the TA delivered (1-3) 3-exceed expectation, 2-meet expectations, 1 below expectations						

C Ascertain type and quality of TA received (by previous projects)							
C.1	Technical assistance support (in Past)	Technology advisory	Farmers linkage	General Technical assistance	Access to finance	Business development services	Food safety
C.1 1	Have you received any support on these (Yes/NO)?						
C.1 2	Who provided that support (Institution/individual/NGO Project)?						
C.1 3	Was that support enough (Quality)?						
C.1 4	Was that support enough (duration)?						
C.1 5	Rate the TA delivered (1-3) 3-exceed expectation, 2-meet expectations, 1 below expectations						
C.2	Technical assistance support (present)						
C.2 1	Are you currently receiving any support from any organization?						
C.2 2	If yes, which organization?						
C.2 3	If Yes, what year is that supposed to End?						
C.2 4	Rate the TA delivered (1-3) 3-exceed expectation, 2-meet expectations, 1 below expectations						
C.6 C.3	What challenges do you face in growing a profitable cashew processing business	1. 2. 3. 4. 5.					
D	Assess industry level factors driving processing success						

D.1	How is competition between RCN exporters and RCN processors managed in your country?								
D.2	How many commercial financiers understand <i>and have financed</i> cashew processing?								
D.3	Are there any concessional loan facilities available for cashew processing?								
E	Social Impact of business								
E.1	Farmers Directly Linked, formal linkage	2015	2016 (Plan)	Comments					
E.1 1	Number of farmers directly linked								
E.1 2	Number of female farmers directly linked								
E.1 3	RCN directly purchased, Mt of RCN								
E.14	Price paid, Mt of RCN on direct purchases								
E.2	Workers employed	2014	2015	2016					
E.2 1	Total Number of workers								
E.2 2	Number of Female workers								
E.23	Average salaries paid to workers in 2015(FCFA)	Shelling	Peeling	Recovery	Grading	Other			
E.2 4	Labor Turnover (% of total staff replaced per year)								
E.3	What social programs do you have for workers?	Creche for kids	Free Breakfast	Free lunch	Transport	Health support	Other		
E.3 1									
E.3 2	Are you currently involved in farmers training programs	1- Yes ☐ 2- No ☐							
E.3 3	If yes, which are they?								
		1. 2. 3.							

		4.						
		5.						
	F	Major Markets and price info						
F.1.	What are the main markets where you sell your kernels? specify how many end buyers		1. 2. 3.					
~~F.3~~ F.2	Do you have any credible sources of market information?		1- Yes ☐ 2- No ☐					
F.3	What are your sources?							
F.4.	How do you know your sales price is the right one?							
F.5.	Is there any price reference for African kernels which you know?		1- Yes ☐ 2- No ☐					
f.5a	If yes, what is the source?		1. 2.					
F.6	What resistance do you find in different export markets like Europe and the USA to buying your processed cashew? If any, please list these		1. 2. 3. 4.					
F.7	Are there worries about sanitation and/or quality? If yes, please list these		1. 2. 3. 4					
F.8	Have potential buyers asked for improvements and/or changes in your operations? If yes, please list these		1. 2. 3. 4					

F.9	Have you attended at international trade fairs/conference/trade mission in the last 5 years?	Yes No If Yes, which? How many such events have you attended in the last 5 years Quote them: 1..... How many purchase contracts resulting from? 2. How many purchase contracts resulting from? 3. How many purchase contracts resulting from? 4. How many purchase contracts resulting from? 5. How many purchase contracts resulting from?
-----	--	---

Annex 4: Processor Employee Questionnaire
BeninCaju Processor Employee Questionnaire

1. General

1.1: Processor Name.....

1.2: Respondent Name.....

1.3: Gender.....
1=Male

2= Female

1.4: Respondent Age (years).....

1.5: Processor plant section where you work.....

1= Shelling

2=Peeling

3= Grading

4= Recovery

5= Accounting Finance

6= Personnel

7= Maintenance

8= Security

9= Other (specify _____)

1.6: How long have you worked for this processor?.....

1= Less than 6 months

2= 6 months to 1 year

3= 1-2 years

4= 2-5 years

5= More than 5 years

1.7: How long have you worked in this same job?.....

1= Less than 6 months

2= 6 months to 1 year

3= 1-2 years

4= 2-5 years

5= More than 5 years

1.8: What is your job level?.....

1= Worker

2= Section supervisor

3= Management

1.9: In thinking about your job, do you think that you have too many different tasks to do, about the right number, or not enough?.....

1= Too many

2= About the right amount

3= Not enough

2.0 Employee Satisfaction

2.1: How satisfied are you with your job?

- 1= Very dissatisfied
- 2= Dissatisfied
- 3= Neither dissatisfied nor satisfied
- 4= Satisfied
- 5= Very satisfied

2.2: How satisfied are you with your opportunity to get a better job with this processor?.....

- 1= Very dissatisfied
- 2= Dissatisfied
- 3= Neither dissatisfied nor satisfied
- 4= Satisfied
- 5= Very satisfied

2.3: How satisfied are you with your opportunity to get higher pay with this processor?.....

- 1= Very dissatisfied
- 2= Dissatisfied
- 3= Neither dissatisfied nor satisfied
- 4= Satisfied
- 5= Very satisfied

2.4: You would recommend to friends and family members that they should work for this processor

- 1= Strongly disagree
- 2= Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.5: My work gives me a feeling of personal accomplishment.....

- 1= Strongly disagree
- 2= Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.6: On my job, I have clearly defined quality goals.....

- 1= Strongly disagree
- 2= Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.7: My job makes good use of my skills and abilities.....

- 1= Strongly disagree
- 2=Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.8: The processor supervisors and managers are committed to high quality products.....

- 1= Strongly disagree
- 2=Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.9: I am paid a fair salary for my work based on my experience and job performance.....

- 1= Strongly disagree
- 2=Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.10: My supervisor and manager at this processor try meet worker requests for improved working conditions.....

- 1= Strongly disagree
- 2=Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.11: When I need to miss work for health or family reasons, my supervisor and manager are understanding of my need and show flexibility.....

- 1= Strongly disagree
- 2=Disagree
- 3= Neither disagree or agree
- 4= Agree
- 5= Strongly agree

2.12: Are you actively looking for a job with another employer.....

- 1= Yes
- 2= No

2.13: Have you applied for another job outside this organization in the past six months.....

- 1= Yes
- 2= No

Annex 5: Disaggregated Values of Key BeninCaju Parameters

A number of the parameters presented in this report are of particular interest to the BeninCaju program as they constitute key indicators of program progress. The values of these parameters at Baseline, presented in this annex, are benchmarks that will be compared to values of these same parameters at intermittent points in the BeninCaju lifecycle, including Endline.

Therefore, these parameters need to be presented at disaggregated levels in order to provide finer resolution data that will be used to guide the interventions and assessment of BeninCaju impacts and outcomes.

Because the data presented in this annex will be used for comparison and program guidance purposes, only data collected from the producers in BeninCaju villages are presented in this table (since, by definition, BeninCaju will not work in any Control villages and thus will not be comparing future data from these villages to Baseline data from them.)

Table A5-1: Disaggregated values of key BeninCaju parameters

INFORMATION NEEDS	DEPARTMENT	COMMUNE	VALUE PER COMMUNE	AVERAGE VALUE PER DEPARTEMENT	REPRESENTATIVE VALUE FOR THE BASELINE
Actual average expense per tree (FCFA/Tree)	BORGOU	N'DALI	186	169	447
		TCHAOUROU	144		
	COLLINES	BANTE	284	477	
		DASSA	525		
		GLAZOUE	709		
		OUESSE	667		
		SAVALOU	311		
		SAVE	450		
	DONGA	BASSILA	90	130	
		DJOUGOU	167		
ZOU	DJIDJA	346	346		
Actual average net revenues per tree (FCFA/Tree)	BORGOU	N'DALI	1611	1116	840
		TCHAOUROU	373		
	COLLINES	BANTE	187	385	
		DASSA	663		
		GLAZOUE	44		
		OUESSE	824		
		SAVALOU	458		
		SAVE	110		
	DONGA	BASSILA	726	1374	
		DJOUGOU	1980		
ZOU	DJIDJA	551	551		
Actual net revenue per ha (FCFA/Ha)	BORGOU	N'DALI	135,092	96,324	73,592,147
		TCHAOUROU	38,172		
	COLLINES	BANTE	53,793	42,718	
		DASSA	54,724		
		GLAZOUE	24,141		
		OUESSE	51,782		
		SAVALOU	54,382		
		SAVE	6085		
	DONGA	BASSILA	121,130	135,021	
		DJOUGOU	147,609		
ZOU	DJIDJA	117,805	117,805		
Actual average total cashew farming expense of farmer (FCFA) (producers	BORGOU	N'DALI	52,833	76,769	150,704
		TCHAOUROU	104,695		
	COLLINES	BANTE	191,023	174,120	
		DASSA	65,278		

INFORMATION NEEDS	DEPARTMENT	COMMUNE	VALUE PER COMMUNE	AVERAGE VALUE PER DEPARTEMENT	REPRESENTATIVE VALUE FOR THE BASELINE
with reported total expenses between FCFA 0-3,000,000)		GLAZOUE	116,100		
		OUESSE	175,025		
		SAVALOU	279,538		
		SAVE	160,152		
	DONGA	BASSILA	115,655	84,593	
		DJOUGOU	53,532		
	ZOU	DJIDJA	162,180	162,180	
Average production/ha (Kg/Ha)	BORGOU	N'DALI	300	270	225
		TCHAOUROU	224		
	COLLINES	BANTE	144	191	
		DASSA	182		
		GLAZOUE	267		
		OUESSE	204		
		SAVALOU	163		
		SAVE	163		
	DONGA	BASSILA	274	264	
		DJOUGOU	255		
	ZOU	DJIDJA	110	110	
	Average production/tree (Kg/Tree)	BORGOU	N'DALI	4.4	
TCHAOUROU			1.8		
COLLINES		BANTE	0.9	2.4	
		DASSA	2.1		
		GLAZOUE	5.0		
		OUESSE	3.2		
		SAVALOU	1.3		
		SAVE	1.3		
DONGA		BASSILA	2.3	3.2	
		DJOUGOU	4.1		
ZOU		DJIDJA	1.2	1.2	
Percent of producers access to current market information *		BORGOU	N'DALI	29%	28%
	TCHAOUROU		27%		
	COLLINES	BANTE	11%	19%	
		DASSA	17%		
		GLAZOUE	23%		
		OUESSE	16%		
		SAVALOU	30%		
		SAVE	10%		
	DONGA	BASSILA	13%	27%	
		DJOUGOU	41%		

INFORMATION NEEDS	DEPARTMENT	COMMUNE	VALUE PER COMMUNE	AVERAGE VALUE PER DEPARTEMENT	REPRESENTATIVE VALUE FOR THE BASELINE
	ZOU	DJIDJA	7%	7%	
Overall density of productive trees (trees/ha)	BORGOU	N'DALI	95	131	143
	COLLINES	TCHAOUROU	183		
		BANTE	231		
		DASSA	97		
		GLAZOUE	79		
		OUESSE	109		
DONGA	SAVALOU	153	184		
	SAVE	134			
		BASSILA	215	184	
		DJOUGOU	155		
	ZOU	DJIDJA	154	154	
Progress out of Poverty Index	BORGOU	N'DALI	22.73	23.00	20.46
		TCHAOUROU	23.40		
	COLLINES	BANTE	18.52	19.35	
		DASSA	19.66		
		GLAZOUE	20.18		
		OUESSE	19.53		
		SAVALOU	18.55		
		SAVE	20.67		
	DONGA	BASSILA	23.10	23.11	
		DJOUGOU	23.13		
	ZOU	DJIDJA	19.07	19.07	

* Defined as the percentage of producers who get information on cashew price and/or selling cashew in groups on mobiles or other devices

Executive Summary

In early planning for the BeninCaju baseline study, it was decided that the collected baseline data should capture all cashew production, yield, and income data for the 2016 season. This required that the USDA-funded Technoserve Benin (TNSB) BeninCaju project baseline survey be delayed until the end of the 2016 cashew harvest and sales period. This in turn raised the possibility that startup of BeninCaju activities and interventions in some villages might occur *before* the baseline survey in those villages was conducted.

USDA's justifiable concern about this plan was the possibility that implementation of *any* BeninCaju activities in any selected village before the survey might affect the surveyed producers' (farmers') responses to questions about their cashew farming practices, their knowledge of Good Agricultural Practices (GAP) for cashew, and their responses to other questions or even the 2016 harvest, thereby "contaminating" the baseline data by farmers reporting knowledge, opinions, or cashew farming practices that were solely due to the startup of the BeninCaju activities.

TNSB, together with the BeninCaju Baseline Coordinator, developed a plan to schedule startup and other activities in the surveyed BeninCaju villages after the baseline survey was completed in those villages. This plan, which was correctly implemented, ensured that no BeninCaju activities of any kind were undertaken in any of the surveyed BeninCaju villages. In fact, as of 29 September, 2016, to further ensure that baseline contamination from any project activities could not possibly take place, all project producer activities thus far undertaken have occurred in other project villages.

Background

The BeninCaju baseline data collection recall timeframes described were selected to produce the best and most valid starting points for BeninCaju based on annual production, processing and institutional reporting cycles. Using these recall timeframes will give the best picture of BeninCaju's impact and will help to inform implementation adaptations during the Life of Project (LOP).

Under USDA M&E policy, projects are normally not allowed to initiate activities before the Baseline Evaluation is approved. The timing of the start of BeninCaju between two cashew seasons has required some adjustment both to have the best baseline data and simultaneously not to delay project activities. For this reason, USDA originally agreed that project activities can start once baseline data has been collected (scheduled for the end of July, 2016) and before the Baseline Evaluation report has been fully approved.

However, for BeninCaju to meet the project goals, it was critical to begin some key project activities even before the end of baseline data collection. BeninCaju carefully examined what activities were critical to begin and how implementation could be undertaken to avoid data contamination. In addition, in order to avoid data contamination, BeninCaju developed some methods for the Evaluator to use to adapt the geographic rollout of project activities so that the sample of producers selected to be part of the sample for the Baseline survey was not included in any BeninCaju activities nor otherwise impacted by them until after completion of the Baseline data collection activities in their villages

While actual implementation of the selected project activities before collection of the baseline data required USDA approval, this approval was ultimately granted and was, to a very large extent, based on USDA's acceptance of the ability of BeninCaju and the Evaluator to work together to ensure that no contamination would take place. In any case, the Evaluator was responsible for ensuring that data contamination does not occur.

The proposed select project activities fall under three categories:

1. Producer support activities: begin training and access to finance
2. Processor support activities: begin technical assistance, access to finance, food safety, product diversification
3. BeninCaju communication activities: develop BeninCaju communication plan

1. Producer support activities: begin farmer training and access to finance

BeninCaju collected producer baseline data collection starting in **April 2016** and completed collection by the end of **June, 2016**. BeninCaju proposed to USDA that they approve starting two producer support activities in March, 2016. Although there might have been some risk of contamination, BeninCaju and the Evaluator planned and implemented the measures necessary to ensure that there was no contamination by either the start of SILC training/facilitation or the start of Gold and Silver farmer training.

Following is a description of each of the two producer activities proposed, with information on how contamination of the baseline data was avoided.

- **Gold and Silver farmer training programs**, which are the “flagship” (i.e., most comprehensive and intensive) farmer training programs. Both of these programs will extend over many months and begin with 10 days of agronomic training, including information on weeding, spacing, grafting, etc.

BeninCaju asked USDA to allow starting the Gold and Silver packages with the *first 2-3 day training session in July, 2016*, which, in the event, turned out to be after the last baseline date were collected . This schedule was necessary to ensure that the farmers can receive the 10-days of agronomic training followed by the harvest/post-harvest contents of the course in time to impact cultivation and harvesting for the 2017 harvest season.

Anti-Contamination Strategy and Update: To ensure that there was no risk of contamination, the consultant and BeninCaju team identified the list of 30 Intervention villages and 30 control villages for the baseline survey. Each village was then mapped with a radius of 10km for intervention villages and 5km for control villages. Trainings did not begin until August 2016. No activities have been done in any of the baseline villages (intervention or control) to date or within the respective radius set. No activities will take place within 5km of the control villages for the duration of the project.

- **Savings and Internal Lending Community (SILC) training and facilitation**, to provide better access to capital for farmers during the cashew season.

BeninCaju requested that USDA approve starting the initial training and organization for the SILCs in March, 2016. This was agreed by USDA. Most of the time during which the baseline survey was conducted through the completion of baseline data collection in June involved forming the initial SILC groups and training and recruiting stakeholders.

This approval was granted because it was known that the SILCs would not be in a position to actually provide financing until well after the baseline. In addition, it was not anticipated that farmers would seek financing at that time, since they would have recently received their revenues from the recently completed cashew harvest. As such, the SILC training was not expected to have an effect on the results of the 2016 harvest or on the BeninCaju baseline survey and evaluation.

Anti-Contamination Strategy and Update: There have been no SILC training or groups organized to date as staff is still being recruited and trained, thus there was no opportunity for any contamination to occur from these activities.

2. *Processor support activities: technical assistance, access to finance, food safety, product diversification*

BeninCaju collected baseline data for the six existing processors based on their status as of December 31st, 2015. These data captured the results of the 2015 harvest and post-harvest processing. The processor data were collected and processed by the end of May, 2016.

USDA approved BeninCaju starting two processor-support activities before the completion of all baseline data.

The two processor support activities with their starting month(s) are:

- Food safety technical assistance (April)
- Diversification into cashew juice (August)

Following is a description of each proposed processor activity to provide information to the Evaluator for designing the Baseline Evaluation to avoid any contamination of baseline data.

- ***Food safety***

BeninCaju hired a consultant to conduct an initial assessment for one of the factories. This report was received in July. While the assessment was done prior to baseline collection, no specific actions were put into place. The full time Food Safety specialist started in September and will be moving forward with the action plan proposed by the consultant.

- ***Diversification into cashew juice***

BeninCaju began the process of developing juice processing by bringing an international volunteer consultant in August, 2016. The volunteer's focus is on analyzing the market for cashew apple-based products in Benin and the region. This has no impact on the processor baseline data.

3. *BeninCaju communication activities*

With USDA approval, BeninCaju began the following specific communication activities before completion of the baseline data collection:

- Hiring of local Communications Specialist
- Development of annual Communications Plan
- Development of BeninCaju branding & marking policy compliant with USDA requirements

- Preparation of BeninCaju communication materials, including logo, flyers, banners, website, social media, etc.
- Implementation of certain communication initiatives in support of approved project activities, including launch events in Cotonou and Parakou.
- Participation in key national, regional, and international cashew industry conferences and events

These actions had no impact on baseline data collection, as these activities do not directly relate to any of the agreed project indicators.

Contamination Avoidance

The principal risk of contamination was posed by BeninCaju startup activities and interventions changing the knowledge, attitudes, and practices (KAP) and, as a remote possibility, the cashew harvest results (production, income) of the surveyed project cashew farmers. As noted above, the geographic rollout of any and all BeninCaju activities was carefully planned and scheduled to avoid any activities in any survey villages until after all survey activities in those villages were completed. In fact, as of this date, all project activities of any kind have taken place in non-surveyed villages at the greatest possible distance from the survey villages as a conservative measure to further ensure that no contamination could take place.

Table 1, below, presents the start and end date of baseline survey activities in the surveyed BeninCaju villages. This table shows that the survey was completed in all selected villages prior to the end of June, 2016.

Table 1: Survey dates in surveyed BeninCaju villages

BeninCaju Survey Villages	Survey Dates (DD/MM/YYYY)	
	Start	End
<i>ADJANTE</i>	05/06/2016	09/06/2016
<i>AFFIZOUNGO</i>	04/06/2016	06/06/2016
<i>AMOU</i>	03/05/2016	04/05/2016
<i>AOTRELE</i>	05/06/2016	05/06/2016
<i>ASSANTE</i>	03/06/2016	06/06/2016
<i>ATCHAKPA</i>	05/06/2016	05/06/2016
<i>BIGUINA</i>	05/06/2016	07/06/2016
<i>BOUYEROU</i>	03/06/2016	07/06/2016
<i>DARINGA</i>	02/06/2016	06/06/2016
<i>DOKOUNDOHO</i>	31/05/2016	03/06/2016
<i>EKPA</i>	03/06/2016	04/06/2016

<i>FOUMBEA</i>	31/05/2016	02/05/2016
<i>GBAFFO</i>	30/05/2016	31/05/2016
<i>GBOWELE</i>	30/05/2016	04/05/2016
<i>GORO</i>	01/05/2016	09/06/2016
<i>HONNONKON</i>	04/06/2016	05/06/2016
<i>KOMIGUEA</i>	07/06/2016	08/06/2016
<i>KORI</i>	05/06/2016	07/06/2016
<i>KPOTA</i>	07/06/2016	08/06/2016
<i>MADENGBE</i>	03/06/2016	04/06/2016
<i>MAMATCHOKE</i>	01/06/2016	02/06/2016
<i>N'TCHON</i>	07/06/2016	09/06/2016
<i>NAGAYILE</i>	04/06/2016	08/06/2016
<i>OKE OWO 2</i>	30/05/2016	30/05/2016
<i>OKELAGBA</i>	30/05/2016	09/06/2016
<i>OKOUTA OSSE</i>	04/06/2016	08/06/2016
<i>ONKLOU</i>	30/05/2016	10/06/2016
<i>OUESSE CENTRE</i>	01/06/2016	06/06/2016
<i>OUESSE-CENTRE</i>	04/06/2016	07/06/2016
<i>TCHETTI</i>	03/06/2016	04/06/2016
<i>VOSSA</i>	31/05/2016	01/06/2016

Conclusion

Prior to the start of BeninCaju baseline survey or project activities USDA had serious concern about the risk of BeninCaju baseline contamination from early activity startup. This concern was justified and was emphasized to the TNS BeninCaju team and to the BeninCaju Baseline Coordinator. In response, the TNSB BeninCaju team and the Baseline Coordinator developed a contamination avoidance plan. This plan was primarily based on timing the geographic rollout of project activities and defining exclusion zones around villages to be surveyed as part of the baseline study. This plan, which was presented to USDA and agreed by them, was correctly – and very conservatively - implemented by the TNSB survey team.

Therefore, because of the coordination and planning among USDA, TNS HQ, TNS Benin, and the Baseline Coordinator, and the complete and correct implementation of the agreed plan, no contamination of the BeninCaju baseline survey or evaluation took place.

ANNEX 7- Baseline Indicators- Attachment E (Below)

ATTACHMENT E- Updated Baseline Indicators

Activity	Indicator	Comments	Source	Baseline Value (Surveyed BeninCaju Producers Only)
Activity 1: Capacity Building and Improved Access to Finance for Producer Groups/Cooperatives	Number of Cashew Production agronomic training sessions conducted for farmers (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0	N/A	0
	Number of farmers trained in cashew production agronomics (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0	N/A	0
	Number of Savings and Lending/Finance Training Sessions conducted for SILC group members (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0	N/A	0
	Number of SILC group members trained in savings and lending/finance (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0	N/A	0
	Progress Out of Poverty Index (percent)	Annual indicators need to be updated as they are not in line with baseline	Producer Survey	20.46
	Number of hectares under improved techniques or technologies as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0	N/A	0
	Number of hectares under sustainable agroforestry practices	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of individuals who have applied improved techniques and technologies as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0

	Number of germplings sold by project-supported nurseries	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of individuals benefiting indirectly from USDA-funded interventions	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of individuals who have applied improved farm management practices (i.e., governance, administration, financial management) as a result of USDA assistance.	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Percent of producers satisfied with technical assistance services from INRAB/MAEP extension agents	This indicator has been updated to change “MYAB” to “INRAB” and “MAEP” extension per the PMP.	0	0
	Value of agricultural or rural loans provided as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Volume of selected crops (cashew) produced per Hectare (yield)	This is expressed at kg per hectare	Producer Survey	225
	Number of targeted agricultural policies that have been approved or enacted	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Percent of producers (farmers) who have access to current market information through their cooperatives or producer associations	Calculated as the % of surveyed farmers in cashew cooperatives (24%) x% of members of cashew cooperatives that receive information on cashew prices from the group (63%)	Producer Survey	15%

	Number of members of targeted producer associations/cooperatives	This indicator refers to what was done as a result of BeninCaju and thus is 0, but needs to be reworded to remove 'members of'	N/A	0
	Value of new public and private sector investment leveraged as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of individuals who have received short-term agricultural sector productivity or food security training as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Value of cashew products sold into domestic, regional, and international markets	Based on 2015 kernel and cashew apple juice sales in USD	Market Research	\$7 802 352
	Average margin between farm gate price and end product price for selected agricultural value chains	Suggest that this indicator be dropped, as both farm gate and FOB will go up. Should instead measure % of FOB that went to farmers, for 2015 it was 44% as well as monitoring farm gate price itself.		
	Volume of product meeting international quality standards	Based on HACCP certification	Processor Interview	0
	Average production cost per unit of output for selected agricultural commodities	This indicator needs to be changed to direct production cost of RCN processed/Mt of kernels to be relevant. Response expressed per kg. Data based on 2015 production	Processor Interview	6
	Percent of product loss due to spoilage or improper processing	Yield loss for 2015	Processor Interview	5%

	Number of distinct markets to which selected agricultural products are exported ⁴	Different markets for the different processors, but this is the total unique number	Processor Survey	9
	Number of purchase contracts resulting from processor attendance at international trade fairs/conference and trade missions	Based on contracts from the last 5 years	Processor Survey	6
	Number of international trade missions conducted with host country ag exporters and foreign buyers	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of firms in target region that are accessing credit through any type of 'formal' loan product	Based on individual processor responses	Processor Survey	4
	Number of private enterprises, producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied new technologies or management practices as result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of shared value models identified and tested	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Percent of firms in selected value chains that actively use business/marketing plans	Based on individual processor responses	Processor Survey	50%

⁴ Total summed over all markets reported by the 6 Partner Processors

	Number of international markets covered by government trade promotion agencies (i.e., buyer research reports, regulations and standards reports, etc.)	Confirmed with National government	Market Research	0
	Number of agricultural regulations related to post-harvest handling, processing, and trade procedures vetted or reviewed by the public/industry	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of industry associations who are aware of international food safety standards	There is only one industry association for processors	Market Research	1
	Number of public-private partnerships formed as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of loans disbursed as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of individuals receiving financial services as a result of USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of individuals benefiting directly from USDA-funded interventions	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of jobs attributed to USDA assistance	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
Activity 2: Training on Improved Farm Management and Improved Post-harvest Handling for Producer Groups/Cooperatives	Number of training sessions in operational and financial management conducted for farmers (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0

	Number of farmers trained in operational and financial management (annual) ³	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of post-harvest training sessions conducted for cashew farmer groups (annual) ⁵	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of farmers trained in post-harvest training (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
Activity 3: Infrastructure, Capacity Building, and Market Development of Processing Sector	Number of technical advisory sessions to new processors (annual) ³	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of new cashew processors receiving technical advisory services (annual) ³	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of processors introduced to buyers (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of BDS trainings delivered (annual) ³	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of processor and service provider staff trained in business management skills and processing techniques and technologies (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0

⁵ Data only tabulated for training done by BeninCaju and does NOT include any prior training done by other organizations or GOB

	Number of quality standards training conducted (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of processors receiving training in quality standards (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of marketing trainings conducted for processors (annual) ³	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of processors trained in marketing (annual) ³	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of buyer-seller introductions facilitated (annual) ³	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
Activity 4: Increase Access to Finance and Investment for Processing Sector	Number of access to credit trainings provided to producers and processors (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of producers and processors receiving access to credit training (annual) ²	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
Activity 5: Capacity Building of Trade Associations and Public Sector Agencies	Number of capacity building actions completed by the project (research linkages, trainings, special studies) (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of government agencies benefiting from research linkages, trainings, and special studies facilitated by the project (cumulative)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0

	Number of membership services trainings conducted for industry associations (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0
	Number of staff members of industry associations trained (annual)	This indicator refers to what was done as a result of BeninCaju and thus is 0.	N/A	0

ATTACHMENT E
PERFORMANCE INDICATORS

Result	Indicator	Baseline
FTF Goal: Sustainably Reduce Global Poverty and Hunger	Progress Out of Poverty Index for Target Regions	20.46%
Increased Agricultural Productivity	Number of hectares under improved techniques or technologies as a result of USDA assistance	0
	Number of hectares under improved techniques of technologies as a result of USDA assistance (new)	0
	Number of hectares under improved techniques of technologies as a result of USDA assistance (pest management)	0
	Total number of individuals benefiting directly as a result of USDA assistance	0
	Total number of individuals benefiting directly as a result of USDA assistance (new)	0
	Total number of individuals benefiting directly as a result of USDA assistance (male)	0
	Total number of individuals benefiting directly as a result of USDA assistance (female)	0
	Total number of individuals benefiting indirectly as a result of USDA assistance	0
	Number of jobs attributed to USDA assistance	0
	Number of jobs attributed to USDA assistance (female)	0
	Number of jobs attributed to USDA assistance (male)	0

	Number of individuals who have received short-term agricultural sector productivity or food security training as a result of USDA assistance (continuing)	0
	Number of hectares under improved techniques of technologies as a result of USDA assistance (Continuing)	0
	Number of hectares under improved techniques of technologies as a result of USDA assistance (disease management)	0
	Number of hectares under improved techniques of technologies as a result of USDA assistance (Other - good agricultural practices)	0
	Number of hectares under improved techniques of technologies as a result of USDA assistance (total w/one or more improved techniques or technologies)	0
Increased Leverage of Private-Sector Resources	Value of new public and private sector investment leveraged as a result of USDA assistance	0
	Value of new public and private sector investment leveraged as a result of USDA assistance (private)	0
	Number of public-private partnerships formed as a result of USDA assistance	0
	Number of public-private partnerships formed as a result of USDA assistance (agricultural post-harvest transformation)	0
	Value of new public and private sector investment leveraged as a result of USDA assistance (public)	0
Increased Capacity of Government Institutions	Number of international markets covered by government trade promotion agencies (i.e., buyer research reports, regulations and standards reports, etc.)	0
	Custom: % of producers satisfied with technical assistance services from MAEB and INRAB extension agents	0

Increased Access to Improved Market Information	FFPr 1.4.3: Percent of producers (farms) who have access to current market information through their cooperatives or producer associations	15%
Improved Policy and Regulatory Framework	Number of agricultural regulations related to post-harvest handling, processing, and trade procedures vetted or reviewed by the public/industry	0
	Number of policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance (stage 2)	0
	Number of policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance	0
	Number of policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance (stage 1)	0
	Number of policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance (stage 3)	0
	Number of policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance (stage 4)	0
	Number of policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance (stage 5)	0
Improved Capacity of Key Groups in the Agriculture Production Sector (Coops and Small Shareholder Farmers)	Number of targeted producer associations/cooperatives	0
Improved Quality of Land and Water Resources	Custom: Number of hectares under sustainable agroforestry practices	0

Increased Use of Improved Agricultural Techniques and Technologies	Volume of selected crops (cashew) produced per hectare in kilograms (yield).	225
	Number of individuals who have applied improved techniques and technologies as a result of USDA assistance	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (female)	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (male)	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (New)	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (Pest Management)	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (Other - good agricultural practices)	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (Disease Management)	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (Continuing)	0
	Number of individuals who have applied new techniques or technologies as result of USDA assistance (total w/one or more improved techniques or technologies)	0
Increased Availability of Improved Inputs	Custom: Number of germlings sold by project-supported nurseries	0
Increased Use of Financial Services	Value of loans provided as a result of USDA assistance	0
	Number of individuals receiving financial services as a result of USDA assistance	0

	Number of loans disbursed as a result of USDA assistance	0
	Value of loans provided as a result of USDA assistance (female)	0
	Value of loans provided as a result of USDA assistance (male)	0
	Value of loans provided as a result of USDA assistance (not applicable)	0
	Number of individuals receiving financial services as a result of USDA assistance (female)	0
	Number of individuals receiving financial services as a result of USDA assistance (male)	0
	Number of firms in target region that are accessing credit through any type of 'formal' loan product (illustrative)	4
	Value of loans provided as a result of USDA assistance (joint)	0
Increased Knowledge by Farmers of Improved Agricultural Techniques and Technologies	Number of individuals receiving short-term agricultural sector productivity or food security training as a result of USDA assistance	0
	Number of individuals who have received short-term agricultural sector productivity or food security training as a result of USDA assistance (female)	0
	Number of individuals who have received short-term agricultural sector productivity or food security training as a result of USDA assistance (male)	0
	Number of individuals who have received short-term agricultural sector productivity or food security training as a result of USDA assistance (Agricultural Producers)	0
	Number of individuals who have received short-term agricultural sector productivity or food security training as a result of USDA assistance (new)	0

	Number of individuals who have received short-term agricultural sector productivity or food security training as a result of USDA assistance (continuing)	0
Improved Farm Management (Operations, Financial)	Number of individuals who have applied improved farm management practices (i.e., governance, administration, financial management)	0
	Number of individuals who have applied improved farm management practices (i.e., governance, administration, financial management) as a result of USDA assistance (female)	0
	Number of individuals who have applied improved farm management practices (i.e., governance, administration, financial management) as a result of USDA assistance (agricultural producers)	0
	Number of individuals who have applied improved farm management practices (i.e., governance, administration, financial management) as a result of USDA assistance (male)	0
Improved Knowledge Regarding Farm Management	Percent of agricultural producers in target region/area who can identify key characteristics of a well-managed farm (illustrative)	0
Expanded Trade of Agricultural Products (Domestic, Regional and International)	Value of sales by project beneficiaries	\$26 231 194
	Value of sales by project beneficiaries (processed kernel)	\$7 787 352
	Value of sales by project beneficiaries (Cashew Apple)	\$15 000
	Value of 2016 sales by project beneficiaries (raw cashew nut) ⁶	\$18 428 842 / 10 817 730 000 CFA
	Total number of individuals benefiting directly as a result of USDA	0

⁶ Calculated by taking the average of earned by farmer from RCN sales multiplied by expected farmer beneficiaries. Subject to change based on number of beneficiaries. (\$376/farmer * 49,000) Used average exchange rate for 2016 of 587 CFA/USD.

	assistance	
	Total number of individuals benefiting directly as a result of USDA assistance (new)	0
	Total number of individuals benefiting directly as a result of USDA assistance (male)	0
	Total number of individuals benefiting directly as a result of USDA assistance (female)	0
	Total number of individuals benefiting indirectly as a result of USDA assistance	0
	Number of jobs attributed to USDA assistance	0
	Number of jobs attributed to USDA assistance (female)	0
	Number of jobs attributed to USDA assistance (male)	0
	Total number of individuals benefiting directly as a result of USDA assistance (continuing)	0
Improved Capacity of Key Organizations in the Trade Sector (Processing Organizations and Trade Associations)	Number of industry associations who are aware of international food safety standards	0
Increased Value Added to Post Production Agricultural Products	If we are measuring impact on farmers, we have to change this as % of farm gate realization of equivalent of end product. Farmers received 44% of the sales of equivalent of kernel for the baseline.	Suggest to remove and replace with 44% of FOB value to farmers
Improved Quality of Post-Production Agricultural Products	Volume of commodities sold by project beneficiaries	24 248 600

	Volume of commodities sold by project beneficiaries (raw cashew nut) ⁷ (total kg RCN sold by surveyed BeninCaju producers in 2016)	23 177 000
	Volume of commodities sold by project beneficiaries (processed kernel in kg)	1 071 600
Increased Adoption of Established Standards by Industry	Percent of registered firms in target sectors that obtain certification with international standards related to product quality (illustrative)	0
Increased Efficiency of Post-Production Processes	Average production cost per unit of output for selected agricultural commodities	\$1.16
Increased Use of Improved Post-Production Processing and Handling Practices	Custom: % of product loss due to spoilage or improper processing	5%
Improved Post-Harvest Infrastructure	Percent of agricultural producers (farms) in the target region that have access to quality storage and/or post-harvest processing facilities (illustrative)	0
Improved Marketing of Agricultural Products	Number of purchase contracts resulting from processor attendance at international trade fairs/conference and trade missions	6
Increased Access to Markets to Sell Agricultural Products	Number of distinct markets to which selected agricultural products are exported (illustrative)	0
Improved Linkages Between Buyers and Sellers	Number of international trade missions conducted with host country ag exporters and foreign buyers (illustrative)	0
Improved Transaction	Number of private enterprises, producers organizations, water users	0

⁷ Calculated based on average kg/farmer sold of RCN based on surveyed farmers times total number of expected farmer beneficiaries. Subject to change based on number of beneficiaries. (473kg/farmers *49,000 farmers)

Efficiency	associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied new technologies or management practices as result of USDA assistance	
	Custom: Number of shared value models identified and tested	0
	Number of private enterprises, producer organizations...that applied improved techniques and technologies as a result of USDA assistance (new)	0
	Number of private enterprises, producer organizations...that applied improved techniques and technologies as a result of USDA assistance (private enterprise)	0
	Number of private enterprises, producer organizations...that applied improved techniques and technologies as a result of USDA assistance (trade and business association)	0
	Number of private enterprises, producer organizations...that applied improved techniques and technologies as a result of USDA assistance (community-based organization)	0
	Number of private enterprises, producer organizations...that applied improved techniques and technologies as a result of USDA assistance (continuing)	0
Improved Management of Buyer/Seller Groups Within Trade Sector	Percent of firms in selected value chains that actively use business/marketing plans	0