

# RESEARCH PEARLS | FEDU PEARL #22

In our series “Research Pearls” we are providing first-hand insights into our dynamic and powerful diaries research. This research pearl will dive further into questions related specifically to agriculture. We will zoom into the three types of agriculture that we explored. We also look at the assumption that agriculture is largely a subsistence activity for home consumption rather than for commercial purposes.

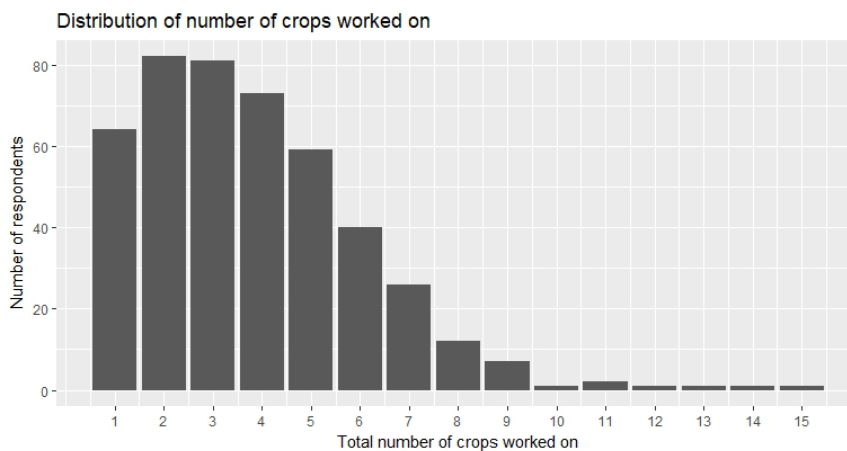
## Focus on Agriculture

In the question set on agriculture we explored whether respondents tended to specialize in certain areas when it comes to agricultural work. Per category of crop agriculture, horticulture and livestock, they were asked which crops they worked on.

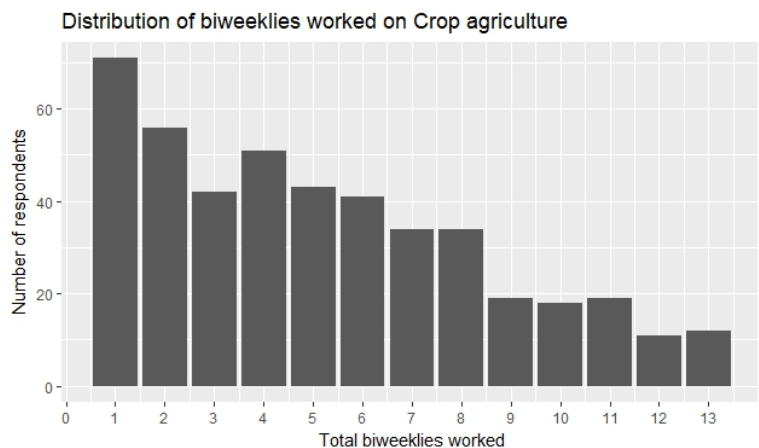
### Agricultural crops

About three quarters, 451 out of 587 respondents reported to have been active in crop agriculture, that is 77% of respondents.

**Types of crops** Of these, it was almost equally common to have 2 or 3 crops followed by 4, 5 and 1. On average, people had 3.83 different types of crops that they farmed during the research period. So this means that people are neither specializing in one crop (mono-cropping) nor diversifying in many crops. Let’s typify this as “modest diversification of crops”.



**Frequency reported** It was common to work fewer biweeklies. Working just “one biweekly interview of crop agriculture”, was the most common frequency (the mode), reported by 71 people. On average, those respondents who worked on at least one type of crop were active on crop agriculture for 5 biweeklies. Working continuously on crop agriculture, i.e. working each of the 13 interviews, was only reported by 12

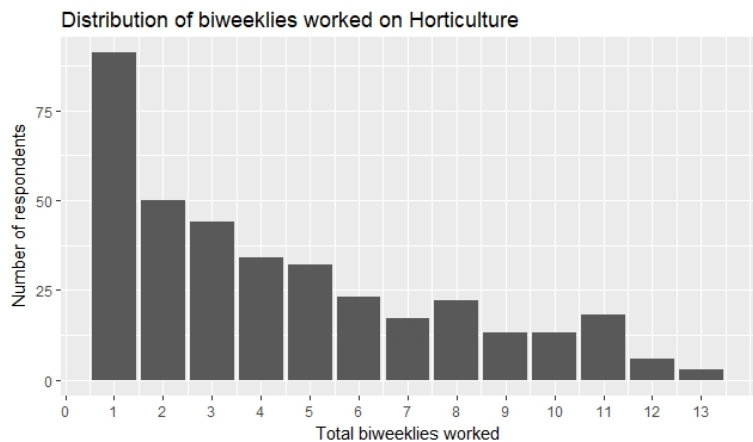


people. The number of biweeklies worked on crops can be seen in the graph on the right.

The three most common types of crop agriculture are maize, cassava and plantain, in that order.

### Horticulture

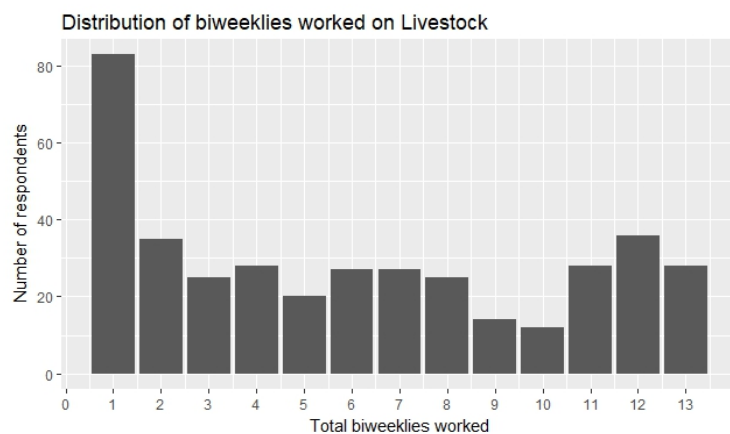
About two thirds of respondents, 366 (62%) respondents worked on horticulture at least once during the research period. In horticulture, it was more common to work on few types of horticulture than in crop agriculture; the mode of respondents, 30%, worked on only one type of horticulture. On average, people had 2.5 types of horticulture active at least once during the research period.



Here even more so than in crop agriculture, it is very common to work at only one biweekly, so horticulture is really a more sporadic type of activity. This can be seen in the graph. On average, people who reported activity in horticulture worked 4.5 biweeklies on any type of horticulture.

The three most common types of horticulture are potatoes, green vegetables and green beans.

### Livestock



Almost two thirds, 388 (66%) respondents, worked on livestock. Here, there was also a slight degree of specialization, respondents focused on fewer types of livestock. On average, they worked on 2.25 types of livestock during the research period. Compared to the other two types of agriculture, livestock is a bit more continuous, with more respondents working on this for a greater number of biweeklies. On average, people worked 6 biweeklies on livestock.

The three most common types of livestock are chicken, followed by goats and cattle.

### Putting it together...

The most common type of agricultural activity is crop agriculture. As can be seen in the table, there is a little more diversification amongst women in crops grown. In horticulture and livestock there is little difference between men and women in the range they grow.

Average number of agricultural activities had			
	Average	Male	Female
<b>Crops</b>	3.8	3.6	4
<b>Horticulture</b>	2.5	2.5	2.6
<b>Livestock</b>	2.25	2.3	2.2

Women tended to work more continuously on agricultural activities as seen in the table below (women

Average number of biweeklies worked			
	Average	Male	Female
<b>Crops</b>	5	4.6	5.6
<b>Horticulture</b>	4.5	3.4	5
<b>Livestock</b>	6	5.7	6.3

### Subsistence or commercial farming?

Out of the total number of people interviewed, 502, that is 86% were involved in some form of agriculture during at least one biweekly. The majority of those active in agriculture, 57% of respondents, actually worked on all three types of agriculture at one point or another. The table below shows this:

Number of types of agriculture	Percent of respondents
1	16.5
2	26.9
3	56.6

However, when asked what type of *income source* respondents had during a biweekly, agriculture was only ever mentioned by 280 respondents once or more frequently; that is only 47.7% as compared to the 86% that worked on agriculture. So in other words, less than half of the respondents that work on agriculture, ever earn any income from it. This shows that while agriculture is practiced by the majority of the population, it remains largely a subsistence activity and is not often a reliable income source for families.

### How much income do people earn from agriculture and are there respondents that rely exclusively on agricultural income?

When looking at **gross income**, livestock earns the highest on average, over the six month research period, with \$47.76. Horticulture earns the least on average, \$16.90 while crop agriculture is in between with \$36.49. The median values are much lower: \$8, \$5.7 and \$5.7, respectively. These latter (median) figures tell us that half of the recorded values lie under these values, so half of those earning from crop agriculture earn less than \$5.7 gross during an entire half year.

When looking at **net income** the most remarkable feature is that the median income for all three types of agriculture is negative. This means that half of those active in agriculture spend more on inputs for their agricultural activities than they earn in monetary form from this activity. In case of crop-agriculture, even the average (mean) net income is negative which again confirms that agriculture is primarily for the household's own consumption and there is only very little crop agriculture production for the market. Livestock, on the other hand earns on average relatively substantial amounts, more than \$10 net during six months. Horticulture on average also has a positive average net income, albeit very small (less than \$1).

These values can be seen in the table that follows:

	NET INCOME			GROSS INCOME		
	mean	Median	total	mean	median	total
<i>Crop agriculture</i>	\$ -0.62	\$ -0.86	\$ -469.92	\$ 36.49	\$ 5.71	\$ 15,143.23
<i>Horticulture</i>	\$ 0.82	\$ -1.29	\$ 300.05	\$ 16.90	\$ 5.71	\$ 3,296.29
<i>Livestock</i>	\$ 10.21	\$ -0.39	\$ 7,983.02	\$ 47.76	\$ 8.00	\$ 20,299.98

### How often do people work on agriculture who also earn money from it?



More respondents have worked on crop agriculture compared to the other two types of agriculture, but many of these only worked for one or two biweekly periods. Of those earning income from the other two types of agriculture, also most respondents work only once or twice during the research period, but the frequency is considerably lower than crop agriculture (NB: this does not mean during the first or second biweekly, it could be any biweekly throughout the research period).

### Do any respondents rely exclusively on agricultural income?

The 280 respondents that earned income from agriculture make up almost half of the researched sample, 47.7%. Out of the respondents working on agriculture (502 respondents), the 280 are 55.8%.

However, when taken together with other income sources such as business, or employment, only 17 respondents earn **only** from agriculture. That is only 6% of those respondents that earn income from agriculture and is only 3% of the entire group of respondents.

### What are the implications for Financial Service Providers?

From the above findings one can conclude that despite widespread activity in agriculture, earning from agriculture is for most people very modest. Even if the gross earnings may be reasonable on average, the

median earnings are quite modest. Particularly when taking into account the costs for agriculture (inputs, services...) the median farmer has a negative monetary result from agriculture. These farmers spend more funds on their agricultural production than they get revenue. While agriculture will still be a major contributor for the household's survival, as it provides food and other vital goods, for the majority of the farmers, agriculture is not a meaningful earner. Financial Service Providers can therefore not expect farmers to be able to pay back loans from agricultural net income. Only the top performers active in livestock would be able to service modest loans due to the average net income from livestock being a little more than \$10.

On the other hand, these modest financial results from agriculture also indicate that there is tremendous opportunity to invest in agriculture and to support farmers in bringing their agricultural activity to a level where more people can make a net positive income, which probably means that loans that will be invested in agriculture may provide significant positive returns.