



**Impact Evaluation:  
Root Capital & Union des Coopératives Caféières de Baptiste  
(UCOCAB)**

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SOCIO DIGITAL RESEARCH GROUP  
(SDRG)

Team Leader

Timothy T. Schwartz, PhD

Analysis, charts and tables, formatting:

Anthony DeMattee

Principal Report Writer and Editor

Harold Maass

Operations Manager

Serge Boissette

Questionnaire Programming

Guy Pavilus

Survey Supervisors

Pharrel Emile

Frantz Mars

Surveyors

Makensen Sylvain

Makensen Emile

Renaud Previlus

Gary Boissette

Egain Ambeau

Logistics and Accounting

Stephanie Pierre

Focus Groups

Almathe Jean

Serge Boissette

Frantz Mars

Guy Pavilus



SDRG Field Team with Franck St. Simon of Root Capital

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## 1.0 Executive Summary

This report describes baseline data collected to help assess Root Capital's impact on coffee production in one of its target regions of Haiti. The survey focused on farmers in the Savannette-Baptiste area of the Departement du Centre. Most of the respondents were members of cooperatives working with Root Capital (n=151); some were not (n=52). The data offers a comprehensive picture of production levels, income from coffee, preferred tree varieties, tree planting and maintenance, inputs, and other key coffee growing practices of coop *Members*. Responses from *Non-Members* provide a basis of comparison that is critical to establishing meaningful baseline performance indicators. These indicators will allow Root Capital to evaluate changes in cultivation, harvesting, and processing practices, as well as income and other factors, in follow-up and endline surveys.

## 2.0 Background

Coffee has long been one of the most prized cash crops for peasant farmers in Haiti's mountains. Haiti was once far and away the world's leading producer. It provided 60 percent of the world's coffee at the end of the colonial period in the late 18<sup>th</sup> century and remained a major producer for much of the 19<sup>th</sup> century. In 1949 Haiti ranked as the world's third largest coffee exporter, thanks to a short-lived comeback.

Income from coffee sales continues to help alleviate poverty in many of Haiti's mountainous communities where the plants grow, often making these areas significantly better off than nearby farming areas where conditions are not conducive to coffee cultivation. Coffee plants and the shade trees around them also serve as one of the last defenses against the deforestation and erosion that have devastated farming communities across Haiti for generations. Coffee farms account for roughly half of Haiti's remaining forest cover--estimated at just two percent of the country's land.

Haitian coffee production is vulnerable to a host of threats. Coffee rust kills trees; erosion eats away at mountain gardens; smallholder farmers lack access to training and international markets; multiple layers of intermediaries siphon off profits; the advanced age of most coffee trees (two-thirds of the country's stands are well past peak production years) limits yields; growers lack access to capital; and road access is poor. These and other economic pressures deprive farmers of financial incentive to invest in their coffee plants resulting in a decline in income and even inducing growers to pull up plants and replace them with other crops. Due to these and other factors, Haiti's coffee exports have been in freefall for decades; production is half what it was 30 years ago.

### 2.1 Root Capital

Root Capital is a nonprofit social investment fund that lends capital and delivers financial training to agricultural businesses in countries that, like Haiti, are poor and environmentally vulnerable. Root Capital has worked in Haiti since 2010, providing loans mostly to coffee and cocoa producers, and offering training to farmers. In order to more fully understand its impact and improve its training and other operations, Root Capital is conducting studies on smallholder farmers from 2014 to 2016 to evaluate changes in their crop yields, income levels, and other markers.

In the area targeted in this study, Root Capital provides loans and financial training to the Union des Coopératives Caféières de Baptiste. This organization, UCOCAB, is a network of coffee cooperatives in the area that joined together in 2006 with the shared goal of revitalizing the local coffee sector and improving the lives of coffee farmers. UCOCAB is seeking ways to keep more of the income from local

coffee production within the community, through such projects as developing coffee-based products and building a coffee roasting plant.

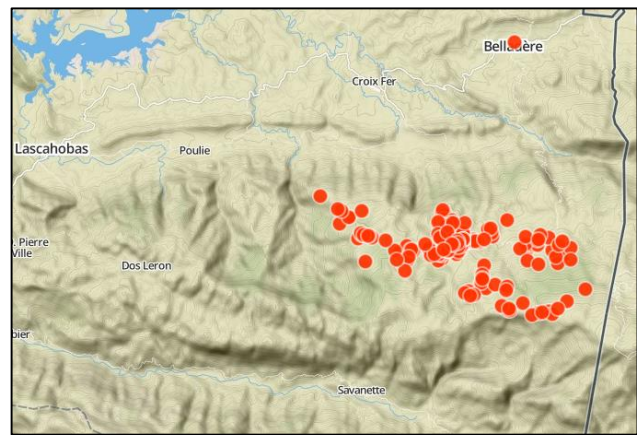
### 3.0 The Survey

Five enumerators collected responses from a random sample of farmers selected from a list of *Members* of the seven cooperatives in UCOCAB, as well as a control group of *Non-Members*. The interviews were conducted over ten days in February 2014, with responses registered on tablets, and uploaded daily, with regular monitoring for quality control. The responses were collected from farmers near the town of Belladere, Haiti (see Pictures 1 & 2). The composition of the dataset is described below along several meaningful dimensions.

**Figure 1: Map of Sample Distribution**



**Figure 2: Map of Sample Distribution 2**



### 3.1 Survey Sample Population Composition by Membership and Gender

By design, the number of *Members* outnumbered *Non-Members* at a ratio of 3:1. There were 152 *Member* responses and 51 *Non-Member* responses. Table 1 shows the composition of this dataset by membership status, age category, and gender. As a whole, males outnumbered females in the dataset 61% to 39%. This disproportionality changed with respect to cooperative membership status. Specifically, for *Members* the gender distribution was 65% male (99 responses) and 35% female (53 responses). For *Non-Members*, the distribution was much more balanced with twenty-five male and twenty-six female responses.

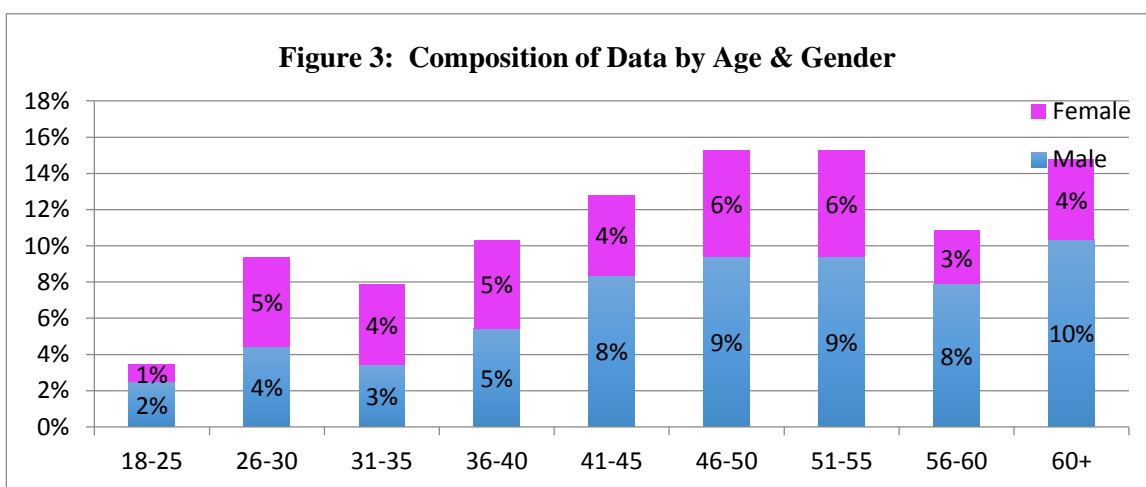
Figure 1 graphically shows the gender distribution by age and gender. No age group represents more than 15% of the data. The data seems skewed towards the higher age ranges, specifically the three age categories that include ages 41 through 55 contain 43% of all observations. For *Members*, 47% of responses come from those age categories while for the *Non-Members* that number is only 31%. For *Members*, the median age category for both males and females is 46-50 years old. For *Non-Members*, the median age category for males is 41-45 years old and for females the median age category is slightly lower at 36-40 years old.

Generally speaking, men outnumber women in each group and age category with the only exceptions being: *Members* age category 31-35 women outnumber men seven to six; *Non-Members* age category 26-30 women outnumber men seven to four, age category 31-35 women outnumber men two to one, and age category 46-50 four to one, and ages 56-60 two to one.



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Table 1: Composition of Data by Membership, Age, and Gender						
	Members		Non-Members		Total	
<b>Male</b>						
18-25	1	1%	4	8%	5	2%
26-30	5	3%	4	8%	9	4%
31-35	6	4%	1	2%	7	3%
36-40	8	5%	3	6%	11	5%
41-45	13	9%	4	8%	17	8%
46-50	18	12%	1	2%	19	9%
51-55	17	11%	2	4%	19	9%
56-60	15	10%	1	2%	16	8%
60+	16	11%	5	10%	21	10%
<b>Sub-Total</b>	<b>99</b>	<b>65%</b>	<b>25</b>	<b>49%</b>	<b>124</b>	<b>61%</b>
<b>Female</b>						
18-25	0	0%	2	4%	2	1%
26-30	3	2%	7	14%	10	5%
31-35	7	5%	2	4%	9	4%
36-40	7	5%	3	6%	10	5%
41-45	6	4%	3	6%	9	4%
46-50	8	5%	4	8%	12	6%
51-55	10	7%	2	4%	12	6%
56-60	4	3%	2	4%	6	3%
60+	8	5%	1	2%	9	4%
<b>Sub-Total</b>	<b>53</b>	<b>35%</b>	<b>26</b>	<b>51%</b>	<b>79</b>	<b>39%</b>
<b>Total</b>	<b>152</b>	<b>100%</b>	<b>51</b>	<b>100%</b>	<b>203</b>	<b>100%</b>



### 3.2 Composition by Locality

Responses were collected from twenty-two named localities. Responses from *Members* were collected in all localities; however, in only seven of the twenty-two named localities were responses from *Non-Members* collected. Nearly half (25 responses) of the *Non-Member* responses came from unnamed localities. Thirty-six (24%) of the *Members* who responded and ten of the *Non-Members* (20%) came from Baptiste, the most represented locality in the data. Table 2 alphabetically lists all localities and displays the quantity of surveys collected.

	Members		Non-Members		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>Baptiste</b>	36	24%	10	20%	46	23%
<b>Barank</b>	1	1%	1	2%	2	1%
<b>BasMont-Leon</b>	1	1%	0	0%	1	0%
<b>Bois-Pine</b>	1	1%	0	0%	1	0%
<b>Bois-PinGomme</b>	2	1%	0	0%	2	1%
<b>BoukanJean-Louis</b>	5	3%	0	0%	5	2%
<b>BoulayJean-Louis</b>	1	1%	0	0%	1	0%
<b>Dieubaprenn</b>	8	5%	0	0%	8	4%
<b>DoPak</b>	1	1%	0	0%	1	0%
<b>DosBaptiste</b>	9	6%	3	6%	12	6%
<b>FonCheval</b>	4	3%	1	2%	5	2%
<b>Joupatonil</b>	1	1%	0	0%	1	0%
<b>LiannRiche</b>	13	9%	0	0%	13	6%
<b>Other</b>	5	3%	25	49%	30	15%
<b>Louime</b>	14	9%	0	0%	14	7%
<b>Mont-Leon</b>	12	8%	0	0%	12	6%
<b>RocheGrande</b>	1	1%	0	0%	1	0%
<b>RochePlate</b>	12	8%	1	2%	13	6%
<b>Sagouret</b>	1	1%	0	0%	1	0%
<b>SousKrab</b>	1	1%	0	0%	1	0%
<b>TiNwel</b>	6	4%	6	12%	12	6%
<b>Tortoye</b>	3	2%	4	8%	7	3%
<b>Trasae</b>	14	9%	0	0%	14	7%
<b>Total</b>	152	100%	51	100%	203	100%

### 3.3 Composition by Available Farming Area

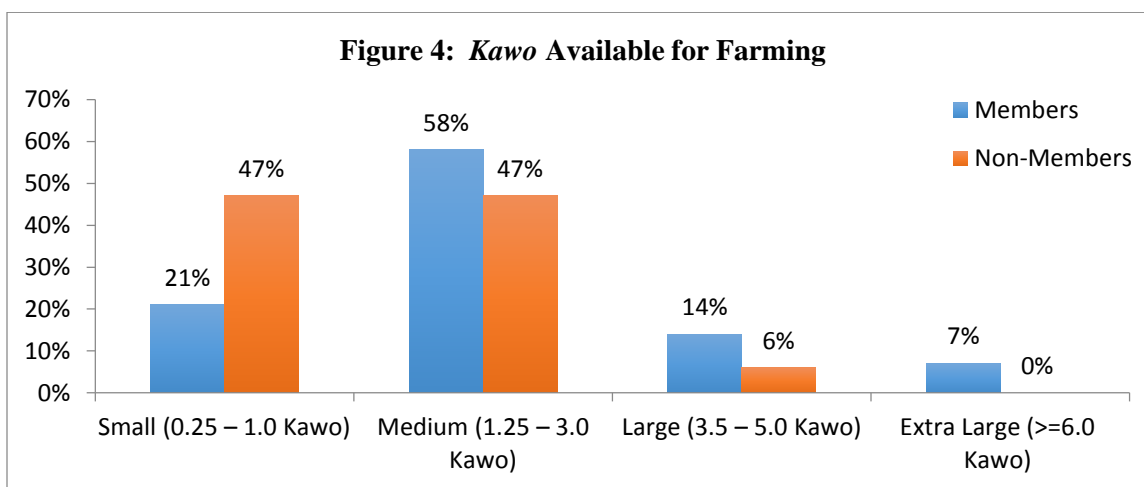
During the data collection process, respondents self-reported the area of land made available to them for farming. This area was reported in *kawo*<sup>1</sup>, which is a standard unit of measure familiar to farmers in the area and equal to 3.19 acres. For the ease of analysis, these categories were then coded into four categories—Small, Medium, Large, and Extra Large. More than half, 55%, of all respondents reported having a Medium area (1.25 to 3.0 *kawo*) to farm. Small (0.25 – 1.0 *kawo*) was the next most common area

<sup>1</sup> Haitian land is sold in units called centieme. One centieme is equivalent to 128 square-meters, and one hundred centieme compose one kawo, which equals 12,800 square-meters. Other useful conversions for kawo are: 1 centieme = 129m<sup>2</sup>; 100 centieme = 1 kawo; 1 kawo = 1.29 hectares; 1 kawo = 3.19 acres; 100 kawo = 0.5miles<sup>2</sup>

size, 28% of respondents, followed by Large (3.5 – 5.0 *kawo*) and Extra Large (greater than 6.0 *kawo*) with 12% and 5% of responses, respectively. However, there appears to be a stark difference in the area of land available to farmers depending on his/her cooperative membership status.

A large majority, 94%, of *Non-Members* reported having access to either Small or Medium sized farming area. These forty-eight responses were evenly divided among the two smallest groups, 47% in each. Only 6% (3 respondents) of *Non-Members* reported having a large farm and zero reported having access to an Extra Large farming area. This distribution is a sharp contrast to *Members* who reported having greater access to larger farms. Only 21% of *Members* reported having access to only Small farms, which is twenty-six points lower than *Non-Members*. Medium farms were most prevalent among *Members* at 58%, which is an eleven point increase over *Non-Members*. Finally, 14% and 7% of *Members* reported having access to Large and Extra Large farming areas, respectively. Table 3 shows the quantity of responses by membership status and available farming area, and Figure 2 displays those quantities graphically.

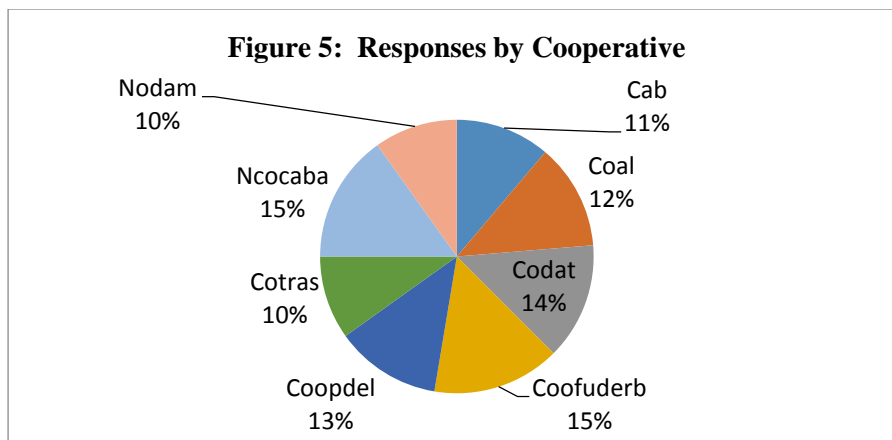
	Members		Non-Members		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>Small (0.25 – 1.0 <i>Kawo</i>)</b>	32	21%	24	47%	56	28%
<b>Medium (1.25 – 3.0 <i>Kawo</i>)</b>	88	58%	24	47%	112	55%
<b>Large (3.5 – 5.0 <i>Kawo</i>)</b>	21	14%	3	6%	24	12%
<b>Extra Large (&gt;= 6.0 <i>Kawo</i>)</b>	11	7%	0	0%	11	5%



### 3.4 Distribution of Responses by Cooperative

As shown in Table 4 and Figure 3, of the 152 *Member* responses, no more than twenty-three and no fewer than fifteen responses were collected from each of the eight cooperatives. The average number of responses collected from each cooperative is nineteen. This shows *Member* observations are almost equally represented across the eight cooperatives approached.

Cooperative	Members
<b>Cab</b>	17
<b>Coal</b>	19
<b>Codat</b>	21
<b>Coofuderb</b>	23
<b>Coopdel</b>	19
<b>Cotras</b>	15
<b>Ncocaba</b>	23
<b>Nodam</b>	15
<b>Total</b>	152



## 4.0 Coffee Development

### 4.1 Average Plot Size (*kawo*)

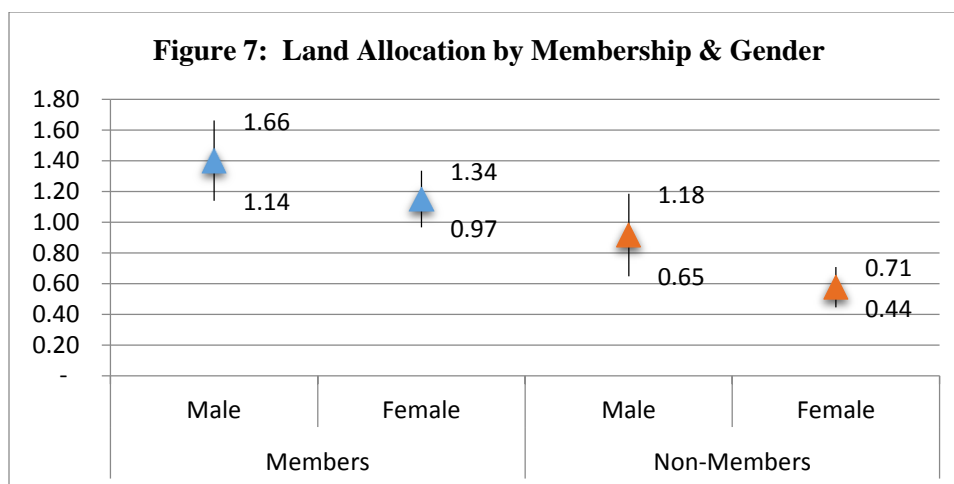
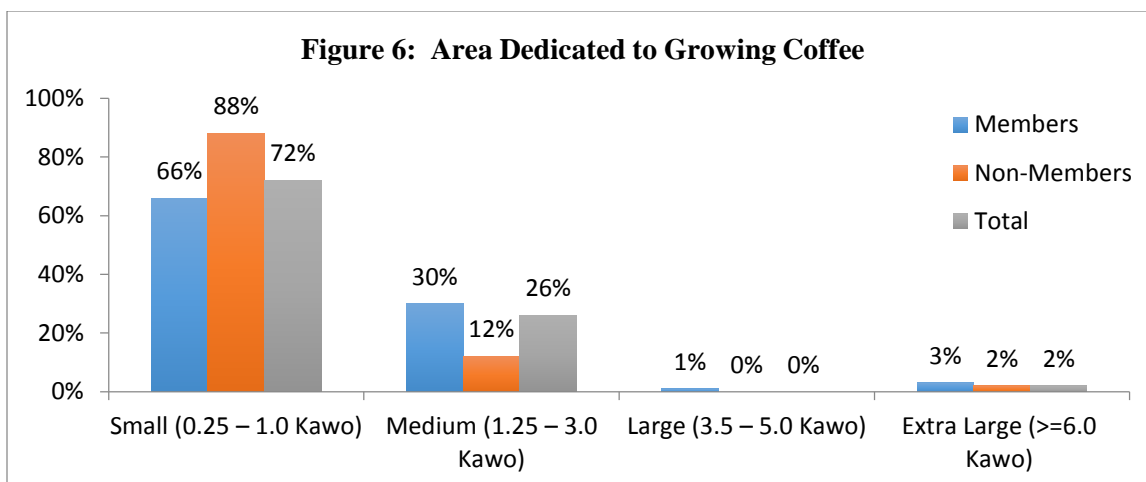
Not all the land available to farmers is used for coffee production. Of the total 490.8 *kawo* of available land reported by 202<sup>2</sup> respondents, only 48% (237.1 *kawo*) of it is used for coffee production. The average plot size of land used for coffee production is 1.17 *kawo* for all respondents and 1.31 and 0.75 *kawo* of land for *Members* and *Non-Members*, respectively.

As shown below in Table 5 and Figure 4, there is a strong tendency in both groups to farm Small (71%) or Medium (25%) coffee plots over larger coffee plots. The number of respondents who have Small coffee plots is 66% for *Members* and 88% for *Non-Members*. Twenty of the forty-four *Non-Members* (45%) who have Small coffee plots have access to larger plots and sixty-eight of the 100 *Members* (68%) who have Small coffee plots have access to larger plots. The 3% of respondents who choose to farm Large or Extra Large coffee plots are *Members*.

Figure 5 shows the 95% confidence intervals for the true but unknown average number of *kawo* farmed for coffee for males and females within each membership group. For all *Members*, with 95% certainty the true but unknown average amount of land used for coffee production among men is between 1.14 and 1.66 *kawo* and among women is between 0.97 and 1.34 *kawo*. These ranges do not indicate a statistically significant difference between sexes within the *Members* group. For all *Non-Members*, with 95% certainty the true but unknown average amount of land used for coffee production among men is between 0.65 and 1.18 *kawo* and among women is between 0.44 and 0.71 *kawo*. These ranges do not indicate a statistically significant difference between sexes within the *Non-Members* group. The data indicates the only statistically significant difference in the relationship between gender and the average amount of land used for coffee production is between male and female *Members* vis-a-viz female *Non-Members*. Table 6 shows other meaningful differences between the sexes according to their *Member* versus *Non-Member* identification.

<sup>2</sup> One *Non-Member* observation omitted from analysis because s/he reported available land is less than land farmed

	Members		Non-Members		Total	
	Count	%	Count	%	Count	%
<b>Small (0.25 – 1.0 Kawo)</b>	100	66%	44	88%	144	71%
<b>Medium (1.25 – 3.0 Kawo)</b>	46	30%	6	12%	52	26%
<b>Large (3.5 – 5.0 Kawo)</b>	2	1%	0	0%	2	1%
<b>Extra Large (&gt;=6.0 Kawo)</b>	4	3%	0	0%	4	2%
<b>Total</b>	152	100%	50 <sup>2</sup>	100%	202	100%

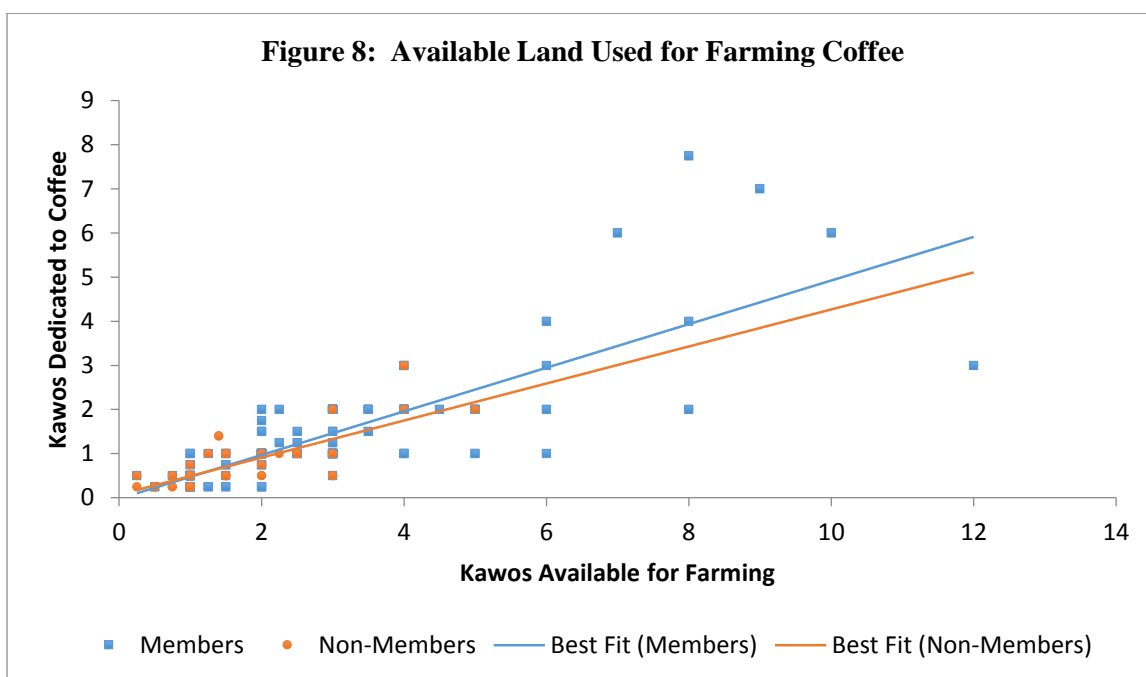


	Members		Non-Members	
	Male	Female	Male	Female
<b>Farmers</b>	99	53	25	26
<b>Percentage of Membership Group</b>	65%	35%	49%	51%
<b>Median Age Category</b>	46-50yrs	46-50yrs	41-45yrs	36-40yrs
<b>Avg. Kawo for Growing Coffee</b>	1.40	1.15	0.92	0.58

## 4.2 Land Allocation

At the group-level it appears that, on average, *Members* and *Non-Members* allocate land for growing coffee at roughly the same rate. As shown in Figure 6, the correlation between available land and land used to produce coffee is quite strong (correlation coefficient ( $r$ )=0.81). Within the data collected, the percentage of available land used by *Members* to grow coffee is, on average, 48.5% (1.31 *kawo* of available land) versus the percentage used by *Non-Members* that is, on average, 46.8% (0.75 *kawo* of available land). This similarity continues to the individual level where, with 95% certainty, the true but unknown utilization rate of available land for the purpose of growing coffee is between 46% and 53% for *Members* and 43% and 59% for *Non-Members*, which is not a statistically significant difference.

These statistics can be interpreted to mean that there is no statistical difference between the two groups with respect to the rate of available land allocated for coffee production. Therefore, any “land advantage” seen in the data is attributable to an initial advantage in access to farmable land. This difference is seen in the data where, with no statistical difference between the two groups in the rate at which available land is used for coffee production, the average amount of available land is 69% greater for *Members* as compared to *Non-Members*, or 2.70 *kawo* as compared to 1.60 *kawo*, respectively.



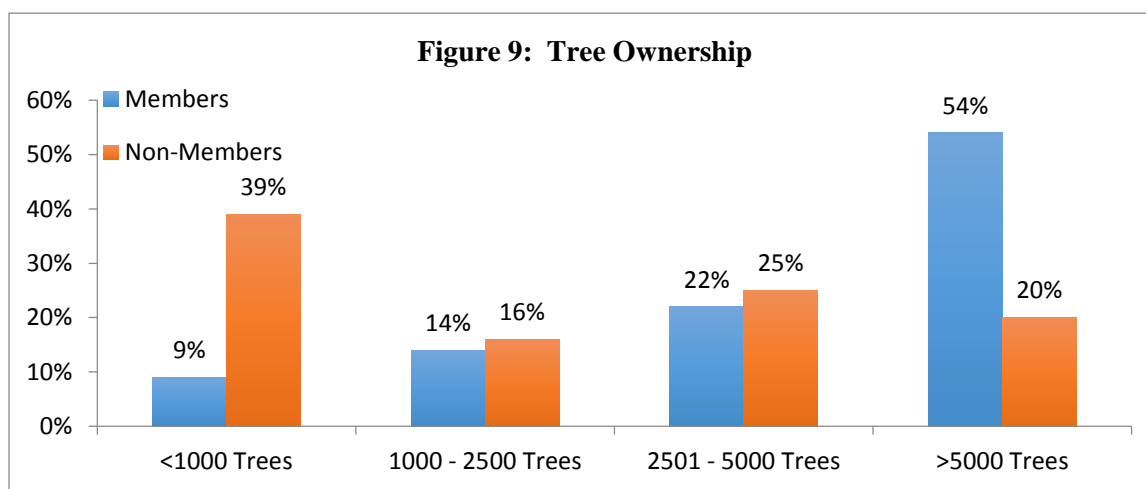
## 4.3 Tree Ownership

The rate of tree ownership is inconsistent between *Members* and *Non-Members*. Over half of the farmers in the *Members* group own 5,000 or more producing coffee trees. Twenty-two percent of *Members* own between 2,500 and 5,000 trees, and only 23% own fewer than 2,500 trees. *Non-Members*, on the other hand, have a much different tree-ownership profile with 39% of farmers owning fewer than 1,000 trees, 16% owning between 1,000 and 2,500 trees, 25% owning between 2,500 and 5,000 trees, and 20% owning more than 5,000 trees. Table 7 and Figure 7 show this information.

The data of the sample show there is a large and statistically significant difference in the number of coffee trees owned by *Members* and *Non-Members*. Based on the data collected, with 95% certainty, the true but

unknown average number of trees owned by the entire population of *Members* is between 7,620 and 13,408. With the same degree of certainty the true but unknown average number of trees owned by the entire population of *Non-Members* is between 2,219 and 3,861.

	Members		Non-Members		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>&lt;1000 Trees</b>	14	9%	20	39%	34	17%
<b>1000 - 2500 Trees</b>	22	14%	8	16%	30	15%
<b>2501 - 5000 Trees</b>	34	22%	13	25%	47	23%
<b>&gt;5000 Trees</b>	82	54%	10	20%	92	45%



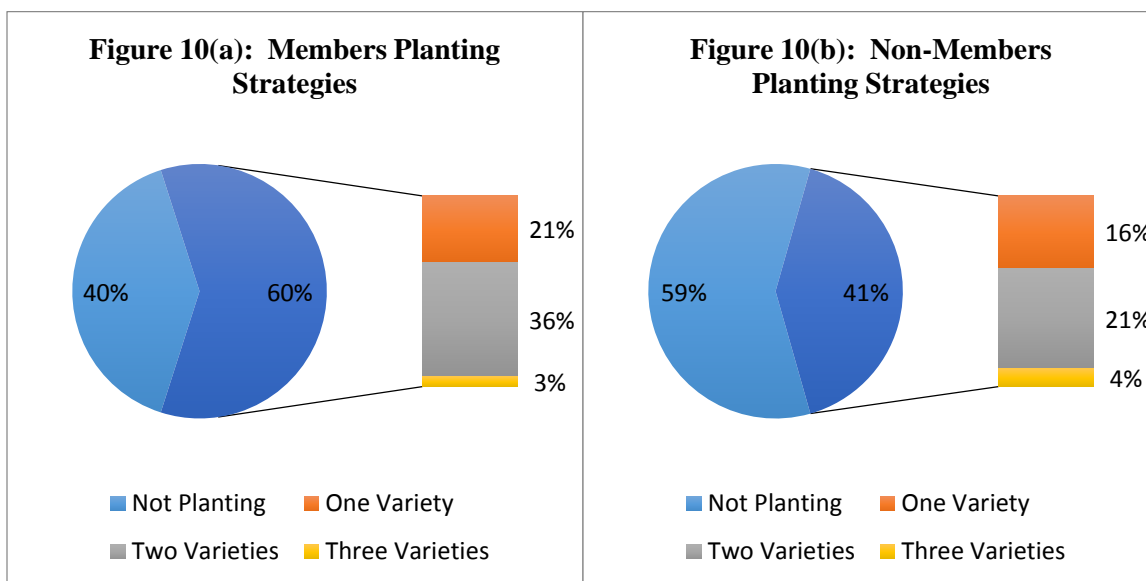
#### 4.4 Tree Planting

Of the farmers surveyed, 60% of *Members* planted new trees as compared to only 41% of *Non-Members*. The data suggests there are two varieties of trees that garner the most attention from farmers, Tipica and Caturra. Table 8 and Figures 8(a) and 8(b) show the different planting strategies of the groups.

Among the ninety-one *Members* planting trees, seventy-three (80%) chose to plant Tipica and seventy-six (84%) chose to plant Caturra. *Members* planted, on average, 984 and 604 trees of each variety, respectively. There were eighty-nine *Members* who chose to plant Tipica and/or Caturra. Thirty-one of them planted only one variety while fifty-eight of them planted both varieties. Among the twenty-one *Non-Members* planting trees, eighteen (86%) chose to plant Tipica and fourteen (67%) chose to plant Caturra. *Non-Members* planted, on average, 746 and 450 trees of each variety, respectively. All twenty-one *Non-Members* who planted trees chose to plant Tipica and/or Caturra. Eleven of them planted only one variety while ten of them planted both varieties. Neither reported planting significant quantities of largely rust-resistant Catimor.

	Members		Non-Members		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>Tipica</b>	73	48%	18	35%	91	45%
<b>Caturra</b>	76	50%	14	27%	90	44%
<b>Catimor</b>	2	1%	2	4%	4	2%
<b>Other Variety</b>	5	3%	2	4%	7	3%
<b>Not Planting</b>	61	40%	30	59%	91	45%

\*Multiple responses permitted, percentages may not total 100%



#### 4.5 Tree Maintenance

The maintenance activities between *Members* and *Non-Members* makes itself known in the data. As Tables 9 & 10 and Figure 9 show, *Members* seem to have higher participation rates in regular tree maintenance activities. *Members* reported preparing trees at a higher rate than *Non-Members*, 60% to 41%, respectively. *Members* also reported pruning their trees at a higher rate than *Non-Members*, 81% to 39%, respectively. The data of the sample show there is a difference in the rate at which farmers reported these maintenance activities, but that does not mean that the rate of maintenance activity for the entire population of *Members* and the entire population of *Non-Members* is statistically different.

	Members		Non-Members		Total	
<b>No</b>	61	40%	30	59%	91	45%
<b>Yes</b>	91	60%	21	41%	112	55%

	Members		Non-Members		Total	
<b>No</b>	29	19%	31	61%	60	30%
<b>Yes</b>	123	81%	20	39%	143	70%



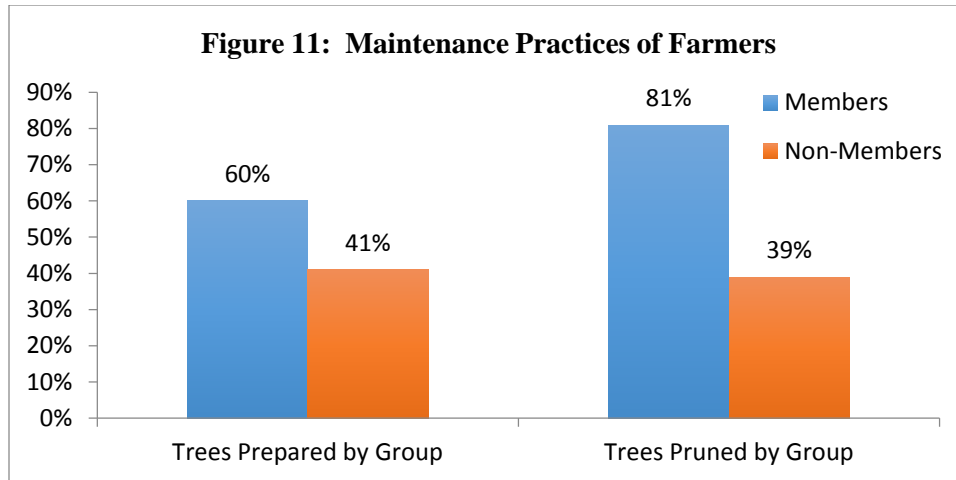
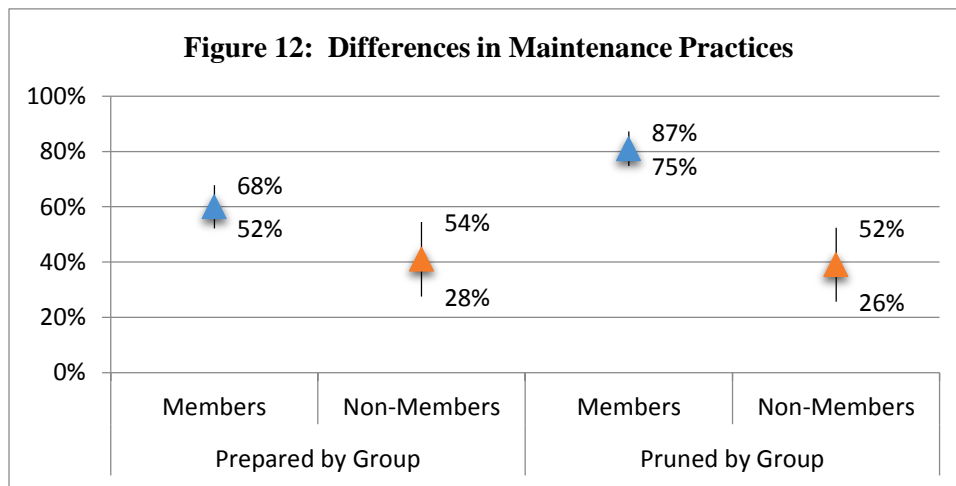


Figure 10 shows the average rate of tree maintenance activity reported by each group in the sample and the range of the 95% confidence interval of the true, but unknown, rate within the entire population. The data show a noticeable statistical difference between *Members* and *Non-Members* for pruning but not for preparation.

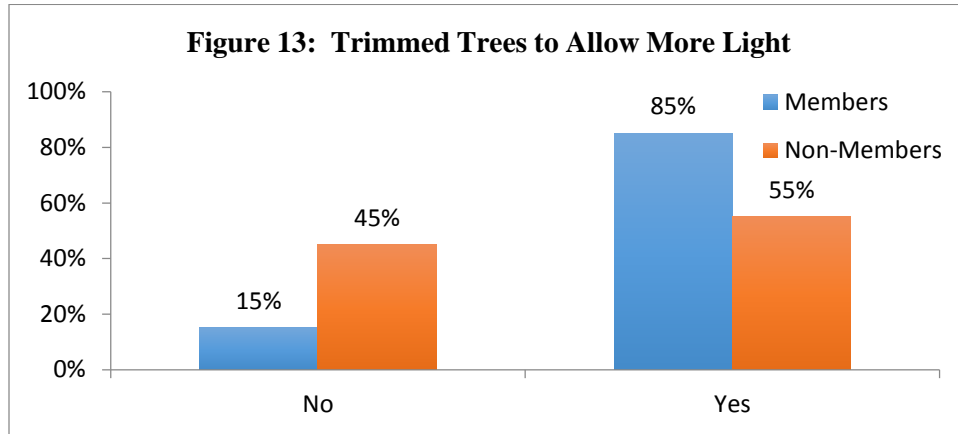
- With 95% certainty, the entire population of *Members* prepares trees at a rate between 52%-68%. This rate is higher but is not statistically different from the entire population of *Non-Members* who prepare trees at a rate between 28%-54%.
- Similarly, with 95% certainty, the entire population of *Members* prunes trees at a rate between 75% and 87%. This rate is higher and statistically different from the entire population of *Non-Members* who prune trees at a rate between 26%-52%.



#### 4.6 Trimming Shade Trees

There is a statistically significant difference between *Members* and *Non-Members* in the rate that each group practices trimming trees to allow more light to enter their gardens. Of the responses collected, 85% of *Members* reported such a practice versus 55% of *Non-Members*. With 95% certainty, the true but unknown rate among all *Members* is between 79% and 91%, and with the same degree of certainty the true but unknown rate among all *Non-Members* is between 41% and 69%. The groups are statistically different in this regard. Table 11 and Figure 11 show this information.

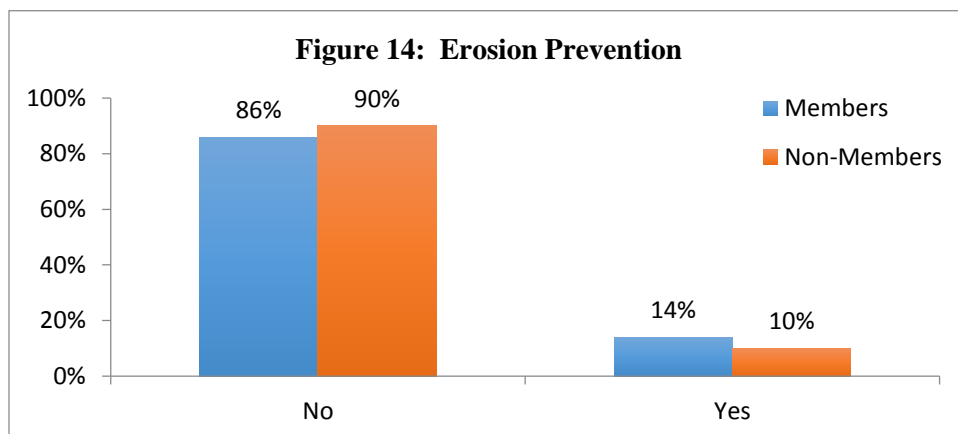
Table 11: Trimmed Trees to Allow More Light						
	Members		Non-Members		Total	
<b>No</b>	23	15%	23	45%	46	23%
<b>Yes</b>	129	85%	28	55%	157	77%



#### 4.7 Erosion Prevention

There is a difference between *Members* and *Non-Members* in the rate each group uses erosion practices in their gardens. Of the responses collected, 14% of *Members* reported such a practice versus 10% of *Non-Members*. With 95% certainty, the true but unknown rate among all *Members* is between 8% and 20%, and with the same degree of certainty the true but unknown rate among all *Non-Members* is between 2% and 18%. The difference between these ranges is not statistically significant and therefore the groups are not significantly different. Table 12 and Figure 12 show this information.

Table 12: Erosion Prevention						
	Members		Non-Members		Total	
<b>No</b>	130	86%	46	90%	176	87%
<b>Yes</b>	22	14%	5	10%	27	13%



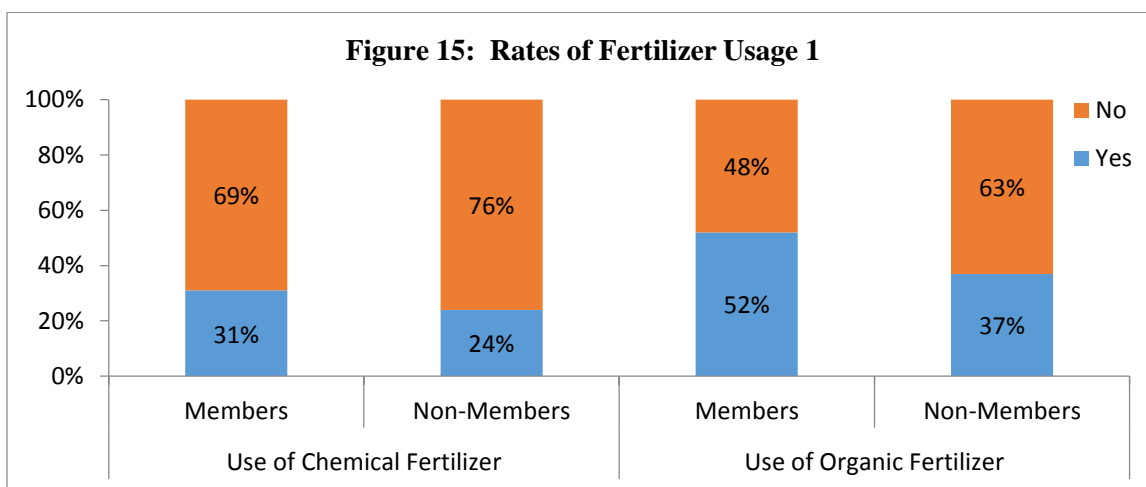
### 4.8 Use of Fertilizer

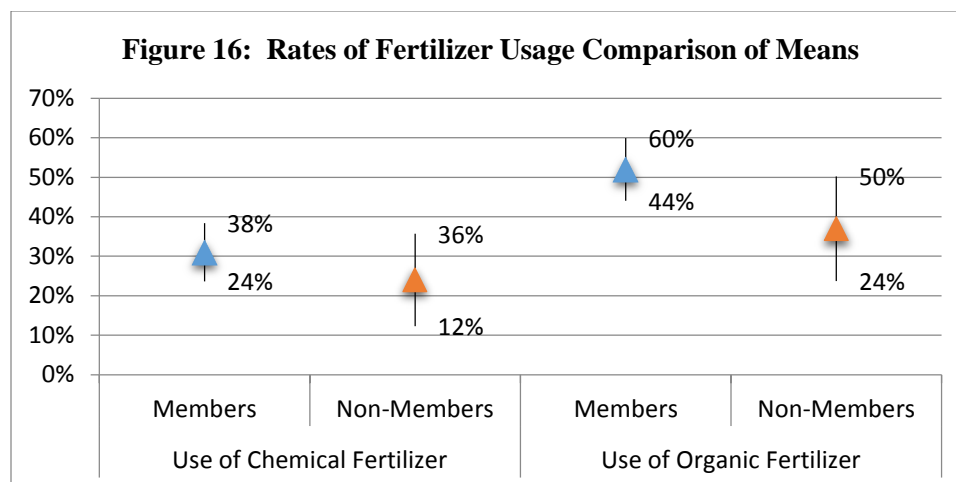
Of farmers surveyed, 31% of *Members* and 24% of *Non-Members* used chemical fertilizers (Table 13). *Members* were also higher adopters of organic fertilizers at 52% versus 37% for *Non-Members* (Table 14). However, according to the data collected, there is not a statistically significant difference between the groups in their choice to use either chemical fertilizer or organic fertilizer.

The only statistically significant difference in the data is the rate at which *Members* choose to use one type of fertilizer or another. According to the data, with 95% certainty the true but unknown rate the entire population of *Members* use chemical fertilizer ranges between 24% and 38%, while the rate they use organic fertilizer ranges between 44% and 60%. This is a statistically significant difference and shows *Members* use organic fertilizer more than chemical fertilizer.

Table 13: Use of Chemical Fertilizer						
	Members		Non-Members		Total	
No	105	69%	39	76%	144	71%
Yes	47	31%	12	24%	59	29%

Table 14: Use of Organic Fertilizer						
	Members		Non-Members		Total	
No	73	48%	32	63%	105	52%
Yes	79	52%	19	37%	98	48%





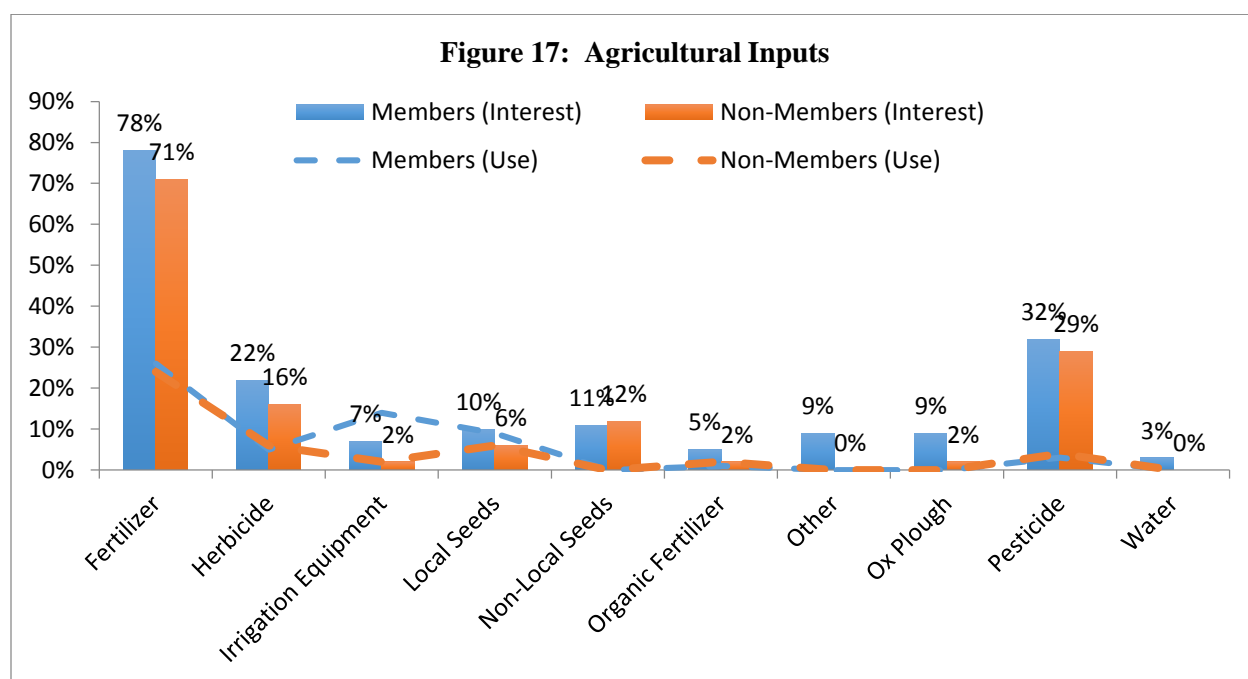
### 4.9 Agricultural Inputs

As shown in Tables 15 & 16, there are several insights with respect to farmers’ interest in various agricultural inputs and their choice to use those inputs. Figure 15 combines these two tables into a visual representation of the level of interests (shown as vertical bars) *Members* and *Non-Members* have in various agricultural inputs and their choice/ability to use those inputs on their farm (shown as dashed lines). There are several observations worth noting:

- Fertilizer and pesticide are the first and second most considered agricultural inputs by farmers. *Members* are interested in these inputs at rates of 78% and 32% while *Non-Members* are interested in these inputs at rates of 71% and 29%, respectively.
- There is stark difference between the rate farmers are interested in fertilizer and pesticide and the rate that they actually use them as agricultural inputs. *Members* use fertilizers and pesticides at rates of 26% and 3%, which are fifty-two and twenty-nine percentage points lower than the rate of interest, respectively. *Non-Members* use fertilizers and pesticides at rates of 24% and 4%, which are forty-seven and twenty-five percentage points lower than the rate of interest, respectively.
- *Members*’ use of irrigation equipment is the only instance where usage is greater than interest. Last season, 7% of *Members* showed an interest in irrigation equipment but 14% used it as an agricultural input.

	Members		Non-Members		Total	
<b>Fertilizer</b>	40	26%	12	24%	52	26%
<b>Herbicide</b>	7	5%	3	6%	10	5%
<b>Irrigation Equipment</b>	21	14%	1	2%	22	11%
<b>Local Seed Variety</b>	14	9%	3	6%	17	8%
<b>Organic Fertilizer</b>	1	1%	1	2%	2	1%
<b>Pesticide</b>	5	3%	2	4%	7	3%

	Members		Non-Members		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>Fertilizer</b>	118	78%	36	71%	154	76%
<b>Herbicide</b>	34	22%	8	16%	42	21%
<b>Irrigation Equipment</b>	10	7%	1	2%	11	5%
<b>Local Seed Variety</b>	15	10%	3	6%	18	9%
<b>Non Local Seed Variety</b>	17	11%	6	12%	23	11%
<b>Organic Fertilizer</b>	8	5%	1	2%	9	4%
<b>Other</b>	14	9%	0	0%	14	7%
<b>Ox Plough</b>	13	9%	1	2%	14	7%
<b>Pesticide</b>	49	32%	15	29%	64	32%
<b>Water</b>	5	3%	0	0%	5	2%



## 5.0 Coffee Production & Revenue

### 5.1 Production Decrease

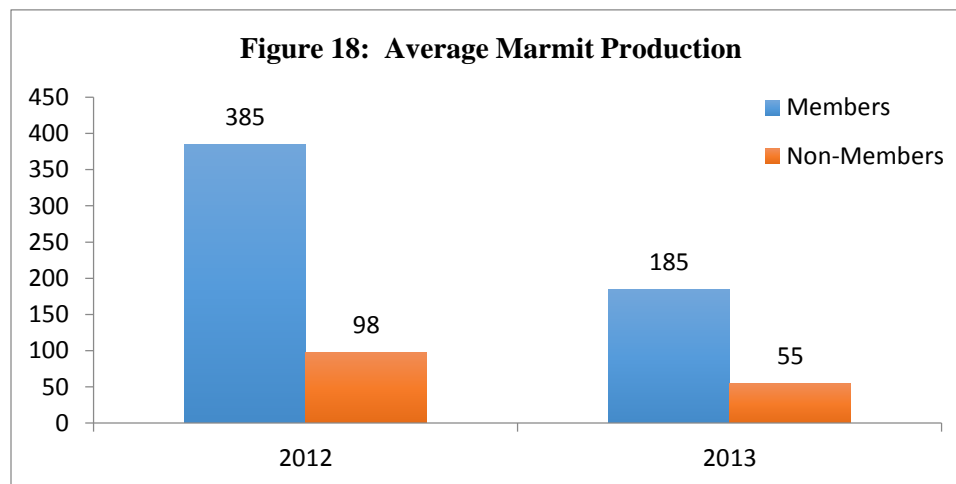
The data show that the average number of *mamit* produced per farmer has had a dramatic change from the 2011-2012 to the 2012-2013 growing season. Table 17 and Figure 16 show the average production for *Members* decreased from 385 units to 185 units (a 52% decrease). For *Non-Members* the decrease was less severe, but still significant, as production decreased by 44% from 98 *mamit* to 55.

The data show the average decrease in production is more pronounced among *Members* and this difference is statistically significant.

- With 95% certainty, the true but unknown average decrease in *mamit* production within the entire population of *Members* ranges from as little as 82 fewer units to as many as 316 fewer units.

- Similarly, with 95% certainty, the true but unknown average decrease in *mamit* production within the entire population of *Non-Members* ranges from as little as 16 fewer units to as many as 71 fewer units.

Variety	Members	Non-Members	Total
Average <i>Mamit</i> Produced ('11-'12)	385	98	313
Average <i>Mamit</i> Produced ('12-'13)	185	55	153



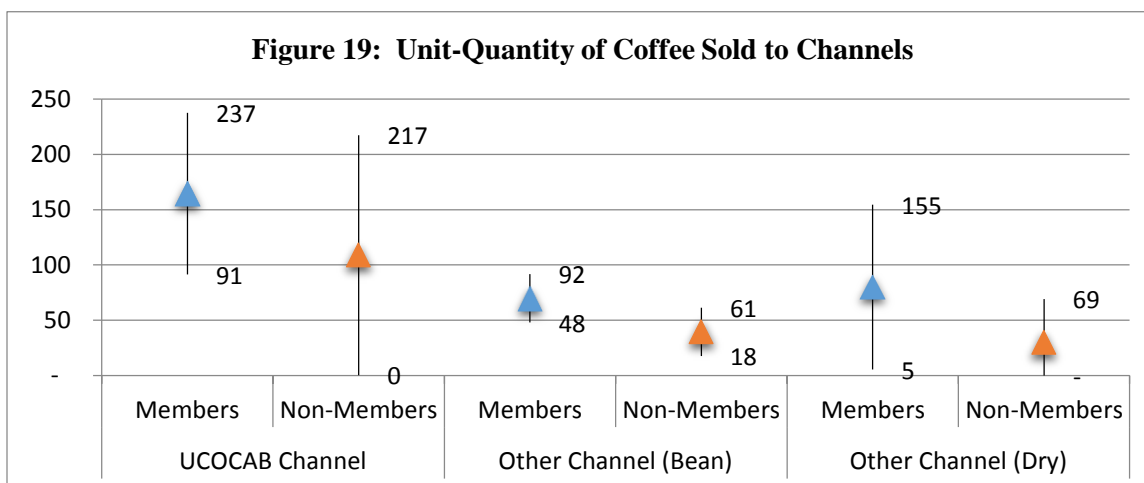
## 5.2 Quantity by Channel & Product

As shown in Table 18, only 3% of *Members* and 4% of *Non-Members* sold dry coffee to other channels. Further analysis will overlook these sales of dry coffee for two reasons: (i) it is difficult to draw meaningful conclusions from such a small sample-size; and (ii) dry coffee is dissimilar enough from coffee cherries that combining it with another category would be inappropriate.

As shown in Figure 17, data collected does not show a statistically significant difference in unit quantity produced between groups selling within the same channel. According to the data, with 95% certainty the true but unknown average unit quantity produced for the entire population of *Members* selling to the cooperative is between 91 and 237. With the same degree of certainty, the true but unknown average unit quantity of the entire population of *Non-Members* selling to the cooperative is between 0 and 217. Though meaningful, these ranges are not statistically different because of the large Standard Error of the Mean within the *Non-Members* group, which had only eleven farmers producing unit quantities that from six to 650 *mamit*.

With the same 95% certainty the true but unknown average unit quantity produced for the entire population of *Members* selling coffee cherries to other members is between 48 and 92, which is not statistically different from *Non-Members* who produce between 18 and 61. The only significantly identifiable difference between the two groups is the significantly higher average production of *Members* producing cherries for the cooperative versus *Non-Members* producing cherries for other channels.

Table 18: Average Quantity of Coffee Sold to Channels				
	Members (n=152)		Non-Members (n=51)	
	Farmers	Units	Farmers	Units
<b>Cherries Sold to UCOBAB</b>	77%	164	22%	109
<b>Cherries Sold to Other</b>	36%	70	57%	40
<b>Dry Sold to Other</b>	3%	80	4%	30



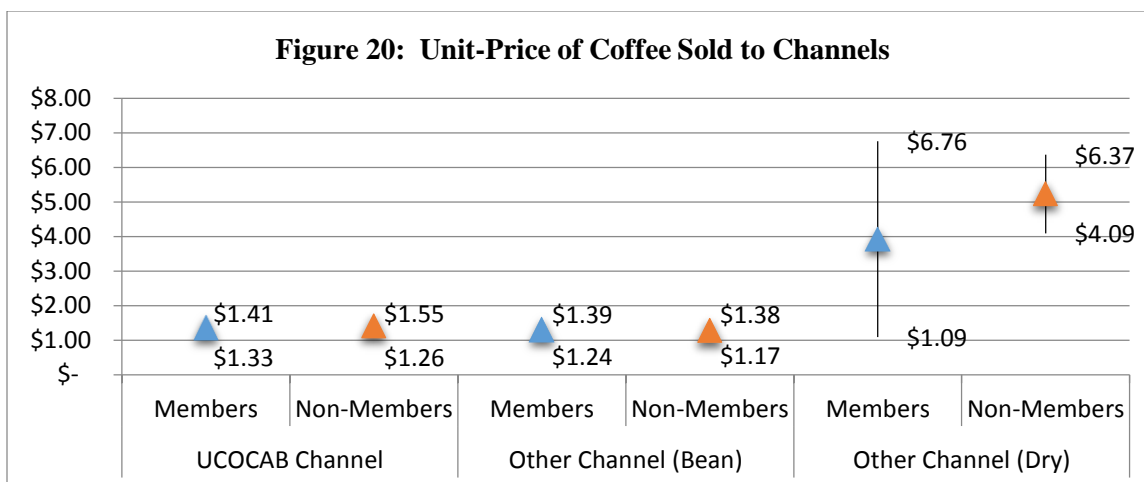
## 5.2 Pricing by Channel & Product

As shown in Figure 18, the data collected does not show any statistically significant differences in prices of cherry coffee between groups or within groups. According to the data, with 95% certainty the true but unknown average price of the entire population of *Members* selling to the cooperative is between \$1.33 and \$1.41. With the same degree of certainty, the true but unknown average price of the entire population of *Non-Members* selling to the cooperative is between \$1.26 and \$1.55. These prices are not statistically different.

According to the data, with 95% certainty the true but unknown average price of the entire population of *Members* selling through other channels is between \$1.24 and \$1.39, which is not statistically different from *Members* selling to the cooperative. With the same degree of certainty, the true but unknown average price of the entire population of *Non-Members* selling through other channels is between \$1.17 and \$1.38, which is not statistically different from *Non-Members* selling to the cooperative.

These four aforementioned ranges are not statistically different from each other, which means there is not a significant difference in *Members'* and *Non-Members'* prices within channels or across channels.

Table 19: Average Unit Price of Coffee Sold to Channels				
	Members (n=152)		Non-Members (n=51)	
	Farmers	Unit Price	Farmers	Unit Price
<b>Cherries Sold to UCOBAB</b>	77%	\$1.37	22%	\$1.41
<b>Cherries Sold to Other</b>	36%	\$1.32	57%	\$1.27
<b>Dry Sold to Other</b>	3%	\$3.92	4%	\$5.23



### 5.3 Revenue by Channel & Product

Estimated Average Revenues are not necessarily representative of actual data. This is because revenues are a product of quantity and price and when average price and average quantity are used as inputs to calculate revenues the result may be misleading. For example, if a business sells 10 *mamit* unit at \$2.00 and sells 50 units at \$1.00 its actual revenues are  $(10 \times \$2.00) + (50 \times \$1.00) = \$70.00$ . However, if revenue is calculated using average units and average prices then the estimated average revenue may be misleading. For example:  $((\$2.00 + \$1.00)/2) \times ((10 + 50)/2) = (\$1.50) \times (30) = \$45.00$ .

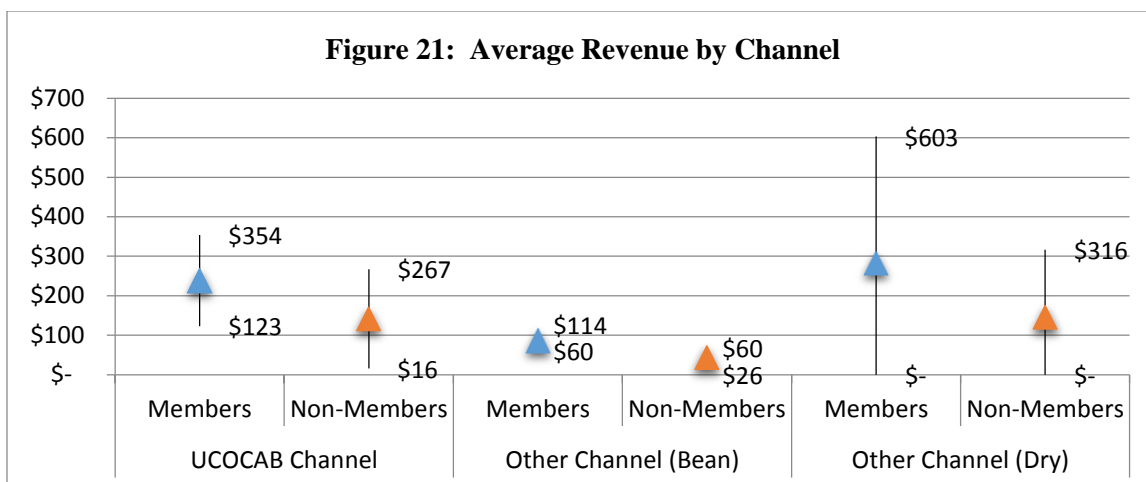
As shows below in Table 20, *Members* reported revenues, on average, of \$239 selling through the cooperative and reported revenues, on average, \$87 selling through other channels. *Non-Members* reported revenues, on average, of \$141 selling through the cooperative and reported revenues, on average, of \$43 selling through other channels.

According to the data, with 95% certainty the true but unknown average revenue earned by the entire population of *Members* selling through the cooperative is between \$123 and \$354. With the same level of certainty, *Members* selling through other channels earn average revenue between \$60 and \$113. This is a statistically significant takeaway: on average *Members* earn more selling through the cooperative.

According to the data, with 95% certainty the true but unknown average revenue earned by *Non-Members* selling through the cooperative is between \$16 and \$267 (this wide range is a byproduct of the small number of *Non-Members* selling through the cooperative and the wide variance in reported revenues). With the same level of certainty, *Members* selling through other channels earn average revenue between \$26 and \$60. These ranges are not statistically different from each other, which means the data does not show a meaningful difference for *Non-Members*' earning potential.

Table 20: Average Revenue by Channel				
	Members (n=152)		Non-Members (n=51)	
	Farmers	Avg. Rev.	Farmers	Avg. Rev.
<b>Cherries Sold to UCOBAB</b>	77%	\$238.71	22%	\$141.40
<b>Cherries Sold to Other</b>	36%	\$86.84	57%	\$43.26
<b>Dry Sold to Other</b>	3%	\$283.43	4%	\$145.35





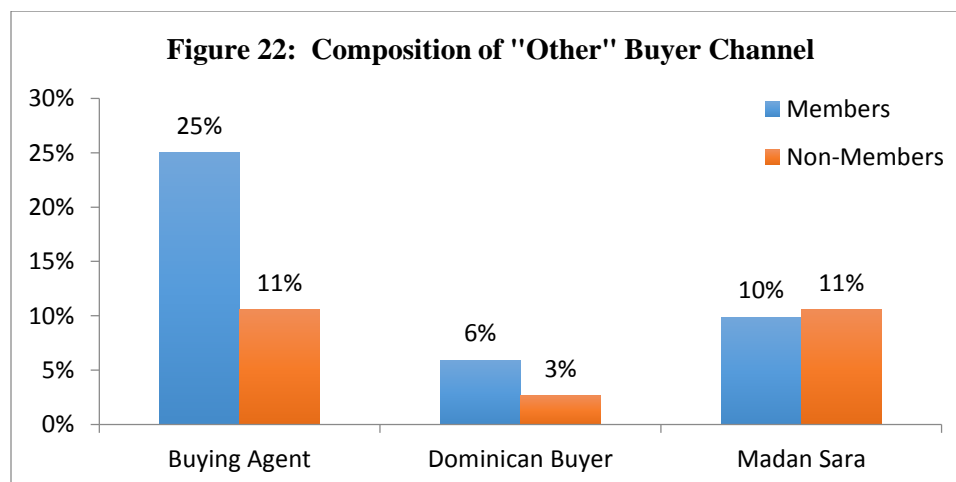
### 5.4 Definition of “Other” Buyer

In total, only 81 farmers (53 *Members* and 28 *Non-Members*) reported selling coffee cherries through other channels, which are represented above in Table 19 as percentages. Farmers may choose to sell their coffee to more than just one “Other” buyer; therefore, the responses listed below in Table 21 total ninety-eight but are representative of only eighty-one farmers.

Buying Agents were the most popular alternative-buyer of coffee cherries among *Members*. Thirty-eight *Members* (72% of *Members* selling in the channel, and 25% all *Members* surveyed) reported selling to a Buying Agent. For *Non-Members*, Buying Agents were used as frequently as a *Madan Sara* when selling in this channel (57% for *Non-Members* selling in the channel, and 31% of all *Non-Members* surveyed).

**Table 21: Definition of “Other” Buyer**

	Members		Non-Members	
<b>Buying Agent</b>	38	25%	16	11%
<b>Dominican Buyer</b>	9	6%	4	3%
<b>Madan Sara</b>	15	10%	16	11%
<b>Neighbor</b>	0	0%	0	0%
<b>Speculator</b>	0	0%	0	0%
<b>Other</b>	0	0%	0	0%



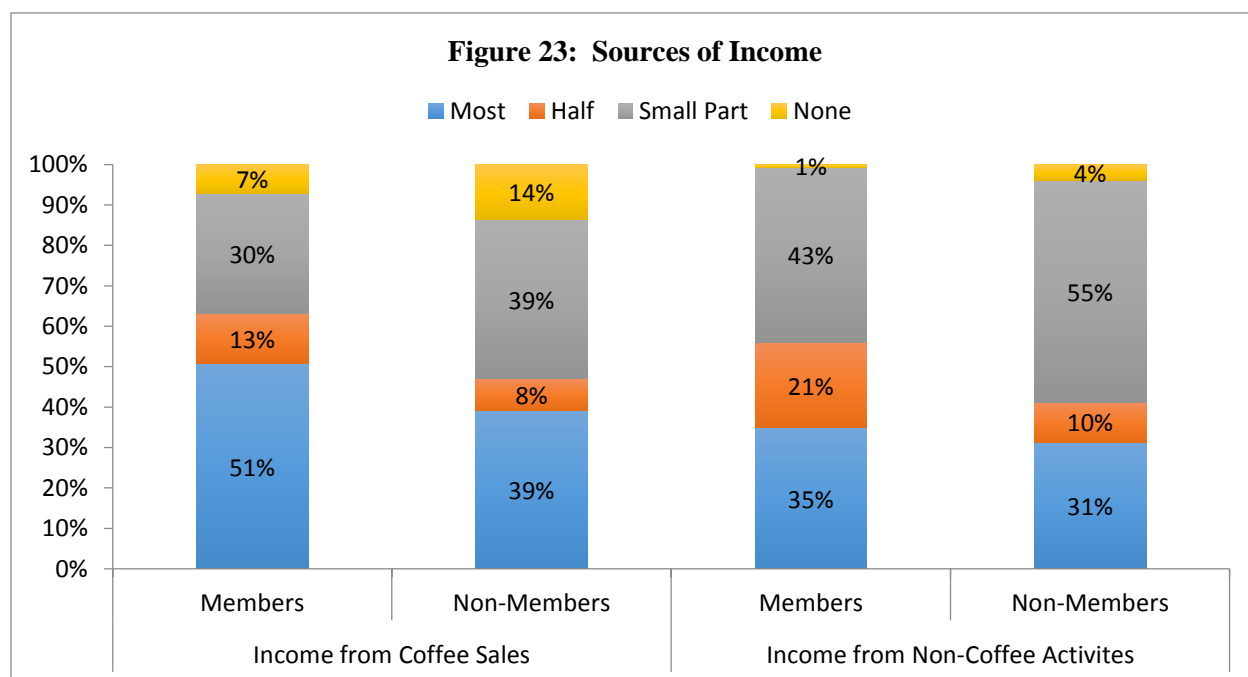
### 5.5 Sources of Income

The data show a difference between the groups with respect to the importance the sale of coffee has on household income. A large majority (51%) of *Members* responded that “most” of the household’s income comes from the sale of coffee, which is twelve percentage points higher than *Non-Members* who reported that answer 39% of the time. While this difference is large it is not statistically significant.

Thirty-nine percent of *Non-Members* reported that a “small part” of the household’s income comes from the sale of coffee. For the *Non-Members* group this is the same response rate as “most.” The responses for *Members* also show “small part” as the second most frequent response at 30%. For both *Members* and *Non-Members* approximately eighty percent of responses are categorized as either “most” or “small part.”

The difference in response rate for these two answers is not statistically different across groups and the response rate is only statistically different within the *Members* group. With 95% certainty, the true but unknown response rate among the entire population of *Members* for the answer “most” is between 43% and 59% and the response rate for “small part” is between 23% and 37%.

	Income from Coffee Sales				Income from Non-Coffee Activities			
	Members		Non-Members		Members		Non-Members	
<b>Most</b>	77	51%	20	39%	53	35%	16	31%
<b>Half</b>	19	13%	4	8%	32	21%	5	10%
<b>Small Part</b>	45	30%	20	39%	66	43%	28	55%
<b>None</b>	11	7%	7	14%	1	1%	2	4%

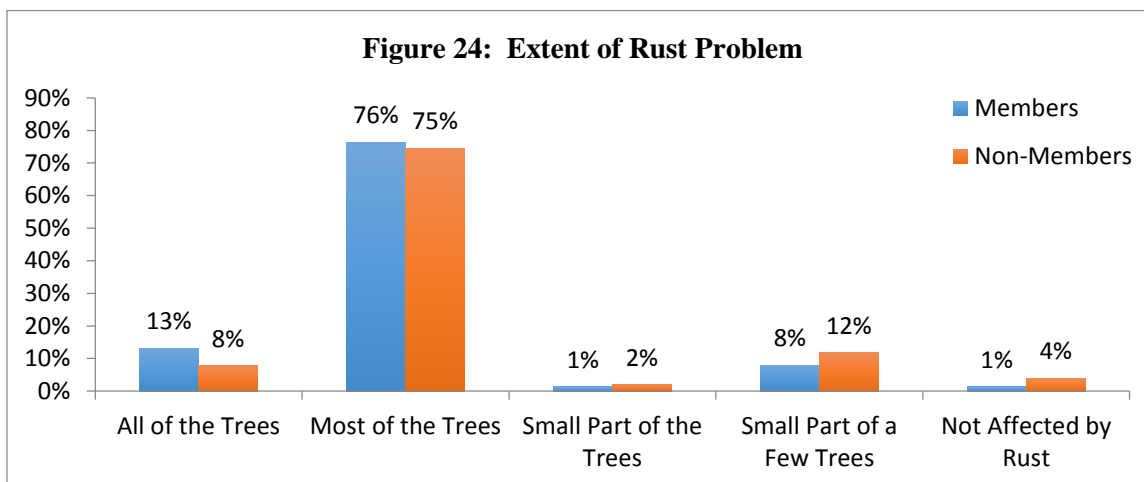


## 6.0 Coffee Rust

### 6.1 Farmers Affected by Coffee Rust Disease

As shown in Table 22 and Figure 21, the Rust coffee disease impacts nearly all farmers. Only small percentages of farmers, 1% of *Members* and 4% of *Non-Members*, are untouched by the disease. For farmers affected by the disease, most reported that it infected most, but not all of their trees. The percentage of farmers who reported this level of infection is almost identical between *Members* and *Non-Members* at 76% and 75%, respectively. For the most part, the remaining percentages of farmers reported the disease as either the most-severe affecting “all trees” (13% of *Members* and 8% of *Non-Members*) or as least-severe and affecting “a small portion of a few trees” (8% of *Members* and 12% of *Non-Members*).

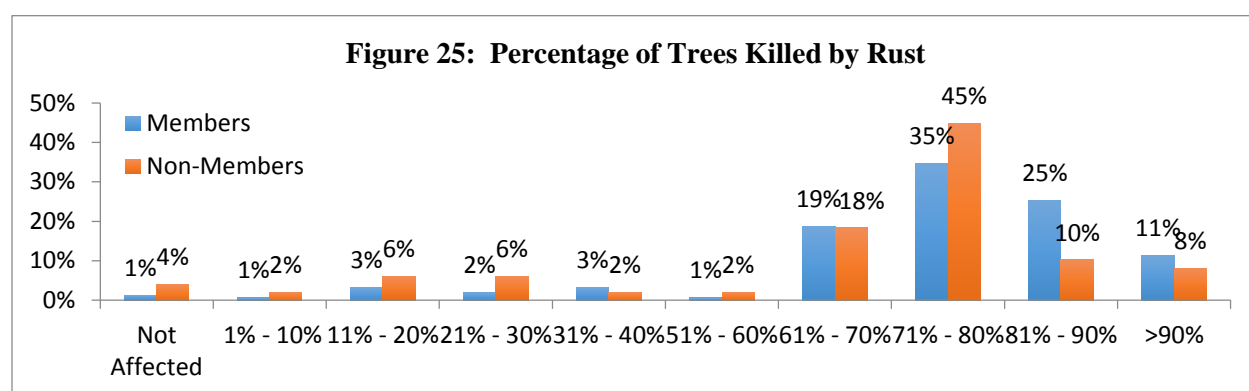
	Members		Non-Members		Total	
<b>All of the Trees</b>	20	13%	4	8%	24	12%
<b>Most of the Trees</b>	116	76%	38	75%	154	76%
<b>Small Part of the Trees</b>	2	1%	1	2%	3	1%
<b>Small Part of a Few Trees</b>	12	8%	6	12%	18	9%
<b>Not Affected by Rust</b>	2	1%	2	4%	4	2%



### 6.2 Trees Killed by Coffee Rust

Over three-quarters of farmers reported that rust killed 60% to 90% of their trees. Table 24 and Figure 23 show the distribution of trees lost by *Members* and *Non-Members*, respectively. Losing 71%-80% of trees was the most frequently reported answer by farmers, with 35% of *Members* and 45% of *Non-members* reporting losing trees at this rate. A combined 10% of *Members* and 20% of *Non-Members* reported losing 50% or less of the trees to rust. Finally, only 1% of *Members* and 4% of *Non-Members* reported no impact from the disease.

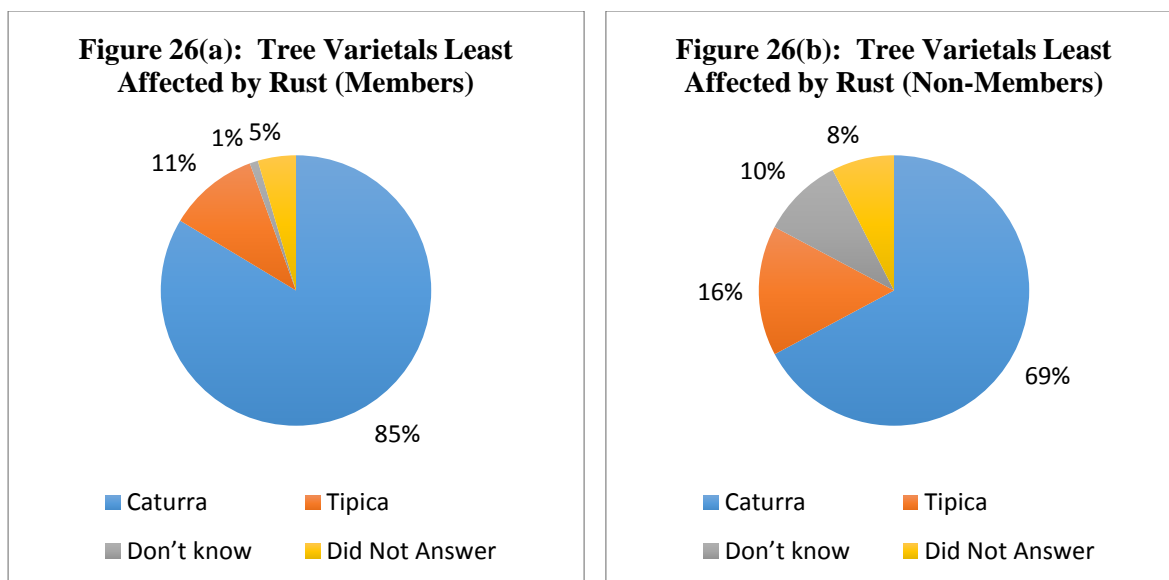
	Members		Non-Members		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>Not Affected</b>	2	1%	2	4%	4	2%
<b>1% - 10%</b>	1	1%	1	2%	2	1%
<b>11% - 20%</b>	5	3%	3	6%	8	4%
<b>21% - 30%</b>	3	2%	3	6%	6	3%
<b>31% - 40%</b>	5	3%	1	2%	6	3%
<b>51% - 60%</b>	1	1%	1	2%	2	1%
<b>61% - 70%</b>	28	19%	9	18%	37	19%
<b>71% - 80%</b>	52	35%	22	45%	74	37%
<b>81% - 90%</b>	38	25%	5	10%	43	22%
<b>&gt;90%</b>	17	11%	4	8%	21	11%



### 6.3 Perception of Durability Against Coffee Rust

The data suggests a difference in the perceptions *Members* and *Non-Members* have with respect to the tree varietal that is least affected by rust disease. *Members* believe the Caturra variety is more robust than the Tipica variety 85% to 11%. *Non-Members* believe similarly but the difference is less pronounced: 69% believe the Caturra variety is more robust and 16% believe the Tipica variety is more robust. Table 25 and Figures 24(a) and 24(b) graphically show this information.

	Members		Non-Members		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
<b>Caturra</b>	127	85%	34	69%	161	81%
<b>Tipica</b>	16	11%	8	16%	24	12%
<b>Don't know</b>	2	1%	5	10%	7	4%
<b>Did Not Answer</b>	7	5%	4	8%	11	5%



## 7.0 Household Resources

### 7.1 Other Produce Grown

There are many similarities between *Members* and *Non-Members* with respect to the types of additional produce they choose to grow. As seen in Table 26, over 90% of *Members* choose to grow banana, maize, and cherries in addition to coffee. For *Non-Members*, these crops are still the most favored but at slightly lower rates: 76%, 80%, and 88%, respectively. *Members* and *Non-Members* choose to grow manioc at nearly equal rates, approximately 35%.

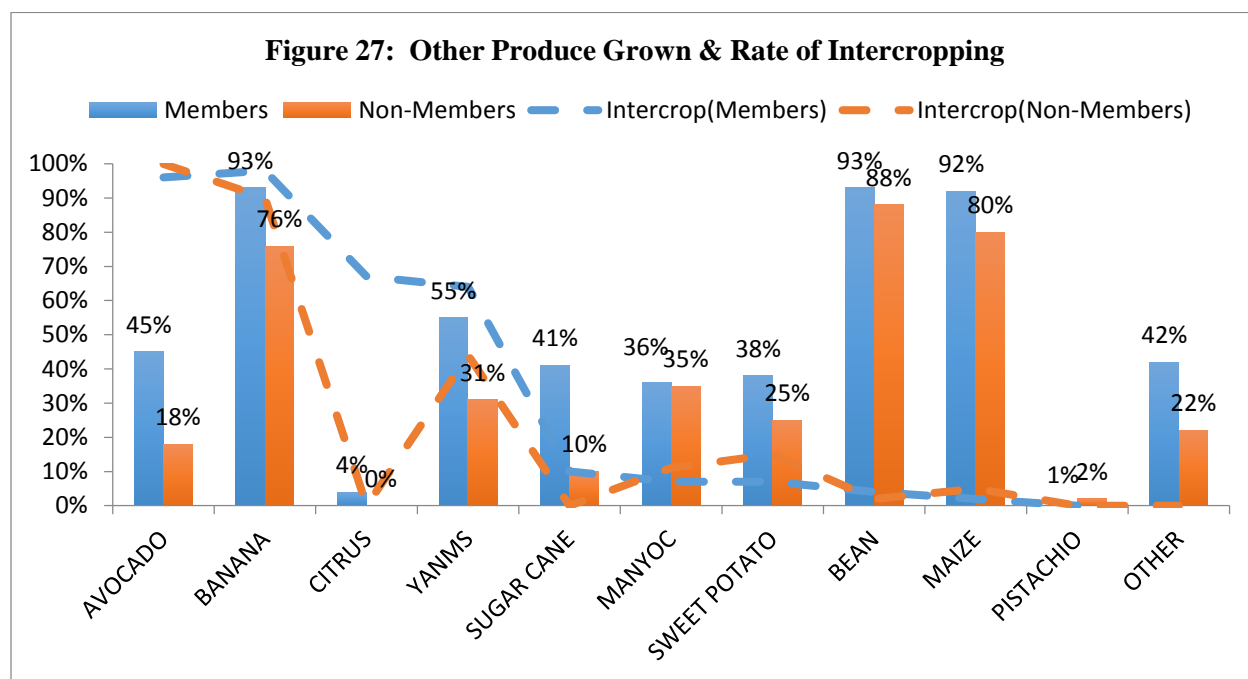
The differences between *Members* and *Non-Members* in their ancillary crop selection is seen in three crops: avocados, sugar cane, and yams. *Members* choose to grow avocados over *Non-Members* 45% to 18%. *Members* choose to grow sugar cane over *Non-Members* 41% to 10%. And finally, *Members* choose to grow yams over *Non-Members* 55% to 31%.

Table 26: Other Produce Grown & Rate of Intercropping Among Growers									
	Members			Non-Members			Total		
		Intercrop			Intercrop			Intercrop	
<b>Avocado</b>	69	45%	96%	9	18%	100%	78	38%	96%
<b>Banana</b>	142	93%	98%	39	76%	90%	181	89%	96%
<b>Cherry</b>	142	93%	4%	45	88%	2%	187	92%	3%
<b>Citrus</b>	6	4%	67%	0	0%	0	6	3%	67%
<b>Maize</b>	140	92%	2%	41	80%	5%	181	89%	3%
<b>Manioc</b>	55	36%	7%	18	35%	11%	73	36%	8%
<b>Pistachio</b>	2	1%	0%	1	2%	0%	3	1%	0%
<b>Sugar Cane</b>	63	41%	10%	5	10%	0%	68	33%	9%
<b>Sweet Potatoes</b>	58	38%	7%	13	25%	15%	71	35%	8%
<b>Yams</b>	83	55%	64%	16	31%	44%	99	49%	61%
<b>Other</b>	64	42%	N/A	11	22%	N/A	75	37%	N/A

## 7.2 Intercropping

Intercropping is practiced similarly between *Members* and *Non-Members*. Figure 25 uses dashed lines to represent the rate of intercropping reported by farmers and overlays that information on top of the frequency farmers choose to grow a particular crop. All related information can be found in the Table 26 above.

Avocado and banana are intercropped at very high rates. *Members* intercrop avocado 96% of the time and banana 98% of the time. *Non-Members* intercrop avocado 100% of the time and banana 90% of the time. Citrus is intercropped 67% of the time by *Members*, but it is impossible to speak to the habits of *Non-Members* as zero of them reported planting citrus. Finally, yams are intercropped by *Members* 64% of the time and by *Non-Members* 44% of the time. These observations should be interpreted with caution, however, as some of the observations have a very small sample size.

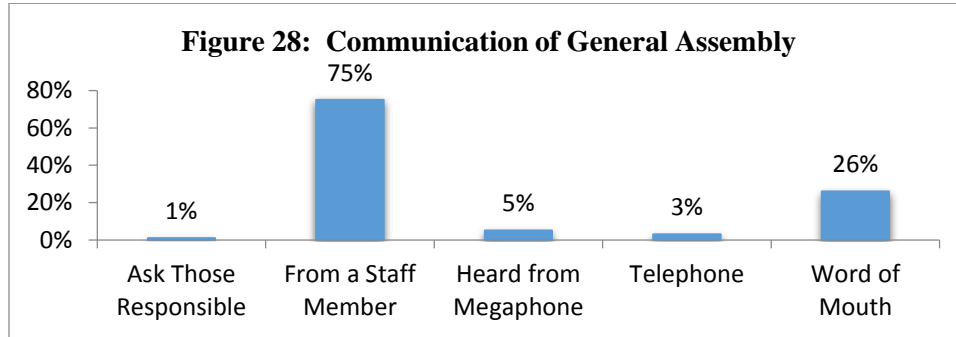


## 8.0 Relationship with Cooperative

### 8.1 General Assemblies

Of the 152 *Members* surveyed, 143 (94%) reported having attended a general assembly meeting. These *Members* responded that the most common ways to learn of a general assembly meeting are from a staff member (75%) and by word of mouth (26%). Other forms of communication were less impactful.

Table 27: Communication of General Assembly Meetings		
Coop member (n=152)		
Ask Those Responsible	2	1%
From a Staff Member	114	75%
Heard from Megaphone	7	5%
Telephone	5	3%
Word of Mouth	40	26%
*Multiple responses permitted, values may not total 100%		



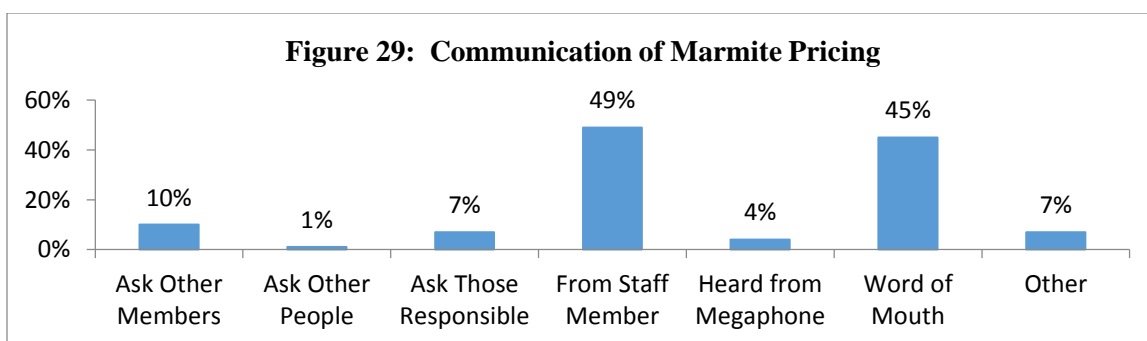
## 8.2 Knowledge of Cooperative Buying Strategy

Communicating with staff was the most frequently reported way that *Members* learn of the cooperative’s buying strategy. Nearly one out of every two people reported learning information this way. The second most frequently reported method for learning information is by word of mouth (45%). *Members* were given the opportunity to provide multiple responses, which are cataloged below in Table 28 and Figure 27.

**Table 28: Communication of Marmite Pricing**

Members		
<b>Ask Other Members</b>	15	10%
<b>Ask Other People</b>	1	1%
<b>Ask Those Responsible</b>	10	7%
<b>From Staff Member</b>	75	49%
<b>Heard from Megaphone</b>	6	4%
<b>Word of Mouth</b>	69	45%
<b>Other</b>	11	7%

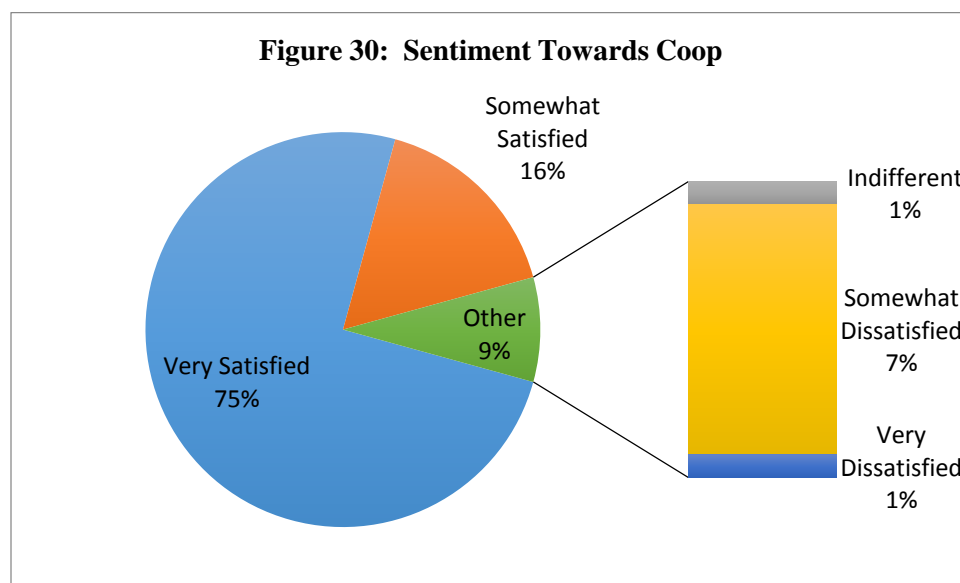
\*Multiple responses permitted, values may not total 100%



## 8.3 Satisfaction with Cooperative

Exactly three-quarters of *Members* responded as positively as possible about their satisfaction with the cooperative. Another 16% of *Members* reported that they are somewhat satisfied. Only 8% of *Members* reported some level of dissatisfaction.

Table 29: Sentiment Towards Cooperative		
Members		
<b>Very Satisfied</b>	114	75%
<b>Somewhat Satisfied</b>	25	16%
<b>Indifferent</b>	1	1%
<b>Somewhat Dissatisfied</b>	11	7%
<b>Very Dissatisfied</b>	1	1%



## 9.0 Cooperative Resources and Characteristics

The eight cooperatives under the UCOCAB umbrella offer coffee farmers several concrete benefits. A survey of cooperative leaders found that seven of the eight (the exception being NODAM) owned a drying platform (*glasi*). All eight had a humidity tester. Seven of the eight (again, the exception was NODAM) had a depot, and seven of eight had a mill (exception: COTRAS). Six of the eight had an office (exceptions: CODAT and NCOCABA). None had a computer, but all eight had accounting books. Only one (COTRAS) had a store, and only one (COOPDEL) had its own nursery. Seven reported having production records, with the exception being NODAM, which reported purchasing no coffee in the past season.

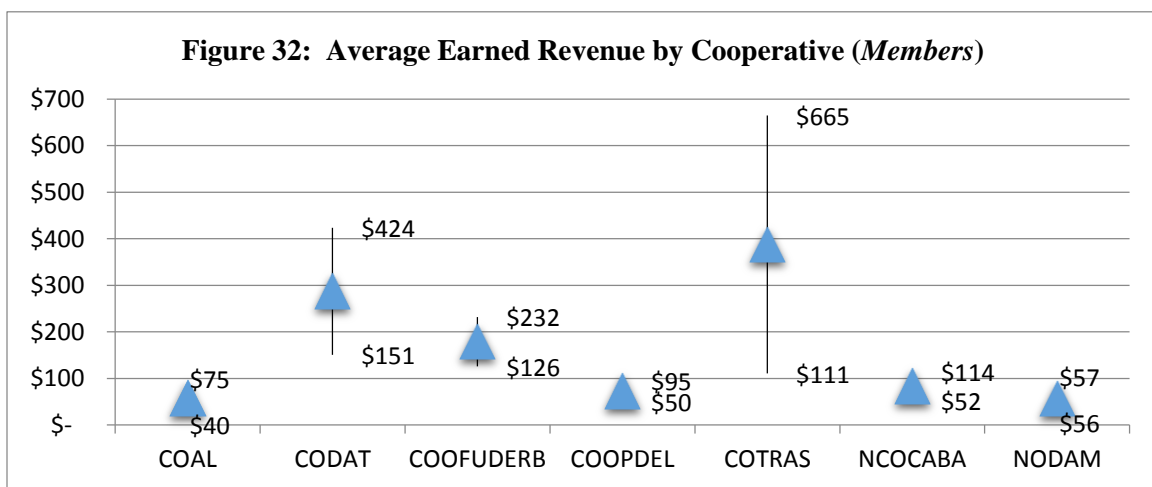
These groups offer more than access to infrastructure and equipment. All but one of the cooperatives (COTRAS) reported holding regular general assemblies, with six of the seven holding meetings saying they were monthly. The most common reason cited for the gatherings (six of the seven holding them) was to offer training.

Figure 29 shows the reported number of members in each cooperative (represented by vertical blue columns) and the quantity of *mamit* purchased by each cooperative (represented by the orange area chart). COOFUDERB reported it had purchased 35,031 *mamit*, which is more than 4.5 times the average of the other six cooperatives that were able to report a quantity of *mamit* purchased. The only cooperative unable to report a quantity of *mamit* purchased was NODAM.





Using the data reported by individual farmers it is possible to estimate the average revenue earned by *Members* of each cooperative. Figure 30 shows the 95% confidence intervals of the true, but unknown, average revenues earned by farmers in seven of the eight cooperatives. There appears to be three cooperatives—COAL, COOPDEL, and NODAM—that are below the average earned income of \$100 and another three cooperatives—CODAT, COOFUDERB, and COTRAS—that are all above the \$100 threshold. These two groups of three cooperatives are different from each other, but the cooperatives in each group are not statistically different. Not pictured in the graph is cooperative CAB that had a single farmer who reported an usually high quantity of *mamit* sold to the cooperative (3,900 units at a price of \$1.63). This high-producer raised the average income of the seventeen *Members* of the cooperative to \$809 and the 95% confidence interval for CAB farmers is between \$0 and \$1,622.



## 10.0 Conclusion

The *Members* of the Baptiste cooperatives impacted by Root Capital are more invested in coffee production than are their *Non-Member* peers. Although both groups allocate roughly the same portion of their land to coffee production, *Members* have access to more land than *Non-Members*, and therefore have more land planted in coffee. Consequently, *Members* are more dependent on coffee for their income. Sixty-four percent reported relying on coffee for half or most of their income, while a narrow majority of *Non-Members* said coffee brought in a small part or none of their household income. This dependence on coffee as a source of household income may have a “self-selection effect” that attracts only serious coffee growers to the cooperative.

The significance of coffee in the lives of cooperative *Members* is reflected in their farming practices. Some coffee farmers in Haiti harvest only opportunistically, when prices rise and there are cherries to be picked and sold for a significant windfall. These farmers tend to neglect their trees, letting them get overgrown. Cooperative *Members* in the Baptiste area actively maintain their coffee, reporting higher rates than *Non-Members* of pruning their coffee trees, and trimming shade trees to let more light into their gardens. They also showed a greater willingness to use organic fertilizers. They reported owning far more coffee plants – *Members* reported owning between 7,620 and 13,408 producing trees on average, while *Non-Members* had an average falling between 2,219 and 3,861. Cooperative *Members* were also more likely to report planting new trees in the latest season (60 percent vs. 41 percent among *Non-Members*). As a result, *Members* produced three times more coffee. All things being equal, the ability to produce coffee is proportional to the amount of land farmed. As shown above, *Members* and *Non-Members* utilize available land for coffee farming at the same rate but *Members* have significantly more land available to them to begin with; therefore, all things being equal, it is logical *Members* produce more.

Farmers recognized the potential benefits offered by the cooperatives, demonstrating a willingness – an eagerness – to participate in programs seeking to stimulate coffee production. *Members* also expressed high levels of satisfaction with the cooperatives, signaling an open attitude toward meetings, training, sales, and other services. Cooperative participants reported receiving marginally higher prices from the cooperatives compared to other sales channels (\$1.37 per *mamit* from cooperatives vs. \$1.32 from other buyers, a difference that is not statistically significant). *Members* sold more of their crop to the coops (164 *mamit* on average) than other buyers (69 *mamit*). In examining the data closely, however, it is the significantly larger sales volume and not the marginally higher sales prices that beget *Members*’ significantly higher revenue from cooperative transactions (on average between \$123 to \$354 per person) versus sales through other channels (on average between \$60 to \$114 per person).

The sample of *Members* was skewed by gender, with 61 percent of respondents from this group being men, and 39 percent women. For both sexes in this group the median age category of respondents is 46-50 years old. Interestingly, this relationship is reversed for *Non-Members* where there is near parity in the gender representation (51% female to 49% male) and the median age category for men (41-45 years old) is slightly higher than women (36-40 years old). Men in both groups, however, reported using more land for coffee production than women (1.40 to 1.15 *kawo* for *Members*, and 0.92 to 0.58 *kawo* for *Non-Members*) but these differences in average plot size are not statistically significant. This suggests the potential exists to attract women and young adults into the activities of the cooperatives, which would benefit households throughout the community by preserving and even enhancing the role of women and youth in the coffee market chain.

## 11.0 Appendix

### 11.1 PPI Annex

**Table 30: Summary of Household Characteristics**

Household Characteristics	Member (n=152)	Non-Member (n=51)	Total (n=203)
<b>Average Number of Children in Hshld</b>	2	2	2
<b>Children ages 6–14 attend school</b>	80%	83%	80%
<b>Possess radios</b>	70%	47%	35%
<b>Members who have salaried employment</b>	13%	4%	10%
<b>Own pig(s)</b>	62%	49%	59%
<b>Have dirt floor</b>	32%	53%	37%
<b>Received remittance in the past month</b>	14%	12%	13%

**Table 31: Plots of agricultural land, forest, pasture, or gardens per household**

No. of Plots	Member		Non-Member		Total	
<b>One</b>	10	7%	15	29%	25	12%
<b>Two to Three</b>	89	59%	34	67%	123	61%
<b>Four or more</b>	53	35%	2	4%	55	27%

## 11.2 Report on Gender Focus Groups

### **Report of Gender Focus Groups for Coffee Survey of Baptiste and Tòtòy Central Department of Haiti (Feb. 2014) Led by Almathe Jean, with Serge Boissette and Franz Mars; Report and Analysis by Almathe Jean; Editor Gina Krone**

#### Introduction

Three women's focus groups were held in February 2014 in two different locations in the Central Department of Haiti, Baptiste and Tòtòy. The goal was to inform three avenues of inquiry:

1. Women's experiences as coffee producers
2. Women's experiences in the cooperative
3. Differences between men's and women's experiences as cooperative members/producers

The questions for the focus groups were provided by Root Capital. They were divided into six categories:

1. The experience of a woman as a coffee producer
2. Gender power differential in the cooperatives
3. Household and Family
4. Coffee production within the household
5. Income
6. The role of women within the community

In the pages that follow we summarize the results for each focus group question and then give at least one representative quote from the focus groups. (Creole and English focus group transcriptions of significant comments are provided in the index).

#### Focus Group Questions and Responses

##### **1. Do you like working as a coffee Producer? If yes/no why?**

Respondents expressed satisfaction with their work as coffee producers. They cited it as the principle means to care for their families and pay for school for their children. Coffee is the main source of income for the people of Baptiste and Tòtòy.

- *Yes, we drink coffee and make money selling coffee.* (Focus group 1 in Baptiste)

- *Yes, it's the means we use to pay for our food.* (Focus group 2 in Baptiste)

##### **2. Was it difficult or easy to become a member of the cooperative? What efforts did you make to become a member?**

Respondents reported that becoming a member in the cooperative was not difficult. It requires you to be 17 years old and to pay a small fee. One needs to be available for meetings and training. After the coffee is picked it must be transported to the cooperative on the same day.

- *You have to be always available for meetings.* (Focus group 2 in Baptiste)

- *We know we need to give coffee before the cooperative closes. We had to become slaves to the coffee. Go to the fields and be back early before they close.* (Focus group 3 in Tòtòy)

**3. Since you became a member of the cooperative, what has been the most significant change?**

Before the cooperatives existed, producers in the area sold most of their coffee in the Dominican Republic. The women cited hardships dealing with Dominican buyers, specifically discrimination, fear of being raped, and fear of money being stolen from them on their way back home. The cooperatives allow them to sell their coffee at a reasonable price within a few miles of home. The women reported that several months after selling to the cooperative, when the cooperative has sold the coffee, they receive an additional payment, what they call 'ristoun'.

*- Because of the coop we don't have to sell our coffee in the Dominican Republic anymore. The Dominicans used to rape us on our way back from selling coffee and take our money. (Focus group 2 in Baptiste)*

*- Our coffee has more value. After the coffee is sold we have the hope of getting a bonus. (Focus group 2 in Baptiste)*

**4. How would you compare your life now and the life of your mother?**

Many of the women and their mothers grew up in homes where the main source of income was coffee. Women from both generations reported knowing how to cultivate coffee as well as men do. However, older women reported not having a significant voice in household decisions; younger women said they now make most of the household decisions.

*-There is a big difference between our lives and the ones of our mothers. Women did not have the right to speak out or make decisions, now we can do all these things. (Focus group 2 in Baptiste)*

According to the women of Baptiste and Tòtòy, their mothers before them carried their loads of goods on their head to sell in the market. Today women carry loads by trucks and motorcycle. Their mothers spent their lives selling coffee in the Dominican Republic; today the women have the option of selling locally to cooperatives. The coffee is being sold at a good price compared to when a *bidon* (cup) was sold for a couple of pesos. Women today also attend school, something that could not be said about their mothers.

*- Coffee used to sell for 4 or 3 pesos. Now we have cooperatives all over the place to buy our coffee. (Focus group 2 in Baptiste)*

*-Another difference is that we have the chance to attend school. Our mothers used to sell coffee in the Dominican Republic where they were faced with discrimination. We have the cooperative to sell our coffee. (Focus group 3 in Tòtòy)*

**5. What are your days like during the coffee season?**

Coffee is picked from September to February, depending on the elevation. The day starts with the women leaving their house around 8 in the morning. The day is spent picking coffee. Meals are cooked in the fields. The coffee must be sorted before it is taken to the cooperatives, and sold on the same day it is picked. Around 3 o'clock the women begin departing for the cooperatives with the fresh picked and sorted cherries. Cooperatives close at 6PM.

*- Coffee is picked every 8-15 days. We get up early in the morning, make something to eat. We spend the whole day picking coffee, if we don't finish with the picking in one day, the next day, very early, we would be back in the field. In 8 -15 days we would be back in the field again to pick up coffee. The coffee needs to be taken to the coop on the same day. We would wash it, spread it on the ground, pick all the good seeds and take them to the coop. (Focus group 1, Baptiste)*

*-We leave the house around 8 o'clock in the morning and start picking coffee. By 2, 3 or 4 o'clock we need to take the coffee to the cooperative. Before taking it to the cooperative it needs to be sorted.*  
(Focus group 3, Tòtòy)

**6. Do you think you receive the same benefits in the coop as the men? (program, inputs, credit)**

Almost all cooperative workers are male. In the two towns where the focus groups were held, none of the women work for cooperatives even though they participate actively as members. The cooperatives do not provide loans to any of their members. Women are the ones selling to the cooperatives. Efforts are equally shared between women and men. However, women said they viewed men as the greater beneficiaries of cooperative activities.

*- The men get more benefits. None of the presidents are women. There are no women working in the coop.* (Focus group 2 , Baptiste)

*-All of us here are members of the cooperative. Stand up if any of you work for the cooperative. Zero.*  
(Focus group 3, Tòtòy)

When asked why women are not working in the cooperatives, typical were responses such as the following:

*- They don't call us to work, we don't come to work. We used to go all the way to the Dominican Republic to work with a bucket on our head.* (Focus group 3, Tòtòy)

**7. Who has more power in the cooperative: women, men, or the same? Why?**

Even though respondents lamented their limited role in running cooperatives and more than 98% of the leaders in the cooperatives are men, most women *did not* feel that men had more power than they had in the cooperatives. During meetings women participate in voting and can voice their comments and concerns. Nevertheless, as several women pointed out, they can vote but it does not mean that their votes will pass.

*- I won't finish by saying that the men have more power in the coop than the women because we get the same information, but during elections it's always a man who gets elected. I don't know why.*  
(Focus group 1, Baptiste)

*- They don't prevent us from talking but most often what we said doesn't get passed.*  
(Focus group 1, Baptiste)

When asked what is preventing the women from becoming leaders in the cooperative, the following response was typical:

*- The men are more active. They campaign to become leaders.* (Focus group 1, Baptiste)

**8. Does being a woman help or hinder your potential to be a cooperative leader? Why (voting, coming to meeting)**

Despite the preceding, for the women of Baptiste and Tòtòy, being a woman does not help or hinder their potential to becoming a cooperative leader. More important is diligent attendance at meetings and trainings.

*- If you are a woman who participates in all activities you can win during elections.*  
(Focus group 1, Baptiste)

Moreover, respondents reported that women do in fact get elected:

*- Yes, only very active women, that means in all types of activities.* (Focus group 2, Baptiste)

On the other hand, while there was no indication that it was related to gender discrimination, there was at least some suggestion that voting is at times manipulated:

- *We vote but sometimes a choice is made on who can vote.* (Focus group 1, Baptiste)

**9. Do you receive the same or different information from the men regarding prices/ other cooperative services? Why?**

Women and men have equal access to information on all cooperative activities.

- *We receive the same information regarding prices or any other services.* ( Focus group 3, Tòtòy)

But women have at least one advantage regarding pay: because coffee is taken to be sold to the cooperatives by women, it is women who receive payments for the coffee. The receipts are written in the women's names. When commissions from cooperative sales arrive, they are given to the women.

**10. Describe how you became a leader in this organization. What have been the challenges? How have you overcome them? What have been the successes?**

Focus groups included over 60 women. Only two serve as board members. For these women, coming to meetings, attending trainings and being very active in the cooperatives allowed them to hold these positions.

- *I am a council member. I attended the training and the meetings. I listen when they talk. I was chosen to be a member. I have not found any success or any difficulties.* (Council member in Tòtòy)

**11. You're a producer. What do you do as a woman and how is this different from what the man does?**

When it comes to coffee production, anything that men do, the women say they can do too. Although considered male work, women plant coffee and weed.

- *Anything a man does we can do it too.* (Focus group 3, Tòtòy)

**12. Who else in your house is in the coffee production?**

Coffee production is a family business. Everyone who lives in the household is involved in production. Because coffee harvest occurs September to February, during the school year, children do not play a major role in the coffee production

- *We are six living in the house, all of us participate in the coffee production except the children.*  
(Focus group 3, Tòtòy)

- *We are eight living in the house, all eight are involved in coffee production including two future agronomists.*  
(Focus group 1, Baptiste)

**13. Since you became a member in the coop what has been the most significant change for your family?**

The most significant change for many of the women is being able to sell their coffee near to home and getting an extra bonus after selling the coffee. The bonus helps with paying for school for their children.

- *The bonus helps with paying for school for the kids. After selling the coffee in a couple of months, we are called back to get the bonus.* (Focus group 3, Tòtòy)

- *We can pay for school for our children.* (Focus group 2, Baptiste)

**14. What are your hopes for your daughters? Are they different from what you wish for your sons?**

For the women in our focus groups, there is no gender preference. More important is the behavior of the child.

*-It depends on their obedience. If you have 2, 3, or 4 children sitting down, and ask for someone to run an errand for you without mentioning anyone's names. The one who got up and did it will have a soft spot in your heart. (Focus group 1, Baptiste)*

*- I have the same hope for both. The sons might have had more capacity to do more than daughters in the past. But nowadays women are doing the same thing that men do even in university. That's why I have the same hope for them both. (Focus group 2, Baptiste)*

**15. Who in the household makes the decisions? Who participates? Who makes the final decisions?**

Men hold the position of being the figurative head of the household but women tend to make the most decisions regarding what is good for the family. Women control the household budget. They sell the products of household labor activities, and they take care of the family.

*- You can ask the father what he thinks but the final decision is made by me. (Focus group 3, Tòtòy)*

*- From a long time ago and right now, after the husband is done with working, he gives the money to the wife. She decides what to do with it. (Focus group 2, Baptiste)*

**16. What is the role of the children in the coffee production?**

Children do not play a major role in the coffee production. They sometimes help the women pick coffee, but coffee production is primarily carried out by adults.

*- Not everyone gets help from the kids because most often they will be in school. After school they need to do homework. They help us but our kids are not slaves to the coffee. Most of the work is done by us and our husbands. (Focus group 1, Baptiste)*

**17. Who distributes the work for the coffee production in the household?**

In the ~27% of households where there is no male household head, women make all the decisions regarding the distribution of work in coffee production. In the ~65% of households where there is both a man and woman household head (the remainder being single male headed household), decisions are typically made by both the man and woman.

*- Both the man and the women contribute to the work. The women weed the land with toughness, pick coffee. Sometimes we might hire someone to work the land. Each of us will be doing something when there is work to be done. (Focus group 1, Baptiste)*

**18. Who makes the decision about how to work the land?**

Similar to production, decisions regarding how to work the land are made by both the man and woman of the household.

*- For women with husbands, all decisions are made together. I don't have a husband. Everything is done by me. (Focus group 3, Tòtòy)*



**19. How is the work for the coffee production divided among the household members? Who plants coffee? Who picks coffee?**

In many households the planting of the coffee is done by the men. When present, men also weed. All other work is carried out by women. Women pick the coffee, wash it, sort it, put it out to dry, and carry it to the cooperatives or market. For the coffee that is not given to the cooperatives, men will sometimes help the women grind/pound the coffee. In homes with no male household head, everything is done by the woman.

*-Both women and men contribute in the coffee production. The women sell, plant, weed, and pick coffee. The men mostly plant and weed the coffee. The women carry the coffee to the cooperative, they put the coffee out to dry. The men help with grinding the coffee. After the coffee is dry the women collect it. If a woman does not have a husband she does all the work.*

(Focus group 2, Baptiste)

*- The men plant more than the women because when they are doing the planting we would be doing the cooking. We women would pick the coffee, take it to be ground, wash it to be dried, put fertilizer in the field. The women work more but the men also work.*

(Focus group 1, Baptiste)

**20. Who decides how to spend money for small expenses? For big expenses? What to do about health? Education?**

As seen earlier, in most households the woman decides how the money should be spent. Some women reported that their husbands do not even know how to manage finances.

*- Women make the decision on how the money should be spent because the men do not know how to manage money. (Focus group 3, Tòtòy)*

Other women were less dogmatic,

*- All the receipts for the coffee are made under the mother's name but both of us decide how the money should be used. (Focus group 1, Baptiste)*

**21. Who decides on the distribution of labor in non-cash crops?**

The distributions are made by both husband and wife. In households with no male figure the women make those decisions.

*- Both of us do it. (Focus group 3, Tòtòy)*

**22. Can you borrow on the coffee?**

Respondents reported that some producers borrow money from neighbors by selling coffee 'on the vine' to for a price lower than the market price.

*- Sometimes parents need to pay for their children's school, but the coffee is not ready yet. A neighbor will lend them money and take the coffee when it's ready, which means they have to sell it for a lower price. (Focus group 1, Baptiste)*

**23. Can you sell coffee like you sometimes sell mangoes?**

Unlike mangoes that can be sold by trees or by the whole harvest, coffee producers do not sell coffee by the whole harvest. Of the 60 women who participated in the focus groups, only one woman reported ever having sold her coffee by the whole harvest. It was done because of a family emergency; someone in the family died and she did not have funds to cover the cost of the funeral.

- *Rarely that is done. If someone in the family died it can happen.* (Focus group 3, Tòtòy)

**24. What kind of remedy can coffee be used for?**

Women from Baptiste and Tòtòy reported using coffee for treatments from fever, anemia, and even diabetes.

- *If you have a fever make some coffee and with a bar of washing soap bathe yourself.*  
(Focus group 3, Tòtòy)

- *People who **fe move san**<sup>3</sup> can drink coffee without sugar and put a compress of coffee leaves on their head.*  
(Focus group 2, Baptiste)

- *Sometimes for anemia we would take half a grapefruit and half a sour orange and pour them in coffee and drink it. Some people here in Baptiste have done it and they are living healthy now.*  
(Focus group 1, Baptiste)

**25. Do you think women and men have the same power to make decisions for the community? (Local politics, local groups).**

According to our women, men have greater political power than women, something typical throughout Haiti.

- *The men have more power in the community.* (Focus group 3, Tòtòy)

- *They have more power, but not when it comes to voting because there are more women in the community.* (Focus group 1, Baptiste)

**26. Do you think that women participate in the community? To what degree?**

Our women reported a high rate of participation in the community. Many are members of a local women's group, AFDB (Women's Association for the Development of Baptiste – a suspiciously English-sounding name).

-*We participate, we even have our own organization.* (Focus group 1, Baptiste)

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<sup>3</sup> **Fe move san:** A Haitian syndrome associated with extreme anger that causes severe headaches, shortness of breath and even death.

**27. Do you think that there are many women leaders in the community? Who are they?**

Respondents cited no significant female community leaders. Several women explained this as a consequence of low levels of female involvement in politics.

*- Few of the women have ever held any political position. The reason is that the women are not very politically active. The men are always ahead of the women. (Focus group 1, Baptiste)*

**28. Is there any type of women's network in the community? Are you a member?**

As mentioned above, there is a women's association group for both women of Baptiste and Tòtòy. Although the office is located in Baptiste, the women of Tòtòy are active in the association. They gather together several times a week to work on transforming fruits into liquor to sell. Coffee is one of the ingredients.

*-Yes, there is an association for women. We transform fruits into drinks. Bread Fruit into Kremas (A creamy liquor drink), bananas into jelly, and passion fruits into liquor. The other women associations did not survive due to lack of support. (Focus group 2, Baptiste)*