



## Factsheet 13.8: Profitability Comparison - Gender Inclusiveness

### Background

In the previous factsheet, information on farmers' attitudes, perceptions of changes, future aspirations and expectations was considered. In this final factsheet based on profit quartiles of the IndoDairy Smallholder Household Survey (ISHS) 'Farm-to-Fact' series, gender inclusiveness in decision making, ownership of assets, group membership and access to credit is examined.

The approach to collecting the data using the Abbreviated Women Empowerment in Agriculture Index (A-WEAI) module was previously explained in Factsheet 11.

In this factsheet, differences in profit quartiles for decision making, access to capital and credit, and group membership will be examined with particular reference to dairy farming activities. In order to avoid biases in responses, the primary decision makers (PDMs) and the secondary decision makers (SDMs) in the household were asked the questions in this module separately.

In Factsheet 3 of the ISHS, on household characteristics, it was noted that **97% of the households' PDMs were male. Overall, 94% of households had a SDM and nearly all were females (99%).**

### Activity participation

The respondents were asked questions about participation in certain types of work activities within the household.

Detailed profit quartile wise results are shown in Table A1 in the Appendix.

#### *Slight difference*

The following work activities trended towards significance between profit quartiles ( $p < 0.10$ ):

- The number of farmers (9%) from Quartile 4 (Q4) (most profitable) engaged in **livestock raising** as an activity was considerably lower compared to farmers (15%) in Quartile 1 (Q1) (least profitable).

There were no significant differences observed between the profit quartiles for **participation in a number of other household activities**, including food crop farming and cash crop farming.

### Decision making

PDMs and SDMs in the household were asked, when decisions are made regarding key work activities, who it is that normally makes the decision. Profit quartile wise results are shown in Table A2 and A3 in the Appendix.

These activities included food crop farming (grown primarily for household consumption), cash crop farming (grown for sale on the market), livestock raising (cattle, buffalo, horse, etc.), and activities related to the dairy business including selling and buying cows, forages, concentrates, maintaining herd health, and milk marketing.

Figures 1 and 2 show differences in perception of decision making of PDMs and SDMs across profit quartiles.

### Significant difference

The following participations in decision-making were significantly different between profit quartiles ( $p < 0.05$ ):

- Only 36% of PDMs (men) in Q4 reported that their spouse contributed to decision making, compared to 44% in Q1. This indicates **fewer PDMs from most profitable households perceived their spouse (wives) made decisions in their household** compared to households with lower profitability (Table A2).
- The number of PDMs from Q2 (9%) who reported that **other household members** normally contribute to decision making was higher, compared to PDMs from Q1 (4%), Q4 (4%) and Q3 (3%) (Table A2). On the other hand, this number was higher for SDMs in Q3 (5%) compared to SDMs from Q1 (3%), Q2 (3%) and Q4 (1%) (Table A2).

- 92% of PDMs from Q4 reported making decisions related to **milk marketing** themselves, while 81% of PDMs from Q1 indicated the same (Table A3).
- 7% of PDMs from Q2 reported other household members make decisions regarding **selling and buying cattle**, compared to PDMs from Q1 (4%), Q3 (3%) and Q4 (1%) (Table A3).
- Similarly, 8% of PDMs from Q2 also indicated other household members make decisions regarding **kinds and quantities of concentrates**, which is more than twice as many compared to PDMs from Q1 (3%), Q4 (3%) and Q3 (2%) (Table A3).

### No difference

The following participations in decision-making were not significantly different between profit quartiles ( $p > 0.10$ ):

- Inputs of PDMs and SDMs (Table A4) in making decisions about **food crop farming, cash crop farming, livestock raising and dairy related decisions**.
- Extent of making personal decisions for PDMs and SDMs (Table A5) regarding **food crop farming, cash crop farming, livestock raising and dairy farming**.
- Input of PDMs and SDMs on making decisions on the use of income generated (Table A6) from **food crop farming, cash**

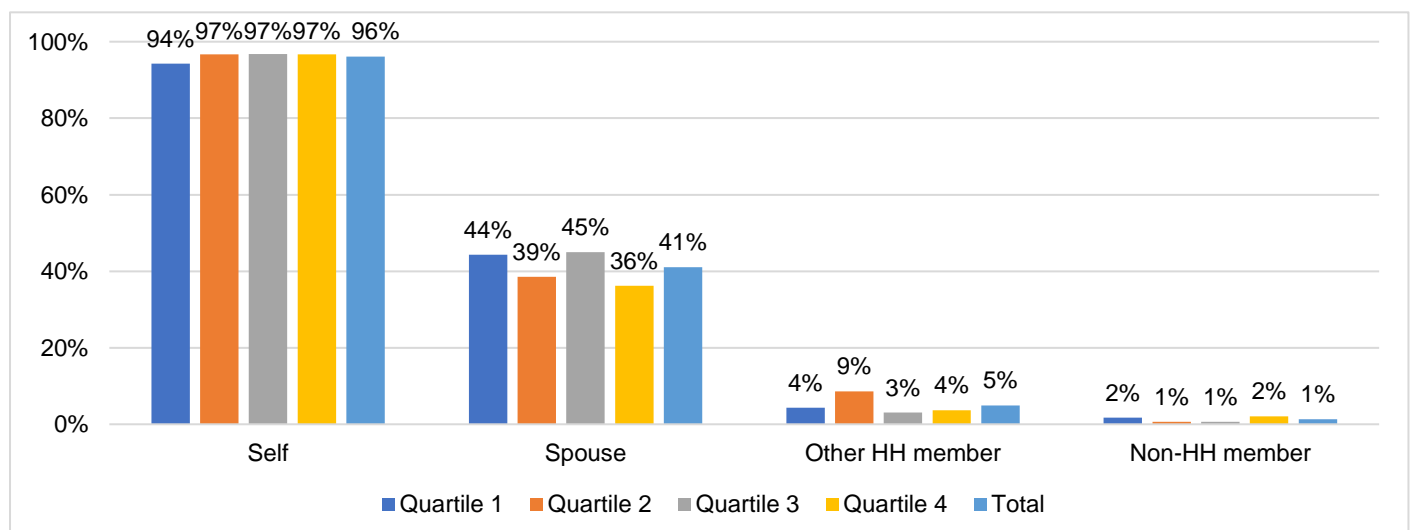
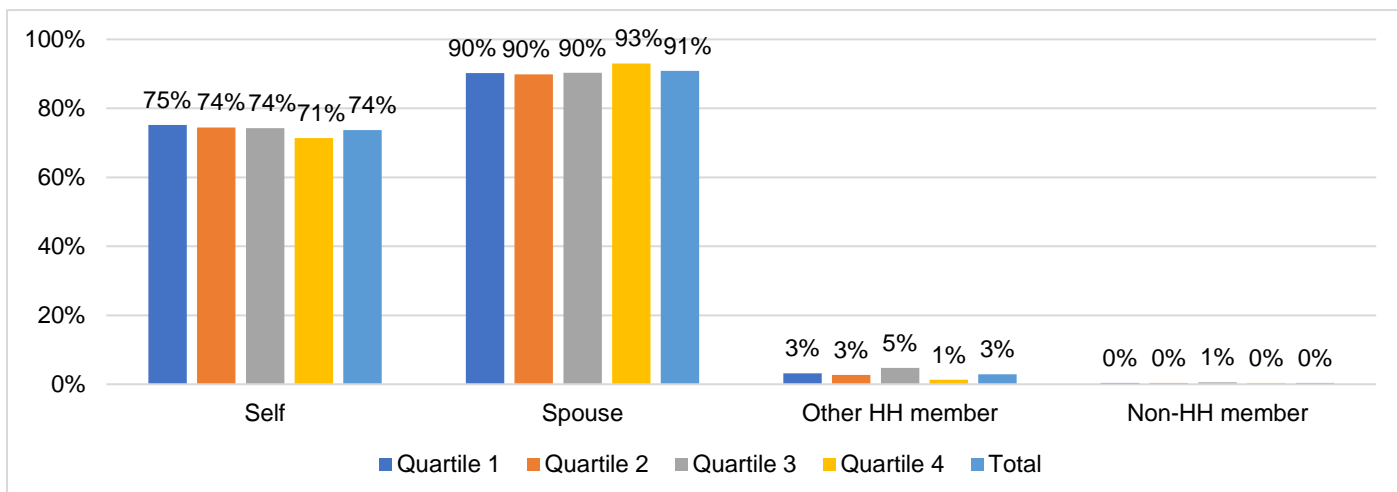


Figure 1. Perception of decision making of primary decision makers, by quartile.



**Figure 2.** Perception of decision making of secondary decision makers, by quartile.

### crop farming, livestock raising and dairy related decisions.

#### Ownership of assets

The respondents were asked about ownership of household assets and a number of other items that could be used to generate income.

Assets that were considered include: agricultural land; large (e.g. cattle, horses and buffalo) and small (e.g. goats, sheep and pigs) livestock; poultry (e.g. chickens, ducks, turkeys and pigeons); fish and fishing equipment; mechanised and non-mechanised farming equipment; non-farm business equipment; houses and other structures; large (e.g. refrigerators) and small (e.g. cookware and radios) consumer durables; mobile phones; other land (for non-agricultural purposes); and means of transportation.

Profit quartile wise results are shown in Table A7 and Table A8 in the Appendix.

#### Significant difference

The following asset ownership were significantly different between profit quartiles ( $p < 0.05$ ):

- The number of PDMs who **own agricultural land pieces or plots** was lowest in Q3 (37%) while highest in Q1 (55%), Q4 (51%) (Table A7).
- The number of PDMs who **own poultry** was highest in Q2 (29%), followed by Q3 (25%), Q1 (24%) and Q4 (17%) (Table A7).

- **Joint ownership of assets** reported by PDMs was highest in Q3 (70%). This was lower across Q2 (66%), Q1 (64%) and Q4 (64%) (Table A8).

#### No difference

The following asset ownership were not significantly different between profit quartiles for both PDMs and SDMs (unless otherwise stated) ( $p > 0.10$ ):

- Large and small livestock
- Poultry (for SDMs)
- Fish pond or fishing equipment
- Mechanised and non-mechanised farm equipment
- Non-farm business equipment
- Houses or other structures
- Large and small consumer durables
- Mobile phones
- Other land not used for agricultural purposes
- Means of transportation

Likewise, percentage of **SDMs reporting on overall sole or joint ownership** was not significant between profit quartiles.

#### Share of ownership

The respondents were asked about their perception on the type of ownership (sole or

joint) of household assets that can be used to generate income.

Profit quartile wise results are shown in Table A9 in the Appendix.

### ***Slight difference***

The following share of ownership of assets trended towards significance between profit quartiles ( $p < 0.10$ ):

- 77% of PDMs from Q3 indicated they jointly owned agricultural land plots compared to Q1 (70%), Q2 (66%), and Q4 (54%). The level of sole ownership in farmers from Q4 (34%) was higher than Q1 (25%), Q2 (22%) and Q3 (18%).
- Sole ownership of mobile phones among SDMs was highest in Q1 (38%) followed by Q4 (31%), Q2 (29%) and Q3 (25%).

### ***No difference***

The following share of ownership of assets were not significantly different between profit quartiles for both PDMs and SDMs (unless otherwise stated) ( $p > 0.10$ ):

- Agricultural land/plots (for SDMs)
- Large and small livestock
- Poultry
- Fish pond or fishing equipment
- Mechanised and non-mechanised farm equipment
- Non-farm business equipment
- Houses or other structures
- Large and small consumer durables
- Mobile phones (for PDMs)
- Other land not used for agricultural purposes
- Means of transportation

### **Sources of credit**

The respondents were asked about their experience with borrowing money or other items in the past 12 months.

Profit quartile wise results of sources of loans are shown in Table A10 in the Appendix. All sources of credit were not significantly different between profit quartiles ( $p > 0.10$ ).

There were also no significant differences across the profit quartiles on the forms of loan (Table A11) including cash, in-kind, cash and in-kind borrowed from the above-mentioned sources.

### **Decisions on borrowing money and what to do with it**

The respondents were asked who made the decision to borrow most of the time in the past 12 months, followed by a question on who makes decisions on what to do with the borrowed funds.

Profit quartile wise results are shown in Table A12 in the Appendix.

### ***Significant difference***

The following responses were significantly different between profit quartiles ( $p < 0.05$ ):

- PDMs from Q4 (70%) who reported their **spouse contributed to decision making to borrow** most of the time was lower compared to what PDMs from Q1 (87%), Q3 (83%) and Q2 (73%) perceived.
- SDMs from Q4 (86%) who indicated their **spouse contributed to decisions to borrow money** (most of the time) was also lower than SDMs from Q1 (94%), Q2 (92%) and Q3 (97%).

This indicates that **fewer PDMs and SDMs from most profitable households (Q4) perceived their spouses contributed to decisions to borrowing money** compared to households from other quartiles.

There were no significant differences across the profit quartiles when it comes to decisions on what to do with the borrowed funds.

### **Group membership**

PDMs and SDMs were asked about formal, informal and customary groups in the community and whether they were active members of these groups.

Groups that are considered in the A-WEIA include: farmer (including agricultural, livestock, fisheries, and marketing), youth, forest, credit or microfinance, insurance, trade and business associations, civic, religious, and women's groups.

Profit quartile wise results are shown in Table A13 in the Appendix.

### **Significant difference**

The following group memberships were significantly different between profit quartiles ( $p < 0.05$ ):

- **Farmer group membership of PDMs was lowest in Q1** (73%), compared to other quartiles Q2 (86%), Q3 (87%) and Q4 (87%).

### **No difference**

The following group memberships were not significantly different between profit quartiles for both PDMs and SDMs (unless otherwise stated) ( $p > 0.10$ ):

- Farmer groups (for SDMs)
- Youth unions
- Forest user's groups
- Credit, microfinance and insurance groups
- Trade and business association groups
- Civic and charitable groups
- Religious groups
- Women's unions
- Other groups

### **Summary**

In this factsheet, insights from the ISHS on the aspect of gender inclusiveness were examined in decision making regarding various dairy farm activities, individual and collective ownership of assets, forms of credit, decision making on borrowing money, and group membership of PDMs and SDMs.

- There were no significant differences across quartiles in activity participation and overall decision making of PDMs and SDMs.
- The number of PDMs from most profitable households who perceived that women made decisions regarding farming activities in their households, was lower than that perceived by PDMs from households with low profitability.
- This was also true for decisions related to dairy farm activities, with more PDMs from Q4 (most profitable) making decisions themselves compared to PDMs from Q1 (least profitable).
- In regard to ownership of assets, PDMs from Q1 had the highest share of ownership of agricultural land and plots, compared to other quartiles.
- There were no significant differences with individual and collective ownership of assets across the profit quartiles.
- Similarly, no significant differences were noted across quartiles in regard to sources and forms of loans.
- Fewer PDMs and SDMs from most profitable households (Q4) perceived their spouses contributed to decision making regarding borrowing funds, compared to households from other quartiles.
- There were no significant differences across the profit quartiles regarding decisions on what to do with the borrowed funds.
- The level of farmer group membership for PDMs in Q1 was the lowest compared to PDMs from other profit quartiles.

This factsheet concludes the 'IndoDairy Smallholder Household Survey' (ISHS) 'Farm-to-Fact' series.

## **Appendix to Factsheet 13.8**

The tables included in this appendix provide summary statistics related to gender inclusiveness in decision making, asset ownership, access to credit, and group membership for the entire sample.

Statistical significance between quartiles were determined using ANOVA (for binary and continuous variables) and Pearson's Chi-squared test (for categorical variables). For categorical variables with small observations ( $n < 5$ ), Fisher's exact test was used to confirm the Chi-squared test. ANOVA and Chi-squared tests results are shown in the right-hand column, under the Total. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant ( $p < 0.1$ ). Quartiles with the same letter are not significantly different at the 5% level ( $p > 0.05$ ).

**Table A1.** Percent of PDMs and SDMs participating in various farm activities during the last 12 months by profit quartile.

Variable	Primary Decision Maker (n=600)										Secondary Decision Maker (n=563)									
	Q1		Q2		Q3		Q4		Total		Q1		Q2		Q3		Q4		Total	
	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>
Food crop farming	9.3%		10.0%		8.0%		10.7%		9.5%		7.1%		11.5%		8.2%		9.5%		9.1%	
Cash crop farming	26.7%		33.3%		23.3%		25.3%		27.2%		19.3%		25.9%		17.0%		21.2%		20.8%	
Livestock raising (cattle, buffalo, horses, etc.)	15.3%	a	7.3%	a	7.3%	a	8.7%	a	9.7%	*	6.4%		3.6%		6.1%		8.8%		6.2%	
Dairy farming (general)	92.7%		95.3%		94.0%		95.3%		94.3%		73.6%		79.1%		74.8%		76.6%		76.0%	
Selling and buying dairy cows	73.3%		74.0%		71.3%		65.3%		71.0%		49.3%		52.5%		50.3%		47.4%		49.9%	
Kinds and quantity of forages	92.7%		94.7%		94.7%		95.3%		94.3%		57.1%		69.8%		59.9%		57.7%		61.1%	
Kinds and quantity of concentrates	92.0%		94.0%		94.0%		92.0%		93.0%		56.4%		60.4%		57.1%		53.3%		56.8%	
Herd health	92.7%		94.7%		95.3%		94.7%		94.3%		57.1%		61.9%		59.2%		53.3%		57.9%	
Milk marketing	90.0%		93.3%		94.7%		92.7%		92.7%		49.3%		54.7%		47.6%		52.6%		51.0%	
None	1.3%		2.0%		1.3%		0.7%		1.3%		17.1%		15.1%		15.0%		11.7%		14.7%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A2.** Percent of PDMs and SDMs are reporting on who normally makes the decision, by profit quartile.

Variable	Primary Decision Maker (n=3,516)										Secondary Decision Maker (n=2,189)									
	Q1		Q2		Q3		Q4		Total		Q1		Q2		Q3		Q4		Total	
	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>2</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>
Self	94.3%	a	96.6%	ab	96.8%	b	96.7%	ab	96.1%	**	75.2%		74.4%		74.3%		71.4%		73.7%	
Spouse	44.4%	bc	38.5%	ab	45.0%	c	36.2%	a	41.0%	***	90.2%		89.9%		90.3%		93.0%		90.9%	
Other HH member <sup>2</sup>	4.3%	a	8.6%		3.1%	a	3.7%	a	4.9%	***	3.1%	ab	2.7%	ab	4.7%	b	1.3%	a	2.9%	***
Non-HH member <sup>2</sup>	1.7%	ab	0.7%	a	0.7%	a	2.1%	b	1.3%	**	0.4%		0.4%		0.5%		0.3%		0.4%	

<sup>1</sup>Sig = Significance; <sup>2</sup>HH = Household; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).



**Table A3.** Percent of PDMs and SDMs reporting on who normally makes the decisions regarding various farm activities, by district.

Variable	Primary Decision Maker (n=600)										Secondary Decision Maker (n=563)										
	Q1		Q2		Q3		Q4		Total		Q1		Q2		Q3		Q4		Total		
	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	
<b>Food crop farming</b>																					
Self	8.7%		9.3%		8.0%		10.7%		9.2%		5.7%		8.6%		7.5%		8.0%		7.5%		
Spouse	6.0%		6.7%		5.3%		6.0%		6.0%		7.1%		10.1%		7.5%		7.3%		8.0%		
Other HH member <sup>2</sup>	0.7%		0.0%		0.0%		0.0%		0.2%		0.0%		0.7%		0.0%		0.0%		0.2%		
Non-HH member <sup>2</sup>	0.0%		0.0%		0.0%		0.7%		0.2%		0.0%		0.0%		0.0%		0.0%		0.0%		
<b>Cash crop farming</b>																					
Self	25.3%		32.0%		23.3%		23.3%		26.0%		13.6%		16.5%		15.0%		14.6%		14.9%		
Spouse	10.0%	a	14.0%	a	13.3%	a	11.3%	a	12.2%		17.9%		22.3%		15.6%		20.4%		19.0%		
Other HH member <sup>2</sup>	2.0%		1.3%		0.0%		2.7%		1.5%		0.0%		1.4%		0.7%		0.0%		0.5%		
Non-HH member <sup>2</sup>	0.0%		0.0%		1.3%		0.7%		0.5%		0.0%		0.0%		1.4%		0.0%		0.4%		
<b>Livestock raising</b>																					
Self	14.0%		6.7%		7.3%		8.7%		9.2%		5.0%		3.6%		4.8%		6.6%		5.0%		
Spouse	10.0%	a	4.0%	a	4.0%	a	6.0%	a	6.0%	*	5.7%		3.6%		6.1%		8.8%		6.0%		
Other HH member <sup>2</sup>	0.0%		0.7%		0.0%		0.0%		0.2%		0.0%		0.7%		0.0%		0.0%		0.2%		
Non-HH member <sup>2</sup>	0.7%		0.0%		0.0%		0.0%		0.2%		0.0%		0.0%		0.0%		0.0%		0.0%		
<b>Dairy business (general)</b>																					
Self	88.7%		90.0%		91.3%		92.0%		90.5%		56.4%		61.2%		58.5%		54.0%		57.5%		
Spouse	56.7%		50.0%		53.3%		46.0%		51.5%		67.9%		73.4%		72.1%		73.7%		71.8%		
Other HH member <sup>2</sup>	4.0%		8.0%		2.7%		3.3%		4.5%		2.9%		2.2%		2.0%		2.9%		2.5%		
Non-HH member <sup>2</sup>	1.3%		1.3%		0.7%		2.7%		1.5%		0.7%		0.0%		0.7%		0.0%		0.4%		
<b>Selling and buying dairy cows</b>																					
Self	68.7%		70.0%		70.0%		64.0%		68.2%		39.3%		43.2%		45.6%		44.5%		43.2%		
Spouse	47.3%	ab	42.7%	ab	52.0%	b	36.0%	a	44.5%	**	45.7%		51.1%		50.3%		43.8%		47.8%		
Other HH member <sup>2</sup>	4.0%	ab	7.3%	b	2.7%	ab	1.3%	a	3.8%	**	0.7%		1.4%		1.4%		1.5%		1.2%		
Non-HH member <sup>2</sup>	1.3%		0.7%		1.3%		0.7%		1.0%		0.7%		0.0%		1.4%		0.0%		0.5%		

Variable	Primary Decision Maker (n=600)										Secondary Decision Maker (n=563)										
	Q1		Q2		Q3		Q4		Total		Q1		Q2		Q3		Q4		Total		
	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	
<b>Kinds and quantity of forages</b>																					
<i>Self</i>	88.0%		93.3%		92.0%		90.7%		91.0%		38.6%		38.8%		36.1%		35.8%		37.3%		
<i>Spouse</i>	24.7%		21.3%		28.0%		22.0%		24.0%		49.3%	a	63.3%	a	58.5%	a	51.1%	a	55.6%	*	
<i>Other HH member<sup>2</sup></i>	4.0%	a	10.0%	a	4.0%	a	4.7%	a	5.7%	*	2.9%		1.4%		2.7%		1.5%		2.1%		
<i>Non-HH member<sup>2</sup></i>	1.3%		0.7%		0.0%		2.7%		1.2%		0.7%		0.0%		0.0%		0.0%		0.2%		
<b>Kinds and quantity of concentrates</b>																					
<i>Self</i>	87.3%		92.7%		90.0%		87.3%		89.3%		40.0%		38.1%		37.4%		36.5%		38.0%		
<i>Spouse</i>	27.3%		26.0%		29.3%		21.3%		26.0%		44.3%		48.9%		51.0%		46.0%		47.6%		
<i>Other HH member<sup>2</sup></i>	3.3%	ab	8.0%	b	2.0%	a	3.3%	ab	4.2%	*	2.1%		0.7%		1.4%		1.5%		1.4%		
<i>Non-HH member<sup>2</sup></i>	2.0%		0.7%		0.0%		2.7%		1.3%		0.0%		0.7%		0.0%		0.0%		0.2%		
<b>Herd health</b>																					
<i>Self</i>	89.3%		92.7%		90.0%		92.0%		91.0%		47.1%		46.0%		46.3%		40.9%		45.1%		
<i>Spouse</i>	39.3%		32.7%		41.3%		30.7%		36.0%		51.4%		55.4%		56.5%		48.9%		53.1%		
<i>Other HH member<sup>2</sup></i>	3.3%		8.0%		3.3%		3.3%		4.5%		0.7%		1.4%		2.0%		1.5%		1.4%		
<i>Non-HH member<sup>2</sup></i>	0.7%		0.7%		0.0%		1.3%		0.7%		0.0%		0.0%		0.0%		0.0%		0.0%		
<b>Milk marketing</b>																					
<i>Self</i>	81.3%	b	90.0%	ab	92.0%	a	92.0%	a	88.8%	***	38.6%		38.8%		35.4%		40.1%		38.2%		
<i>Spouse</i>	38.0%		32.7%		35.3%		30.7%		34.2%		40.0%		48.2%		42.9%		47.4%		44.6%		
<i>Other HH member<sup>2</sup></i>	4.0%		8.0%		3.3%		2.7%		4.5%		1.4%		1.4%		2.0%		2.2%		1.8%		
<i>Non-HH member<sup>2</sup></i>	2.7%		0.0%		0.7%		0.7%		1.0%		0.0%		0.0%		0.0%		0.0%		0.0%		

<sup>1</sup>Sig = Significance; <sup>2</sup>HH = Household; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Districts with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A4.** Percent of PDMs and SDMs reporting on how much input they have in making decisions on various farm activities, by profit quartile.

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Food crop farming (PDM=38) (SDM = 46)</b>												
<i>No input</i>	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	6.7%	0.0%	10.0%	4.4%	
<i>Input in few decisions</i>	0.0%	0.0%	12.5%	10.0%	5.3%		40.0%	26.7%	27.3%	50.0%	34.8%	
<i>Input in some decisions</i>	50.0%	50.0%	62.5%	20.0%	44.7%		40.0%	46.7%	54.6%	40.0%	45.7%	
<i>Input into most or all decisions</i>	50.0%	50.0%	25.0%	70.0%	50.0%		20.0%	20.0%	18.2%	0.0%	15.2%	
<b>Cash crop farming (PDM=81) (SDM=110)</b>												
<i>No input</i>	5.9%	0.0%	0.0%	10.0%	3.7%		4.0%	15.2%	0.0%	3.6%	6.4%	
<i>Input in few decisions</i>	5.9%	17.4%	9.5%	15.0%	12.4%		52.0%	36.4%	37.5%	46.4%	42.7%	
<i>Input in some decisions</i>	35.3%	69.6%	52.4%	35.0%	49.4%		36.0%	39.4%	54.2%	46.4%	43.6%	
<i>Input into most or all decisions</i>	52.9%	13.0%	38.1%	40.0%	34.6%		8.0%	9.1%	8.3%	3.6%	7.3%	
<b>Livestock raising (cattle, buffalo, horses, etc.) (PDM=37) (SDM=34)</b>												
<i>No input</i>	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
<i>Input in few decisions</i>	12.5%	16.7%	16.7%	0.0%	10.8%		0.0%	0.0%	0.0%	16.7%	5.9%	
<i>Input in some decisions</i>	43.8%	66.7%	33.3%	44.4%	46.0%		62.5%	40.0%	55.6%	50.0%	52.9%	
<i>Input into most or all decisions</i>	43.8%	16.7%	50.0%	55.6%	43.2%		37.5%	60.0%	44.4%	33.3%	41.2%	
<b>Dairy farming (general) (PDM = 334) (SDM=408)</b>												
<i>No input</i>	1.1%	1.2%	0.0%	0.0%	0.6%		2.0%	4.9%	3.8%	7.8%	4.7%	
<i>Input in few decisions</i>	14.4%	9.3%	12.2%	11.8%	12.0%		38.8%	36.3%	43.4%	42.2%	40.2%	
<i>Input in some decisions</i>	33.3%	57.0%	48.8%	44.7%	45.8%		46.9%	47.1%	46.2%	44.1%	46.1%	
<i>Input into most or all decisions</i>	51.1%	32.6%	39.0%	43.4%	41.6%		12.2%	11.8%	6.6%	5.9%	9.1%	
<b>Selling and buying dairy cows (PDM = 283) (SDM=271)</b>												
<i>No input</i>	1.3%	1.4%	0.0%	0.0%	0.7%		6.2%	2.8%	1.4%	0.0%	2.6%	
<i>Input in few decisions</i>	10.7%	5.5%	10.1%	7.1%	8.5%		27.7%	21.1%	36.5%	34.4%	29.9%	
<i>Input in some decisions</i>	46.7%	64.4%	53.2%	51.8%	54.1%		49.2%	66.2%	50.0%	54.1%	55.0%	
<i>Input into most or all decisions</i>	41.3%	28.8%	36.7%	41.1%	36.8%		16.9%	9.9%	12.2%	11.5%	12.6%	
<b>Kinds and quantity of forages (PDM = 177) (SDM=319)</b>												
<i>No input</i>	4.4%	4.4%	2.3%	4.7%	4.0%		11.1%	18.0%	11.6%	18.1%	14.7%	
<i>Input in few decisions</i>	6.7%	11.1%	6.8%	7.0%	7.9%		41.7%	40.5%	43.0%	33.3%	39.8%	
<i>Input in some decisions</i>	46.7%	57.8%	65.9%	53.5%	55.9%		41.7%	36.0%	37.2%	41.7%	38.9%	
<i>Input into most or all decisions</i>	42.2%	26.7%	25.0%	34.9%	32.2%		5.6%	5.6%	8.1%	6.9%	6.6%	
<b>Kinds and quantity of concentrates (PDM = 183) (SDM=272)</b>												
<i>No input</i>	6.1%	2.0%	4.4%	10.0%	5.5%		10.9%	17.7%	14.7%	15.4%	14.7%	
<i>Input in few decisions</i>	24.5%	14.3%	8.9%	12.5%	15.3%		43.8%	35.3%	40.0%	21.5%	35.3%	
<i>Input in some decisions</i>	42.9%	61.2%	66.7%	57.5%	56.8%		35.9%	39.7%	38.7%	56.9%	42.7%	
<i>Input into most or all decisions</i>	26.5%	22.5%	20.0%	20.0%	22.4%		9.4%	7.4%	6.7%	6.2%	7.4%	

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Herd health (PDM = 240) (SDM=301)</b>												
<i>No input</i>	1.6%	1.7%	3.1%	1.9%	2.1%		1.4%	1.3%	4.8%	10.1%	4.3%	
<i>Input in few decisions</i>	12.5%	6.8%	9.4%	3.8%	8.3%		34.7%	36.4%	37.4%	29.0%	34.6%	
<i>Input in some decisions</i>	43.8%	64.4%	57.8%	60.4%	56.3%		51.4%	50.7%	45.8%	52.2%	49.8%	
<i>Input into most or all decisions</i>	42.2%	27.1%	29.7%	34.0%	33.3%		12.5%	11.7%	12.1%	8.7%	11.3%	
<b>Milk marketing (PDM = 226) (SDM=256)</b>												
<i>No input</i>	6.2%	1.8%	3.7%	0.0%	3.1%		5.2%	13.4%	15.9%	10.3%	11.3%	
<i>Input in few decisions</i>	13.9%	19.3%	13.0%	8.0%	13.7%		39.7%	38.8%	30.2%	27.9%	34.0%	
<i>Input in some decisions</i>	50.8%	57.9%	63.0%	68.0%	59.3%		41.4%	40.3%	46.0%	55.9%	46.1%	
<i>Input into most or all decisions</i>	29.2%	21.1%	20.4%	24.0%	23.9%		13.8%	7.5%	7.9%	5.9%	8.6%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A5.** Percent of PDMs and SDMs reporting on the extent of making personal decisions on various farm activities, by profit quartile.

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Food crop farming (PDM=38) (SDM = 46)</b>												
<i>Not at all</i>	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	6.7%	0.0%	0.0%	2.2%	
<i>Small extent</i>	0.0%	0.0%	12.5%	10.0%	5.3%		30.0%	26.7%	27.3%	30.0%	28.3%	
<i>Medium extent</i>	30.0%	60.0%	37.5%	30.0%	39.5%		60.0%	40.0%	54.6%	70.0%	54.4%	
<i>High extent</i>	70.0%	40.0%	50.0%	60.0%	55.3%		10.0%	26.7%	18.2%	0.0%	15.2%	
<b>Cash crop farming (PDM=81) (SDM=110)</b>												
<i>Not at all</i>	5.9%	8.7%	0.0%	5.0%	4.9%		4.0%	21.2%	0.0%	7.1%	9.1%	
<i>Small extent</i>	5.9%	21.7%	19.1%	15.0%	16.1%		44.0%	39.4%	45.8%	42.9%	42.7%	
<i>Medium extent</i>	41.2%	34.8%	42.9%	55.0%	43.2%		36.0%	36.4%	41.7%	46.4%	40.0%	
<i>High extent</i>	47.1%	34.8%	38.1%	25.0%	35.8%		16.0%	3.0%	12.5%	3.6%	8.2%	
<b>Livestock raising (cattle, buffalo, horses, etc.) (PDM=37) (SDM=34)</b>												
<i>Not at all</i>	0.0%	16.7%	0.0%	11.1%	5.4%		0.0%	20.0%	0.0%	8.3%	5.9%	
<i>Small extent</i>	18.8%	16.7%	16.7%	0.0%	13.5%		62.5%	40.0%	66.7%	50.0%	55.9%	
<i>Medium extent</i>	37.5%	33.3%	33.3%	33.3%	35.1%		37.5%	20.0%	33.3%	33.3%	32.4%	
<i>High extent</i>	43.8%	33.3%	50.0%	55.6%	46.0%		0.0%	20.0%	0.0%	8.3%	5.9%	
<b>Dairy farming (general) (PDM = 334) (SDM=408)</b>												
<i>Not at all</i>	2.2%	10.5%	6.1%	5.3%	6.0%		4.1%	11.8%	10.4%	10.8%	9.3%	
<i>Small extent</i>	13.3%	5.8%	13.4%	7.9%	10.2%		45.9%	40.2%	44.3%	46.1%	44.1%	
<i>Medium extent</i>	40.0%	45.4%	42.7%	42.1%	42.5%		37.8%	38.2%	37.7%	33.3%	36.8%	
<i>High extent</i>	44.4%	38.4%	37.8%	44.7%	41.3%		12.2%	9.8%	7.6%	9.8%	9.8%	
<b>Selling and buying dairy cows (PDM = 283) (SDM=271)</b>												
<i>Not at all</i>	2.7%	6.9%	6.3%	3.6%	5.0%		12.3%	15.5%	4.1%	4.9%	9.2%	
<i>Small extent</i>	12.0%	9.6%	5.1%	3.6%	7.8%		26.2%	25.4%	43.2%	31.2%	31.7%	
<i>Medium extent</i>	45.3%	49.3%	46.8%	51.8%	48.1%		50.8%	45.1%	44.6%	52.5%	48.0%	
<i>High extent</i>	40.0%	34.3%	41.8%	41.1%	39.2%		10.8%	14.1%	8.1%	11.5%	11.1%	
<b>Kinds and quantity of forages (PDM = 177) (SDM=319)</b>												
<i>Not at all</i>	4.4%	6.7%	2.3%	4.7%	4.5%		11.1%	23.6%	14.0%	15.3%	16.3%	
<i>Small extent</i>	8.9%	13.3%	13.6%	2.3%	9.6%		43.1%	36.0%	44.2%	31.9%	38.9%	
<i>Medium extent</i>	40.0%	46.7%	36.4%	60.5%	45.8%		36.1%	32.6%	29.1%	43.1%	34.8%	
<i>High extent</i>	46.7%	33.3%	47.7%	32.6%	40.1%		9.7%	7.9%	12.8%	9.7%	10.0%	
<b>Kinds and quantity of concentrates (PDM = 183) (SDM=272)</b>												
<i>Not at all</i>	8.2%	8.2%	4.4%	7.5%	7.1%		10.9%	20.6%	18.7%	15.4%	16.5%	
<i>Small extent</i>	20.4%	16.3%	13.3%	10.0%	15.3%		48.4%	36.8%	37.3%	32.3%	38.6%	
<i>Medium extent</i>	42.9%	40.8%	40.0%	60.0%	45.4%		28.1%	30.9%	30.7%	44.6%	33.5%	
<i>High extent</i>	28.6%	34.7%	42.2%	22.5%	32.2%		12.5%	11.8%	13.3%	7.7%	11.4%	

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Herd health (PDM = 240) (SDM=301)</b>												
<i>Not at all</i>	3.1%	6.8%	4.7%	1.9%	4.2%		5.6%	7.8%	7.2%	10.1%	7.6%	
<i>Small extent</i>	10.9%	10.2%	10.9%	1.9%	8.8%		43.1%	37.7%	38.6%	27.5%	36.9%	
<i>Medium extent</i>	40.6%	52.5%	48.4%	58.5%	49.6%		40.3%	40.3%	41.0%	49.3%	42.5%	
<i>High extent</i>	45.3%	30.5%	35.9%	37.7%	37.5%		11.1%	14.3%	13.3%	13.0%	13.0%	
<b>Milk marketing (PDM = 226) (SDM=256)</b>												
<i>Not at all</i>	6.2%	10.5%	9.3%	0.0%	6.6%		5.2%	19.4%	17.5%	14.7%	14.5%	
<i>Small extent</i>	15.4%	14.0%	13.0%	6.0%	12.4%		43.1%	32.8%	28.6%	30.9%	33.6%	
<i>Medium extent</i>	47.7%	47.4%	51.9%	66.0%	52.7%		39.7%	35.8%	44.4%	45.6%	41.4%	
<i>High extent</i>	30.8%	28.1%	25.9%	28.0%	28.3%		12.1%	11.9%	9.5%	8.8%	10.6%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A6.** Percent of PDMs and SDMs reporting on how much input they have in decisions regarding the use of income generated from various farm activities, by profit quartile.

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Food crop farming (PDM=57) (SDM = 51)</b>												
<i>No input</i>	14.3%	6.7%	0.0%	0.0%	5.3%		20.0%	12.5%	0.0%	0.0%	7.8%	
<i>Input in few decisions</i>	21.4%	13.3%	33.3%	37.5%	26.3%		10.0%	12.5%	25.0%	7.7%	13.7%	
<i>Input in some decisions</i>	21.4%	40.0%	16.7%	25.0%	26.3%		50.0%	43.8%	33.3%	61.5%	47.1%	
<i>Input into most or all decisions</i>	42.9%	40.0%	50.0%	37.5%	42.1%		20.0%	31.3%	41.7%	30.8%	31.4%	
<b>Cash crop farming (PDM=163) (SDM=117)</b>												
<i>No input</i>	2.5%	0.0%	0.0%	2.6%	1.2%		0.0%	5.6%	0.0%	0.0%	1.7%	
<i>Input in few decisions</i>	17.5%	22.0%	22.9%	23.7%	21.5%		33.3%	11.1%	24.0%	13.8%	19.7%	
<i>Input in some decisions</i>	32.5%	38.0%	31.4%	29.0%	33.1%		48.2%	47.2%	48.0%	55.2%	49.6%	
<i>Input into most or all decisions</i>	47.5%	40.0%	45.7%	44.7%	44.2%		18.5%	36.1%	28.0%	31.0%	29.1%	
<b>Livestock raising (cattle, buffalo, horses, etc.) (PDM=58) (SDM=35)</b>												
<i>No input</i>	4.4%	9.1%	0.0%	0.0%	3.5%		0.0%	0.0%	0.0%	0.0%	0.0%	
<i>Input in few decisions</i>	30.4%	45.5%	0.0%	15.4%	24.1%		22.2%	0.0%	44.4%	25.0%	25.7%	
<i>Input in some decisions</i>	17.4%	0.0%	27.3%	30.8%	19.0%		44.4%	40.0%	44.4%	50.0%	45.7%	
<i>Input into most or all decisions</i>	47.8%	45.5%	72.7%	53.9%	53.5%		33.3%	60.0%	11.1%	25.0%	28.5%	
<b>Dairy farming (general) (PDM = 566) (SDM=428)</b>												
<i>No input</i>	0.7%	1.4%	1.4%	4.2%	1.9%		1.0%	0.0%	1.8%	5.7%	2.1%	
<i>Input in few decisions</i>	23.0%	24.5%	24.1%	21.7%	23.3%		20.4%	13.6%	19.1%	18.1%	17.8%	
<i>Input in some decisions</i>	35.3%	34.3%	39.0%	34.3%	35.7%		39.8%	47.3%	49.1%	41.9%	44.6%	
<i>Input into most or all decisions</i>	41.0%	39.9%	35.5%	39.9%	39.1%		38.8%	39.1%	30.0%	34.3%	35.5%	
<b>Selling and buying dairy cows (PDM = 426) (SDM=281)</b>												
<i>No input</i>	2.7%	2.7%	3.7%	3.1%	3.1%		4.4%	0.0%	2.7%	1.5%	2.1%	
<i>Input in few decisions</i>	16.4%	16.2%	18.7%	18.4%	17.4%		11.6%	8.2%	17.6%	16.9%	13.5%	
<i>Input in some decisions</i>	33.6%	43.2%	43.0%	41.8%	40.4%		55.1%	63.0%	59.5%	43.1%	55.5%	
<i>Input into most or all decisions</i>	47.3%	37.8%	34.6%	36.7%	39.2%		29.0%	28.8%	20.3%	38.5%	28.8%	
<b>Kinds and quantity of forages (PDM = 566) (SDM=344)</b>												
<i>No input</i>	13.0%	10.6%	15.5%	16.1%	13.8%		23.8%	35.1%	30.7%	29.1%	29.9%	
<i>Input in few decisions</i>	6.5%	7.8%	7.0%	7.0%	7.1%		25.0%	19.6%	26.1%	20.3%	22.7%	
<i>Input in some decisions</i>	20.9%	20.4%	18.3%	16.1%	18.9%		38.8%	29.9%	31.8%	32.9%	33.1%	
<i>Input into most or all decisions</i>	59.7%	61.3%	59.2%	60.8%	60.3%		12.5%	15.5%	11.4%	17.7%	14.2%	
<b>Kinds and quantity of concentrates (PDM = 558) (SDM=320)</b>												
<i>No input</i>	14.5%	12.1%	17.0%	16.7%	15.1%		19.0%	22.6%	29.8%	23.3%	23.8%	
<i>Input in few decisions</i>	10.1%	12.8%	6.4%	10.1%	9.9%		31.7%	21.4%	23.8%	17.8%	23.8%	
<i>Input in some decisions</i>	21.0%	17.0%	17.7%	18.1%	18.5%		27.9%	33.3%	29.8%	32.9%	30.9%	
<i>Input into most or all decisions</i>	54.4%	58.2%	58.9%	55.1%	56.6%		21.5%	22.6%	16.7%	26.0%	21.6%	

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Herd health (PDM = 566) (SDM=326)</b>												
<i>No input</i>	11.5%	12.7%	16.1%	14.1%	13.6%		13.8%	17.4%	16.1%	24.7%	17.8%	
<i>Input in few decisions</i>	10.8%	8.5%	7.7%	7.8%	8.7%		25.0%	20.9%	25.3%	16.4%	22.1%	
<i>Input in some decisions</i>	23.0%	26.1%	25.2%	23.9%	24.6%		42.5%	39.5%	42.5%	42.5%	41.7%	
<i>Input into most or all decisions</i>	54.7%	52.8%	51.1%	54.2%	53.2%		18.8%	22.1%	16.1%	16.4%	18.4%	
<b>Milk marketing (PDM = 556) (SDM=287)</b>												
<i>No input</i>	0.4%	0.4%	0.2%	0.5%	0.4%		1.5%	2.6%	4.3%	2.8%	2.8%	
<i>Input in few decisions</i>	2.2%	2.1%	2.0%	1.5%	2.0%		14.5%	15.8%	18.6%	11.1%	15.0%	
<i>Input in some decisions</i>	2.8%	2.5%	2.9%	3.0%	2.8%		39.1%	44.7%	38.6%	40.3%	40.8%	
<i>Input into most or all decisions</i>	4.5%	4.9%	4.9%	5.0%	4.8%		44.9%	36.8%	38.6%	45.8%	41.5%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).



**Table A7.** Percent of PDMs and SDMs who own various assets that could be used to generate income, by profit quartiles.

Variable	Primary Decision Maker (n=600)										Secondary Decision Maker (n=563)									
	Q1		Q2		Q3		Q4		Total		Q1		Q2		Q3		Q4		Total	
	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>
Agricultural land	55.3%	b	43.3%	ab	37.3%	a	50.7%	ab	46.7%	***	53.6%	b	46.8%	ab	36.7%	a	46.0%	ab	45.6%	**
Large livestock	94.7%		94.7%		93.3%		93.3%		94.0%		92.9%		94.2%		93.9%		92.7%		93.4%	
Small livestock	6.7%		4.7%		2.7%		6.0%		5.0%		7.9%		3.6%		2.7%		7.3%		5.3%	
Poultry	24.0%	a	28.7%	a	25.3%	a	16.7%	a	23.7%	*	24.3%		26.6%		25.2%		19.0%		23.8%	
Fish pond or fishing equipment	5.3%		6.7%		2.0%		4.7%		4.7%		4.3%		6.5%		2.0%		5.1%		4.4%	
Farm equipment (non-mechanised)	83.3%		76.7%		77.3%		78.0%		78.8%		76.4%		74.8%		72.8%		77.4%		75.3%	
Farm equipment (mechanised)	4.7%		2.7%		2.7%		3.3%		3.3%		6.4%		2.9%		2.0%		4.4%		3.9%	
Non-farm business equipment	14.7%		12.0%		14.0%		8.7%		12.3%		16.4%		12.2%		15.0%		8.8%		13.1%	
House or other structures	90.7%		90.0%		90.7%		88.0%		89.8%		90.7%		87.8%		90.5%		88.3%		89.3%	
Large consumer durables	98.0%		100.0%		98.7%		99.3%		99.0%		97.9%		100.0%		98.0%		99.3%		98.8%	
Small consumer durables	98.7%		98.0%		96.0%		95.3%		97.0%		99.3%		97.8%		95.2%		97.8%		97.5%	
Mobile phones	88.0%		86.7%		84.7%		84.7%		86.0%		87.1%		87.1%		81.0%		83.9%		84.7%	
Other land not used for agricultural purposes	14.7%		16.0%		20.0%		16.7%		16.8%		15.0%		16.5%		17.7%		15.3%		16.2%	
Means of transportation	86.0%		83.3%		80.0%		80.7%		82.5%		87.1%		84.2%		76.9%		82.5%		82.6%	
None	0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		1.4%		0.0%		0.4%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A8.** Percent of PDMs and SDMs reporting on overall sole or joint ownership of assets, by profit quartiles.

Variable	Primary Decision Maker (n=4,438)						Secondary Decision Maker (n=4,133)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Do you own any of the items that could be used to generate income?</b>												
<i>No</i>	14.2%	12.8%	11.3%	12.6%	12.8%	**	14.6%	16.2%	12.3%	13.5%	14.2%	
<i>Yes, solely</i>	21.8%	21.2%	18.6%	23.4%	21.3%	**	10.9%	10.9%	11.4%	11.2%	11.1%	
<i>Yes, jointly</i>	64.0%	66.0%	70.1%	64.0%	66.0%	**	74.5%	72.8%	76.3%	75.3%	74.7%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A9.** Percent of PDMs and SDMs reporting sole or joint ownership of various assets, by profit quartiles.

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Agricultural land (PDM=280) (SDM=257)</b>												
No	4.8%	12.3%	5.4%	11.8%	8.6%	*	9.3%	12.3%	14.8%	12.7%	12.1%	
Yes, solely	25.3%	21.5%	17.9%	34.2%	25.4%	*	6.7%	4.6%	3.7%	6.4%	5.5%	
Yes, jointly	69.9%	66.2%	76.8%	54.0%	66.1%	*	84.0%	83.1%	81.5%	81.0%	82.5%	
<b>Large livestock (PDM=564) (SDM=526)</b>												
No	3.5%	2.1%	3.6%	2.1%	2.8%		6.9%	7.6%	7.3%	10.2%	8.0%	
Yes, solely	17.6%	18.3%	17.9%	22.9%	19.2%		1.5%	0.0%	0.0%	0.8%	0.6%	
Yes, jointly	78.9%	79.6%	78.6%	75.0%	78.0%		91.5%	92.4%	92.8%	89.0%	91.4%	
<b>Small livestock (PDM=30) (SDM=30)</b>												
No	10.0%	0.0%	0.0%	0.0%	3.3%		9.1%	0.0%	25.0%	10.0%	10.0%	
Yes, solely	10.0%	28.6%	50.0%	11.1%	20.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
Yes, jointly	80.0%	71.4%	50.0%	88.9%	76.7%		90.9%	100.0%	75.0%	90.0%	90.0%	
<b>Poultry (PDM=142) (SDM=134)</b>												
No	22.2%	7.0%	10.5%	20.0%	14.1%		14.7%	13.5%	16.2%	7.7%	13.4%	
Yes, solely	11.1%	18.6%	21.1%	12.0%	16.2%		14.7%	10.8%	5.4%	15.4%	11.2%	
Yes, jointly	66.7%	74.4%	68.4%	68.0%	69.7%		70.6%	75.7%	78.4%	76.9%	75.4%	
<b>Fish pond or fishing equipment (PDM=28) (SDM=25)</b>												
No	0.0%	0.0%	0.0%	0.0%	0.0%		16.7%	0.0%	0.0%	28.6%	12.0%	
Yes, solely	0.0%	10.0%	0.0%	0.0%	3.6%		0.0%	0.0%	0.0%	0.0%	0.0%	
Yes, jointly	100.0%	90.0%	100.0%	100.0%	96.4%		83.3%	100.0%	100.0%	71.4%	88.0%	
<b>Farm equipment (non-mechanised) (PDM=473) (SDM=424)</b>												
No	0.8%	0.9%	1.7%	1.7%	1.3%		26.2%	26.9%	23.4%	25.5%	25.5%	
Yes, solely	47.2%	39.1%	37.9%	44.4%	42.3%		4.7%	3.9%	1.9%	2.8%	3.3%	
Yes, jointly	52.0%	60.0%	60.3%	53.9%	56.5%		69.2%	69.2%	74.8%	71.7%	71.2%	
<b>Farm equipment (mechanised) (PDM=20) (SDM=22)</b>												
No	0.0%	0.0%	0.0%	0.0%	0.0%		11.1%	25.0%	33.3%	33.3%	22.7%	
Yes, solely	28.6%	75.0%	50.0%	80.0%	55.0%		11.1%	0.0%	0.0%	0.0%	4.6%	
Yes, jointly	71.4%	25.0%	50.0%	20.0%	45.0%		77.8%	75.0%	66.7%	66.7%	72.7%	
<b>Non-farm business equipment (PDM=74) (SDM=74)</b>												
No	13.6%	11.1%	4.8%	7.7%	9.5%		30.4%	29.4%	31.8%	25.0%	29.7%	
Yes, solely	27.3%	38.9%	42.9%	23.1%	33.8%		13.0%	23.5%	4.6%	16.7%	13.5%	
Yes, jointly	59.1%	50.0%	52.4%	69.2%	56.8%		56.5%	47.1%	63.6%	58.3%	56.8%	

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>House or other structures (PDM=539) (SDM=503)</b>												
No	9.6%	5.9%	5.9%	6.8%	7.1%		4.7%	4.1%	6.0%	6.6%	5.4%	
Yes, solely	11.8%	13.3%	7.4%	15.9%	12.1%		9.5%	4.9%	3.0%	5.8%	5.8%	
Yes, jointly	78.7%	80.7%	86.8%	77.3%	80.9%		85.8%	91.0%	91.0%	87.6%	88.9%	
<b>Large consumer durables (PDM=594) (SDM=556)</b>												
No	13.6%	10.7%	8.8%	11.4%	11.1%		1.5%	0.0%	2.1%	1.5%	1.3%	
Yes, solely	8.8%	6.7%	4.1%	8.7%	7.1%		11.0%	10.1%	8.3%	11.0%	10.1%	
Yes, jointly	77.6%	82.7%	87.2%	79.9%	81.8%		87.6%	89.9%	89.6%	87.5%	88.7%	
<b>Small consumer durables (PDM=582) (SDM=549)</b>												
No	31.1%	25.2%	25.0%	23.1%	26.1%		0.0%	0.0%	0.7%	0.0%	0.2%	
Yes, solely	6.8%	5.4%	2.8%	7.7%	5.7%		31.7%	30.2%	20.7%	31.3%	28.4%	
Yes, jointly	62.2%	69.4%	72.2%	69.2%	68.2%		68.4%	69.9%	78.6%	68.7%	71.4%	
<b>Mobile phones (PDM=516) (SDM=477)</b>												
No	34.1%	35.4%	30.7%	31.5%	33.0%		37.7%	39.7%	34.5%	29.6%	35.4%	*
Yes, solely	40.2%	37.7%	34.7%	36.2%	37.2%		37.7%	28.9%	25.2%	31.3%	30.8%	*
Yes, jointly	25.8%	26.9%	34.7%	32.3%	29.8%		24.6%	31.4%	40.3%	39.1%	33.7%	*
<b>Other land not used for agricultural purposes (PDM=101) (SDM=91)</b>												
No	4.6%	4.2%	13.3%	12.0%	8.9%		0.0%	13.0%	11.5%	14.3%	9.9%	
Yes, solely	18.2%	33.3%	13.3%	28.0%	22.8%		0.0%	0.0%	3.9%	9.5%	3.3%	
Yes, jointly	77.3%	62.5%	73.3%	60.0%	68.3%		100.0%	87.0%	84.6%	76.2%	86.8%	
<b>Means of transportation (PDM=495) (SDM=465)</b>												
No	12.4%	14.4%	6.7%	12.4%	11.5%		30.3%	29.9%	26.6%	33.6%	30.1%	
Yes, solely	27.9%	29.6%	28.3%	29.8%	28.9%		1.6%	2.6%	2.7%	2.7%	2.4%	
Yes, jointly	59.7%	56.0%	65.0%	57.9%	59.6%		68.0%	67.5%	70.8%	63.7%	67.5%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A10.** Percent of PDMs and SDMs who had a loan in the last 12 months from various sources, by profit quartiles.

Variable	Primary Decision Maker (n=600)						Secondary Decision Maker (n=563)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
Dairy cooperative	32.0%	37.3%	36.0%	39.3%	36.2%		31.4%	36.7%	36.7%	38.7%	35.9%	
Formal lender (bank/financial institution)	23.3%	19.3%	24.0%	16.0%	20.7%		24.3%	20.1%	24.5%	17.5%	21.7%	
Informal lender	0.0%	0.7%	0.7%	0.0%	0.3%		0.0%	0.7%	0.0%	0.0%	0.2%	
Friends/relatives (charging zero interest)	8.0%	3.3%	7.3%	6.0%	6.2%		9.3%	3.6%	6.8%	5.8%	6.4%	
Union	0.0%	0.0%	0.7%	0.0%	0.2%		0.0%	0.0%	0.7%	0.0%	0.2%	
Informal savings and credit groups	0.0%	0.0%	1.3%	0.0%	0.3%		0.0%	0.0%	1.4%	0.0%	0.4%	
Non-government organisation	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
Other	0.0%	0.7%	0.7%	1.3%	0.7%		0.0%	0.7%	0.7%	1.5%	0.7%	
None	37.3%	40.0%	34.0%	38.7%	37.5%		0.0%	0.0%	0.0%	0.0%	0.0%	
Don't know	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.7%	0.0%	0.0%	0.2%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A11.** Percent of PDMs and SDMs reporting on the forms of loan taken in the last 12 months from various sources, by profit quartiles.

Variable	Primary Decision Maker (PDM)						Secondary Decision Maker (SDM)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
<b>Dairy cooperative (PDM=217) (SDM=202)</b>												
Cash	93.8%	100.0%	98.2%	98.3%	97.7%		95.5%	100.0%	98.2%	98.1%	98.0%	
In-kind	6.3%	0.0%	0.0%	0.0%	1.4%		4.6%	0.0%	0.0%	0.0%	1.0%	
Cash and in-kind	0.0%	0.0%	1.9%	1.7%	0.9%		0.0%	0.0%	1.9%	1.9%	1.0%	
<b>Formal lender (bank/financial institution) (PDM=124) (SDM=122)</b>												
Cash	100.0%	100.0%	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	100.0%	100.0%	
In-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
Cash and in-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Informal lender (PDM=2) (SDM=1)</b>												
Cash	0.0%	100.0%	100.0%	0.0%	100.0%		0.0%	100.0%	0.0%	0.0%	0.0%	
In-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
Cash and in-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Friends/relatives (charging zero interest) (PDM=37) (SDM=36)</b>												
Cash	91.7%	80.0%	81.8%	88.9%	86.5%		92.3%	80.0%	80.0%	87.5%	86.1%	
In-kind	8.3%	20.0%	18.2%	11.1%	13.5%		7.7%	20.0%	20.0%	12.5%	13.9%	
Cash and in-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Union (PDM=1) (SDM=1)</b>												
Cash	0.0%	0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%	0.0%	
In-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
Cash and in-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Informal savings and credit groups (PDM=2) (SDM=2)</b>												
Cash	0.0%	0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%	0.0%	
In-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
Cash and in-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Other (PDM=19) (SDM=20)</b>												
Cash	100.0%	100.0%	100.0%	85.7%	94.7%		100.0%	100.0%	100.0%	85.7%	95.0%	
In-kind	0.0%	0.0%	0.0%	14.3%	5.3%		0.0%	0.0%	0.0%	14.3%	5.0%	
Cash and in-kind	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	

<sup>1</sup>Sig = Significance; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A12.** Percent of PDMs and SDMs reporting on decision making on borrowing funds, by quartiles.

Variable	Primary Decision Maker (n=402)										Secondary Decision Maker (n=384)										
	Q1		Q2		Q3		Q4		Total		Q1		Q2		Q3		Q4		Total		
	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	Value	Sig <sup>1</sup>	
<b>Decisions to borrow</b>																					
Self	88.9%		92.6%		96.3%		96.0%		93.5%		79.5%		82.8%		86.1%		86.1%		83.9%		
Spouse	86.9%	b	72.6%	ab	82.6%	ab	69.7%	a	78.1%	***	94.0%	ab	91.9%	ab	97.0%	b	86.1%	a	92.2%	**	
Other HH member <sup>2</sup>	4.0%		5.3%		3.7%		1.0%		3.5%		3.6%		4.0%		2.0%		2.0%		2.9%		
Non-HH member <sup>2</sup>	1.0%		0.0%		1.8%		1.0%		1.0%		0.0%		0.0%		0.0%		2.0%		0.5%		
<b>Decisions regarding borrowed funds</b>																					
Self	84.8%		84.2%		89.9%		87.9%		86.8%		79.5%		87.9%		87.1%		86.1%		86.4%		
Spouse	79.8%		76.8%		85.3%		77.8%		80.1%		89.2%		89.9%		90.1%		81.2%		87.5%		
Other HH member <sup>2</sup>	4.0%		5.3%		1.8%		1.0%		3.0%		3.6%		4.0%		1.0%		2.0%		2.6%		
Non-HH member <sup>2</sup>	1.0%		0.0%		1.8%		1.0%		1.0%		1.2%		0.0%		0.0%		2.0%		0.8%		

<sup>1</sup>Sig = Significance; <sup>2</sup>HH = Household; \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).

**Table A13.** Percent of PDMs and SDMs who are members of various groups, by profit quartiles.

Variable	Primary Decision Maker (n=600)						Secondary Decision Maker (n=563)					
	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>	Q1	Q2	Q3	Q4	Total	Sig <sup>1</sup>
Farmer group <sup>2</sup>	73.3%	86.0%	86.7%	86.7%	83.2%	***	25.0%	23.0%	19.0%	22.6%	22.4%	
Youth union	7.3%	6.0%	6.7%	9.3%	7.3%		2.1%	0.0%	0.7%	2.9%	1.4%	
Forest user's group	6.0%	6.0%	7.3%	7.3%	6.7%		5.0%	5.0%	1.4%	3.6%	3.7%	
Credit, microfinance, and insurance group	2.7%	3.3%	1.3%	1.3%	2.2%		7.1%	3.6%	4.1%	3.6%	4.6%	
Trade and business association group	2.0%	0.7%	0.0%	2.0%	1.2%		1.4%	2.9%	0.7%	2.9%	2.0%	
Civic and charitable group	14.0%	10.0%	14.0%	12.0%	12.5%		12.9%	11.5%	12.2%	12.4%	12.3%	
Religious group	70.7%	66.7%	60.0%	64.7%	65.5%		77.1%	74.8%	72.1%	71.5%	73.9%	
Women's union	1.3%	2.0%	1.3%	1.3%	1.5%		25.0%	25.2%	29.9%	24.1%	26.1%	
Other	1.3%	0.7%	1.3%	0.0%	0.8%		1.4%	0.0%	0.7%	2.2%	1.1%	

<sup>1</sup>Sig = Significance; <sup>2</sup>Includes agricultural livestock and fisheries producers groups (including marketing); \* p < 0.1, \*\* p < 0.05 and \*\*\* p < 0.01 indicate significance at the 10%, 5% and 1% levels, respectively. Pairwise comparisons were performed for continuous and binary variables using Tukey tests when the ANOVA test was trending towards significant (p < 0.1). Quartiles with the same letter are not significantly different at the 5% level (p > 0.05).