

Impact Assessment of Mercy Corps AgriFin Mobile Program: Agriculture Financing Model for Corn Farmers in Sumbawa Island, West Nusa Tenggara

Final Report
September 28, 2018



Mercy Corps Indonesia

Impact Assessment of Mercy Corps AgriFin Mobile Program: Agriculture Financing Model for Corn Farmers in Sumbawa Island, West Nusa Tenggara

Mercy Corps Indonesia



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Summary of Findings

01

Summary of Findings

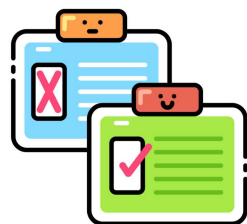
Impact Assessment of Mercy Corps AgriFin Mobile Program: Agriculture Financing Model for Corn Farmers in Sumbawa Island, West Nusa Tenggara

Underlying Hypothesis



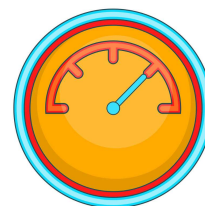
- Farmers who have been in the model for more cycles should have better performance across all the categories in the impact assessment.

Tested using Impact Assessment



- **Impact Assessment** by interviewing over 250 corn farmers across three districts in NTB.
- **Field qualitative assessment** to complement survey results

Impact on Key Indicators



- Contextual Information
- Business Model
- Economic
- Gender Equality

Actual Results




























- Farmer's productivity have slightly increased but lower gross margins due to lower corn market price.
- Modest differences between farmer's in the model and control group.
- Training penetration and socialization is still low.

“Smallholder farmers that has been involved in more Agriculture Financing Model in NTB for more cycles would have greater access to products and services that Agriculture Financing Model provides that will lead to an improvement in their overall livelihood.”

Summary of Findings

Main findings in comparison with SIA 2017



Legend:
 Increased from SIA Result 2017
 Decreased from SIA Result 2017
 Similar to SIA Result 2017
 SIA Result 2017

		2 Planting Cycle or More	1 Planting Cycle	Control Group	
Profile and Contextual Information 	Average Corn Production Area (Ha)	 3.17 2.35	 2.91 2.11	 2.50 1.64	Increasing trend of average corn production area compared to the SIA 2017
	Average Land Under Agriculture Financing Model (Ha)	 2.04 1.63	 1.71 1.41	 0 0	2 Planting Cycles or More Group have a larger average land under Agriculture Financing Model
	Amount of Seed Used (kg/ha)	 19.88 20.8	 20.98 20.2	 21.47 20.1	Seed usage fairly similar for all groups. However, the control group farmers tend to use more seeds
ADB (Growing Protocol) 	Access to ADB (Yes)	 55% 68%	 41% 44%	 4% 12%	Lower rates of access to ADB for all three groups compared to SIA 2017
	Training to ADB (Yes)	 38% 46%	 22% 20%	 0% 0%	ADB Training penetration is still low, 2 Planting Cycles or More Group have a lower rate compared to SIA 2017
Cost 	Average Fertilizer Cost (in million IDR)	 1.83 1.75	 1.94 1.41	 1.93 1.39	Farmers increase their spending on fertilizers across the three groups

Summary of Findings

Main findings in comparison with SIA 2017

Legend:
 ↑ Increased from SIA Result 2017
 ↓ Decreased from SIA Result 2017
 ↔ Similar to SIA Result 2017
 ■ SIA Result 2017


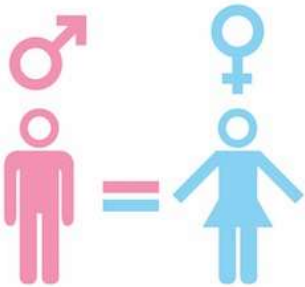
		2 Planting Cycle or More	1 Planting Cycle	Control Group	
Finance and Insurance 	Access to Finance (Main Source)	↔ 100% ■ 100%	↔ 100% ■ 100%	↔ 58% ■ 58%	There is no change in access to finance rate compared to SIA 2017
	Socialisation of Access to Finance	YES ↑ 22% ■ 15%	NO ↓ 78% ■ 84%		More farmers joined the socialisation of Access to Finance even though the rate is still fairly low.
	Financial Literacy Training	YES ↓ 6% ■ 14%	NO ↑ 94% ■ 86%		Less farmers are able to join financial literacy training this year
	Access to Crop Insurance	↓ 68% ■ 80%	↓ 60% ■ 86%	↑ 4% ■ 2%	This year, less Agriculture Financing Model Farmers claim to have access to crop insurance.
Harvest 	Yield (Tons)	↑ 7.19 ■ 6.93	↑ 6.95 ■ 6.33	↑ 7.01 ■ 6.22	All farmers across three groups have better yields this year.
	Average Price (IDR/Kg)	↓ 2,964 ■ 3,420	↓ 2,933 ■ 3,439	↓ 2,979 ■ 3,396	The market price for corn this year is much lower as farmers obtained an average price of < IDR 3,000

Summary of Findings

Main findings in comparison with SIA 2017

Legend:

- ↑ Increased from SIA Result 2017
- ↓ Decreased from SIA Result 2017
- ↔ Similar to SIA Result 2017
- SIA Result 2017

		2 Planting Cycle or More	1 Planting Cycle	Control Group	
Economic 	Average Revenue (in million IDR)	↓ 21.4 23.8	↓ 20.4 21.9	↓ 20.7 21.2	The farm revenue is lower this year due to lower market price of corn
	Average Cost (in million IDR)	↑ 9.7 8.9	↑ 10.4 8.9	↑ 9.7 8.5	A slight increase in cost across all three groups compared to last year.
	Gross Margin (in million IDR)	↓ 11.8 14.9	↓ 10.0 13.0	↓ 11.0 12.7	This year, the gross margin is lower due to corn market price; however 2 Planting Cycle farmers still have the highest gross margin
Gender Equality 	Women Influence in Deciding Corn Farming Profession	97%	98%	96%	Women has a strong influence in deciding corn farming as a profession in the farmer household
	Women Ownership in Major Asset (Yes)	27%	27%	35%	Women generally still have a lower rate of major assets ownership in the household
	Decision Maker in Obtaining and Usage of Loans (Both & Wife)	92%	85%	79%	Women have an important role in deciding and utilising their household loans



Introduction

02

AgriFin Mobile Program

Context



Agri-Fin Mobile



Goals:

The AgriFin Mobile Program aims to achieve increased food and livelihood security of male and female smallholder farmers as a result of accessing bundled rural advisory services (RAS) and financial services through mobile technology platforms.

The Objectives of the AgriFin Mobile Program

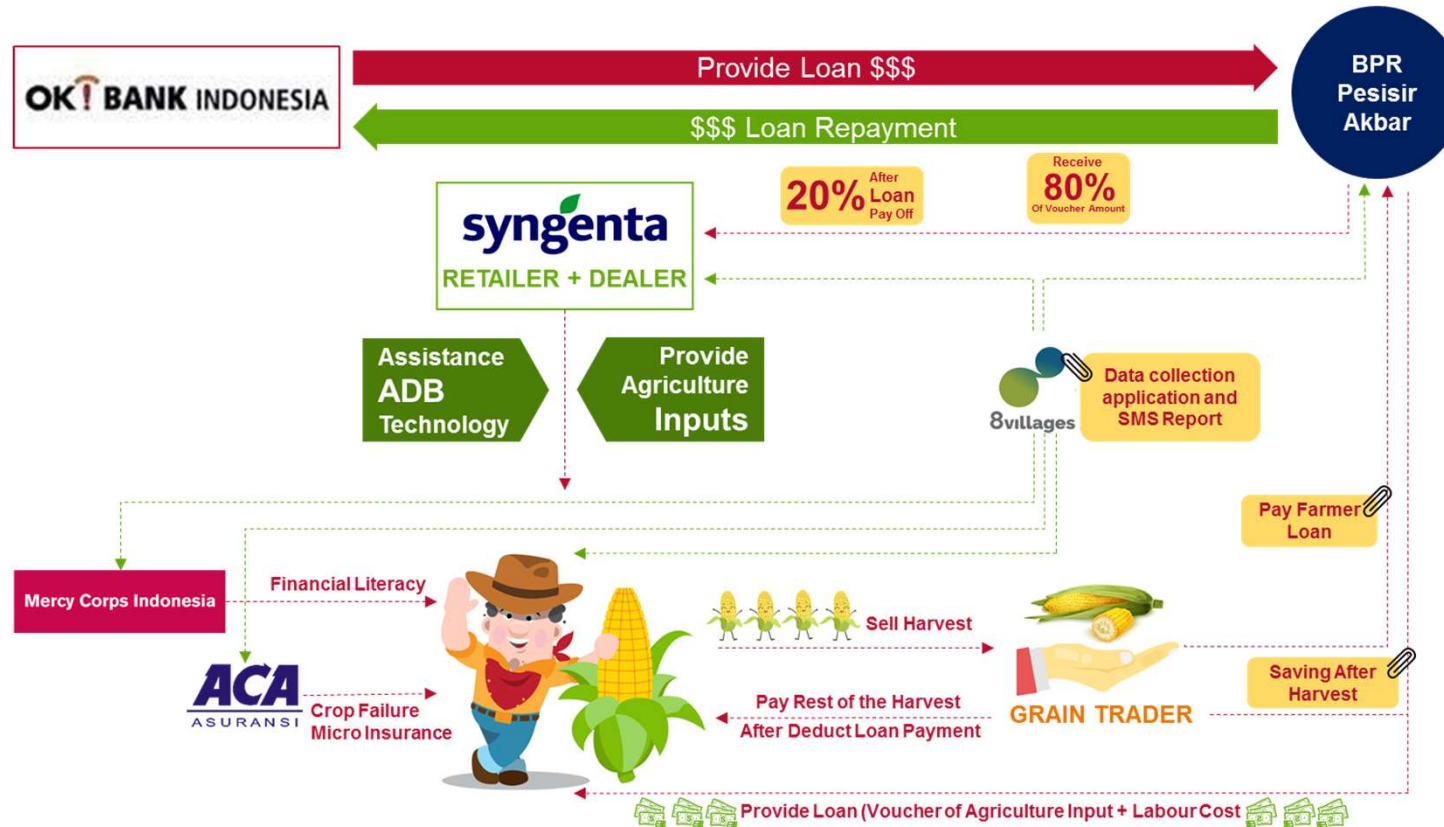
Sustainable and scalable business models for the delivery of bundled RAS and financial services are established.

Male and female smallholder farmers have access to, and make accurate use of RAS and financial services.

Knowledge of business models, services and products is captured and shared widely to influence policy, share learning and enable replication.

Agriculture Financing Model (*Model Pembiayaan Pertanian*)

Description of the Agriculture Financing Model in West Nusa Tenggara, Indonesia



The business model of the Agriculture Financing Model:

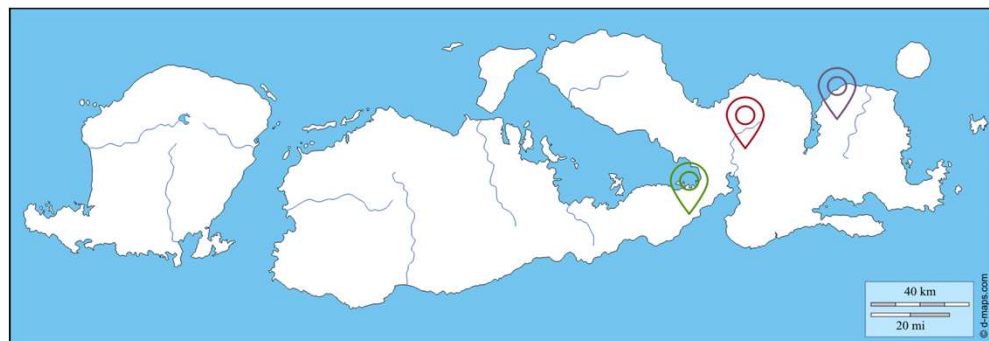
- Microfinance loan of IDR 10 million/hectare, in the form of a package of agriculture inputs (high quality seeds and pesticides) and cash money.
- Financial literacy module and training.
- Access and Training on Syngenta's Start it Right (Awali Dengan Benar).
- Agricultural insurance if the farmer experiences crop failure from 75% due to drought or cyclone.
- Access to interactive SMS based information.
- Farmer Groups.
- Linkages to Guaranteed Off-takers (Grain Traders).

INNOVATIVE FINANCE FOR CORN FARMERS IN BIMA, DOMPU AND SUMBAWA DISTRICT.

The Agriculture Financing Model takes a user-centered approach to provide smallholders farmers with agriculture inputs and financial products. The model works with different partner such as OK Bank Indonesia, BPR Pesisir Akbar (rural bank), ACA Insurance, 8villages and Syngenta.


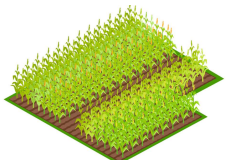


Agriculture Financing Model in West Nusa Tenggara

Model Progress throughout the years



Current Locations in West Nusa Tenggara:

-  **Bima**
-  **Dompu**
-  **Sumbawa**

	Phase 1	Phase 2	Phase 3	Phase 4 (Targeted)
 Number of Farmers	194 Farmers	642 Farmers	805 Farmers	1,228 Farmers
 Land Coverage	385 Ha	1,202 Ha	1,546 Ha	2,350 Ha
 Yield Increase	20%	~10%	~10%	~10%
 Geographical Coverage	Bima, Dompu	Bima, Dompu	Bima, Dompu, Sumbawa	Bima, Dompu, Sumbawa

Impact Assessment Objectives

Purpose of conducting an impact assessment on the corn farmers in NTB

Mercy Corps Indonesia



- **Mercy Corps Indonesia** has been leading the Agriculture Financing Model in Sumbawa Island, West Nusa Tenggara Province; An initiative that aims to increased food and livelihood security of smallholders farmers.
- **Mercy Corps Indonesia** wishes to assess **the social impact assessment of the Agriculture Financing Model on smallholders corn farmers**. This is as a follow-up impact assessment to see the progress of the model after Phase 4.
- This year assessment was based on a similar hypothesis with a greater focus on Farmer's contextual information, business model and overall livelihood.
- **Hypothesis:** "Smallholder farmers that has been involved in more cycles of Agriculture Financing Model would have greater access to products and services that the model provides will lead to an improvement in their overall livelihood."
- The objectives of the Social Impact Assessment (**SIA**):
 1. To understand how farmers has benefited from the Agriculture Financing Model and potential model improvement needed.
 2. To assess farmer's overall economic livelihood conditions and improvements.

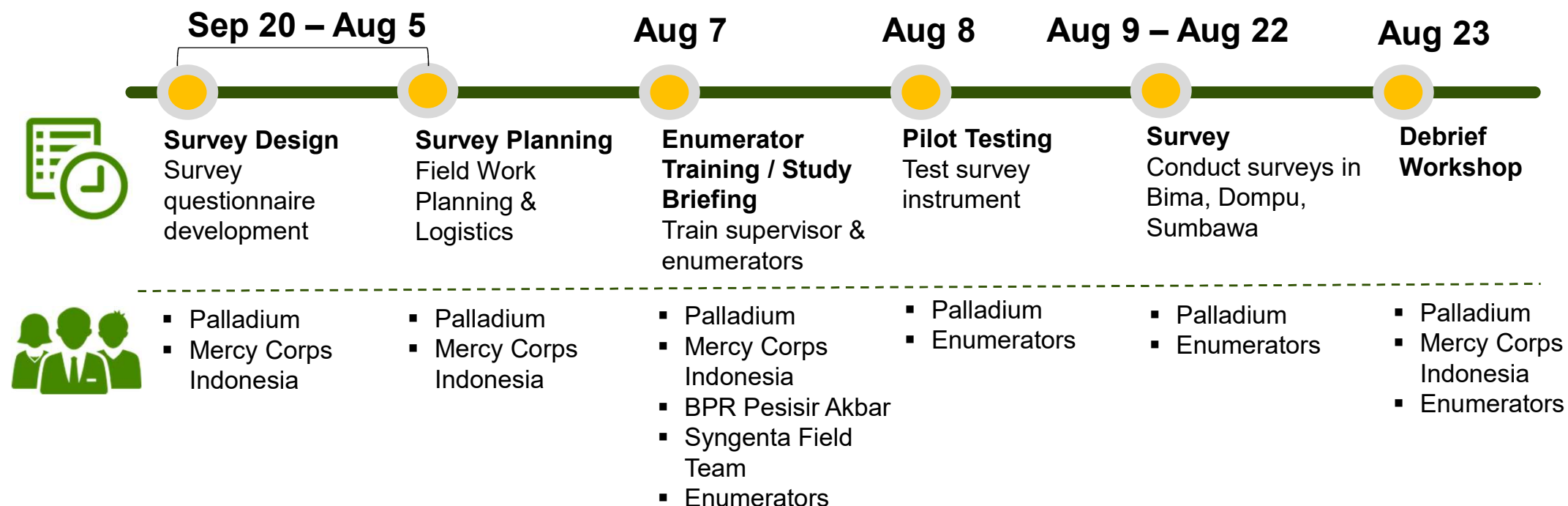


Methodology

03

Impact Assessment Schedule

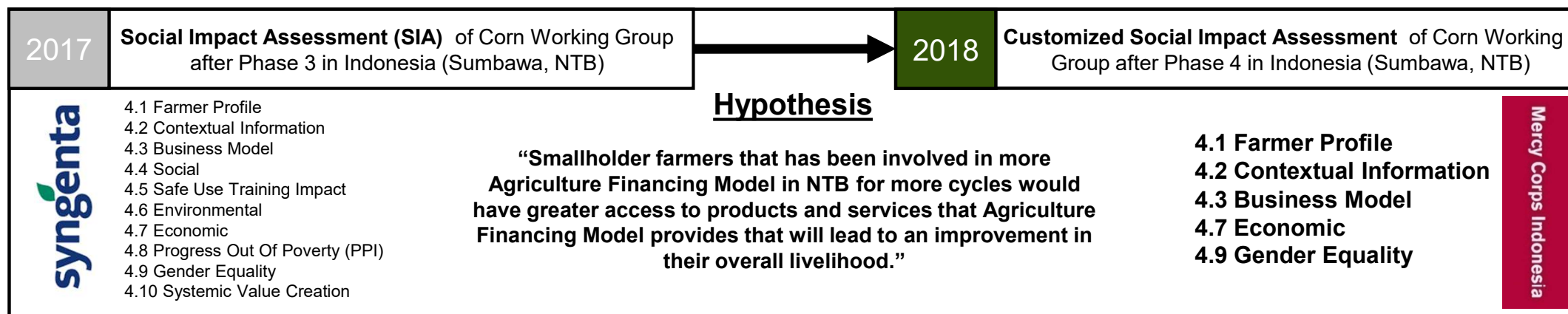
Overview of the Key Dates



- Survey questionnaire was collectively designed by Mercy Corps Indonesia and Palladium. It was based on the Social Impact Assessment (SIA) questionnaire that was conducted last year.
- The milestone dates of the impact assessment are shown above. The start date of the survey was slightly delayed because of the Lombok Earthquake on August 6, 2018 which cause some travel delays for the Palladium team.
- Overall, the Enumerators conducted 254 interviews in 14 working days.
- Because of another earthquake in Lombok and NTB area, the survey debriefing was conducted via conference call with each enumerators.

Survey Questionnaire

Questionnaire was enhanced and focused on the 5 categories from the Social Impact Assessment last year while keeping the same overlying hypothesis



Category	Sample Components	Sample Questions
Farmer Profile & Contextual Information	<ul style="list-style-type: none"> ▪ Farmer Demographic Information ▪ Land Ownership ▪ Planting and Harvesting Information ▪ Type of Crops Planted 	<ul style="list-style-type: none"> ▪ How long have you planted corn? ▪ Month of planting cycle? ▪ What is the land ownership status? ▪ What other crops do you plant besides corn? ▪ How many kg of seed/ha have you planted in last production cycle? ▪ What is the type and the variety of seed that you use?
Business Model	<ul style="list-style-type: none"> ▪ Access to Growing Protocol ▪ Access to Safe use training? ▪ Fertilizer Information ▪ Access to Finance ▪ Access to Financial Literacy Training ▪ Access to Crop Insurance 	<ul style="list-style-type: none"> ▪ Do you have access to a growing protocol or Awali Dengan Benar (ADB)? ▪ Do you remember that you ever had training on safe used pesticides? ▪ How many times do you fertilized the corn per season? ▪ Do you have access to finance? ▪ Did you participate in the financial literacy training? ▪ Do you have access to crop insurance?
Economic	<ul style="list-style-type: none"> ▪ Productivity (Yield, Price) ▪ Quality of Crops ▪ Production Cost (Labor & Inputs Cost) 	<ul style="list-style-type: none"> ▪ How many kilograms of corn did you produce in the last harvest? ▪ How would you rate the quality of your crops? ▪ What is the breakdown of your labor and input cost?
Gender Equality	<ul style="list-style-type: none"> ▪ Access to government and other extensions ▪ Women role in household ▪ Women influences in society 	<ul style="list-style-type: none"> ▪ Do you think that you are treated equally in getting access to government and other extensions compared with the opposite gender? ▪ What roles does the women play in the household?

Enumerator Training & Survey Implementation

Details of the Enumerator Training & Survey Implementation

August
7

Date:
August 7th, 2018

Time:
09:30 – 16:30



Location:
Hotel Marina Bima
Jl. ST.Kaharudin No. 4,
Tanjung, Rasanæ Bar.,
Bima, NTB. 84118



Agenda:

- Model Explanation
- Enumerator Training
- Questionnaire Review
- Assessment Schedule
- Q&A

Survey Instrument



Dooblo SurveyToGo platform was utilized to collect and generate data from farmers. Tablets will be used to input data to ensure timely and accurate entry.



Team

Field Supervisor
Supervisor &
Enumerator

Enumerator 1

Enumerator 2

Enumerator 3

Enumerator 4

An experienced team consisting of a field supervisor and 4 enumerators was engaged to conduct interviews in Bima, Dompu and Sumbawa.

Targets

250

Target number of farmers to be interviewed

3

Total weeks of data collection period

4 - 5

Approximate number of interviews per day per enumerator

- A 1-day enumerator training/survey briefing was conducted in Hotel Marina Bima on August 7th, 2018.
- It was attended by 1 Syngenta Field Team, 1 Field Supervisor and 4 Enumerators and facilitated by two Palladium Consultants.
- The objective of the session was to familiarize the enumerators on the Agriculture Financing Model in Sumbawa.

Survey Locations

Main Sub-districts in Bima, Dompu and Sumbawa

Kabupaten Bima:

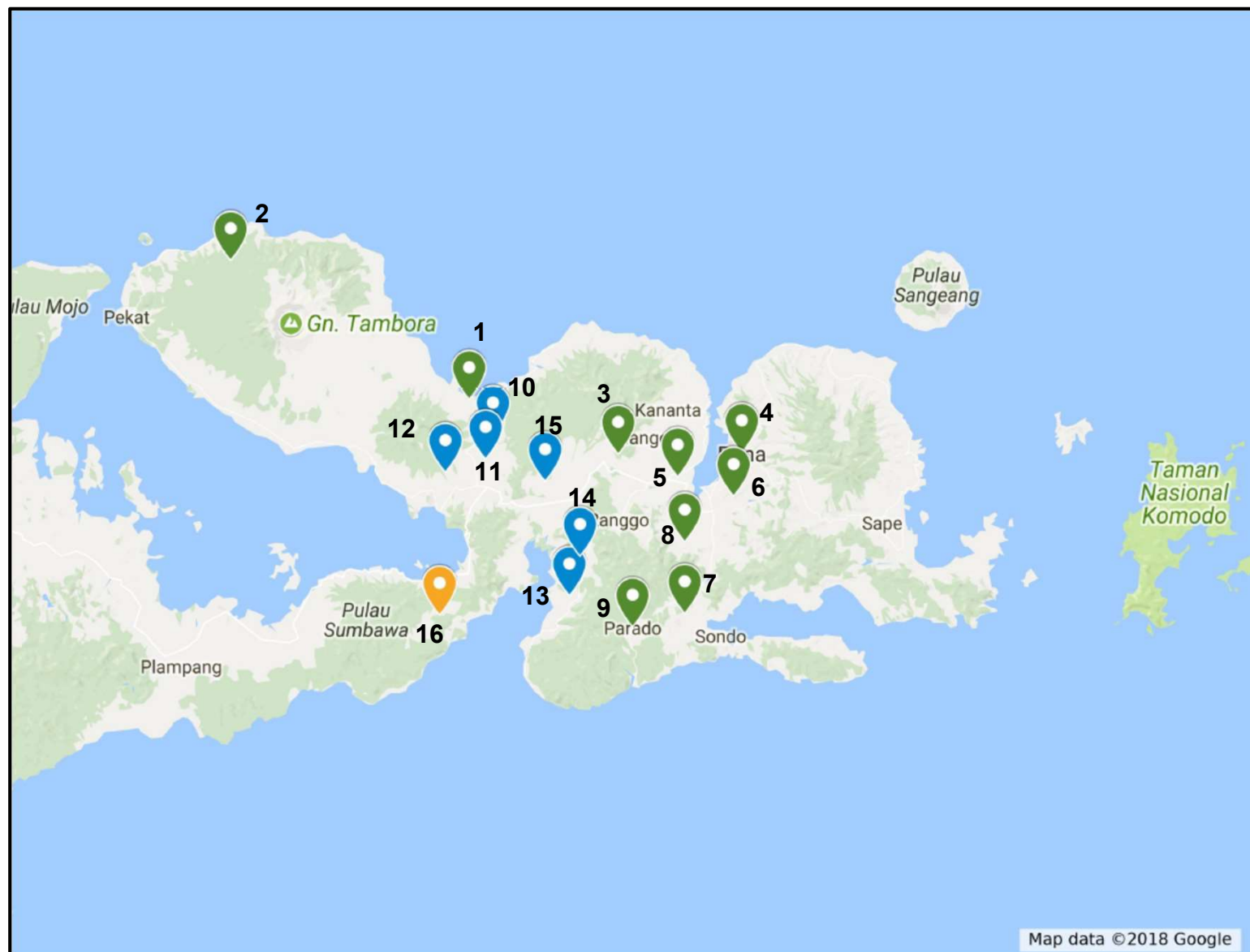
- 1 Sanggar (Bima)
- 2 Tambora (Bima)
- 3 Donggo (Bima)
- 4 Kota Bima (Bima)
- 5 Bolo (Bima)
- 6 Palibelo (Bima)
- 7 Monta (Bima)
- 8 Woha (Bima)
- 9 Parado (Bima)

Kabupaten Dompu:

- 10 Kilo (Dompu)
- 11 Manggelewa (Dompu)
- 12 Kempo (Dompu)
- 13 Hu'u (Dompu)
- 14 Pajo (Dompu)
- 15 Woja (Dompu)

Kabupaten Sumbawa:

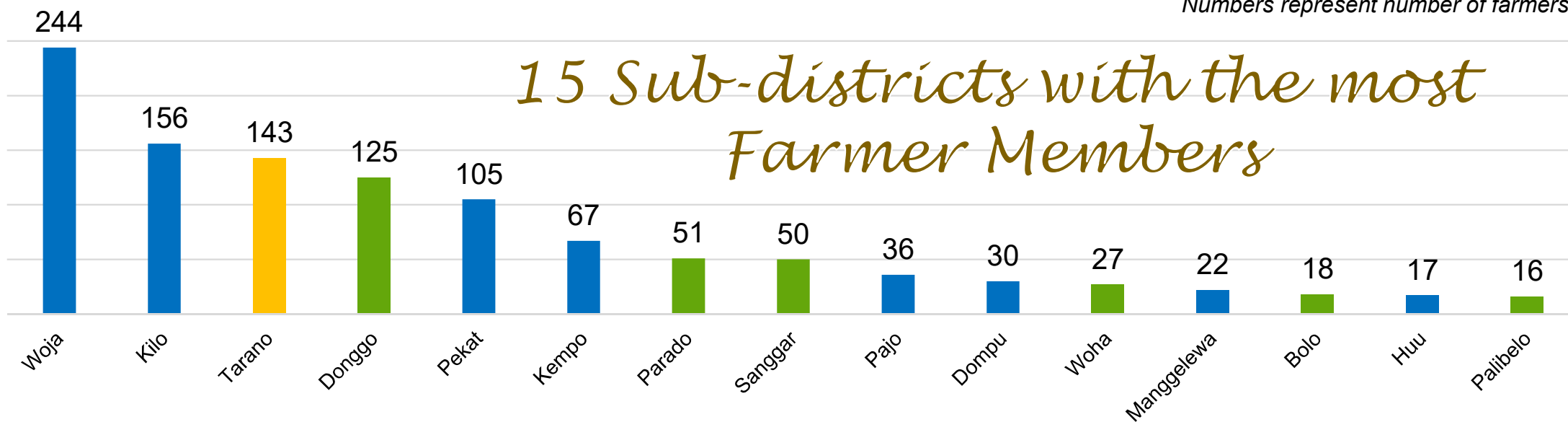
- 16 Torano (Sumbawa)



Survey Locations

Main Sub-districts in Bima, Dompu and Sumbawa

Numbers represent number of farmers



15 Sub-districts with the most Farmer Members

Bima		Dompu		Sumbawa	
1. Donggo	1. Woja				
2. Parado	2. Kilo				
3. Sanggar	3. Pekat				
4. Bolo	4. Kempo			1. Tarano	
5. Palibelo (Pilot)	5. Pajo				
6. Woha (Pilot)	6. Dompu				
	7. Manggelewa				
	8. Hu'u				

Based on the sub-districts with the most farmer members and upon consultation with the PISAgrO and Syngenta field team, the bolded sub-districts above were selected for the pilot and main survey

Pilot Survey

One day pilot was conducted to test the survey questionnaire

Objective

Conducted 10 pilot interviews to test survey instruments (tablets, software, questionnaires) for the purpose of improving the survey based on feedback from farmers and field observations.

Sampling Methodology:

- Both locations were chosen because they were close to the Marina Hotel.
- Samples were taken randomly based on farmer borrowers and gender.



Enumerator interviewing a corn farmer in Risa Village, Woha sub-district in Bima

August

8

Date:

August 8th, 2018

Time:

09:30 – 16:30



Locations:

- Woha, Bima (5 Interviews)
- Palibelo, Bima (5 Interviews)



Palladium Consultant with local farmers and a community leader in Ragi Village, Palibelo sub-district after the pilot interviews in the area

Pilot Outcomes:

- Enumerators were received in the community well. Farmers were more than willing to contribute through the survey.
- The language of the questions were further specified/modified to ensure that farmers accurately answer the questions.
- Some question answers were modified to include popular choices.
- Some farmers were not aware / do not remember the products they used. Therefore, for the main survey implementation, pictures of the products were provided to assist the enumerators.

Sampling Methodology

Number of Samples (Farmers Interviewed)

*sub-districts and figures for each survey segmentation was determined based on the number of farmer members in Phase 4 of the Agriculture Financing Model.

Category	Details / Numbers*																	
Total Farmers to be Interviewed	250 Farmers																	
Kabupaten (District)	Bima						Dompu						Sumbawa					
Total Sub-districts (database)	4 Sub-districts						5 Sub-districts						1 Sub-district					
Representative Farmers	62						147						41					
Selected Sub-districts	Donggo, Sanggar, Bolo, Woha						Kilo, Pajo, Woja, Kempo, Manggalewa, Pajo						Torano					
Gender (Male - 75%, Female - 25%)	47			15			109			38			31			10		
Groups (2 or more planting season – 30%, 1 planting season – 50%, control group – 20%)	11	25	11	3	7	5	31	56	22	9	21	8	9	15	7	3	5	2

- The target representative farmers in each district are determined based on the number of farmer members in the. Agriculture Financing Model.
- The target percentage of Gender & Groups are the same as the last Social Impact Assessment conducted last year.
- Samples were randomly sampled from the database provided by Bank BPR Pesisir Akbar based on the target survey allocation above.



Main Findings

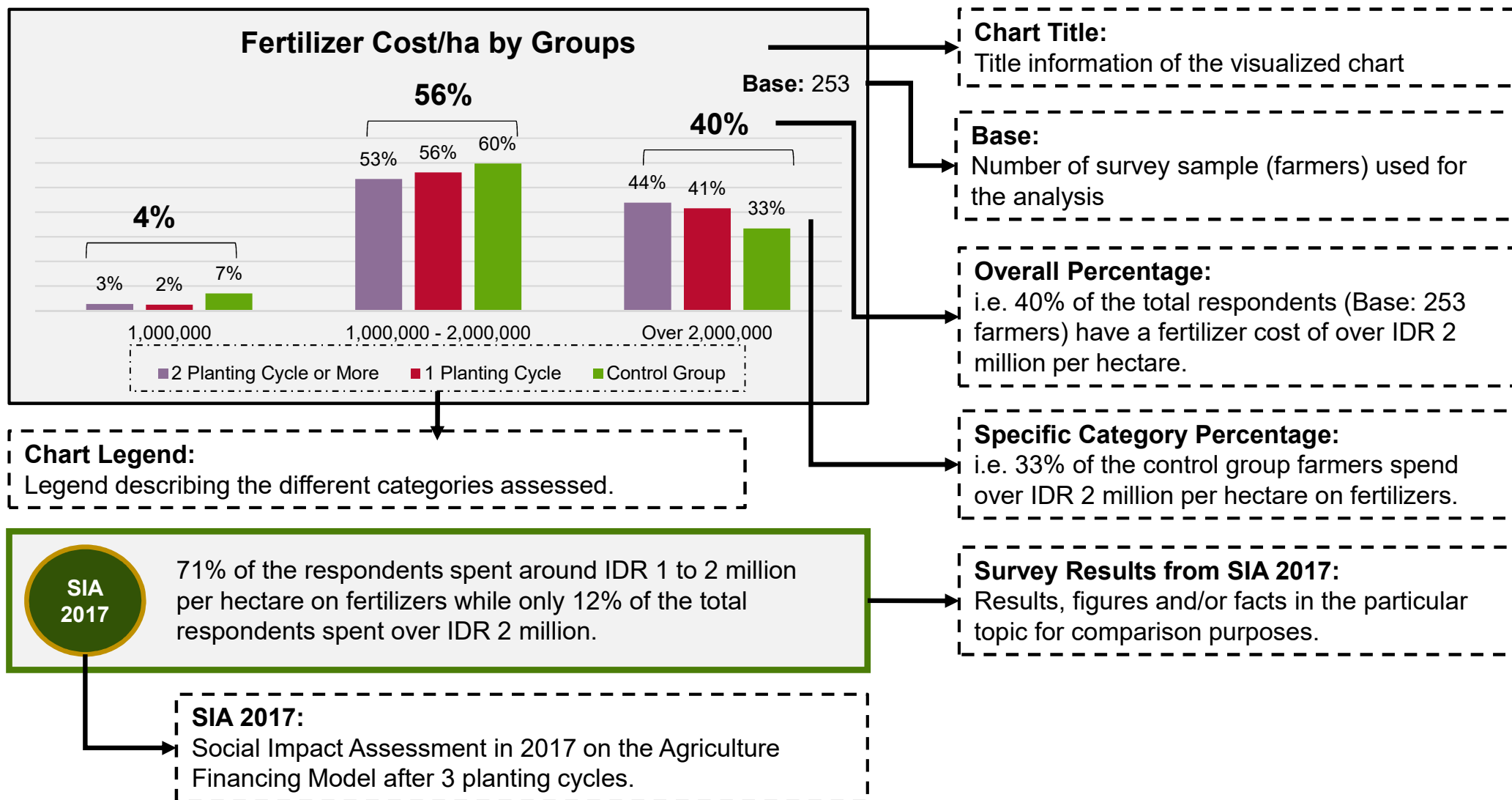
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Main Findings

Legends

EXAMPLE

This section shows a brief description on how to read the analysis in each of the main findings





Main Findings:

4.1 Farmer Profile

4.2 Contextual Information

4.3 Business Model

4.4 Economic

4.5 Gender Equality

4.6 Additional Observations



*“Agriculture is our wisest pursuit,
because it will in the end contribute
most to real wealth, good morals, and
happiness.”*

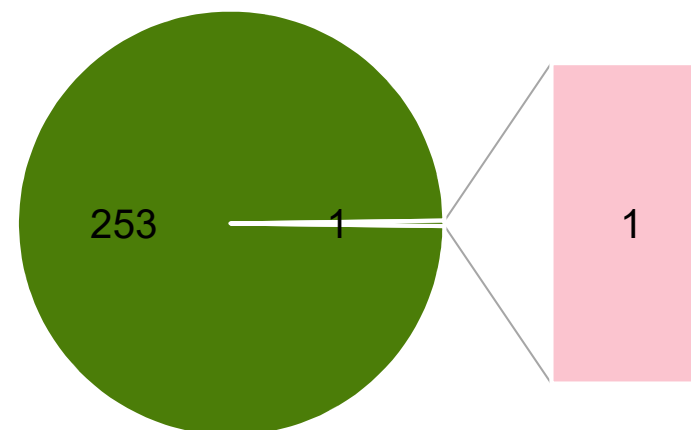
Thomas Jefferson

4.1 Farmer Profile

Survey Respondents



Impact Assessment Survey



■ Analysed ■ Discarded

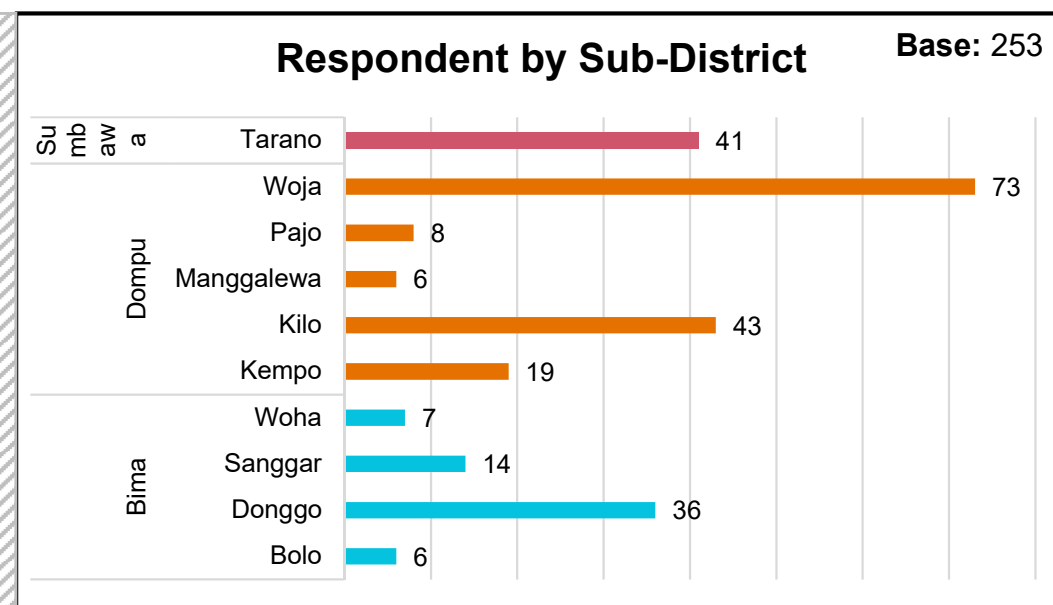
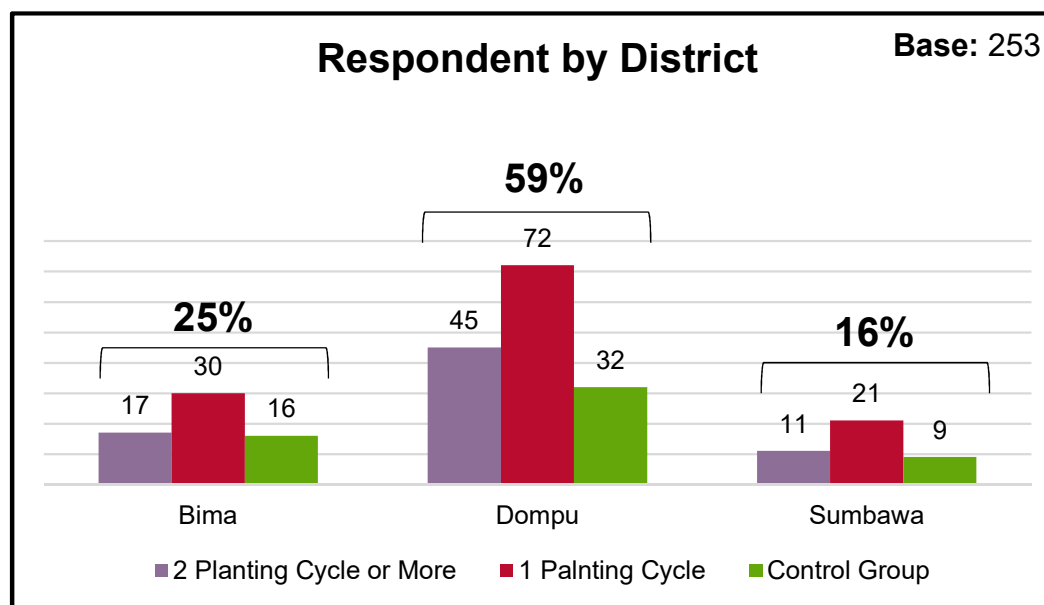
Base: 254

- **254 Corn Farmers** were interviewed by **5 enumerators** across **3 Districts: Bima, Dompu, and Sumbawa.**
- The respondents came from a total of **10 Sub-districts: Bolo, Donggo, Sanggar, Woha, Kempo, Kilo, Manggalewa, Pajo, Woja, and Tarano.**
- **1 survey** was discarded because it was incomplete.
- The pictures on the left are some pictures from the interview process in various villages.

253 surveys were used as the basis for the **2018 Impact Assessment of Mercy Corps AgriFin Mobile Program: Agriculture Financing Model in NTB**

4.1 Farmer Profile

Farmer Locations

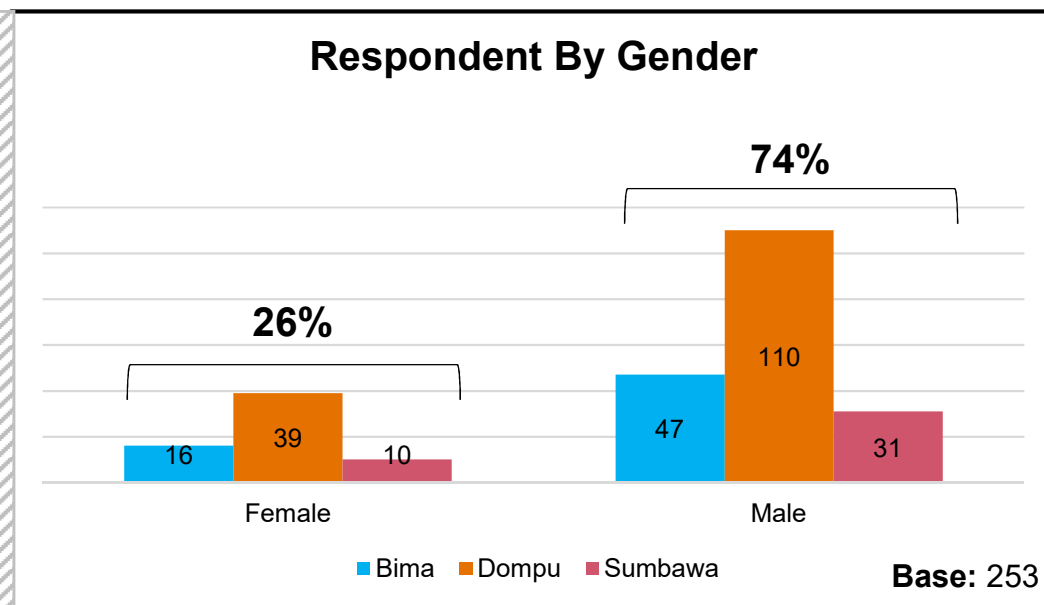
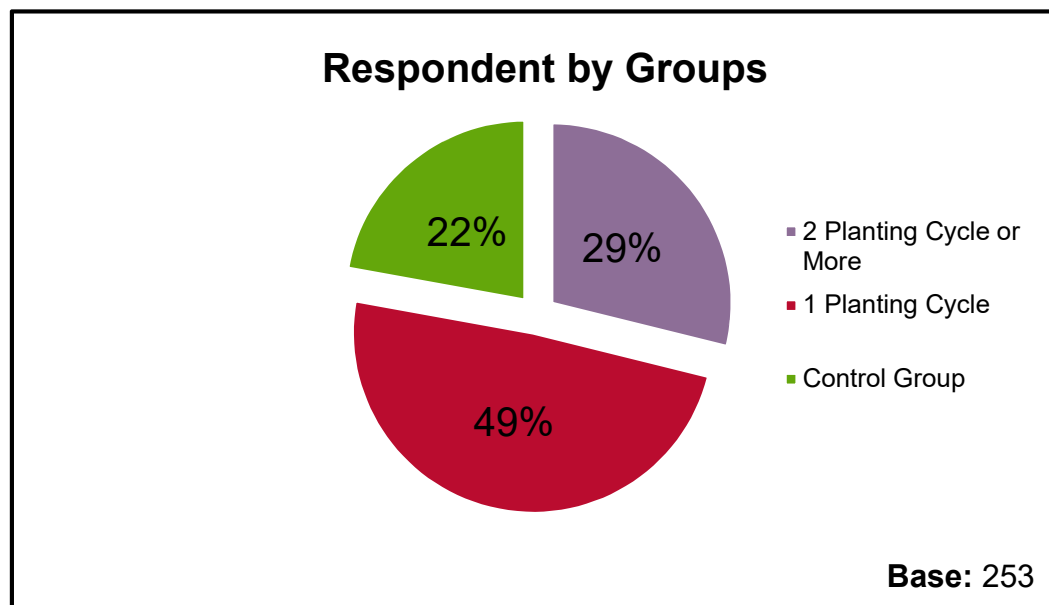


- The target respondents per district were based on the current number of Agriculture Financing Model members in Phase 4.
- The majority of farmers in the Agriculture Financing Model are from Dompu, followed by Bima and Sumbawa. As many as 59% of the respondents are from Dompu, followed by 25% from Bima and the rest from Sumbawa (16%).
- There are an increasing number of farmer members in Sumbawa compared to those in the previous planting cycles as the model keeps expanding the scope of area beyond Dompu and Bima.

- The samples were further segmented into 10 sub-districts and the number of interviewees/ samples per sub-district was targeted to proportionally match the current number of Agriculture Financing Model members in Phase 4.
- Most of the farmers interviewed came from Woja, Dompu as they currently have the most number of farmers registered in the Agriculture Financing Model.
- The number of members in Tarano, Sumbawa has increased quite significantly compared to Phase 3 of the Agriculture Financing Model.

4.1 Farmer Profile

Groups & Gender



Target:
30% (2 Planting Cycle of More), 50% (1 Planting Cycle) and 20% (Control Group)

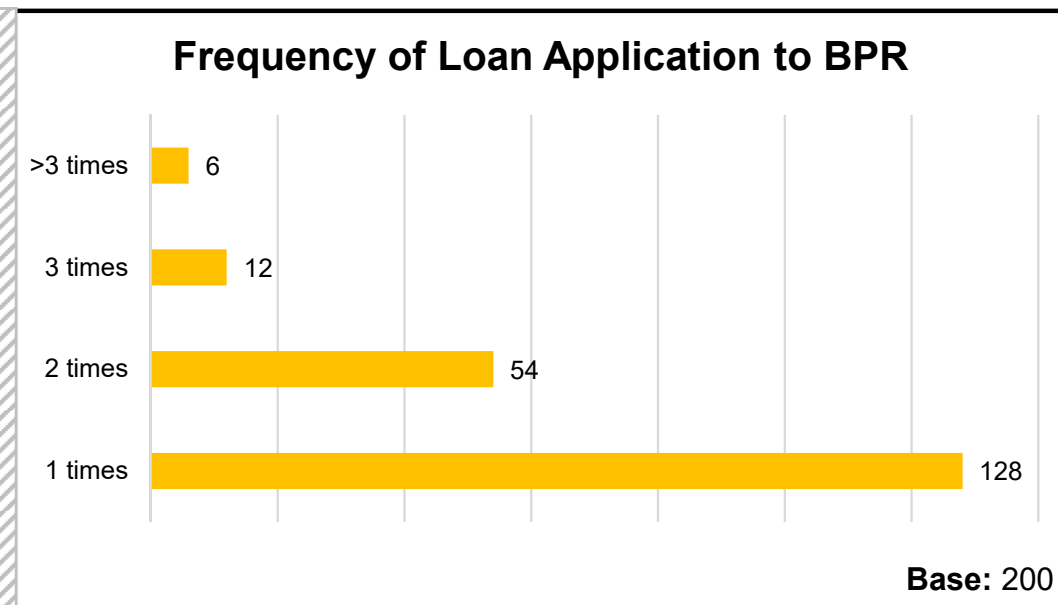
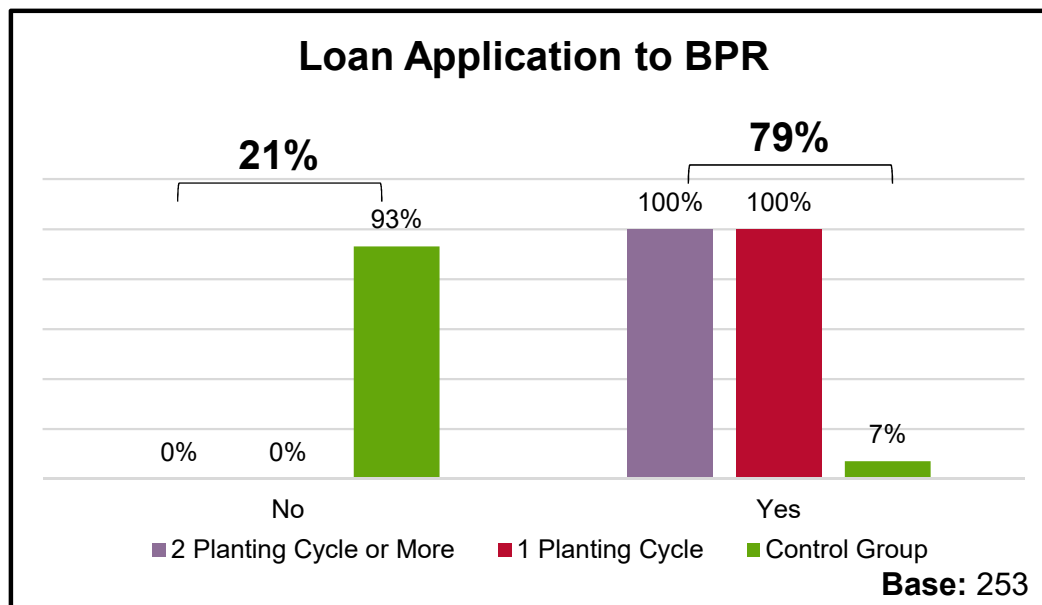
Target:
25% (Female) and 75% (Male)

- The main hypothesis of the survey is to compare the results from farmers in the three main Agriculture Financing Model participation groups.
- The target percentage of respondents for each group was determined prior to the survey implementation and it is the same as last year's social impact assessment survey. The percentage was based on the current number of farmer members in the Agriculture Financing Model in Phase 4.
- Almost half of the respondents have joined the model for 1 planting cycle, followed by 29% of the respondents who have joined the model for 2 planting cycles or more and 22% being control group farmers.

- The samples were also segmented based on their respective gender to evaluate the difference in outcomes between Male farmers and Female farmers.
- The target percentage of respondents for each gender was also predetermined and was based on the current number of Male and Female members in the Agriculture Financing Model.
- As many as 74% of the respondents are Male Farmers while 26% of the respondents are Female Farmers.

4.1 Farmer Profile

Loan Application to Bank BPR Pesisir Akbar

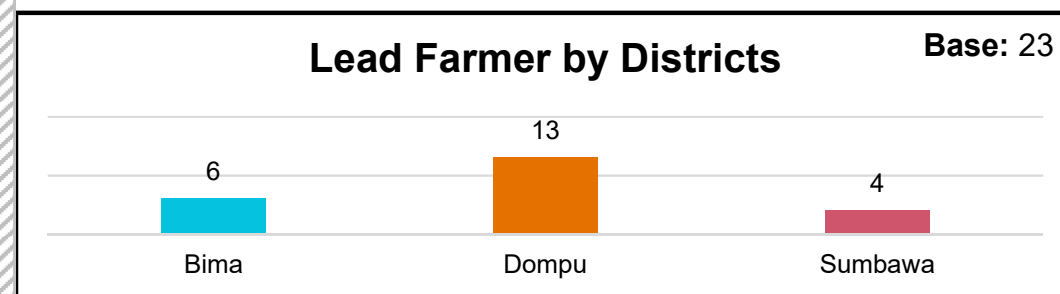
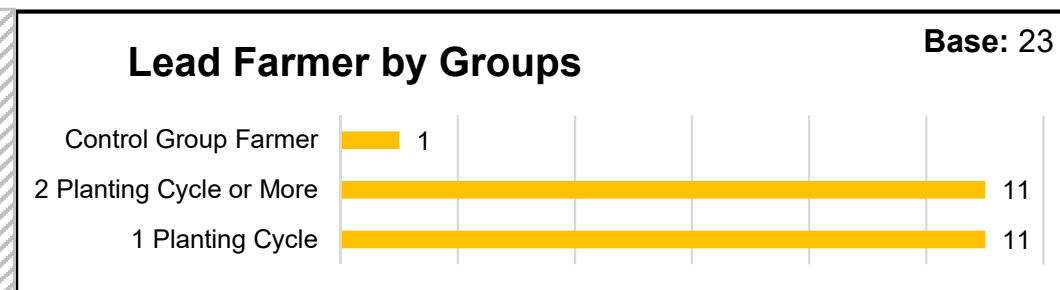
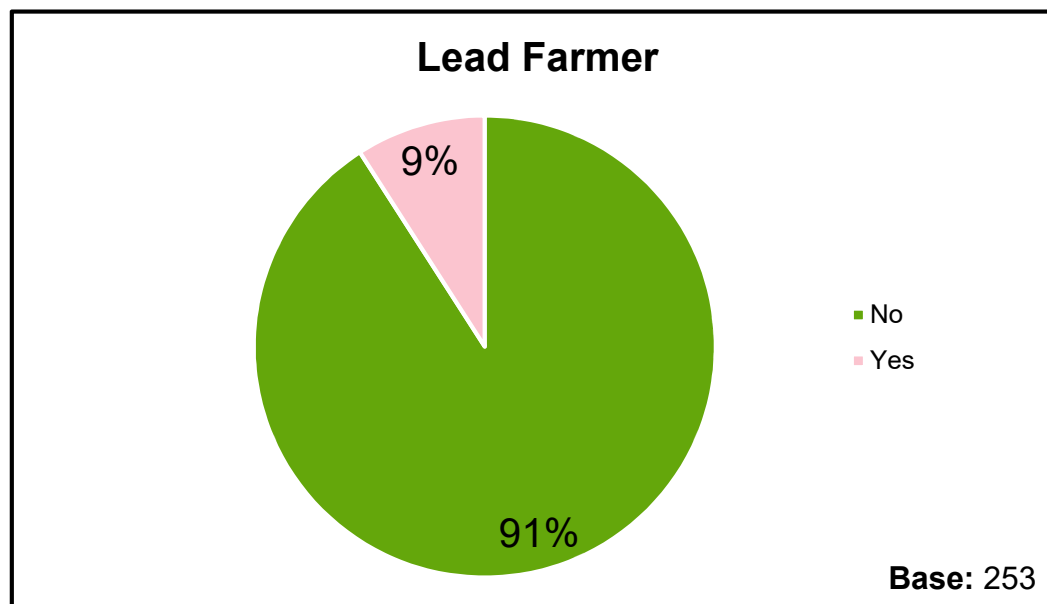


- Bank BPR Pesisir Akbar is the rural bank partner in the Agriculture Financing Model. They are the bank who disburse the loan directly to the farmers in addition to providing services such as socialization and training for the farmer members.
- The majority of the respondents have filed a loan application to Bank BPR Pesisir Akbar as the rural bank in their area.
- All of the farmer respondents that are part of the Agriculture Financing Model acknowledged that they have applied for a loan to BPR.
- A small number of the control group farmers (7%) have applied for a loan to Bank BPR Pesisir Akbar.

- The majority of the respondents have applied for a loan to Bank BPR Pesisir Akbar once (128 respondents).
- The respondents who have applied for a loan to BPR multiple times (2 times, 3 times, and >3 times) are the ones who have joined the Agriculture Financing Model for 2 planting cycles or more.

4.1 Farmer Profile

Lead Farmers



- From last year’s social impact assessment and from field observation, Lead Farmers have better access to services offered by the Agriculture Credit Model and hence have slightly better performance compared to that of their peers.
- About 9% of the respondents from this year’s impact assessment survey are Lead Farmers.
- In this report, we will compare the outcomes of the Lead Farmers to the outcomes of Farmer Members relating to several key categories such as access to training.

- Out of the 9% of Lead Farmers interviewed in the impact assessment, 11 of them have joined the Agriculture Financing Model for 2 planting cycles or more, 11 have joined the model for 1 planting cycle, and 1 Lead Farmer was from the control group.
- The majority of the lead farmers interviewed were from Dompu (13 Lead Farmer respondents), followed by Bima (6 Lead Farmer respondents) and Sumbawa (4 Lead Farmer respondents).



Main Findings:

4.1 Farmer Profile

4.2 Contextual Information

4.3 Business Model

4.4 Economic

4.5 Gender Equality

4.6 Additional Observations



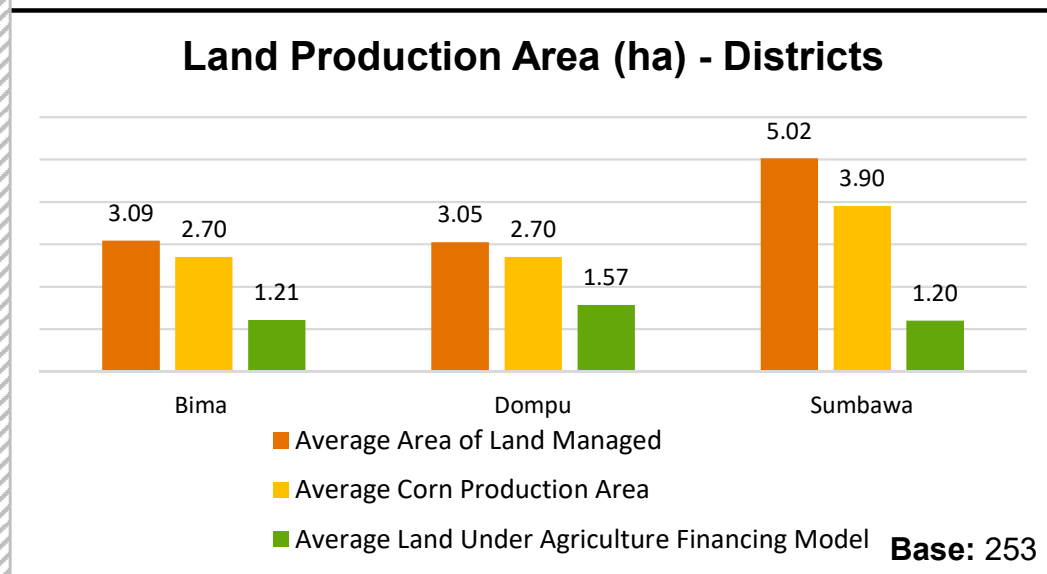
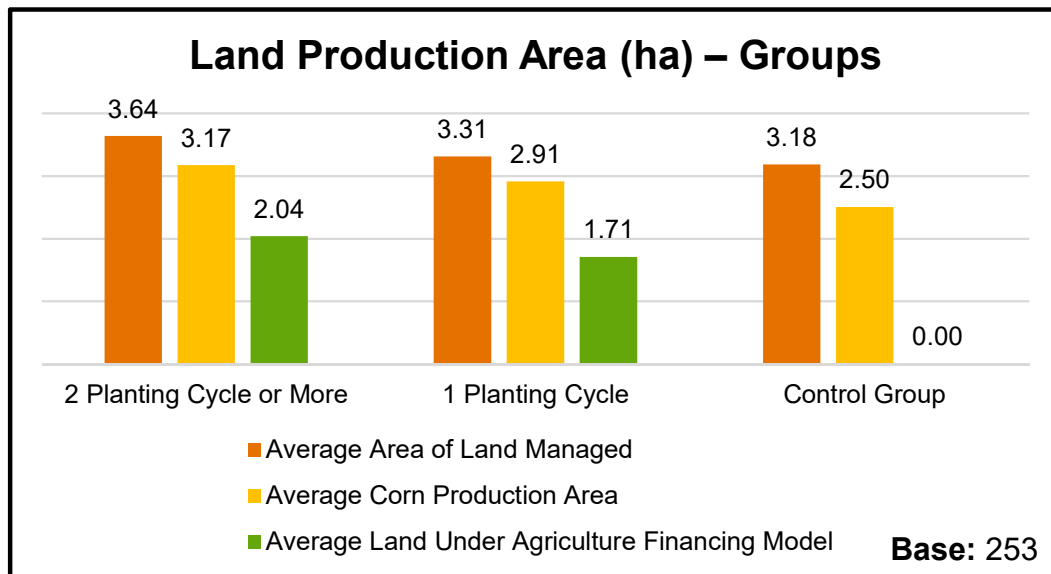
*“Agriculture is the most healthful,
most useful and most noble
employment of man.”*

George Washington

4.2 Contextual Information

Land Information

This section provides information about the average area of land managed across different groups and districts.



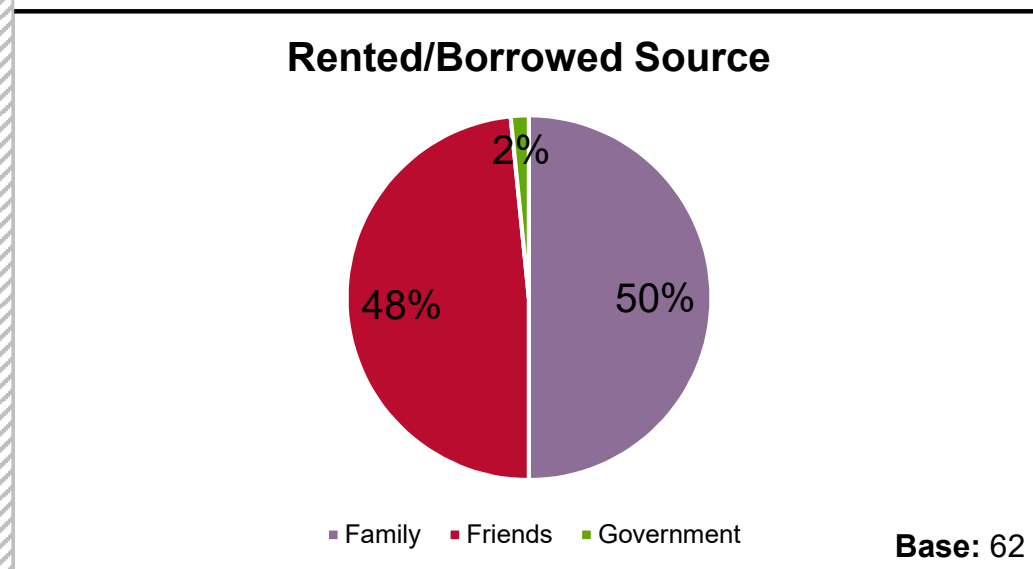
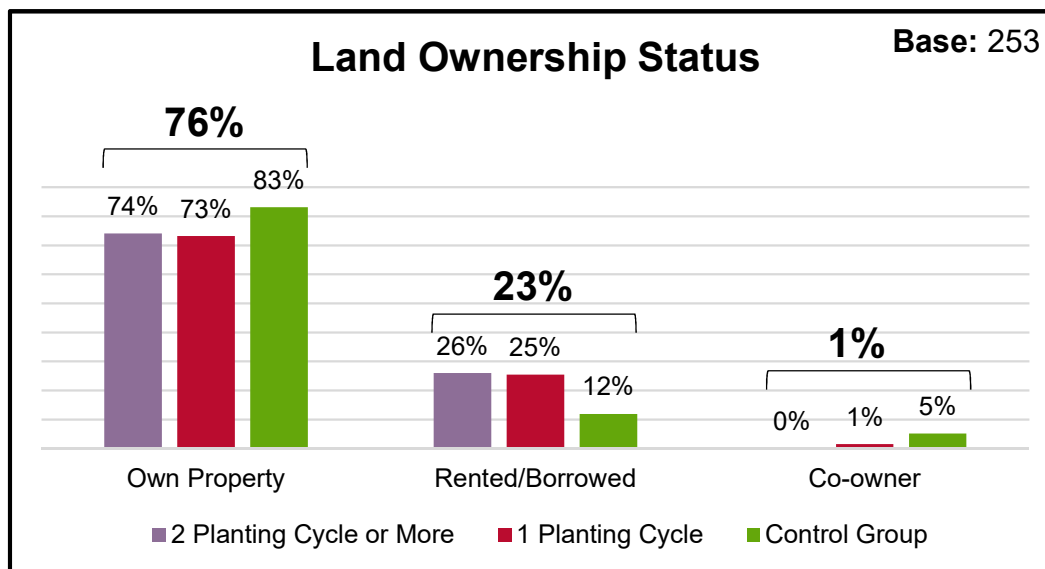
- The respondents were questioned in relation to the total area of land they manage, the total area planted with corn, and the total area that is under the Agriculture Financing Model.
- Of all the three categories, farmers in the 2 planting cycles or more group have a larger average area compared to farmers in the 1 planting cycle group and the control group farmers.
- One potential reason is farmers who have already had access to services offered by the Agriculture Financing Model have been exposed to the value-added services and capital to improve their ability to expand the total land they manage.

- In general, farmers in Bima, Dompu, and Sumbawa have a similar land area under the Agriculture Financing Model. The model limits the area of land for new members to 2 ha per farmer in the beginning to build their credit record first.
- However, in terms of the total area of land managed and the total corn production area, Sumbawa farmers have the highest average compared to farmers in Bima and Dompu.
- Sumbawa respondents had an average of 3.9 ha of corn production area while respondents in Bima and Dompu each have an average of 2.7 ha of corn production area.

4.2 Contextual Information

Land Ownership

This section provides information about land ownership and breakdown.



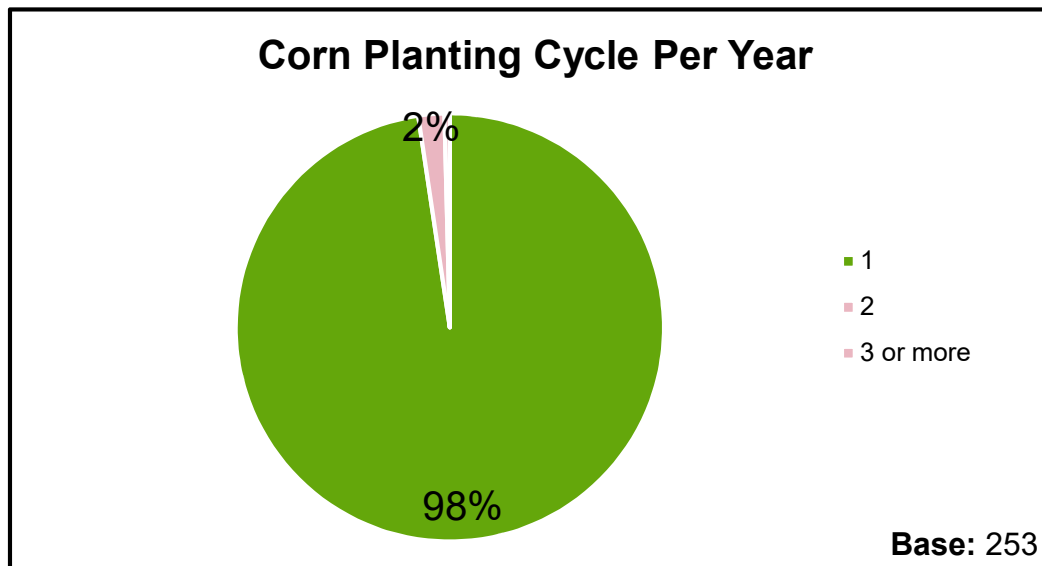
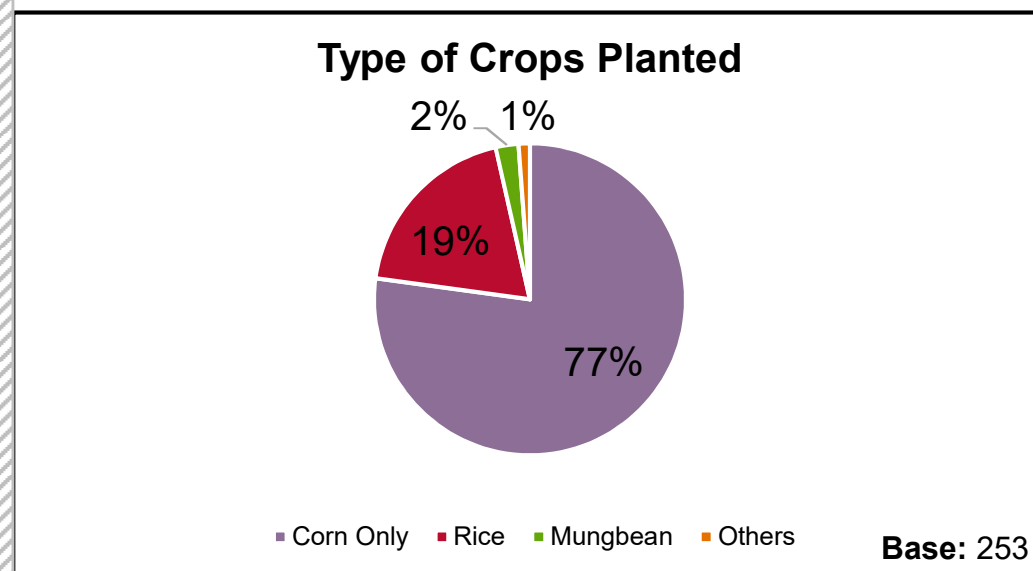
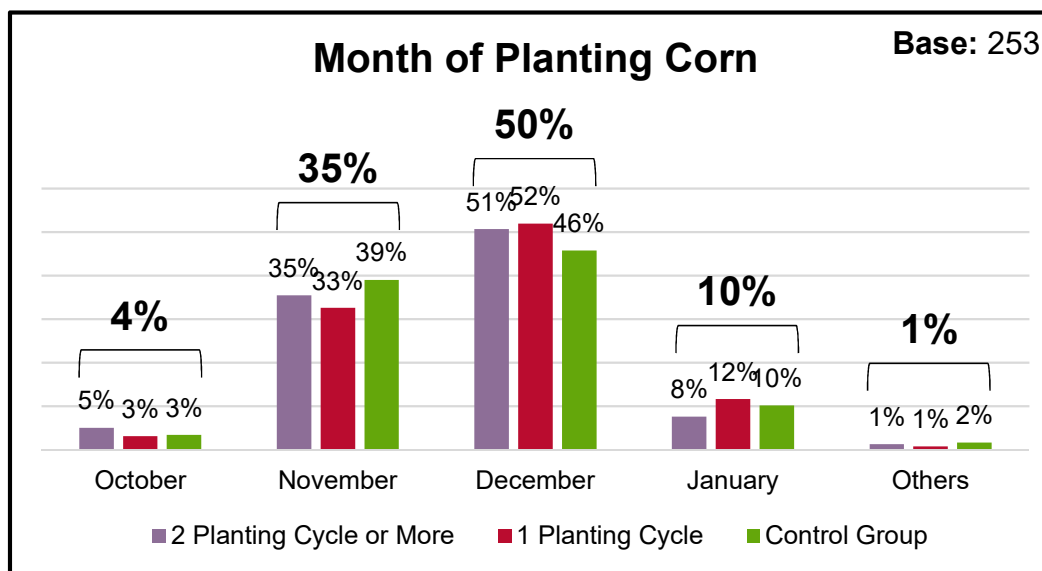
- The question about land ownership allows multiple answers as many farmers in the area either own the land they manage or rent it from family members, friends or other external parties.
- As many as 76% of the total respondents are the owner of the land while a quite significant number of farmers (23%) rent/ borrow the land they manage.
- More control group farmers own their own property as shown on the chart compared to farmers in the Agriculture Financing Model.
- The percentage of land ownership of the 2 planting cycles or more farmers is similar to that of the 1 planting cycle farmers.
- One of the requirements to join the Agriculture Financing Model is to have a Land Certificate that can be shared with up to 3 farmers and will be used as collateral to avoid non-performing loans.

- Out of the 23% of respondents who rent/ borrow their land, most of them obtain the land from family (50%) and friends (48%).
- A small number of respondents who rent/borrow their land obtain the land from the Government.

4.2 Contextual Information

Month of Planting Corn, Planting Cycle and Other Crops Planted

This section provides information about months when corn is most commonly planted, the number of corn planting cycles, and other crops planted.

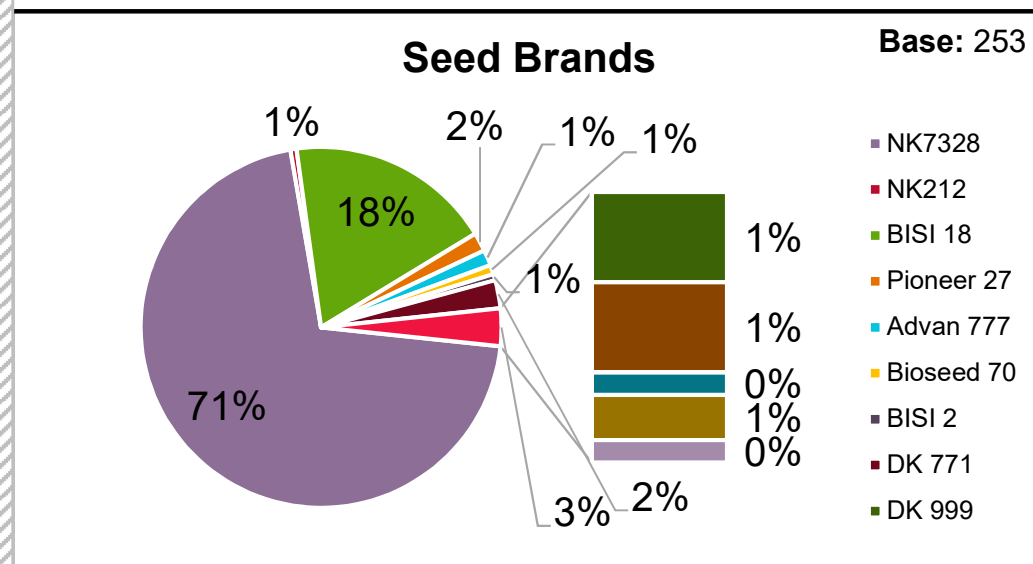
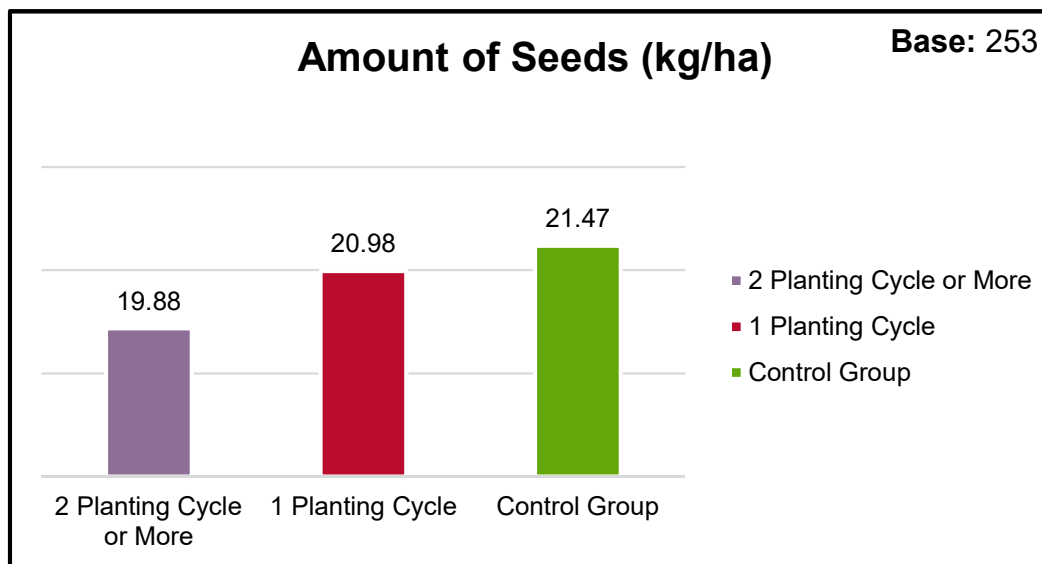


- The month when corn is most commonly planted is December (50% of the respondents), followed by November.
- There are no significant differences in the month when corn is most commonly planted between different groups.
- Farmers are generally aware that good timing to plant their corn is crucial to the success of their corn production. However, many farmers have complained about a delay in the loan disbursement from the bank (January), forcing them to find other capital sources.
- As many as 98% of the respondents have only 1 corn planting cycle per year. The minority who have more than 1 cycle are in Woja & Pajo.
- As many as 77% of the respondents only plant corn. The ones who have other crops plant rice and mung bean, mainly for their own consumption.

4.2 Contextual Information

Seeds

This section provides information about the distribution of the average seed usage, types of seed, and seed brands.



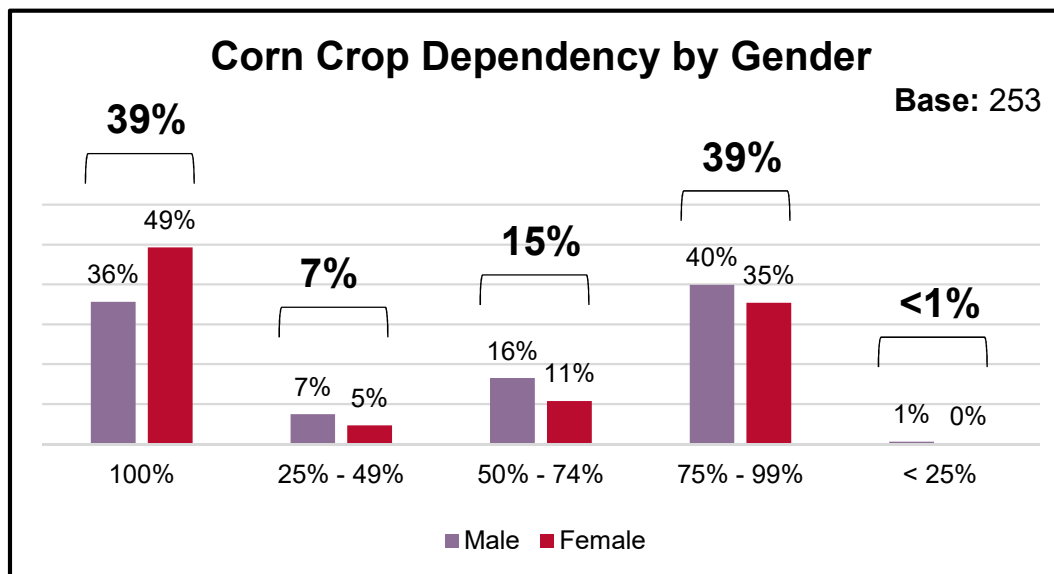
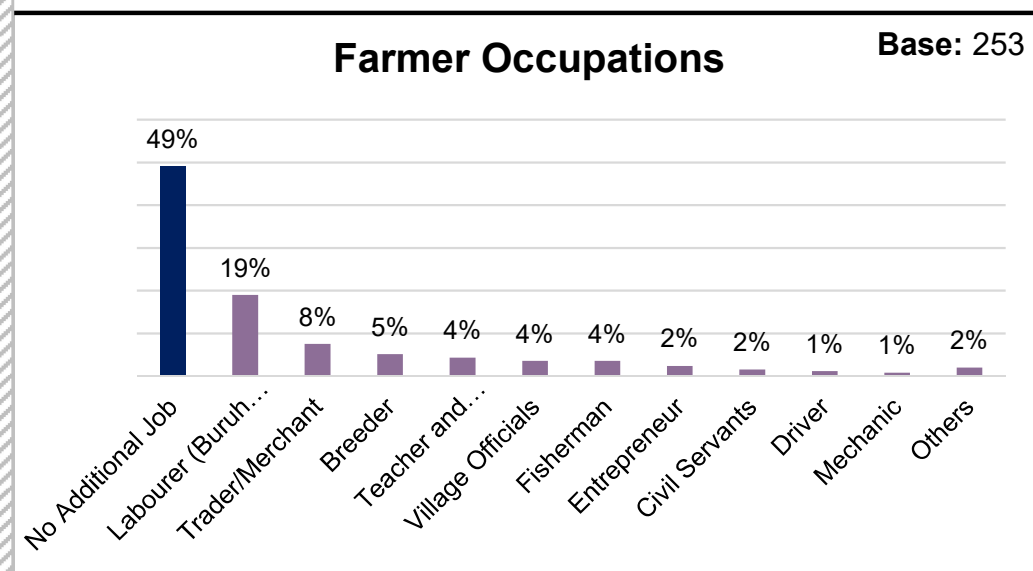
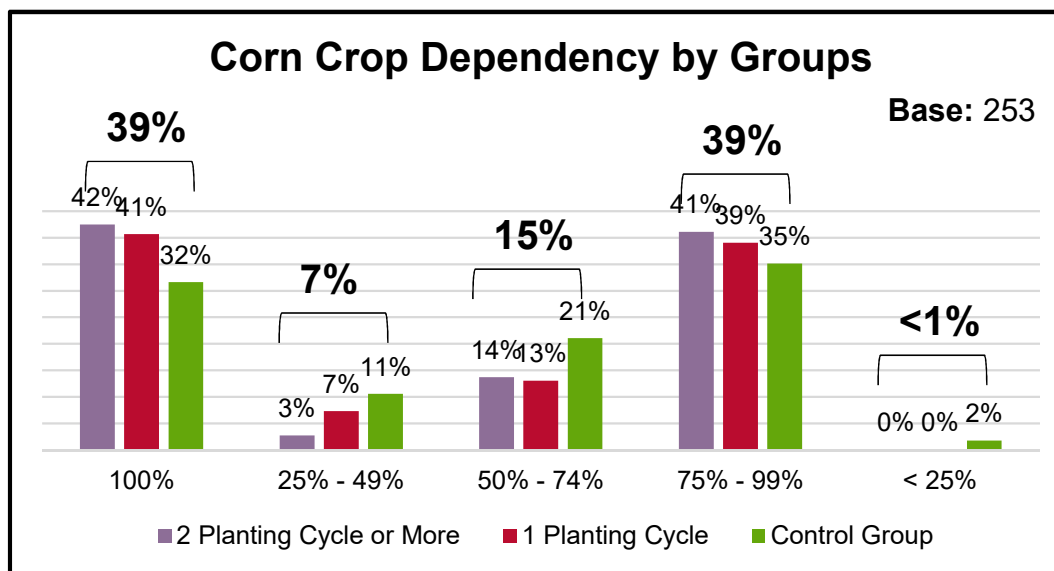
- The amount of seeds used per hectare by the farmers from the three groups is similar.
- Farmers in the Agriculture Financing Model are given 20 kg of seeds per hectare.
- All of the respondents (100%) use hybrid corn seeds.

- The most common seed brand used is NK7328 – 71% (given from the Agriculture Financing Model), followed by BISI18, which is used by a significant number of farmers.
- Many farmers, even the ones in the Agriculture Financing Model, mix their plot with other brands such as BISI18, claiming that it is more suitable for their land topography.
- Most farmers still use NK7328 because the corn seeds are bigger and denser, thereby more resistant to natural disasters. NK 7328 also typically produces better quality corn.
- However, many farmers choose other seeds because they claim that NK7328 is not suitable for land with a higher level of moisture, making the crops more prone to rotten corn stems.

4.2 Contextual Information

Corn Crop Dependency & Farmer Occupation

This section provides information about farmers' dependency on corn farming and farmers' other occupations.



- More farmer respondents who have joined the model for more cycles rely on the Corn Crops despite a very marginal difference with farmers in the control group .
- This shows that farmers who join the model typically treat corn farming as their main occupation and source of livelihood compared to farmers in the control group .
- In terms of Corn Crop Dependency of different gender, the percentage of Corn Crop Dependency of both the Male and the Female is the same, which is >75%, where 76% of the respondents (Male) and 74% of the respondents (Female) claim that corn farming is their main source of livelihood.
- Almost half of the respondents only do corn farming for a living while a significant number of farmers work as laborers for other farms/ plots (19%) and grain traders (8%).



Main Findings:

4.1 Farmer Profile

4.2 Contextual Information

4.3 Business Model

4.4 Economic

4.5 Gender Equality

4.6 Additional Observations



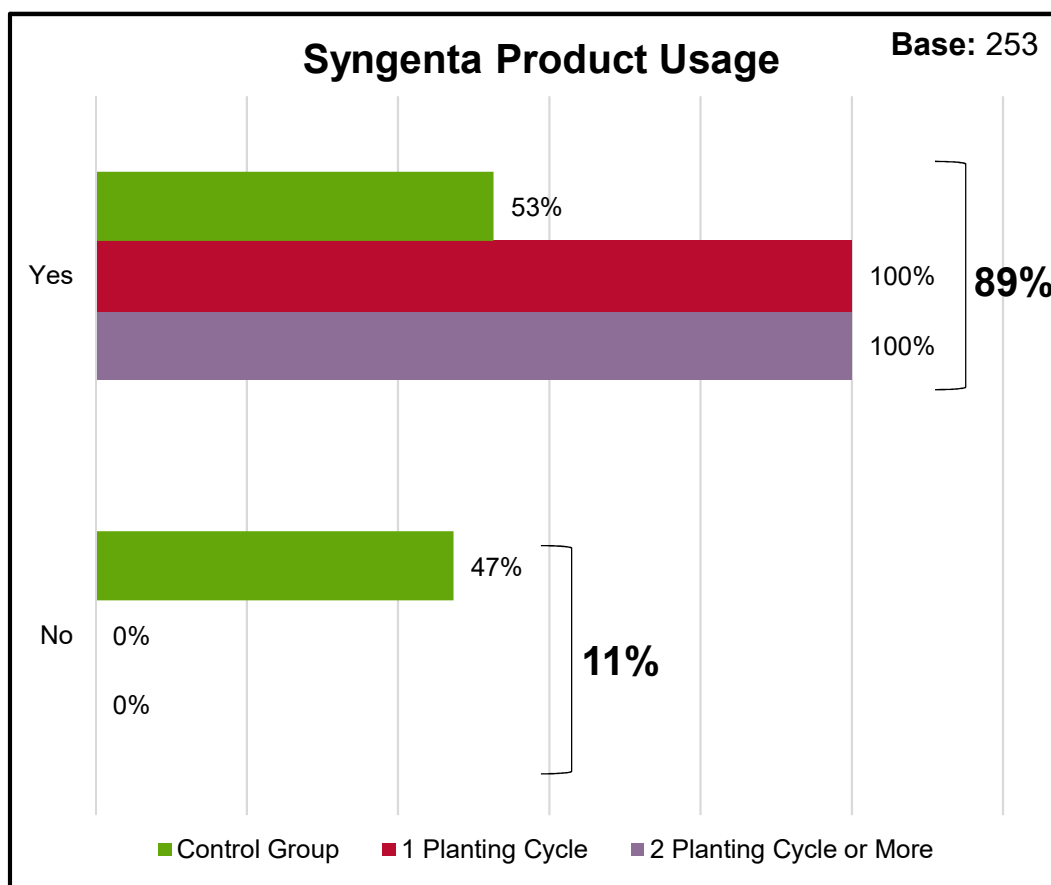
*"Corn can add inches in a single day;
if you listened, you could hear it
grow."*

Laura Ruby

4.3 Business Model

Syngenta Product Usage

This section provides information about the rate of use of input technology from the Agriculture Financing Model input provider (Syngenta).



syngenta

“A farmer is a Syngenta product user if he/she uses 2 or more Syngenta Products (Gramoxone, Calaris, NK seeds)”

Gramoxone[®]

Calaris[®]

NK[®]

- Agriculture Financing Model farmers in the last planting cycle (Phase 4) are given products such as Gramoxone, Calaris, and NK Seeds to boost their productivity.
- In the meantime, control group farmers have to obtain inputs such as seeds and pesticides from the free market.
- A significant number of control group farmers (53%) are Syngenta product users as they use at least 2 of 3 Syngenta products, namely Gramoxone, Calaris, and NK Seeds.
- Syngenta products are generally popular among the communities of our survey area as shown by the majority of control group farmers who use Syngenta products.

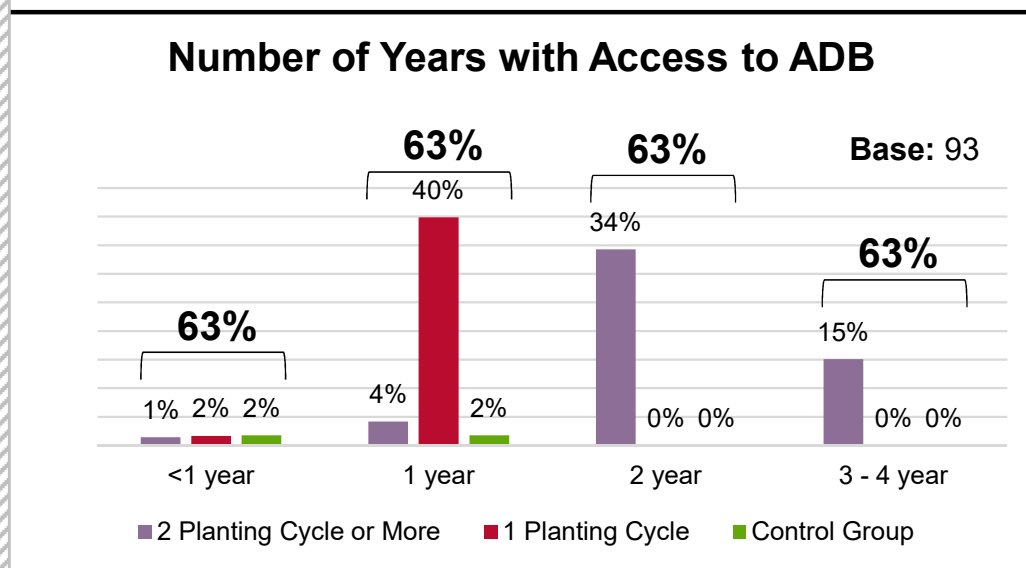
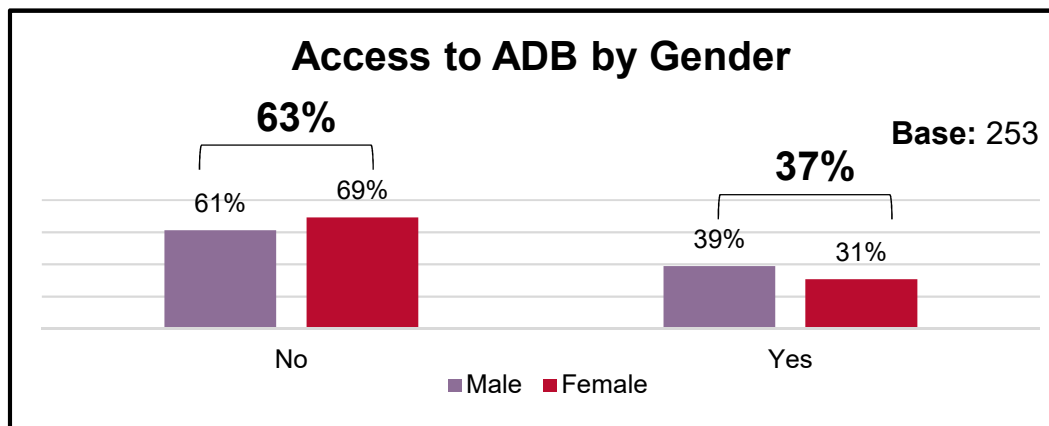
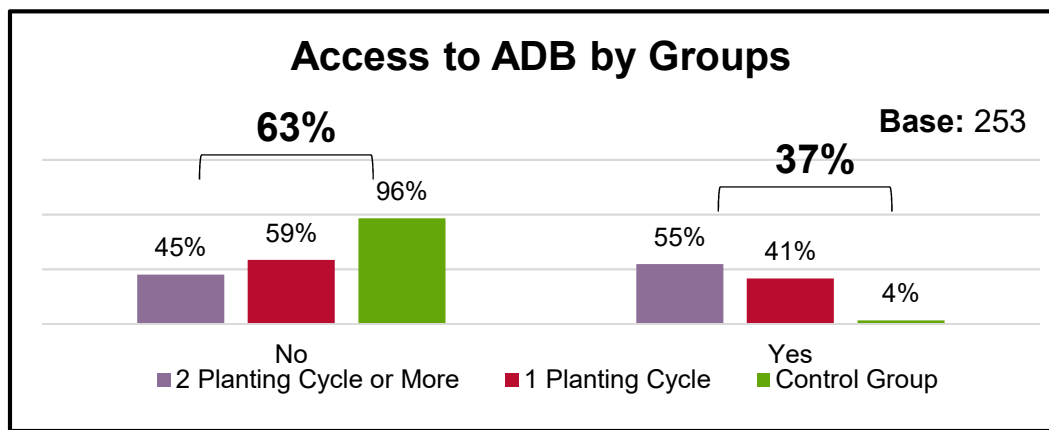
**SIA
2017**

There is a slight decline in the percentage of control group farmers who are Syngenta product users compared to last year’s social impact assessment (60% of the control group farmers).

4.3 Business Model

Access to Growing Protocol (Awali Dengan Benar)

This section examines the percentage of farmers with access to the Awali Dengan Benar (ADB) growing protocol.



- Only 37% of the total respondents have access to the growing protocol from Syngenta (Awali Dengan Benar - ADB).
- There is considerably low access to ADB among farmers who are part of the Agriculture Financing Model. Only 55% of the 2 planting cycles or more farmers have access to ADB and only 41 of the 1 planting cycle farmers have access.
- In relation to gender, the percentage of male farmers (39%) who have access to ADB is slightly higher compared to female farmers (31%).
- Farmers who have joined the model for 2 planting cycles or more typically have access to ADB for more than 2 years while farmers who have joined the model for only 1 planting cycle generally have access for about 1 year.



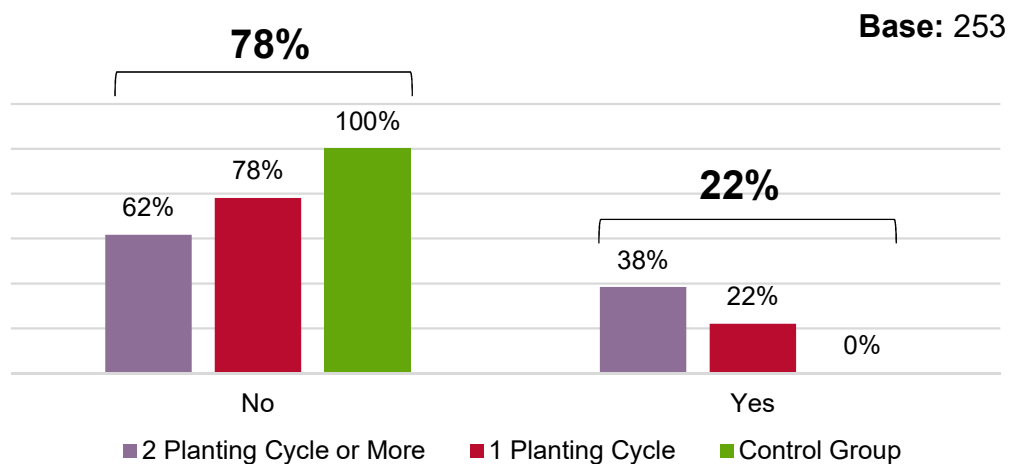
The percentage of farmers in the three groups with access to ADB are significantly lower this year compared to those in the last year where a total of 42% of the farmers and 68% of the 2 planting cycles or more farmers had access to ADB.

4.3 Business Model

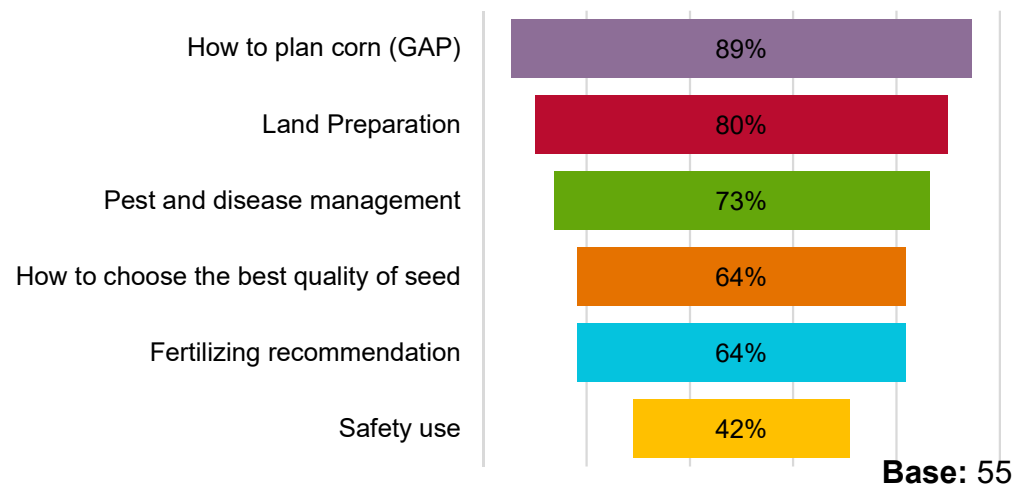
Growing Protocol (Awali Dengan Benar) Training

This section examines access to growing protocol training and the most useful training topics.

Training in ADB by Groups



Most Useful ADB Training Topic



SIA
2017

In last year's surveys, 46% of the 2 planting cycles or more farmers and 20% of the 1 planting cycle had training in ADB growing protocol, while 20% of the 1 planting cycle had training in ADB growing protocol.

SIA
2017

The most useful ADB training topics (in order of usefulness) for the respondents who had training last year are 'how to plant corn (GAP)', 'land preparation', and 'pest and disease management'.

- ADB training penetration is considerably low. Only 38% of the 2 planting cycles or more farmers have attended training in ADB growing protocol and only 22% of the 1 planting cycle farmers have attended training in the ADB growing protocol.
- The percentage of training penetration has not improved compared to last year's survey results. However, this may be because of a greater number of Agriculture Financing Model farmer members.

- For farmers who had training in ADB, the top 3 most useful topics are 'how to plant corn (good agricultural practices)' – 89% of the total respondents, 'land preparation – 80%', and 'pest and disease management – 73%'.
- This is consistent with last year's survey results where respondents chose those topics as the most useful training topics for corn farmers.

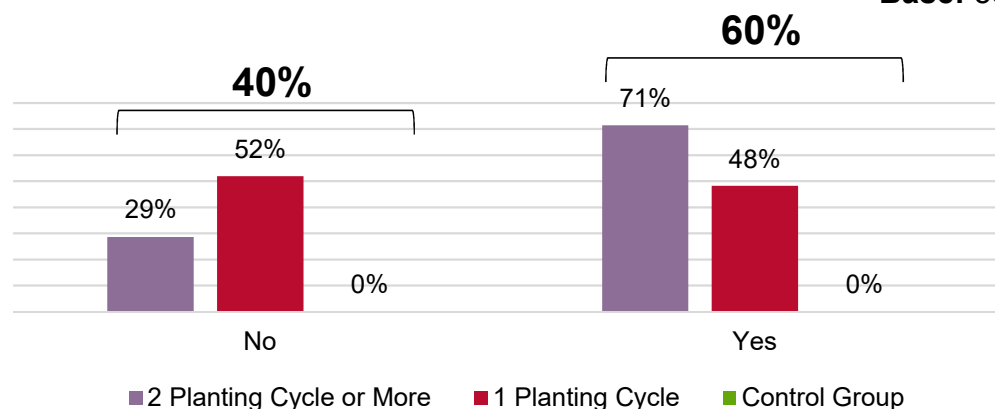
4.3 Business Model

Syngenta Corn Field Day & Syngenta Staff Satisfaction

This section examines farmers attending Syngenta Corn Field Day and the level of satisfaction of Syngenta staff.

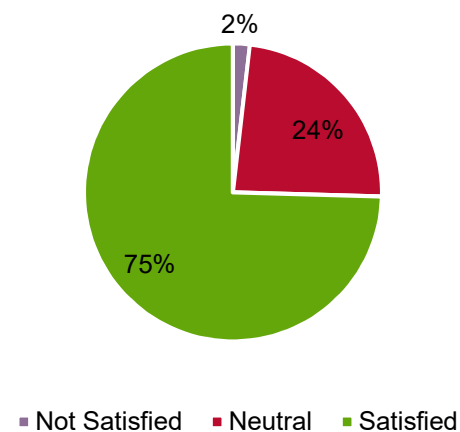
Syngenta Corn Field Day Attendance

Base: 55



Syngenta Staff Satisfaction Level

Base: 55



SIA
2017

Only 45% of the 2 planting cycles or more farmers and 30% of the 1 planting cycle farmers attended Syngenta Corn Field Day.

SIA
2017

As many as 69% of the farmers who attended Syngenta Corn Field Day were satisfied with Syngenta staff's performance.

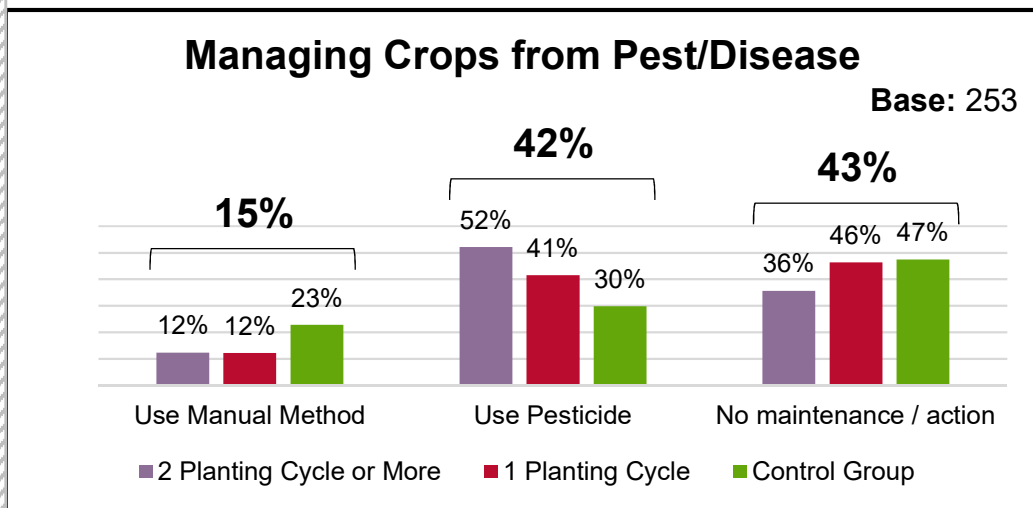
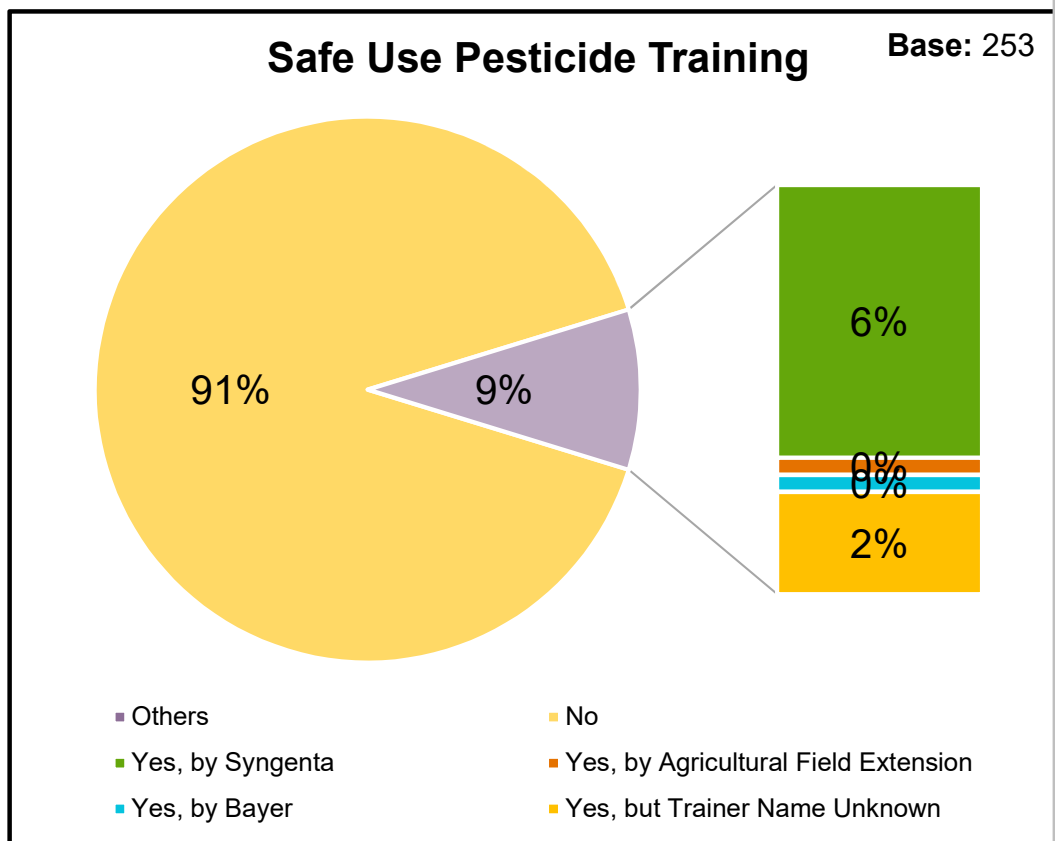
- The majority of the respondents attended Syngenta Corn Field Day. As expected, Agriculture Financing Model members are the ones who would have the chance to attend.
- Most of the 2 planting cycles or more farmers (71%) have attended Syngenta Corn Field Day while only 48% of the 1 planting cycle farmers attended the event.
- There is a significant increase in the level of attendance compared to last year's attendance level.

- For farmers who attended Syngenta Corn Field Day, 75% of them expressed satisfaction with Syngenta staff
- Only 2% of the farmers were not satisfied with Syngenta staff performance.
- The level of satisfaction with Syngenta staff is generally high and the percentage of satisfaction is also higher than last year's survey results.

4.3 Business Model

Safe Use Pesticide Training and Managing Crops from Diseases

This section examines farmers' access to training in safe use of pesticides and the ways they manage pests/diseases.



- SIA**

2017

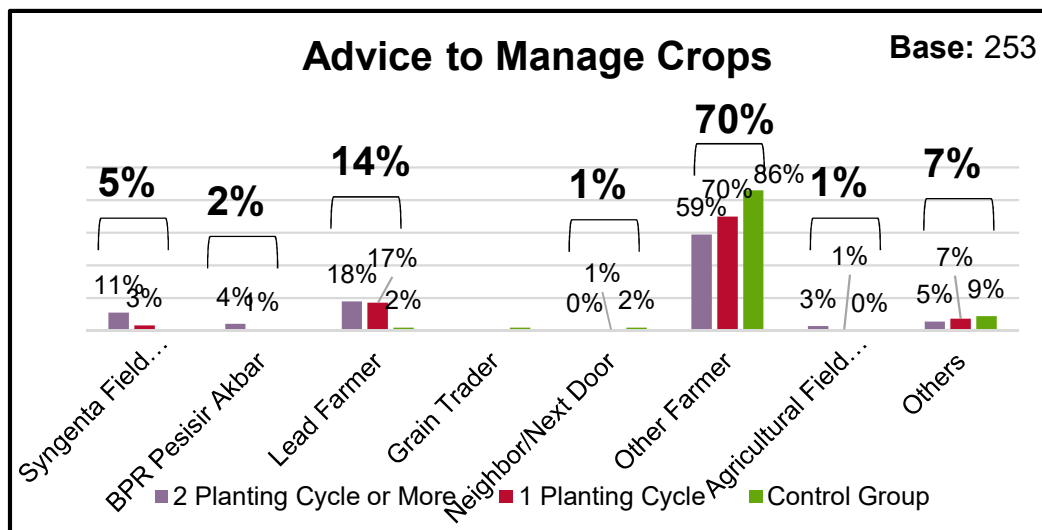
 - As many as 15% of the total respondents in last year's surveys attended training in safe use of pesticides.
 - As many as 41% of the total respondents use pesticide to protect their crops from pests and diseases while 33% of them do not take any measures.

- Only 9% of the total respondents have attended training in safe use of pesticides.
- The majority of the farmers got training from Syngenta (6%), followed by farmers who got training from other trainers (2%) whose names cannot be identified.
- More Agriculture Financing Model farmers use pesticides to protect their crops from pests and diseases.
- The use of pesticides is still considerably low, many farmers still do not take any measures and use conventional methods.

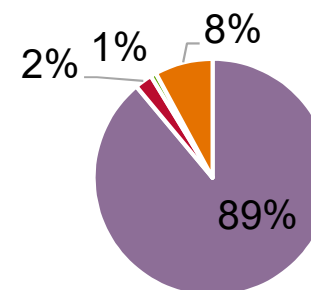
4.3 Business Model

Advice to Manage Crops

This section examines the ways farmers seek advice on how to manage their crops.



How do you contact the Person to seek advice?



■ By face to face meeting ■ By Phone ■ By SMS ■ Others

Base: 253

SIA
2017

As many as 74% of the total respondents seek advice from their fellow farmers on how to manage their crops while 8% of the total respondents seek advice from Syngenta's field team.

SIA
2017

As many as 92% of farmers seek advice through face-to-face meetings while 8% of them do so by phone.

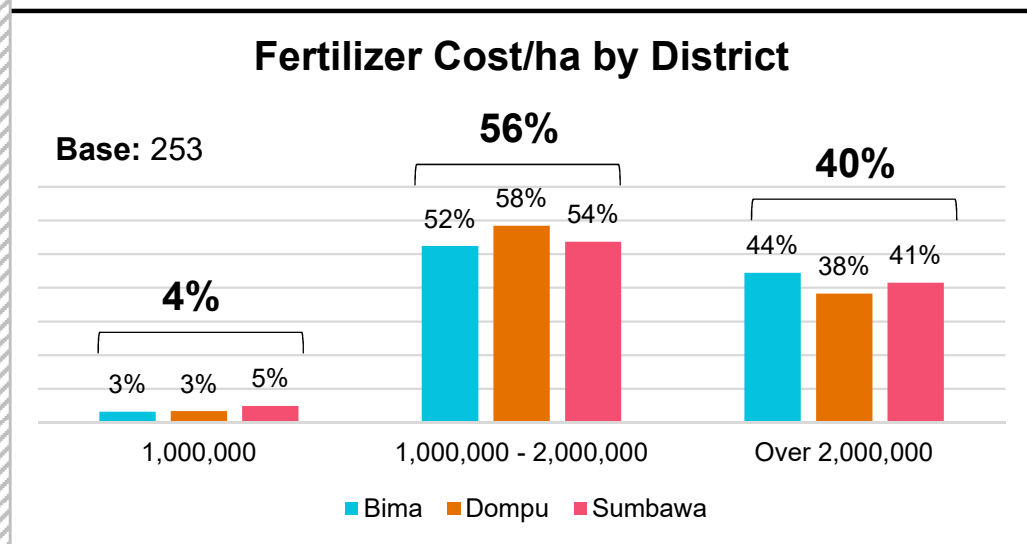
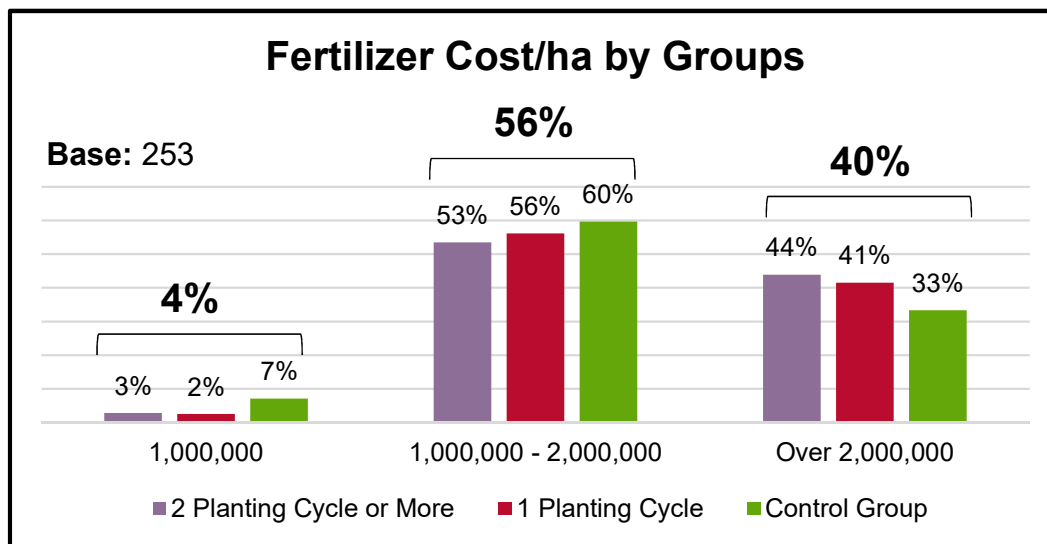
- The majority of farmers (70%) seek advice on how to manage their crops from their fellow farmers.
- A small number of Agriculture Financing Model farmers (2 planting cycles or more and 1 planting cycle) seek advice from Lead Farmers and Syngenta's field team.
- Farmers rely heavily on their fellow farmers on grounds of easy accessibility.

- The majority of farmers (89%) seek advice through face-to-face meetings as most of them seek advice from their fellow farmers.
- Only a small percentage of farmers use phone or SMS to seek advice on how to manage their crops.

4.3 Business Model

Fertilizers

This section examines the cost of fertilizers segmented by the groups and districts



As many as 71% of the respondents spent around IDR 1 to 2 million per hectare on fertilizers while only 12% of the total respondents spent over IDR 2 million.



In last year's surveys, the respondents in Sumbawa on average spent a considerably smaller amount of money than farmers in Bima and Dompu did as 43% of Sumbawa farmers spent less than IDR 1 million.

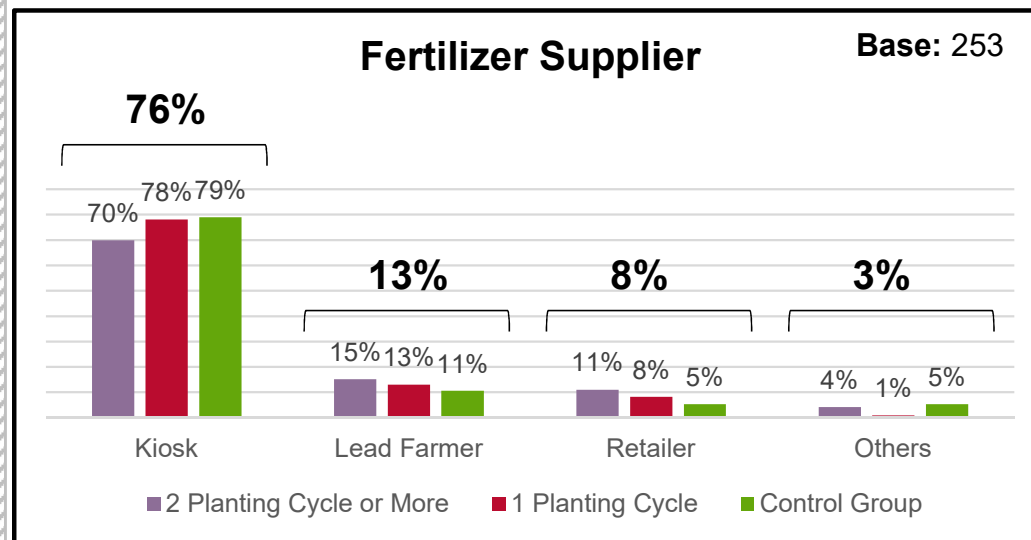
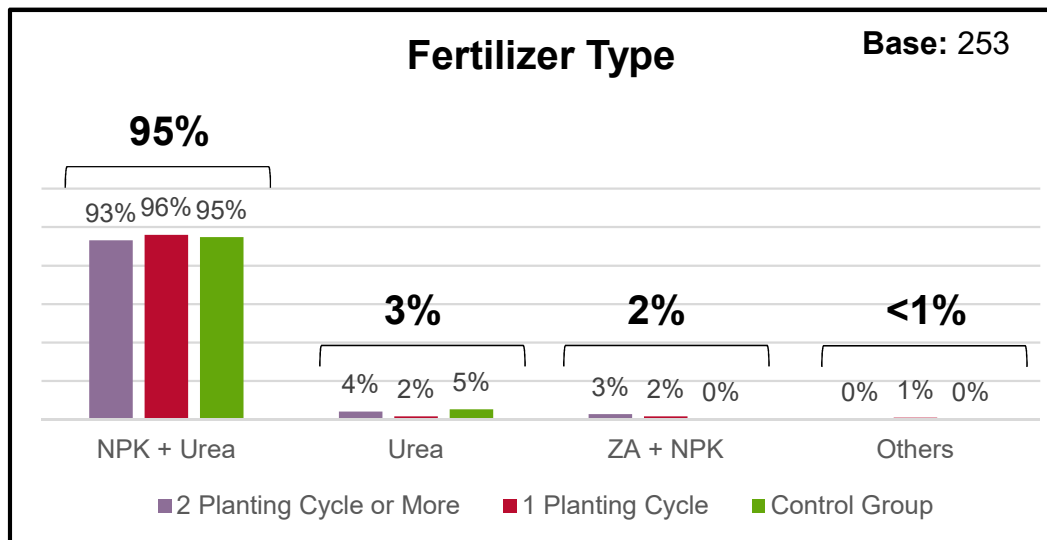
- More than half of the total respondents spend (56%) around IDR 1 to 2 million per hectare on fertilizers. A considerable percentage of farmers (40%) spend over IDR 2 million on fertilizers per hectare.
- More Agriculture Financing Model farmers spend more on fertilizers compared to control group farmers.
- More farmers in this year's survey spend more on fertilizers, possibly because of the continued fertilizer shortage during peak corn planting seasons and higher prices.

- There is no significant difference in the fertilizer cost between the districts included in the surveys.
- The majority of farmers in all the three districts spend around IDR 1 to 2 million per hectare on fertilizers.
- Based on field observation, fertilizer prices fluctuate throughout the year. The supply of fertilizers during the peak corn season is also difficult, causing the price to rise.

4.3 Business Model

Fertilizers

This section examines fertilizer suppliers and types of fertilizer used by farmers.



As many as 95% of the total respondents choose to use a combination of NPK + Urea as fertilizers. These fertilizers are used by the three groups.



As many as 73% of the total respondents get their fertilizers from kiosks while 20% obtain them from retailers.

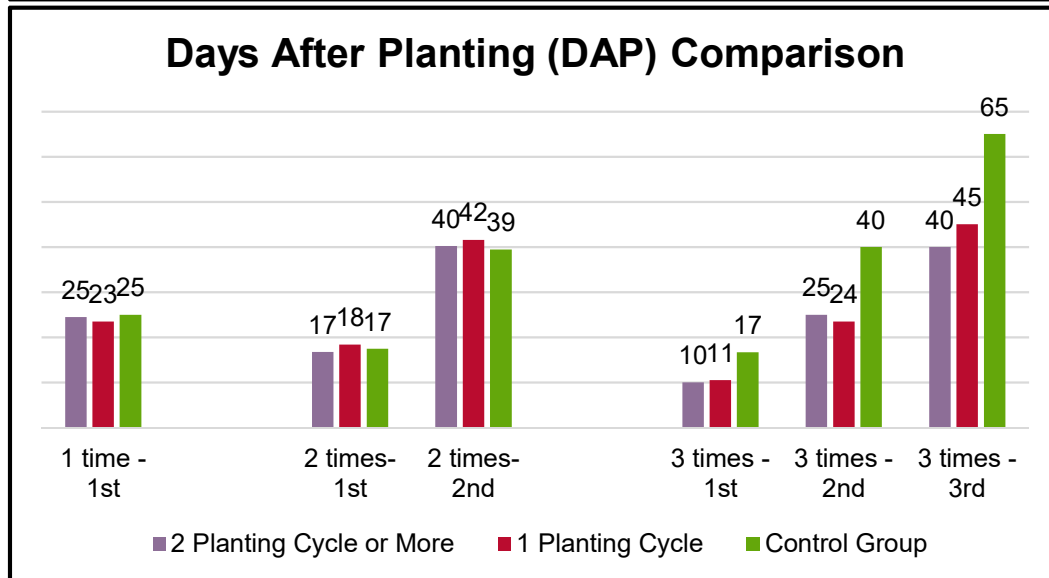
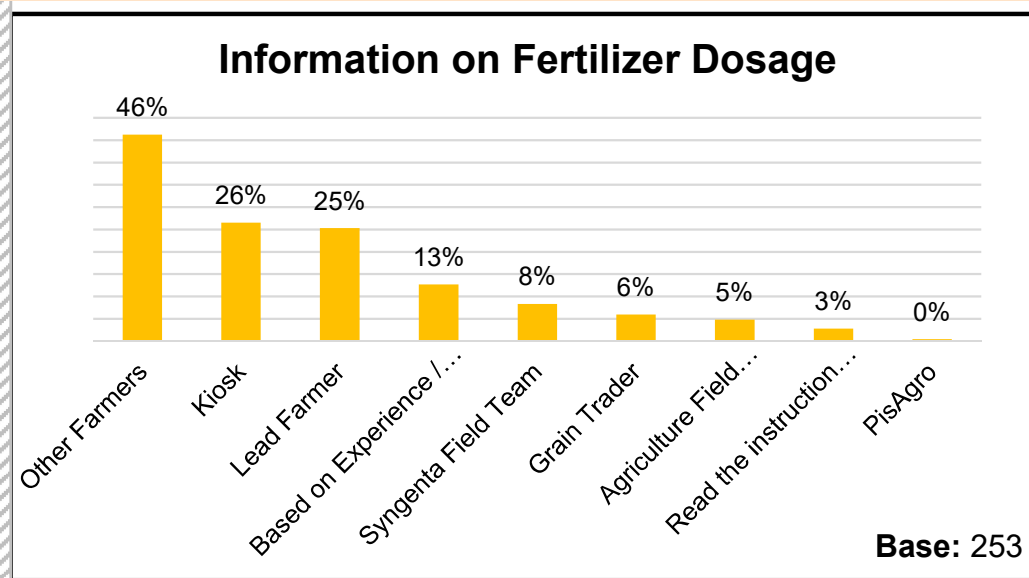
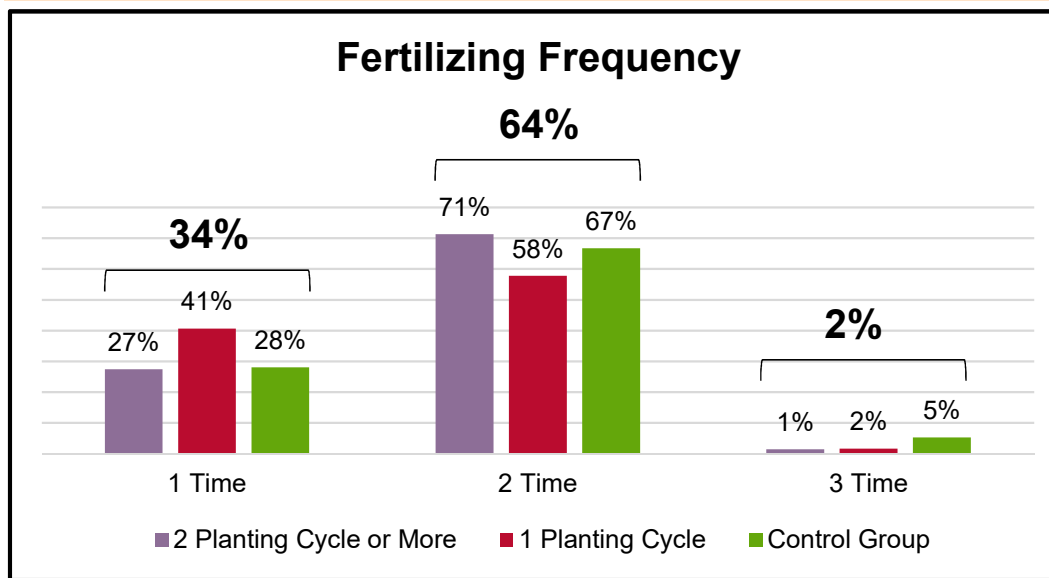
- Almost all of the respondents (95%) choose to use a combination of NPK and Urea as fertilizers.
- The percentages are consistent across the three groups.

- A kiosk refers to an official retail space while retailers are unofficial fertilizer sellers and do not have a store. Retailers can be collectors or grain traders who provide loans in the form of fertilizers to farmers in return for their crops.
- The majority of the respondents (76%) obtain their fertilizers from kiosks while some (13%) obtain them from their lead farmers and retailers (8%).

4.3 Business Model

Fertilizers

This section examines the frequency of fertilizer application, days after planting, and sources for fertilizer dosage information.



SIA 2017 As many as 57% of farmer respondents apply fertilizers 2 times in one planting season and 42% of them apply fertilizers 1 time.

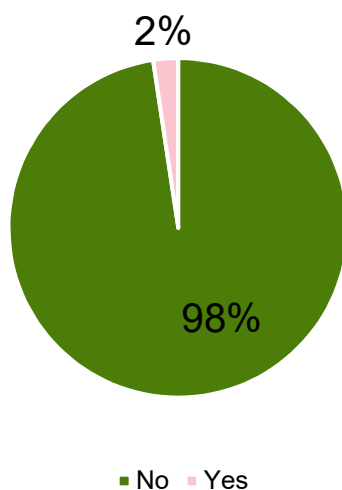
- The majority of farmers in the three groups apply fertilizers to their cornfield twice in one planting season.
- Compared to last year's surveys, this year there are more farmers who apply fertilizers twice in a season as they continue to see the benefits of applying fertilizers more regularly.
- Comparison relating to days after planting (DAP) indicates very similar results among the three groups for the farmers who apply fertilizers 1 or 2 times in a season.

4.3 Business Model

SMS Service

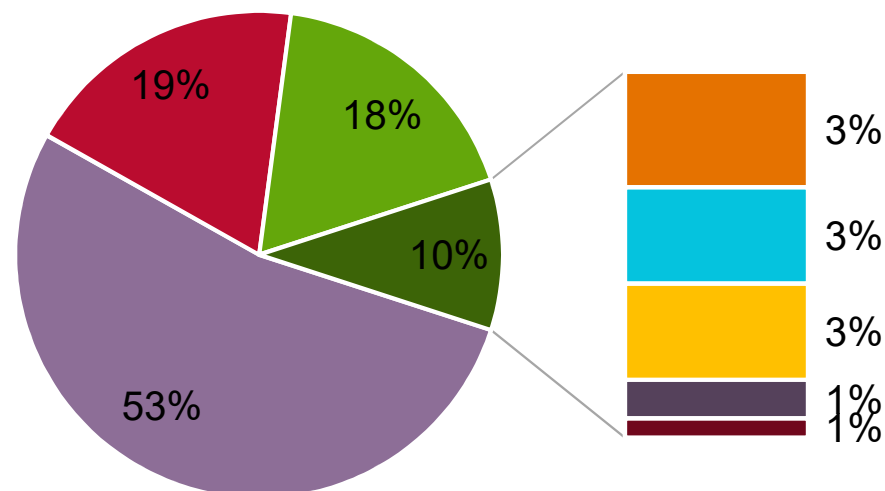
This section examines the use of the SMS-based service provided by the model.

SMS Service Usage



Base: 253

Reasons why farmers did not use SMS service



Base: 190

- Do not know this service (No information shared to the farmers)
- Unable to access the service
- Do not have the application
- Do not have mobile phone
- Prefer to go to the Lead Farmer or discussion with other farmers
- Do not have the module
- I have the knowledge
- Get the answer directly from Syngenta Field Team

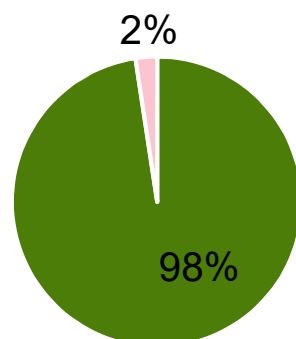
- Only 2% of the total respondents uses the SMS-based service to send information and ask questions.
- The respondents using the service ask questions relating to good agricultural practices, planting schedule, crop management, and fertilizer dosage.
- Some of the main reasons for not using the SMS-based service are because farmers do not know about the service and they are unable to access the service.
- The reasons indicate that dissemination of the information about such a service to all farmers does not run effectively, resulting in a low level of use.
- Based on field interviews, farmers are keen to be exposed to this value-added service and they are hoping for better dissemination of information.

4.3 Business Model

Growing Protocol Information via Mobile Phone

This section examines the effectiveness of disseminating growing protocol information via mobile phone.

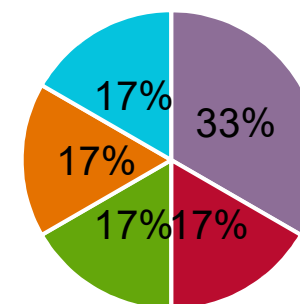
Growing Protocol Information Received via Mobile Phone



■ No ■ Yes

Base: 253

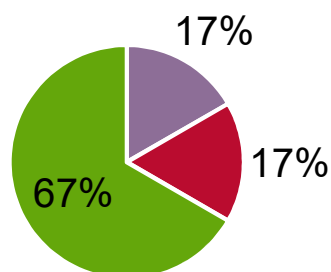
Frequency of Information Received via Mobile Phone



■ Every week ■ One Time ■ If there is a meeting
■ Training time ■ No fix frequency

Base: 6

Usefulness Level on Information Received via Mobile Phone



■ Not Useful ■ Neutral ■ Quite Useful

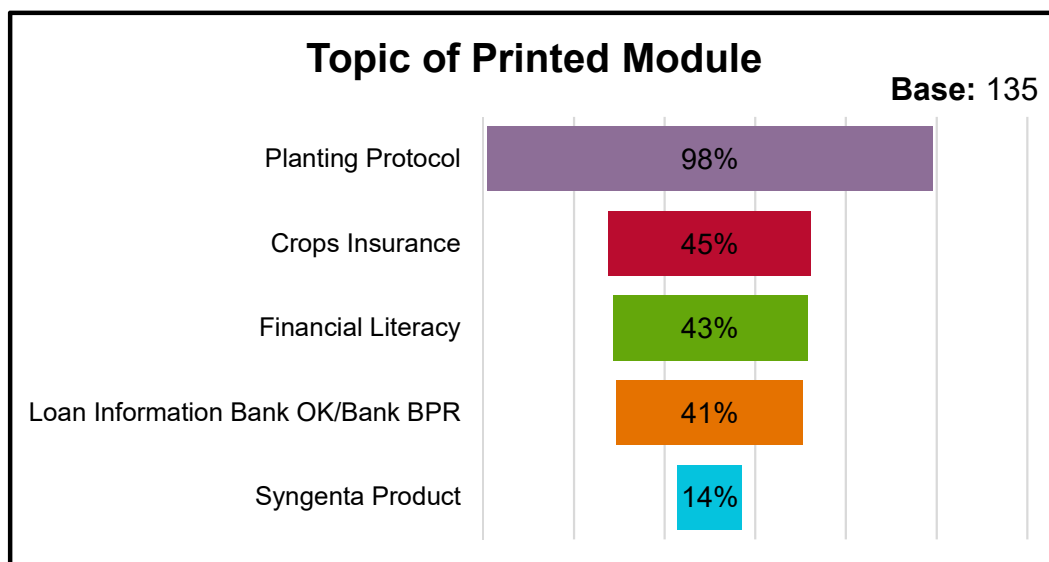
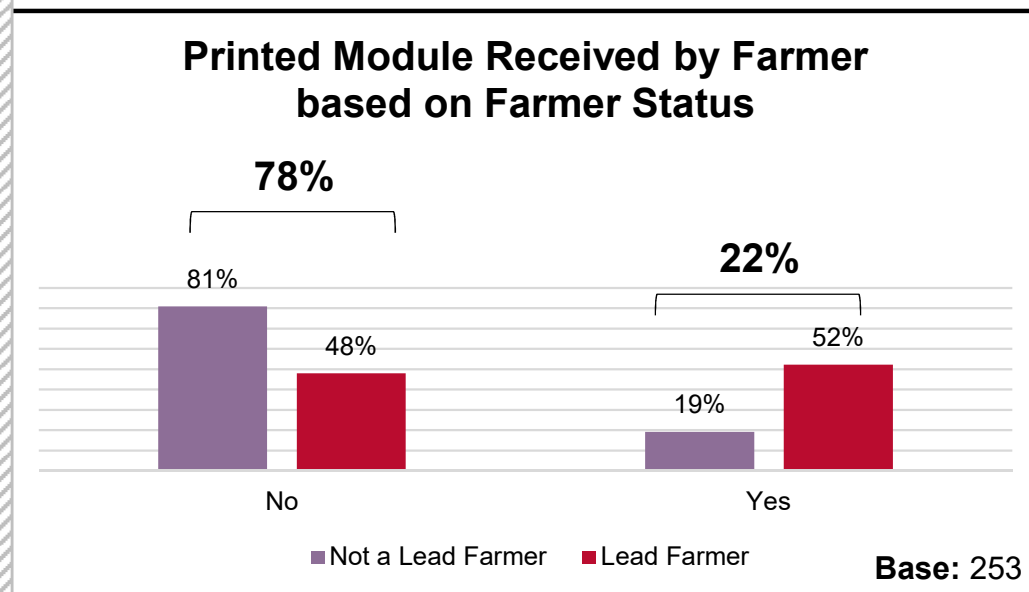
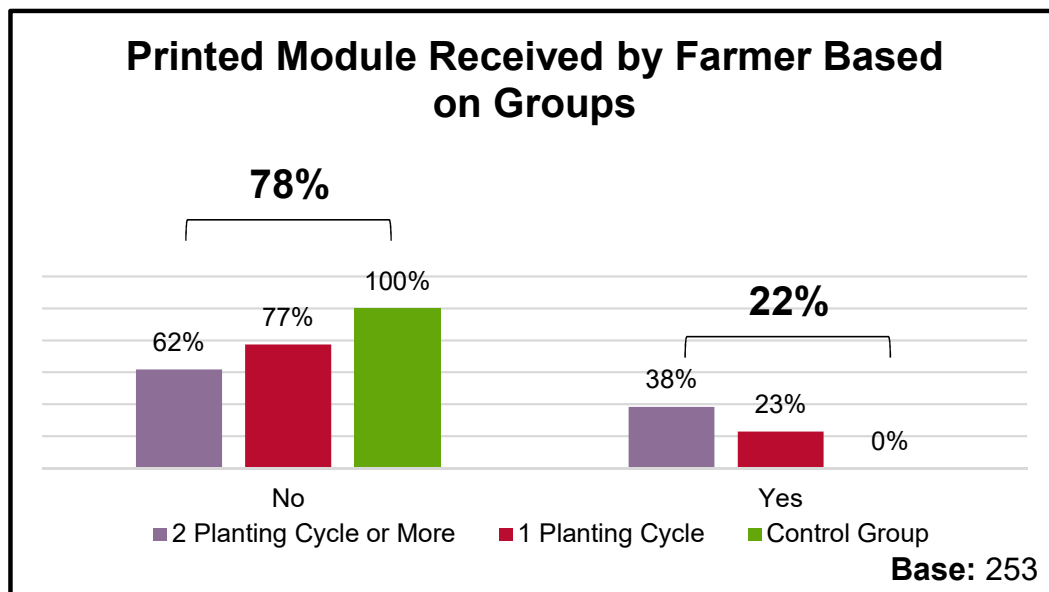
Base: 6

- Only 2% of the respondents receive information about Growing Protocol via their mobile phone and most respondents receiving such information (33% - 2 respondents) claim to receive it every week.
- The majority of farmers who receive growing protocol information via their mobile phone (67%) say that the information provided is quite useful.

4.3 Business Model

Printed Modules

This section examines the effectiveness of the printed modules given to farmers.



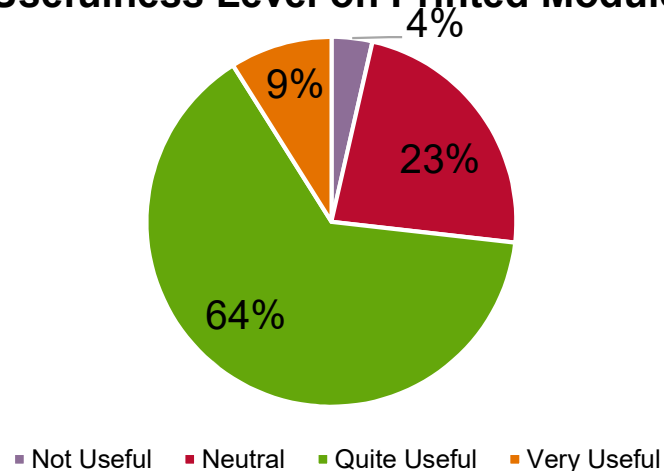
- The majority of farmer respondents do not receive printed modules. As many as 38% of the 2 planting cycles or more farmers receive printed modules while 23% of the 1 planting cycle farmers receive printed modules.
- Comparing lead farmers with non-lead farmers, half of the lead farmer respondents receive printed modules while only 19% of the non-lead farmer respondents receive the modules.
- This shows that printed modules are generally distributed to lead farmers only as not many farmers receive them.
- According to farmers receiving them, growing protocol is the most common topic in the printed modules.

4.3 Business Model

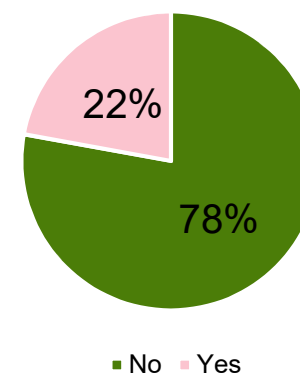
Printed Modules & Language

This section examines the effectiveness of the printed modules given to farmers and the language barrier.

Usefulness Level on Printed Module Base: 56






Is Bahasa Indonesia an obstacle in understanding the Modules & Trainings?



Base: 253

Top 3 Suggestions for Printed Modules:

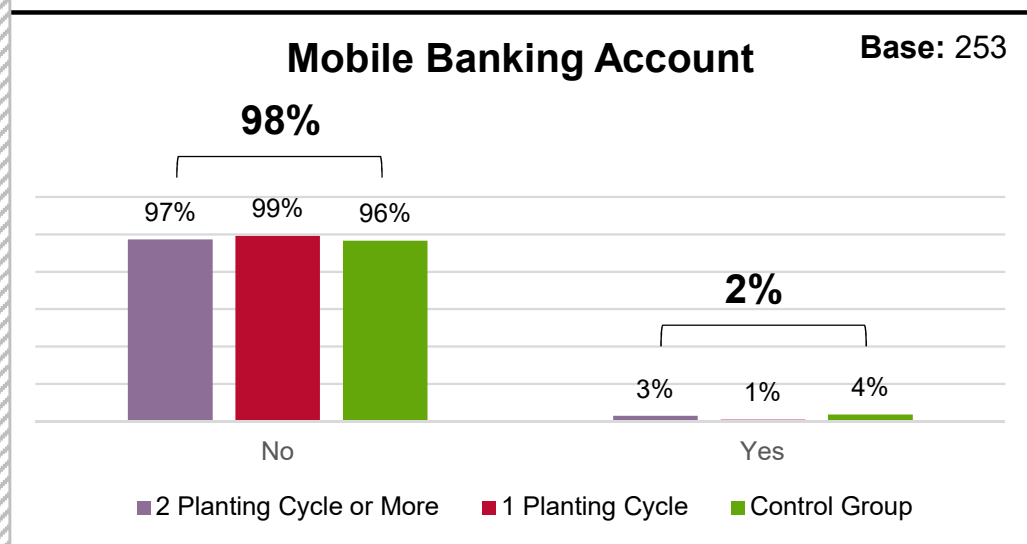
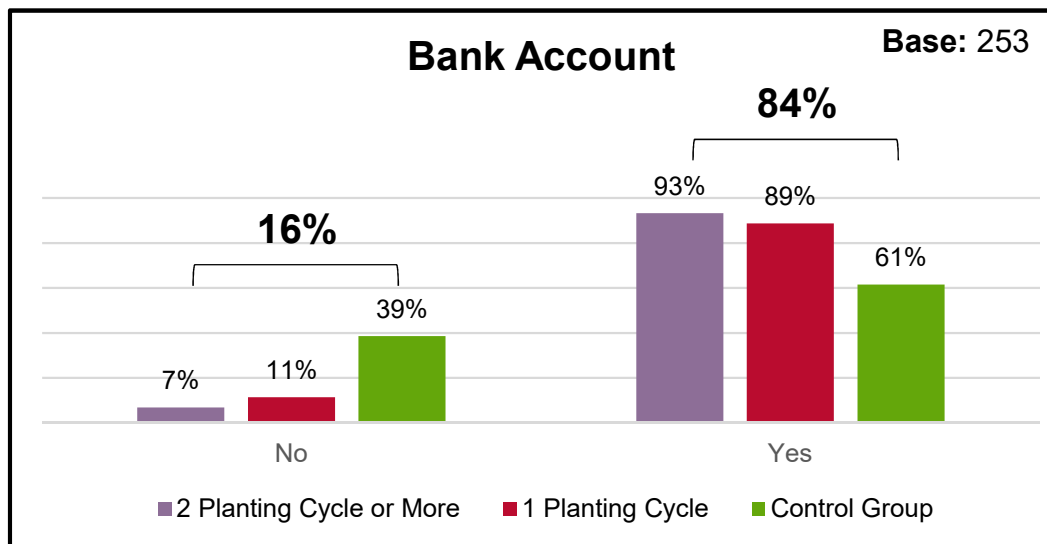
- 1  Update module contents
- 2  Published more frequently
- 3  Provide module to all farmers not just lead farmers

- Most farmers receiving the printed modules find the modules to be quite useful (64%) while a considerable percentage of them are neutral (23%).
- The top 3 suggestions for the printed modules are to keep updating those modules based on conditions and challenges in the relevant areas. Farmers also expect to receive printed modules more frequently. Lastly, they would like the printed modules to be distributed to all farmers rather than to lead farmers only.
- Around 22% of the respondents say that the use of Bahasa Indonesia creates a barrier to understanding the modules and/or training materials. People in Bima, Dompu, and Sumbawa have different local dialects that they use to communicate with their peers. Therefore, it is not very challenging to translate modules and conduct training in their local dialects.

4.3 Business Model

Bank Account & Mobile Banking

This section examines farmers' access to bank account and mobile banking.



As many as 82% of the farmer respondents say that they have bank accounts. While almost all of the 2 planting cycles or more farmers (95%) and the 1 planting cycle farmers (93%) say that they have bank accounts.



As many as 99% of the farmer respondents do not have a mobile bank account.

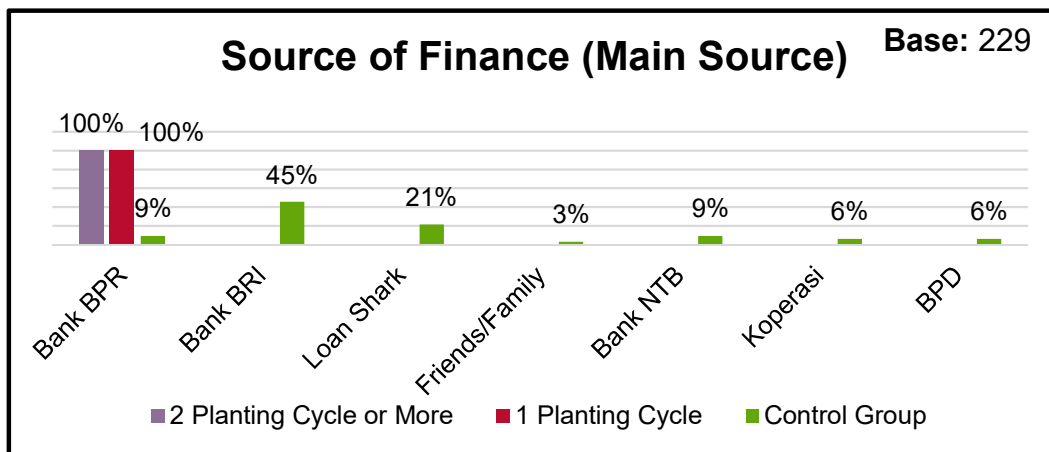
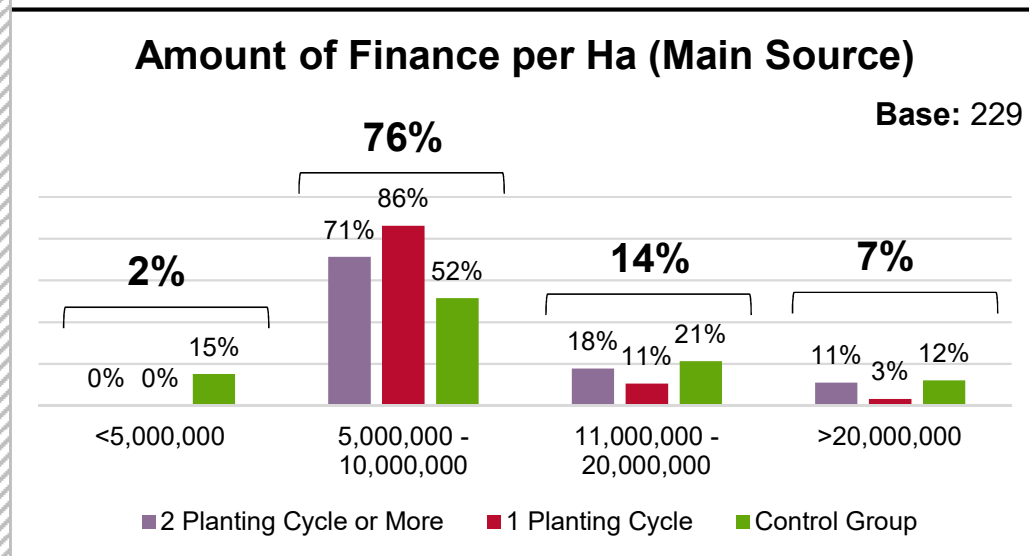
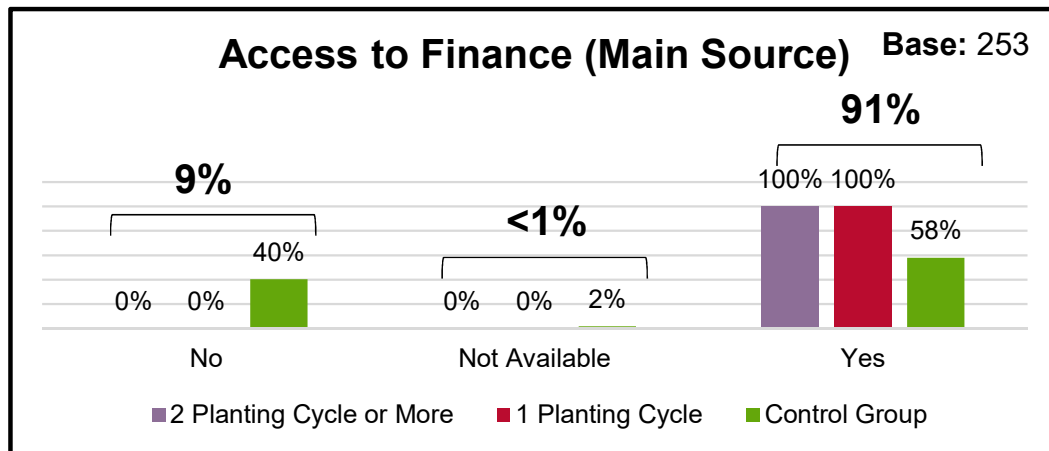
- Farmers joining the Agriculture Financing Model are supposed to have a bank account at Bank BPR Pesisir Akbar where some of the cash portion of the loan is kept. However, some farmer members still do not know that they have a bank account and some have not seen their savings book.
- There are about 7% of the 2 planting cycles or more farmers and 11% of the 1 planting cycle farmers who still do not know that they have a bank account at Bank BPR Pesisir Akbar.

- Almost all of the farmer respondents (98%) do not have a mobile bank account.
- These statistics are consistent for the three groups.

4.3 Business Model

Access to Finance (Main Source)

This section examines the percentage of farmers' main sources of finance, sources of finance, and the amount financed.



- Agriculture Financing Model farmers (2 planting cycles or more, and 1 planting cycle) have access to finance through Bank BPR Pesisir Akbar, and more than half (58%) of the control group farmers have access to finance through various sources.
- The most common access to sources of finance among control group farmers is Bank BRI (45%), followed by loan sharks as a great number of them (21%) still receive loans from these loan sharks.
- The most common amount financed per hectare ranges from IDR 5 to 10 million as Bank BPR provide IDR 10 million loan to farmers who have joined the Agriculture Financing Model.
- Some Agriculture Financing Model farmers state that they get more than IDR 10 million possibly because their answer refers to their total amount, not the amount per hectare.

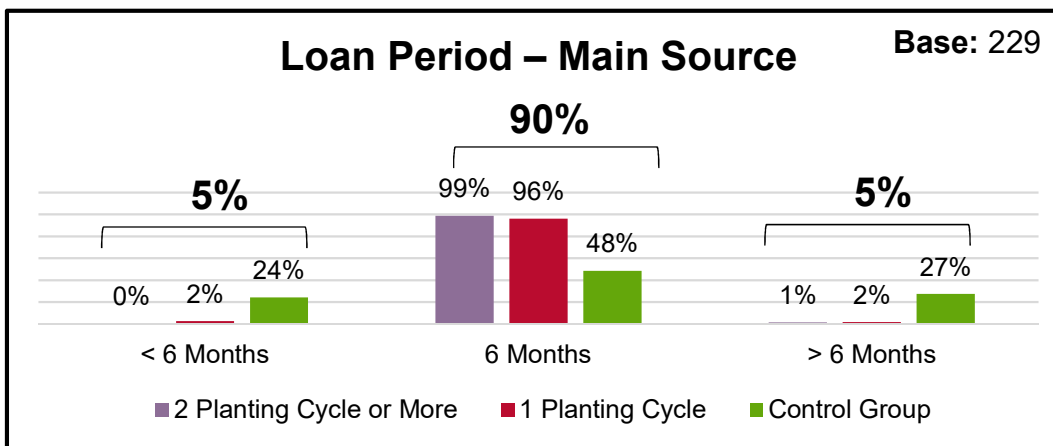
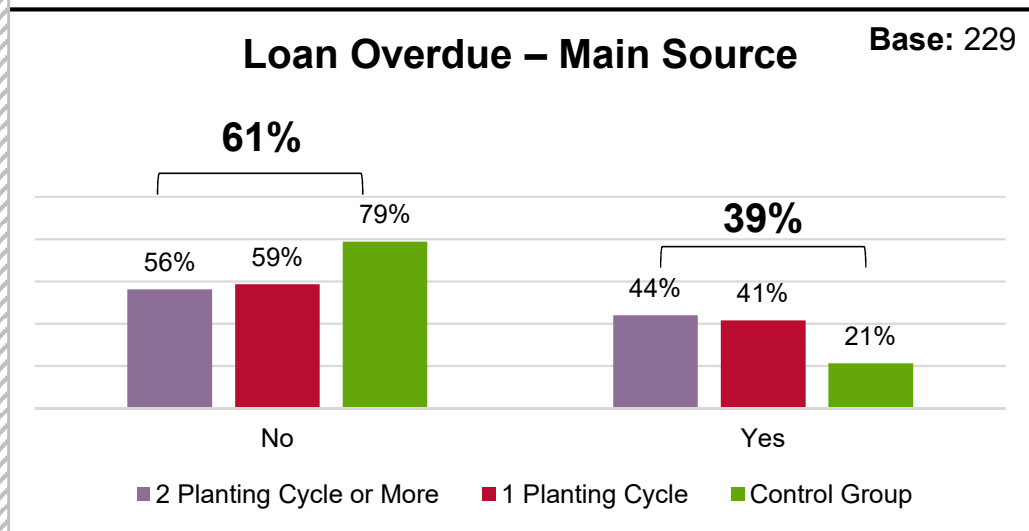
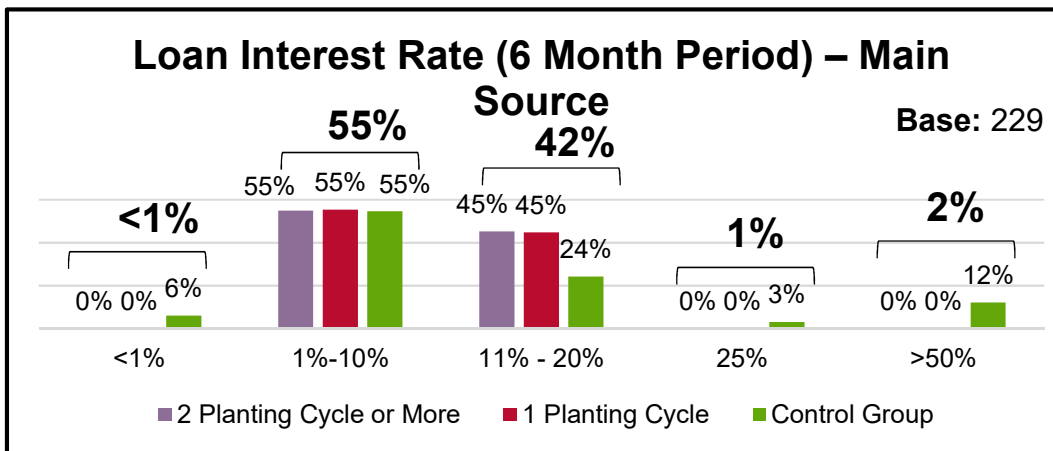


As many as 58% of the control group farmers have access to finance and 42% of them obtain it from Bank BRI.

4.3 Business Model

Access to Finance (Main Source)

This section examines the loan interest rate, loan period, and the percentage of farmers with overdue loans.



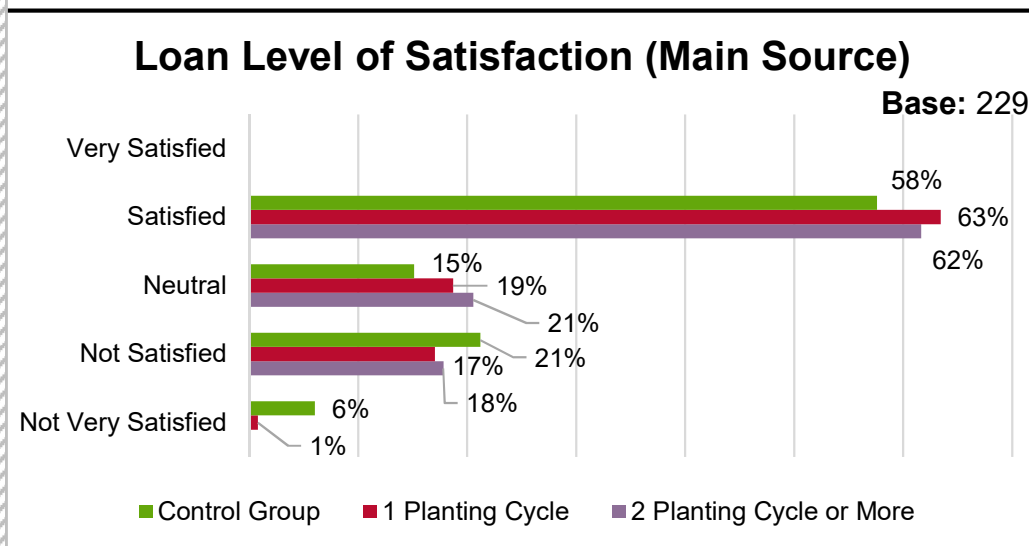
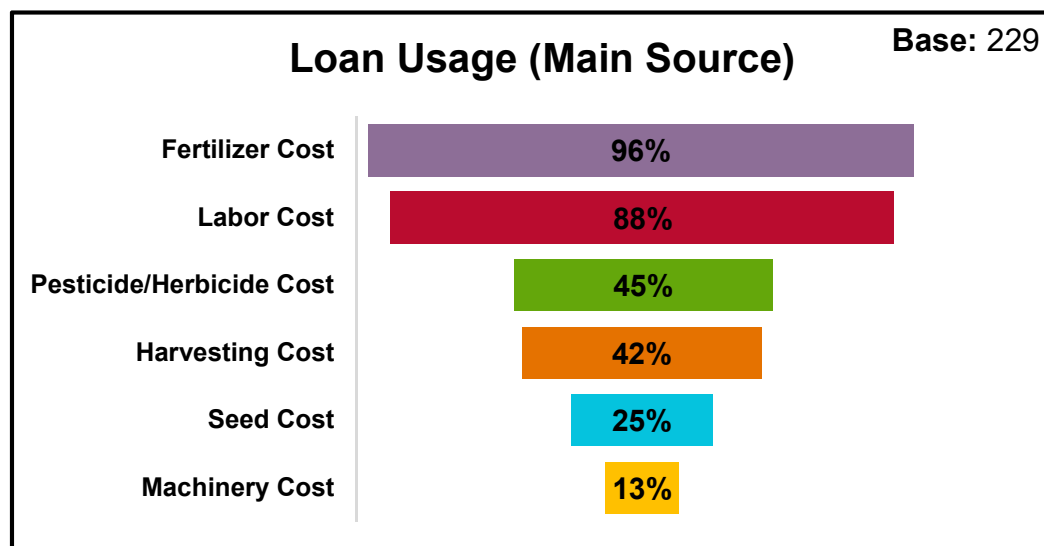
SIA 2017 More than 90% of the Agriculture Financing Model farmers claim to have a loan interest rate between 1-10% and, similarly, 53% of the control group farmers express the same thing. Only 6% of the total respondents have overdue loans.

- The loan interest rates on the 6-month-period basis vary based on the survey results. Around 55% of the Agriculture Financing Model farmers say that they pay interest of about 1-10% while 45% say that the interest ranges from 11 to 20%.
- A considerable number of control group farmers (12%) still pay very high interest on the loans they receive (>50%), possibly from loan sharks.
- Most of the loan periods commonly last for 6 months as Agriculture Financing Model farmers are given the loan tenure in line with the corn planting seasons.
- Many farmers still pay their loan late as around 39% of the total respondents claim that their loan payment is overdue.
- The percentage of these overdue loans is much higher compared to last year’s surveys as some farmers use harvest failure as one of the reasons for this.

4.3 Business Model

Access to Finance (Main Source)

This section examines loan use and the level of satisfaction with the loans.



The top two loan use categories from last year's surveys are also to buy fertilizers and to pay the labor cost across the planting phases.



Around 45% of the total respondents are satisfied with their access to finance. It is consistent for the 3 groups.

- The top two loan usages are to buy fertilizers (96%) and to pay the labor cost (88%).
- The supply of fertilizers is very limited at the peak of the corn planting season, causing the price to skyrocket to twice as much as the price of subsidized fertilizers.
- Other input costs (seeds, pesticides) are covered in the package on the loan given by the Agriculture Financing Model.

- The majority of the respondents (58-62%) are satisfied with the main loan from various sources.
- Around 62-63% of the Agriculture Financing Model farmers are satisfied with the loan they get from Bank BPR.
- The satisfaction level is higher compared to last year's survey.
- However, none of the farmers feel very satisfied with their loan terms.

4.3 Business Model

Access to Finance (Main Source)

This section displays the profiles of the top 3 main loan providers and the majority responses



Bank BPR Pesisir Akbar

Base: 199

100%

of the **Agriculture Financing Model** Farmers obtain their main source of loan from Bank BPR.



80% of farmers received a loan amount of **IDR 5 to 10 million** per hectare.



INTEREST RATES

54% of farmers claim to have a loan interest rate between **1% - 10%**.



96% of farmers have **6 months** of loan period. 58% of farmers are able to pay the loan on-time.



SATISFIED!

63% of farmers are satisfied with loan service from Bank BPR.



Bank BRI

Base: 15

45%

of the **Control Group** Farmers obtain their main source of loan from Bank BRI.



60% of farmers received a loan amount of **IDR 5 to 10 million** per hectare.



INTEREST RATES

80% of farmers claim to have a loan interest rate between **1% - 10%**.



47% of farmers have **6 months** of loan period. 60% of farmers are able to pay the loan on-time.



SATISFIED!

73% of farmers are satisfied with loan service from Bank BRI.



Loan Sharks

Base: 7

21%

of the **Control Group** Farmers obtain their main source of loan from Loan Sharks.



43% of farmers received a loan amount of **IDR 11 to 20 million** per hectare.



INTEREST RATES

57% of farmers claim to have a loan interest rate between **> 50%**.



57% of farmers have **6 months** of loan period. 100% of farmers are able to pay the loan on-time.



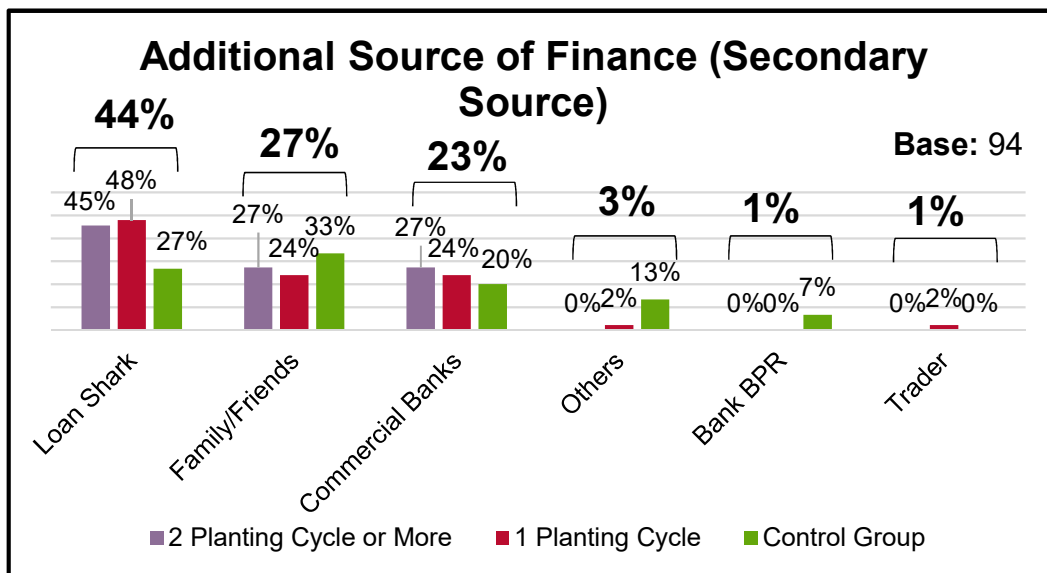
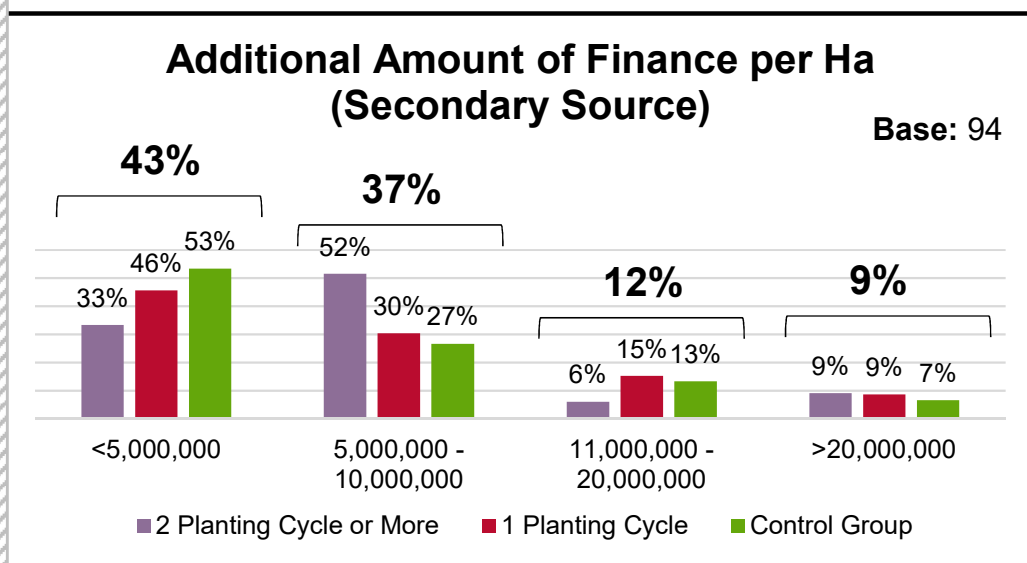
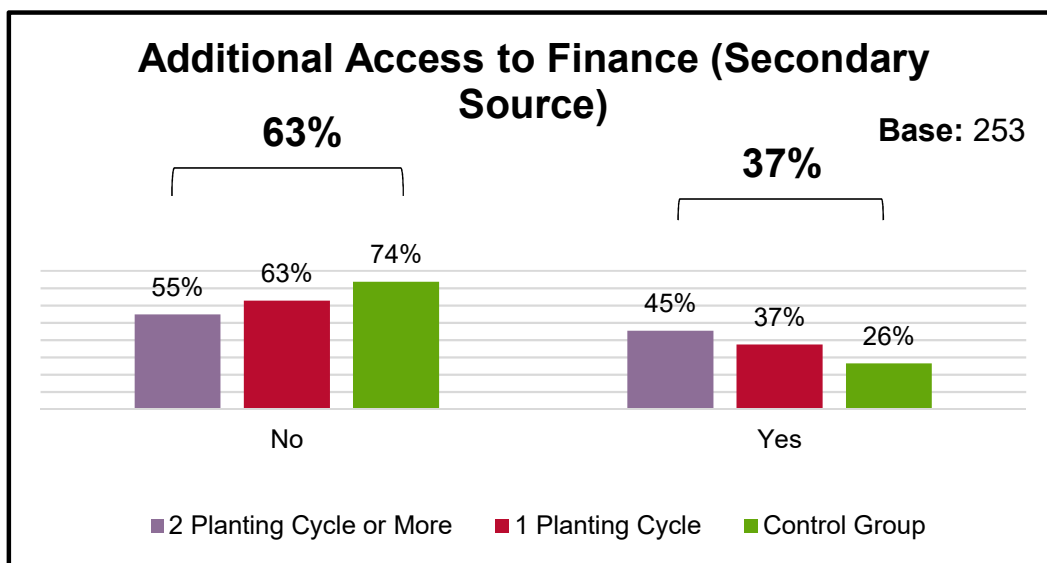
SATISFIED!

0% is satisfied with loan service from Loan Shark.

4.3 Business Model

Access to Finance (Secondary Source)

This section examines the percentage of farmers' secondary sources of finance, sources of finance, and the amount financed.

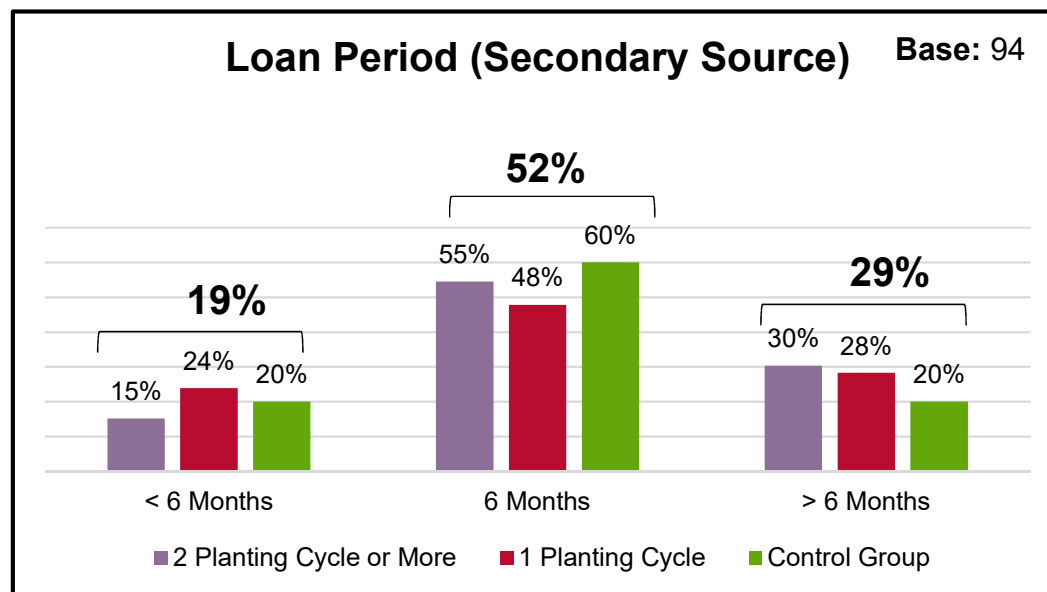
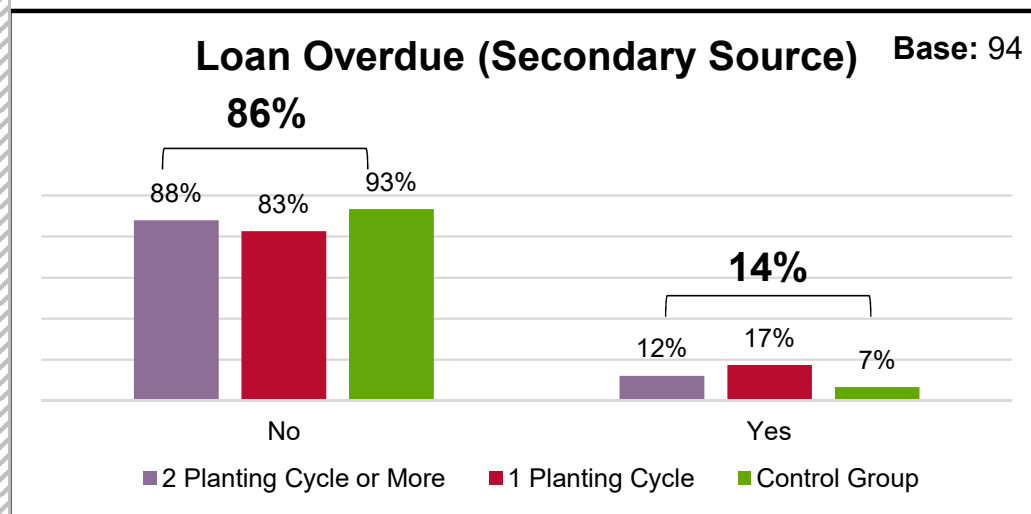
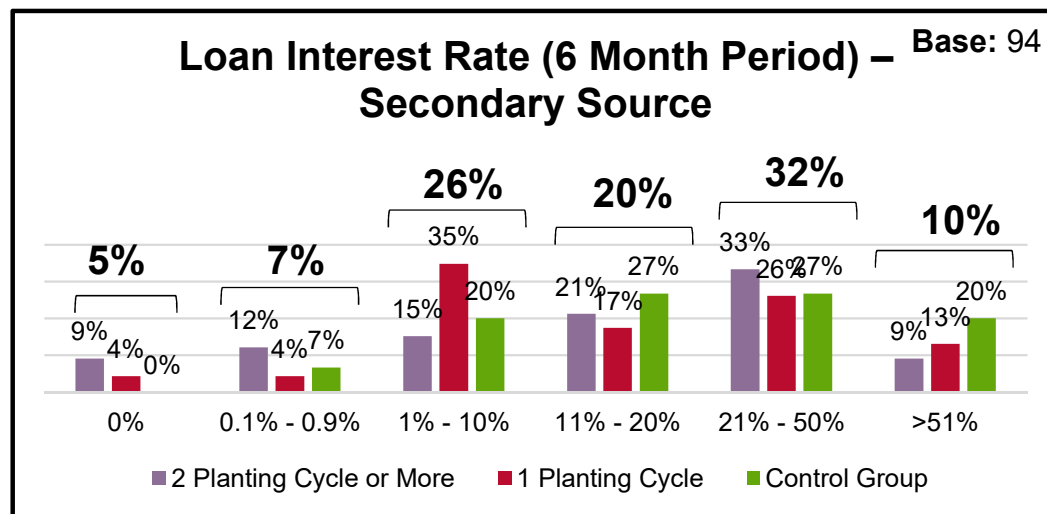


- Around 37% of the total respondents have additional access to finance (secondary source) aside from their main source of finance.
- The percentage of Agriculture Financing Model farmers with additional access to finance is higher, specifically 45% of the 2 planting cycles or more farmers and 37% of the 1 planting cycle farmers.
- Most of the secondary sources of finance are commonly obtained from loan sharks (44%), friends/ family (27%), and other banks (23%).
- The majority of farmers take out a loan of less than IDR 5 million from secondary sources. However, more Agriculture Financing Model farmers take out a greater loan from secondary sources (IDR 5 to 10 million).
- Based on field interviews, many have claimed that the cash component on the loan in the model is not sufficient. Many demand that an all-cash loan scheme be implemented.

4.3 Business Model

Access to Finance (Secondary Source)

This section examines the loan interest rate, loan period, and the percentage of farmers with overdue loans.



- The rates of interest on loans from secondary sources are generally higher than those on loans from primary sources. The majority of respondents (32%) obtain their loans with an interest rate of 21-50% over a 6-month period.
- Most of the loan periods commonly still last for 6 months, adjusted to the corn planting season.
- There is a smaller number of farmers (14%) with overdue loans for their secondary source of finance.

4.3 Business Model

Access to Finance (Secondary Source)

This section displays the profiles of the top 3 secondary loan providers and the majority responses



Loan Shark

Base: 41

44%

of Farmers obtain their secondary source of loan from Loan Shark.



56% of farmers received a loan amount of **< IDR 5 million** per hectare.



59% of farmers claim to have a loan interest rate between **21% - 50%**.



51% of farmers have **6 months** of loan period.
88% of farmers are able to pay the loan on-time.



SATISFIED!

5% of farmers are satisfied with loan service from Loan Shark.



Family / Friends

Base: 25

27%

of Farmers obtain their secondary source of loan from Family or Friends.



65% of farmers received a loan amount of **< IDR 5 million** per hectare.



28% of farmers claim to have a loan interest rate between **1% - 10%**.



80% of farmers have **6 months** of loan period.
88% of farmers are able to pay the loan on-time.



SATISFIED!

52% of farmers are satisfied with loan service from Family or Friends.



Commercial Banks

Base: 23

23%

of farmers obtain their secondary source of loan from Commercial Banks.



39% of farmers received a loan amount of **IDR 5 to 10 million** per hectare.



74% of farmers claim to have a loan interest rate between **1% - 10%**.



74% of farmers have **> 6 months** of loan period.
87% of farmers are able to pay the loan on-time.



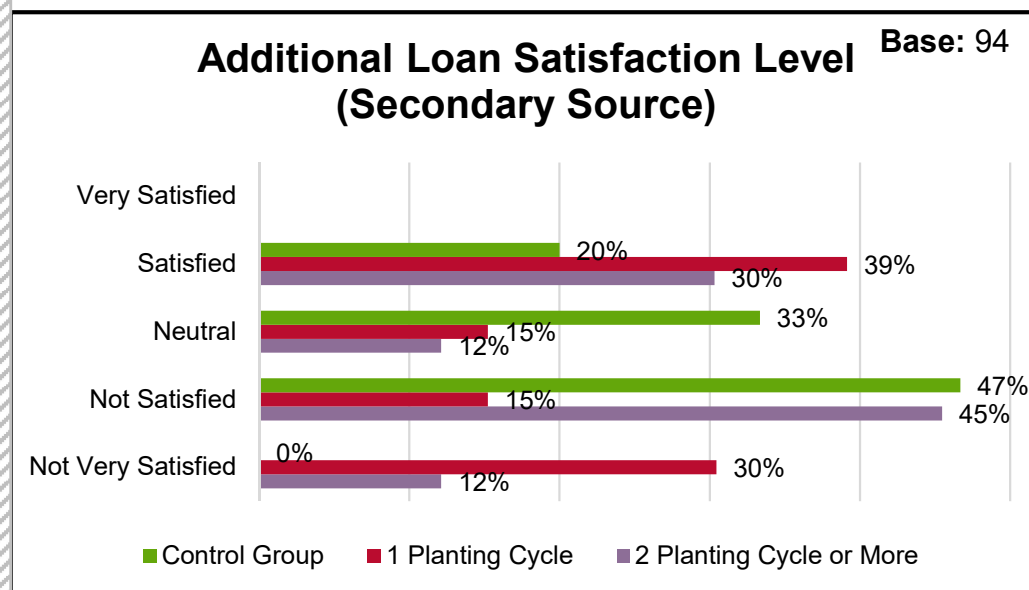
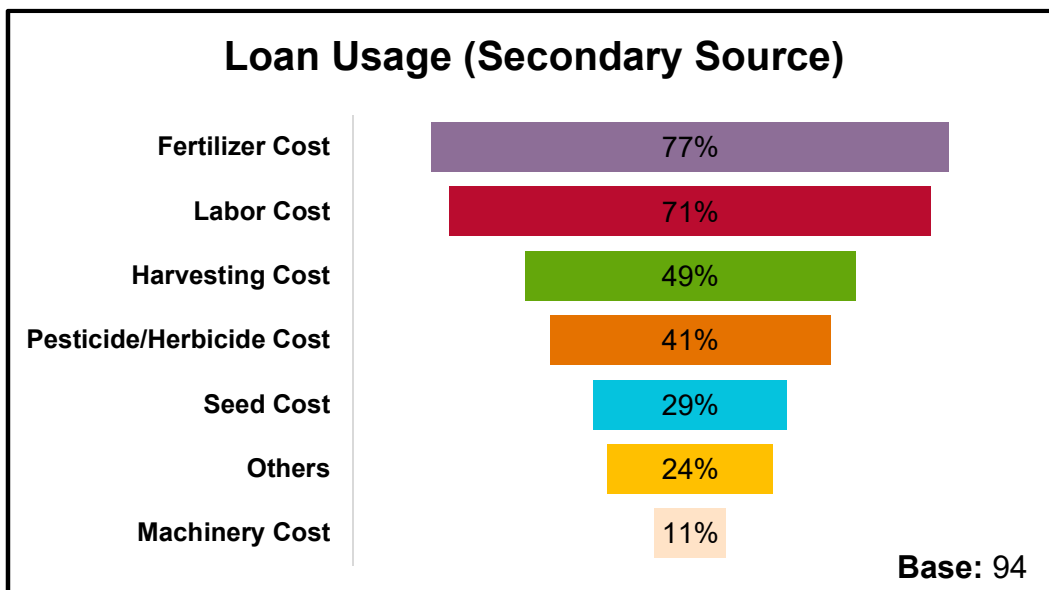
SATISFIED!

70% of farmers are satisfied with loan service from Commercial Banks.

4.3 Business Model

Access to Finance (Secondary Source)

This section examines loan use and the level of satisfaction with the loans.



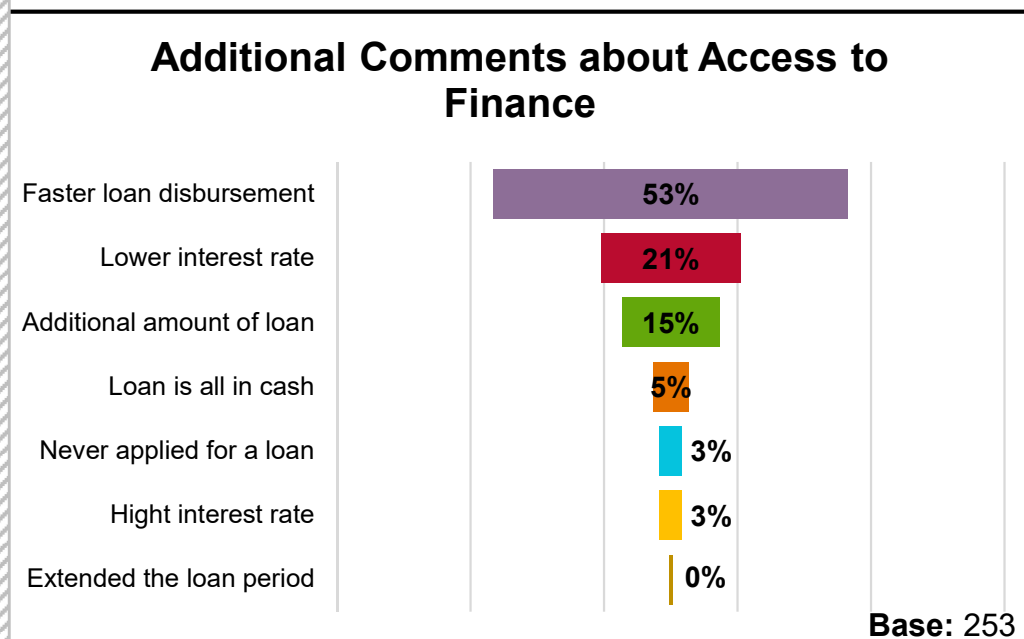
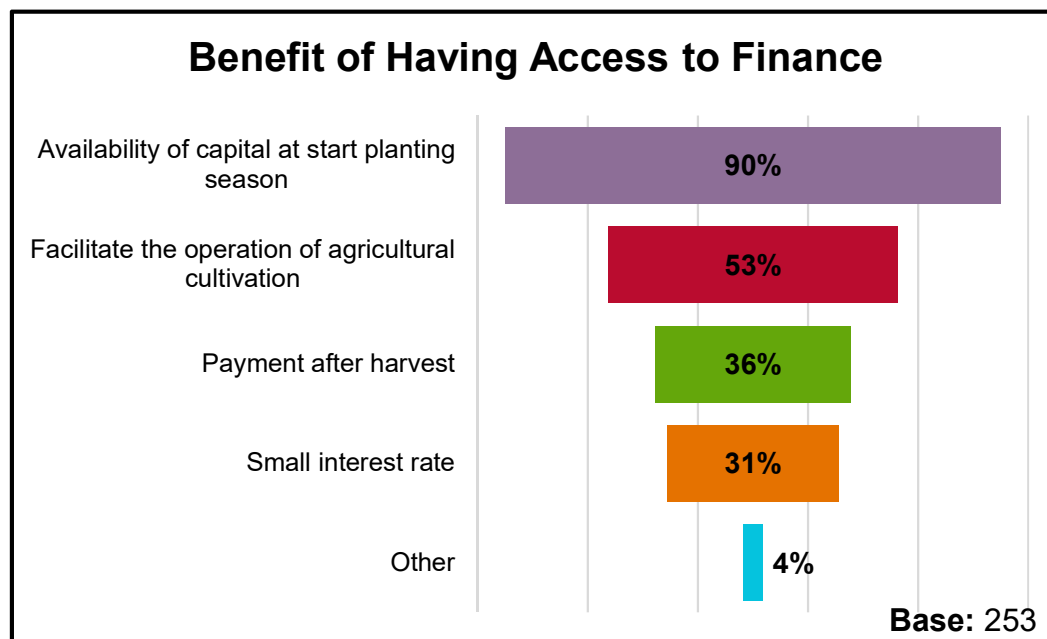
- The top two categories for the use of loans from secondary sources are still the same, namely to buy fertilizers and to pay the labor cost. A significantly high number of farmers (49%) also claim to use their money to pay the harvesting cost which may include transport, sacks, and labor.
- This further highlights the problem in the fertilizer area as the low supply and a high demand cause the price to be higher than it is normally.

- More farmer respondents are not satisfied with their secondary sources of loans mainly because of a high interest rate.
- The satisfaction level varies because the loan sources also vary.

4.3 Business Model

Access to Finance (Benefits & Comments)

This section examines advantages of having access to finance and any additional comments about them.



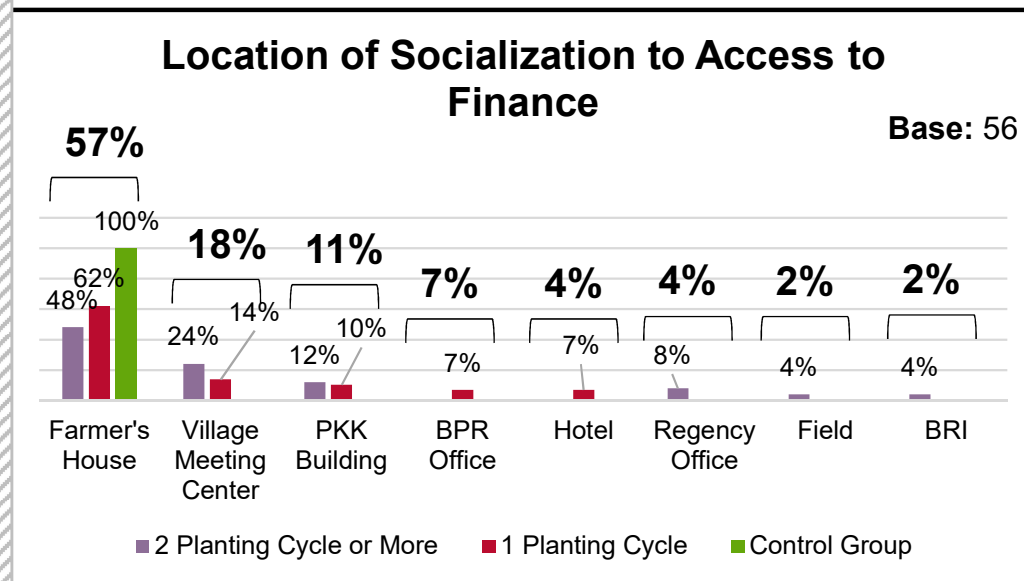
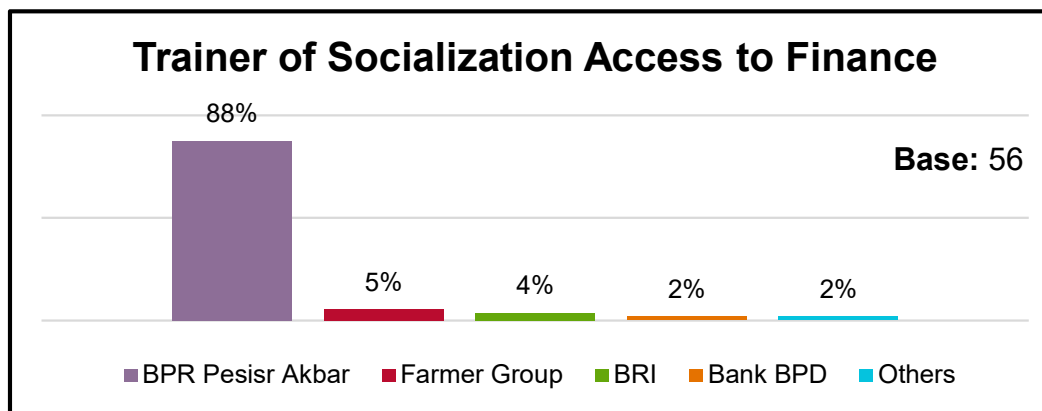
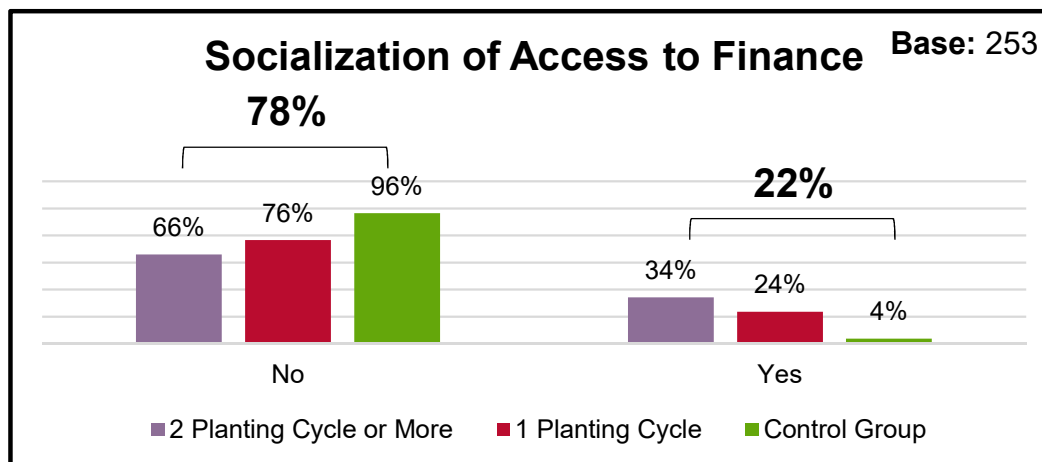
- The majority of farmers (90%) say that the advantage of having access to finance is to have some capital to start their corn planting season.
- Farmers cite that the requirement to do land preparation, buy inputs, and pay labor as the reasons why capital is necessary at the beginning of the season.
- The second advantage of having access to finance is to facilitate the operation of agricultural cultivation.

- Most farmers (53%) would rather have loans disbursed faster as they will use the loans as capital to start their corn planting season.
- A considerable percentage of farmers (21%) expect a lower rate of interest on loans.

4.3 Business Model

Dissemination of Information about Access to Finance

This section examines dissemination of information about access to finance penetration, trainers, and locations.



- Only 22% of the total respondents have attended a financial information dissemination session. Only 34% of the 2 planting cycles or more farmers and 24% of the 1 planting cycle farmers have attended the session .
- Of all the farmers present during the dissemination of such information, 88% of them mentioned Bank BPR Pesisir Akbar as the trainer.
- The locations where financial information dissemination was most commonly held were at farmers' houses (57%).

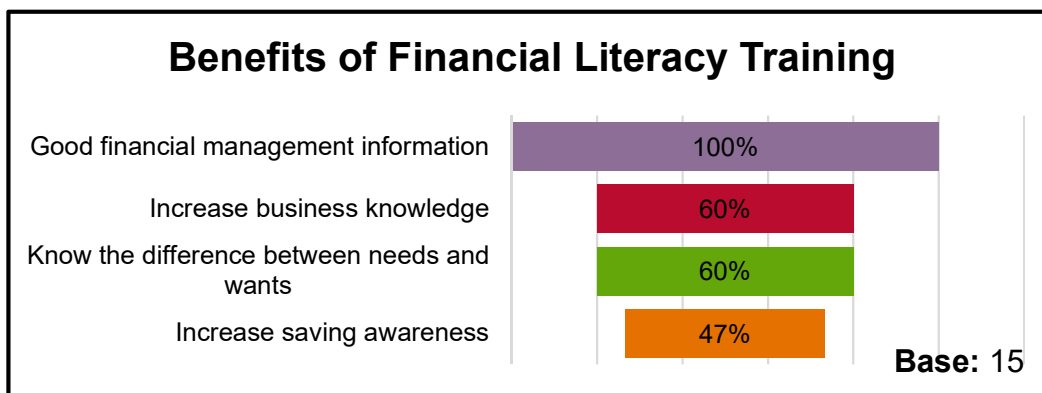
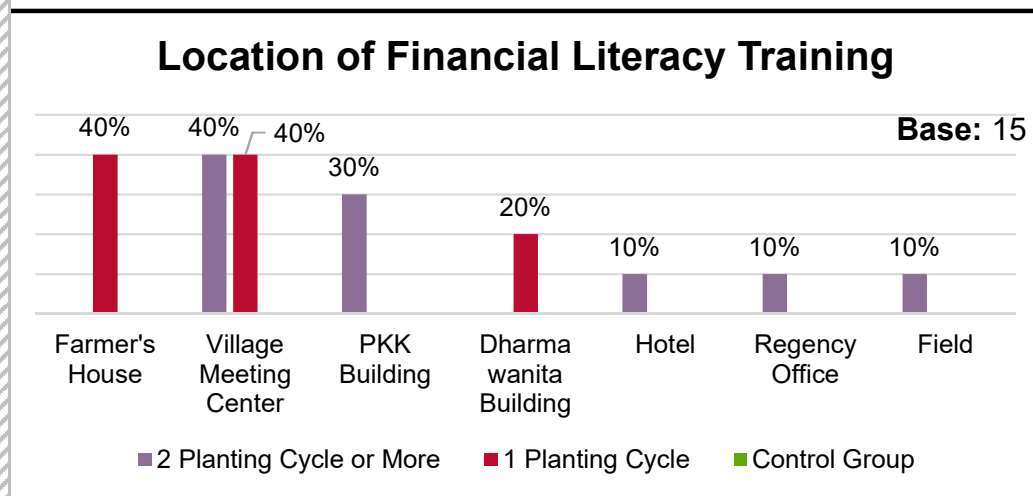
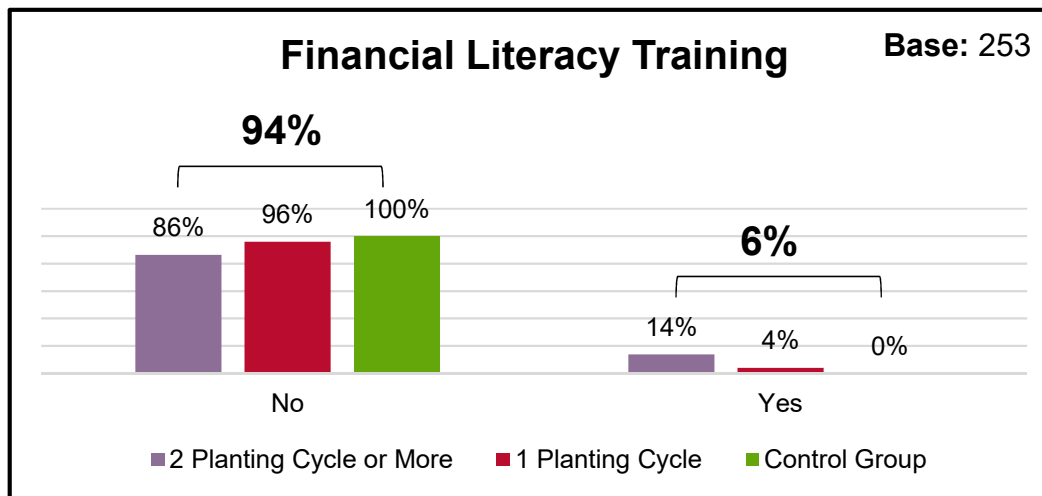


Only 16% of the total respondents were present during the dissemination of such information and almost all of those who attended mentioned Bank BPR Pesisir Akbar as their trainer.

4.3 Business Model

Financial Literacy Training

This section examines the financial literacy training penetration, trainers, locations, and benefits of the training



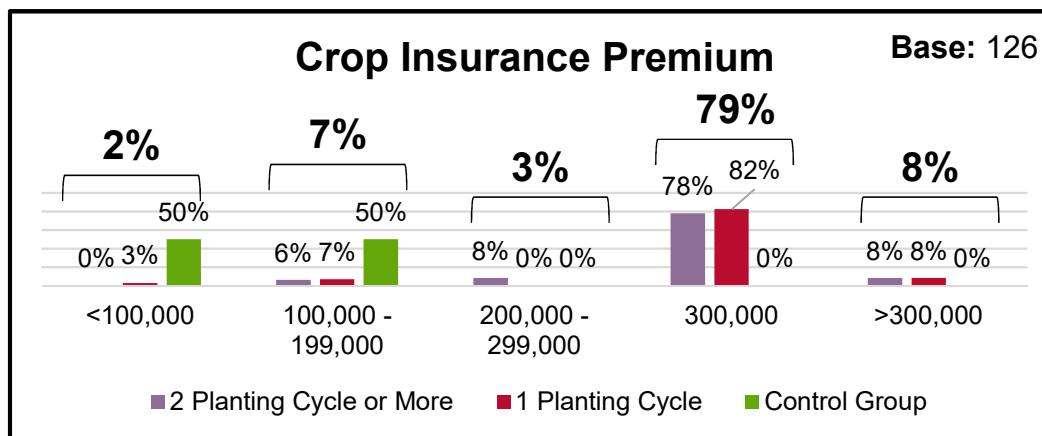
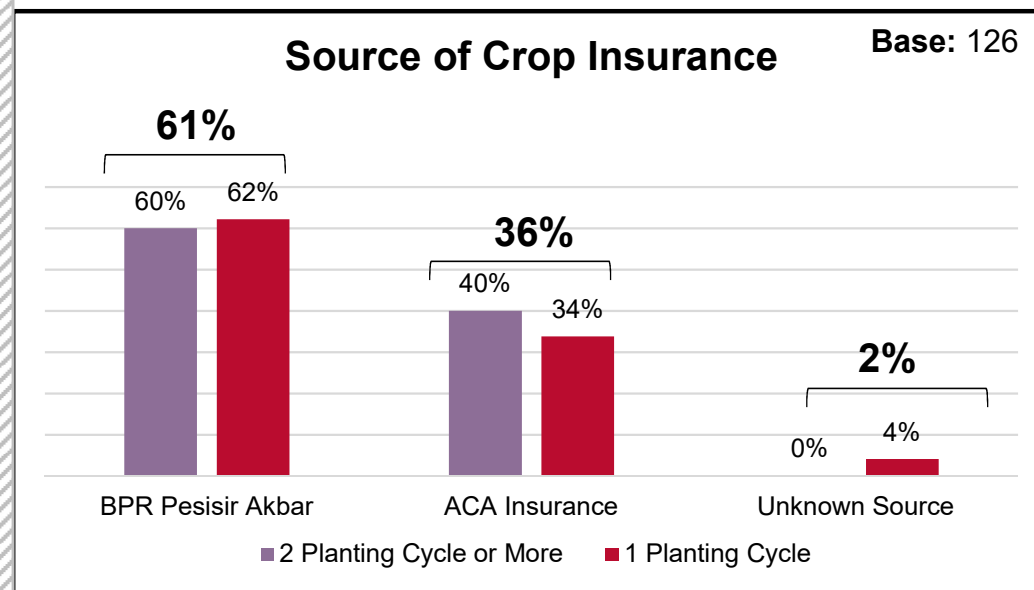
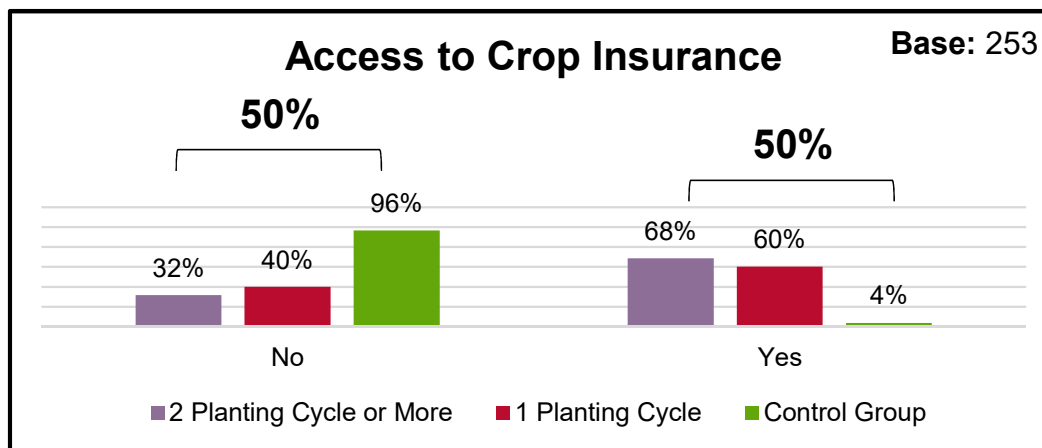
14% of the total respondents have attended financial literacy training held by Bank BPR Pesisir Akbar.

- Only 6% of the total respondents have attended training in financial literacy.
- The percentage of farmers attending the training is far smaller than the percentage in last year's surveys.
- For the ones who did, they attended such training at farmers' houses and village meeting centers.
- All of the farmers attending the training claim to have better understanding of financial management as the main benefit of the training.

4.3 Business Model

Crop Insurance

This section examines dissemination of information about access to finance penetration, trainers, and locations.



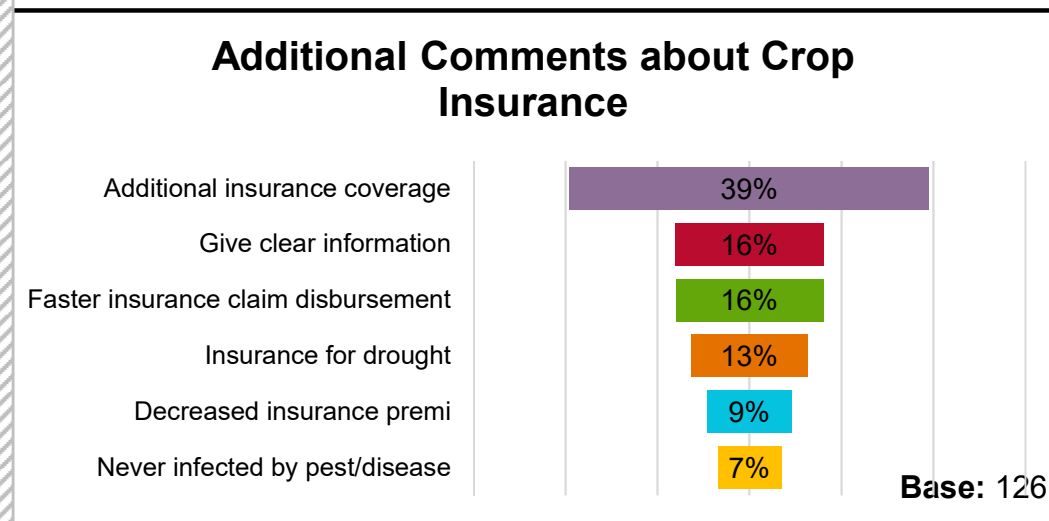
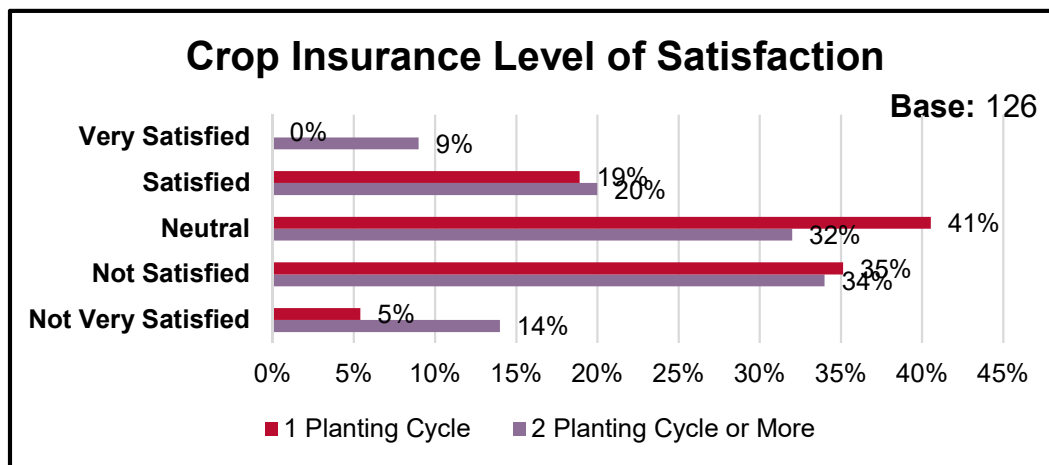
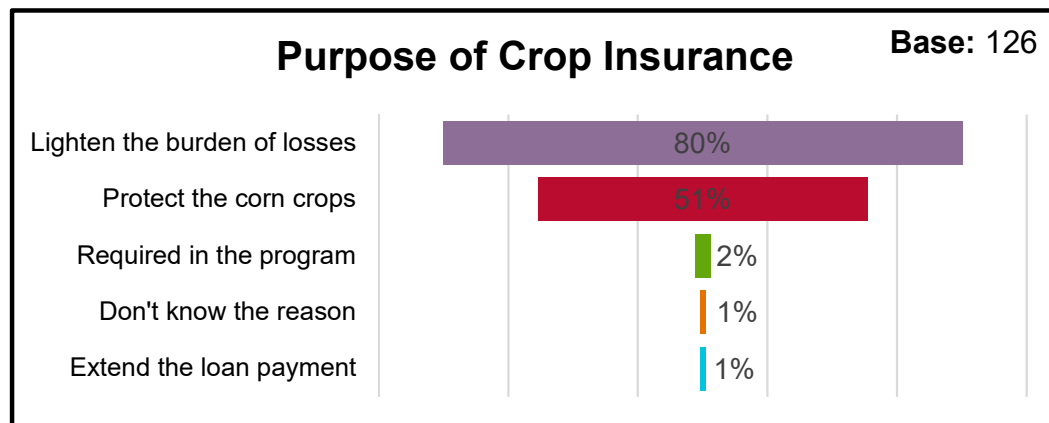
86% of the 2 planting cycles or more farmers and 80% of the 1 planting cycle farmers claim to have access to insurance. Only 2% of the control group farmers have crop insurance.

- Only 68% of the 2 planting cycles or more farmers and 60% of the 1 planting cycle farmers claim to have access to insurance despite the model providing mandatory crop insurance through ACA Insurance.
- This rate is much lower compared to last year's surveys despite the insurance service being continually offered.
- The ones who have crop insurance said that they obtain it from Bank BPR Pesisir Akbar (61%) while 36% of them said that they get it from ACA Insurance. This shows that farmers are still genuinely confused by the actual issuer of the insurance.
- The majority of the respondents having access to crop insurance pay a premium of around IDR 300,000.

4.3 Business Model

Crop Insurance

This section examines dissemination of information about access to finance penetration, trainers, and locations.



The top two purposes of having crop insurance are to 'lighten the burden of losses' and 'protect the corn crops'. As many as 37-40% of the Agriculture Financing Model farmers are satisfied with their crop insurance.

- The top two purposes of having crop insurance are the same as last year's surveys with 'lighten the burden of losses' (80%) and 'protect the corn crops' (51%) being the top two answers.
- A smaller number of farmers are satisfied as only 19-20% of the Agriculture Financing Model farmers claim to feel satisfied with the insurance offered by ACA Insurance in the model. Last year, around 37-40% of the Agriculture Financing Model farmers expressed satisfaction.
- Farmers expect additional coverage on top of coverage for tornadoes. They would like to see coverage for rotten stems or pests/ diseases.



Main Findings:

4.1 Farmer Profile

4.2 Contextual Information

4.3 Business Model

4.4 Economic

4.5 Gender Equality

4.6 Additional Observations



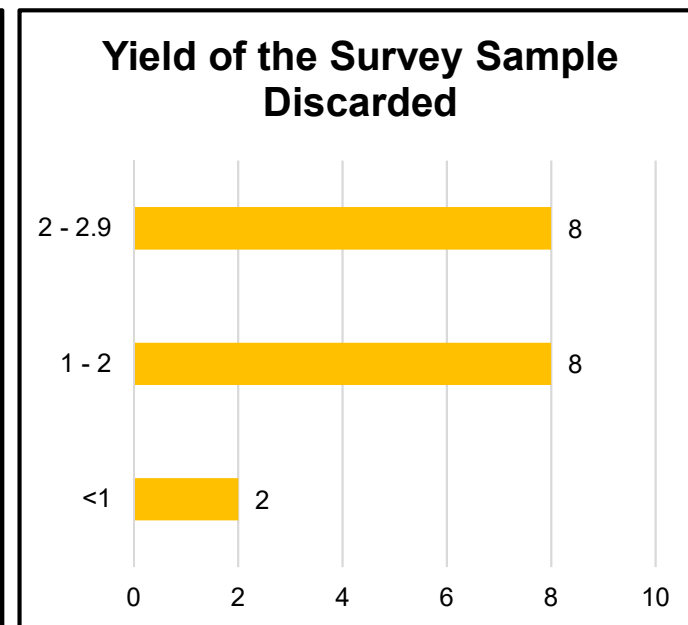
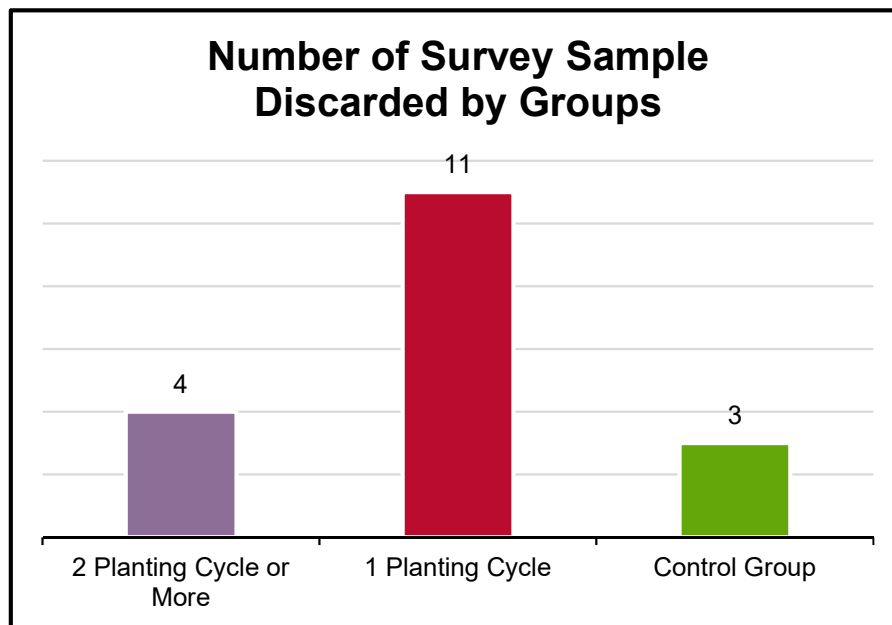
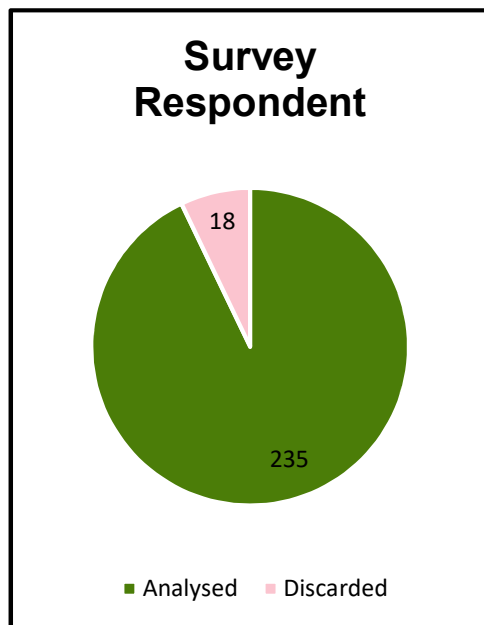
“The farmer is the only man in our economy who buys everything at retail, sells everything at wholesale, and pays the freight both ways.”

John F. Kennedy

4.4 Economic

Survey Sample Outliers

- Farmers in the area consider their planting season a failure if they obtain a yield of under 3 tons per hectare.
- For the purpose of the economic section, we discarded data from some respondents as they had a yield amount of less than 3 tons per hectare because of harvest failures (cyclone, pest & diseases).
- A total of **18 farmer respondents** had a yield under that amount. The breakdown of the samples discarded are the following:



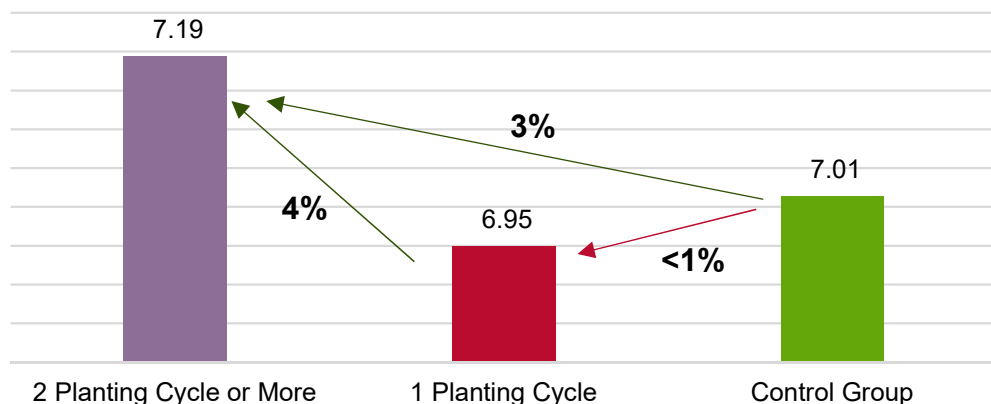
After discarding the outliers, a **base of 235 farmers** was used to analyze the economic indicators in this survey report.

4.4 Economic

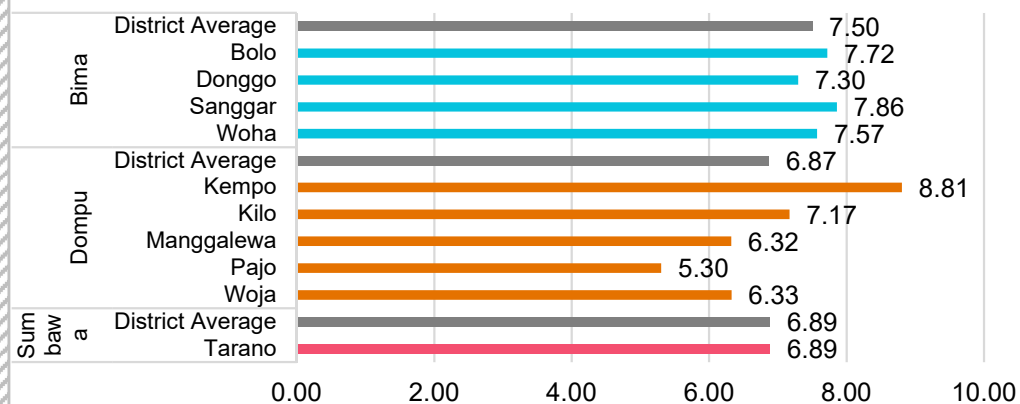
Yield

This section examines the average yields by groups and district.

Average Yield (tons) by Groups Base: 235



Average Yield (tons) by Districts Base: 235



The average yields for the 2 planting cycles or more respondents amount to 6.93 tons, followed by the 1 planting cycle respondents with the average yields of 6.33 tons and control group farmers with the average yields of 6.22 tons.



Bima (7.78 tons/ha) produces the highest average yields at district level, followed by Dompu (6.03 tons/ha) and Sumbawa (5.52 tons/ha). Donggo and Sanggar had the highest average yields at sub-district level.

- The average yields of the three groups are higher than last year's surveys.
- However, the average figures are still far below the ideal farm potential of 8 tons/ha.
- Many of the Agriculture Financing Model farmers especially the 1 planting cycle farmers still produce yields of less than 5 tons/hectare mainly because of rotten stems and other natural causes (diseases/ pest).
- The improvements generated by the control group farmers and the 2 planting cycles or more farmers are very marginal (3%).

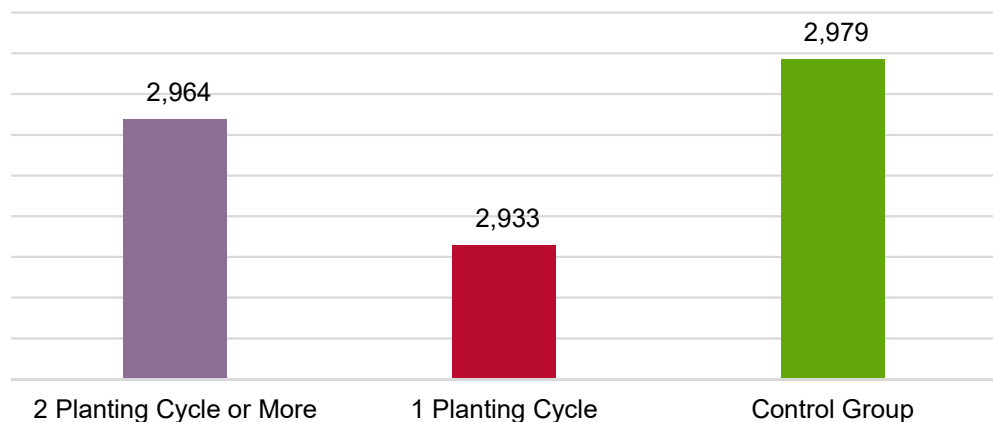
- The district of Bima produces the highest average yields at district level, which is 7.50 tons/ha, followed by Sumbawa with 6.89 tons/ha and Dompu with 6.87 tons/ha.
- The district of Sumbawa produces the biggest improvement in the average yields as more and more farmers from the region are planting corn and joining the Agriculture Financing Model.
- Sanggar produces the highest average yields at sub-district level, which is 7.86 tons/ha, while Pajo produces the lowest average yields of 5.30 tons/ha.

4.4 Economic

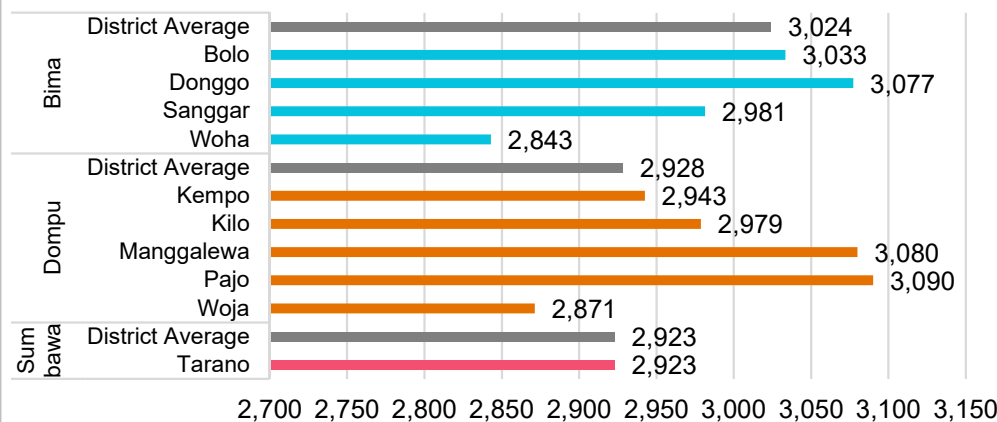
Price of Crops

This section examines the average price of crops by groups and district.

Average Price per Kg by Groups Base: 235



Average Price per Kg by Districts Base: 235



The market price for corn in the area last year was higher as farmers got the average price of around IDR 3,400/kg to IDR 3,500/kg.



Bima (IDR 3,525/kg) has the highest average corn price per kg at district level, followed by Sumbawa (IDR 3,391/kg) and Dompu (IDR 3,380/kg).

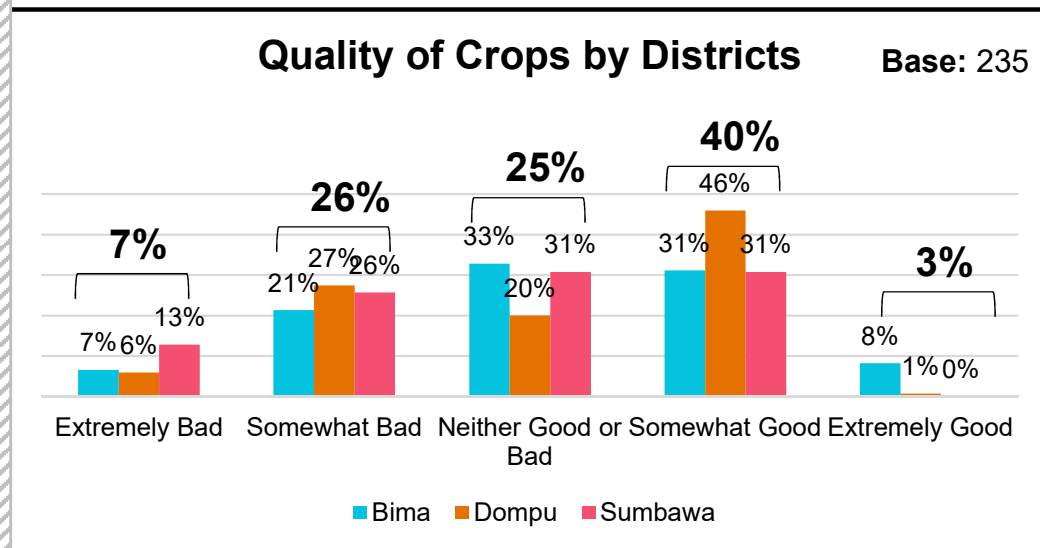
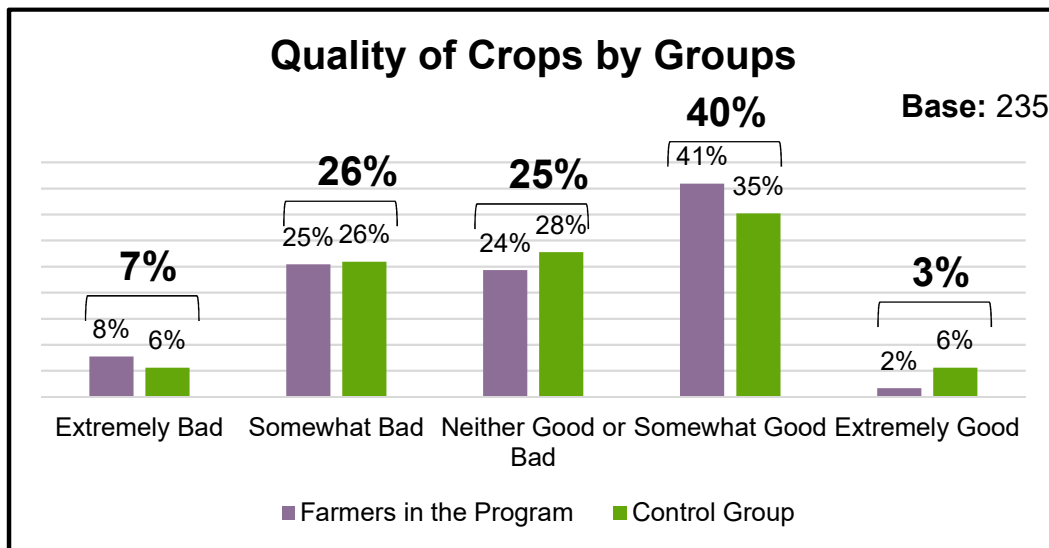
- The average price per kg of corn across the three groups are relatively the same. There are no major difference in prices from the survey data obtained.
- In general, the corn prices have decreased quite significantly (~15%) compared the market price in 2017 and farmers have expressed their concerns about the lower market price this planting season.
- The average price per kg of corn this year is around IDR 2,900 to IDR 3,000/kg range.

- Bima has the highest district average price per kg of corn with IDR 3,024/kg followed by Dompu with IDR 2,928/kg and Sumbawa with IDR 2,923/kg.
- The prices are significantly lower compared to last years prices in the respective districts.
- Pajo is the district with the highest average price per kg of corn despite being the district with the lowest average yield.

4.4 Economic

Quality of Crops

This section examines quality of the crops produced according to groups and district.



As many as 50% of the total respondents state that quality of the crops is ‘Somewhat Good’. While a total of 18% of the respondents state that their crops are either ‘Somewhat Bad’ or ‘Extremely Bad’.



As many as 75% of the respondents in Bima state that the quality of their crops is ‘Somewhat Good’ and 15% state that it is ‘Extremely Good’. Less than 50% of the farmers in Dompu and Sumbawa state that their crops are good.

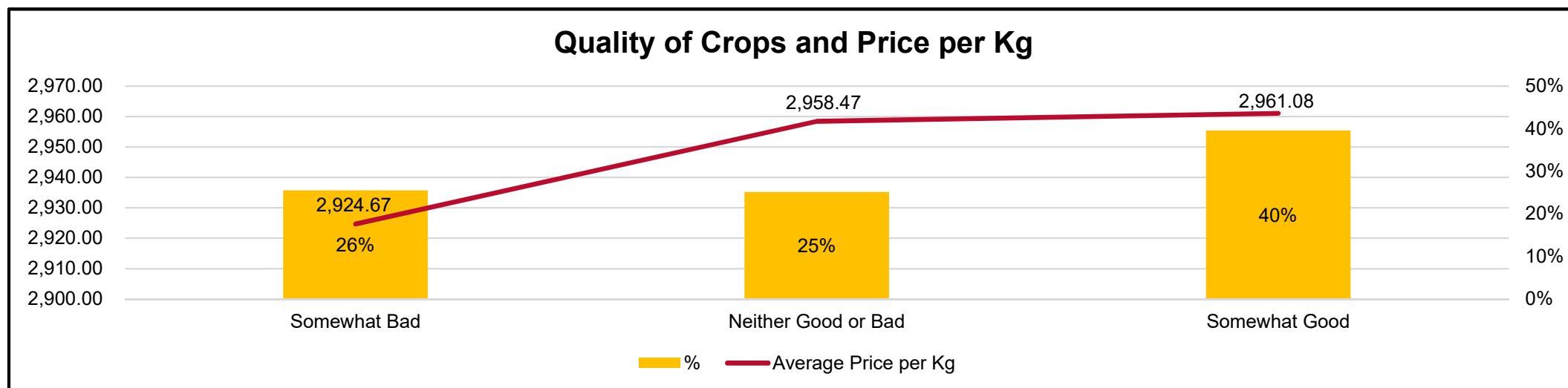
- The quality of crops is determined solely based on farmers’ perception of their own crops.
- As many as 40% of the total farmer respondents state that the quality of their crops is ‘Somewhat Good’. This year’s farmer respondents have a lower crop quality satisfaction level compared to last year’s respondents.
- There is no significant difference in the perception of quality of crops among the three groups.

- As many as 46% of the farmers in Dompu has a reasonably high level of satisfaction with the quality of their crops as 46% of the farmers in Dompu state that their crops are ‘Somewhat Good’.
- This is considerably higher than the perception of farmers in Bima and Sumbawa.
- Around 1/3 of the total farmers say that their crops are either ‘Extremely Bad’ or ‘Somewhat Bad’. This is mainly because of the prevalence of diseases and pests.

4.4 Economic

Quality of Crops vs Price

This section plots the crop quality index with the price.



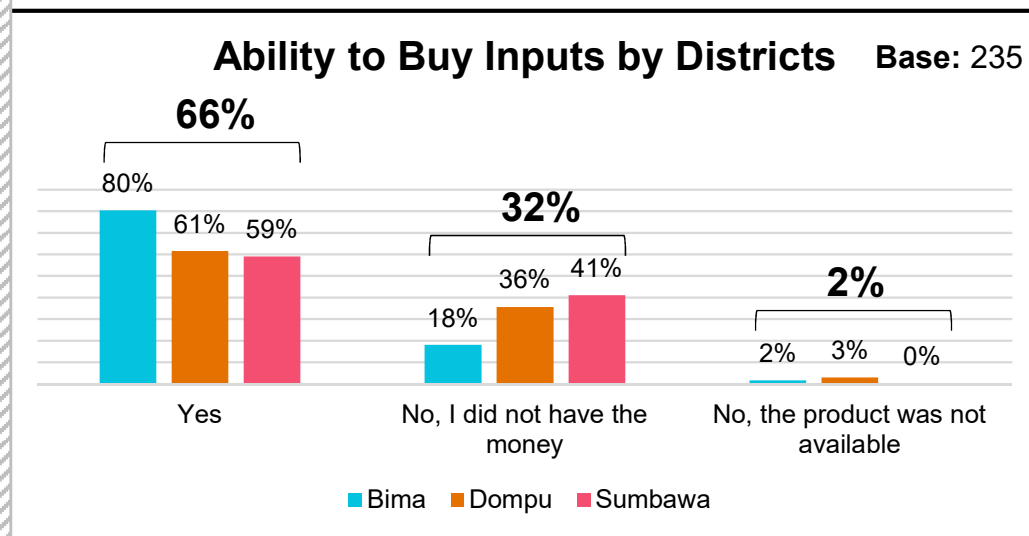
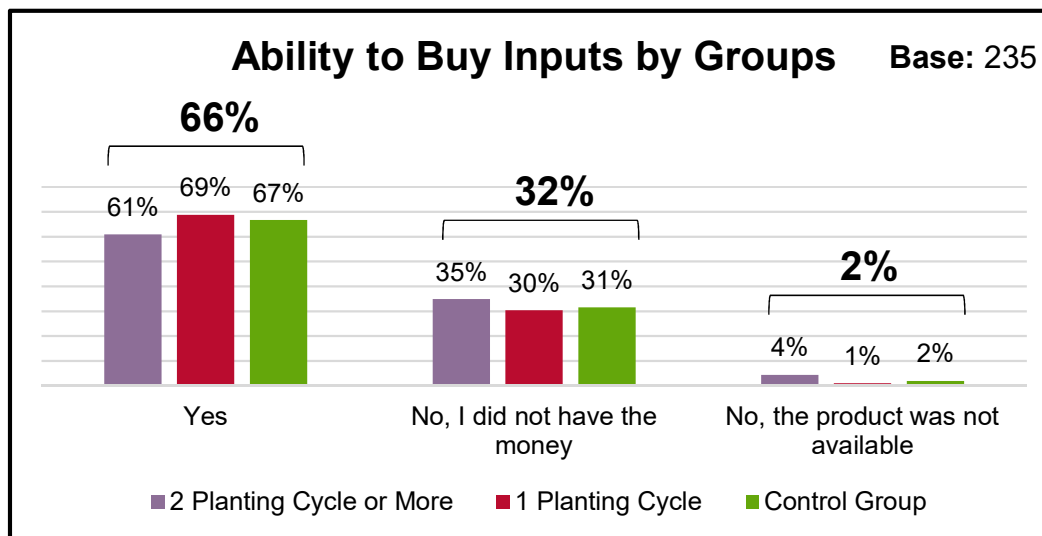
As farmers' perception of the quality of their crops increases, the price of their crops also increases. Therefore, there is a positive trend correlating the quality of crops and the price. However, the average price differential across the perceived quality of crops is very marginal.

- There are not enough samples to obtain the average comparable price per kg for farmers saying that their crops are 'Extremely Bad' and those saying that their crops are 'Extremely Good'.
- However, there is a slight increase in prices among farmers stating that their crops are 'Somewhat Bad' (IDR 2,924/kg) and those stating that their crops are "Neither Good nor Bad" (IDR 2,958/kg) with those stating that their crops are 'Somewhat Good' (IDR 2,961/kg).
- Despite such a price increase, the resulting differentials are too marginal to make a clear distinction in terms of quality between crops of different quality.

4.4 Economic

Ability to Buy Inputs

This section examines farmers' ability to buy inputs according to groups and districts.



Only 32% of the total respondents say that they are able to buy inputs, while 64% state that they do not have any money to buy the inputs.



More than half of the respondents in Bima (54%) and only 24% of the respondents in Sumbawa and Dompu state that they are able to buy inputs .

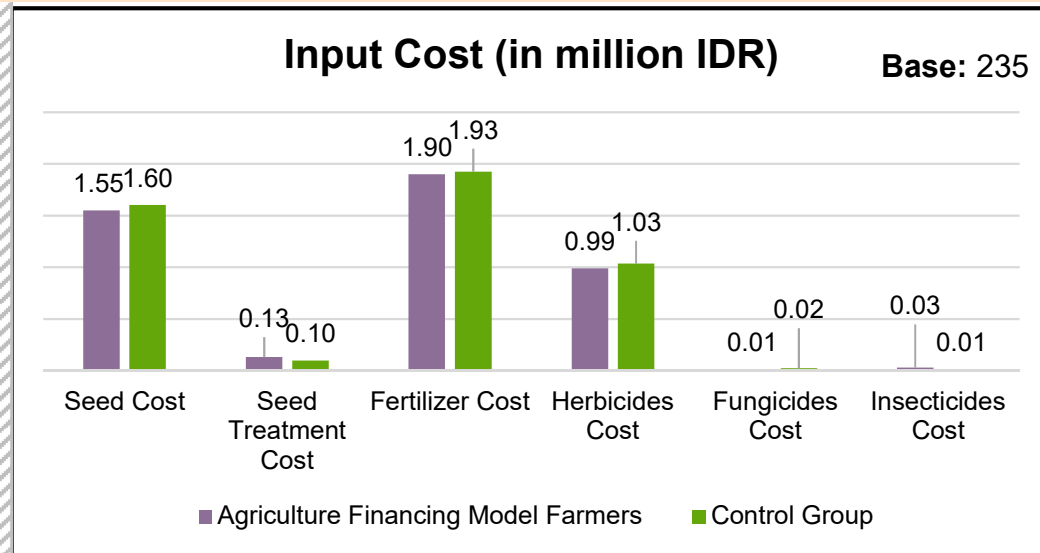
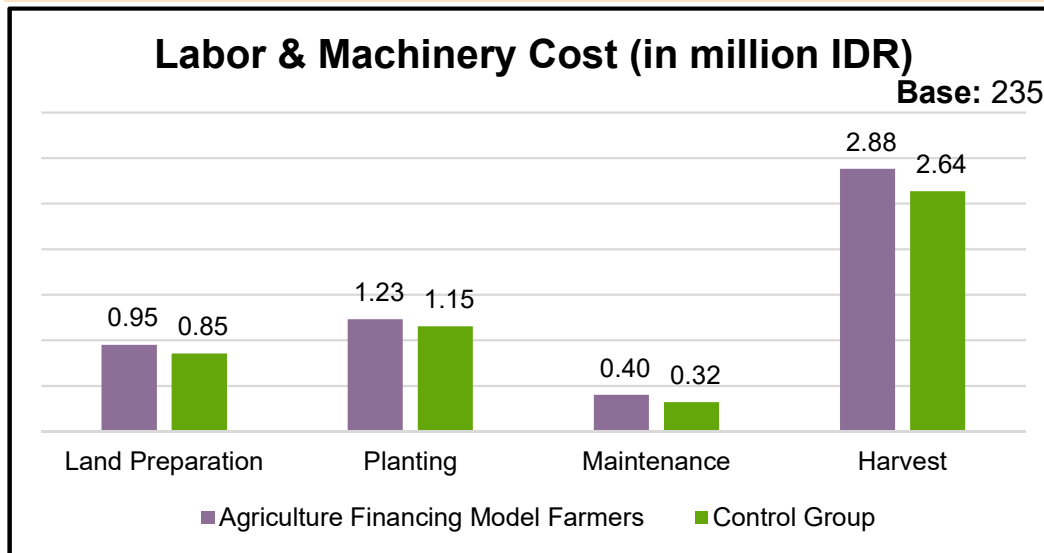
- There is a sharp contrast in the ability of the respondents to buy inputs in this year's surveys as 66% of the total respondents say that they are able to buy inputs while only 32% say that they do not have any money.
- There is no major difference in results between the groups.

- Bima farmers (80%) once again is the farmer group that has the highest ability to buy inputs followed by Dompu (61%) and Sumbawa (59%).
- The easier accessibility to inputs in Bima may be the reason for the big difference with other districts.

4.4 Economic

Production Cost

This section examines the average labor & input costs between the groups.



'Harvest' is by far the highest component of the labor and machinery costs throughout the planting phases, followed by 'Land Preparation' and 'Planting'.



'Seed Cost' and 'Fertilizer Cost' are the biggest components of input costs based on last year's surveys and Agriculture Financing Model farmers on average spend more on inputs than control group farmers do.

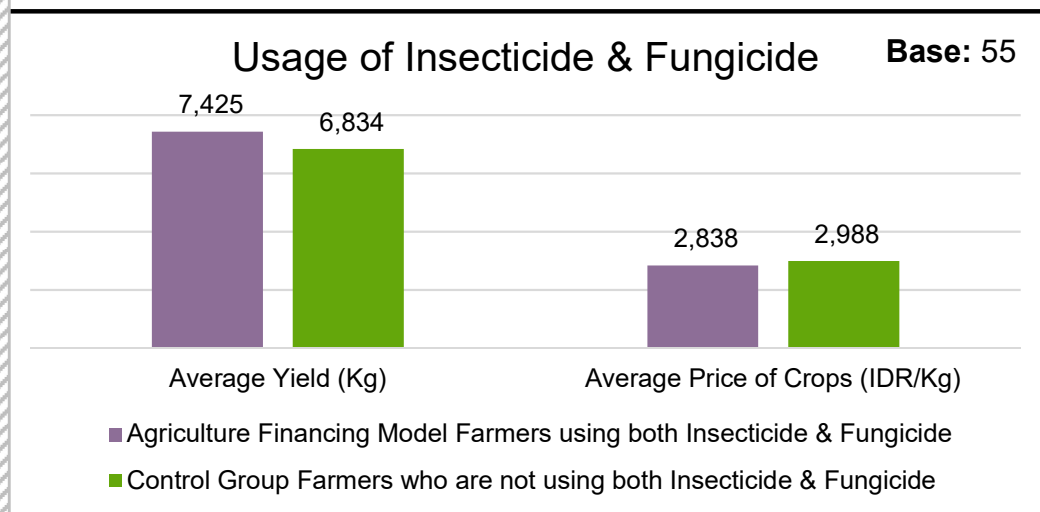
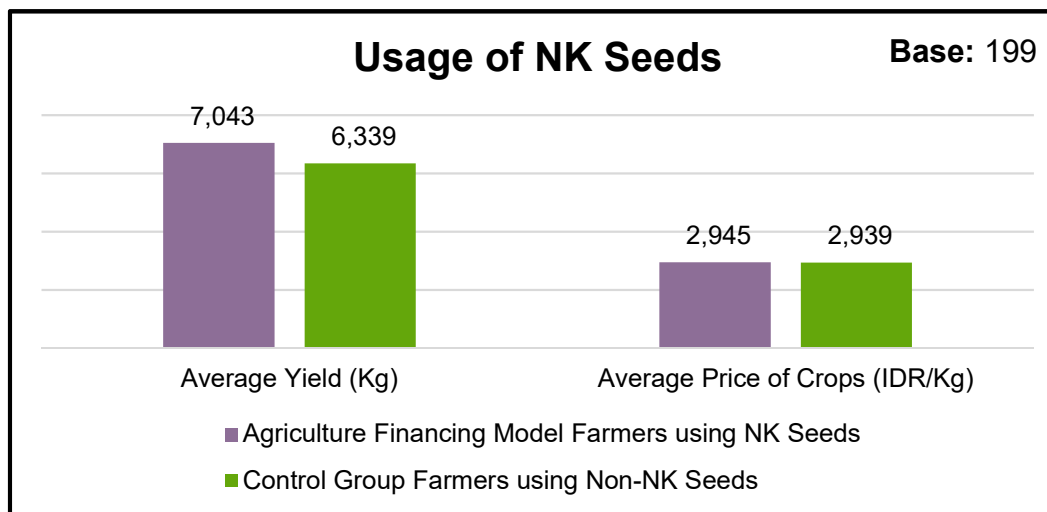
- 'Harvest' is the highest component of the labor and machinery costs throughout the planting phases, ranging from IDR 2.64 million to IDR 2.97 million per hectare on average.
- There is no major difference among the groups. However, Agriculture Financing Model farmers seem to spend a little bit more than the control group farmers do on labor and machinery almost throughout all the planting phases.

- 'Fertilizer Cost' is the biggest component of input costs based on this year's survey with farmers spending around IDR 1.83 million to IDR 1.93 million per hectare.
- This is followed by 'Seed Cost' where farmers spend around IDR 1.54 million to IDR 1.60 million per hectare.
- Despite the absence of no major difference among the groups, control group farmers tend to spend more on inputs this year compared to Agriculture Financing Model farmers.

4.4 Economic

Usage of NK Seeds and Crop Protection Products (Insecticide & Fungicide)

This section shows comparison results in terms of economic indicators between Agriculture Financing Model farmers using Syngenta's NK seeds and CPPs (Insecticides & Fungicides) and Control Group farmers using neither NK seeds nor CPPs.



SIA 2017 Agriculture Financing Model farmers using NK seeds produce average yields 3% higher than the average yields of Control Group farmers using non-NK seeds from Syngenta. The average crop price differential between the two groups is extremely small.

SIA 2017 Agriculture Financing Model farmers using both insecticides and fungicides produce average yields 9% higher than the average yields of Control Group farmers using neither insecticides and pesticides. The average crop price differential between the two groups is extremely small.

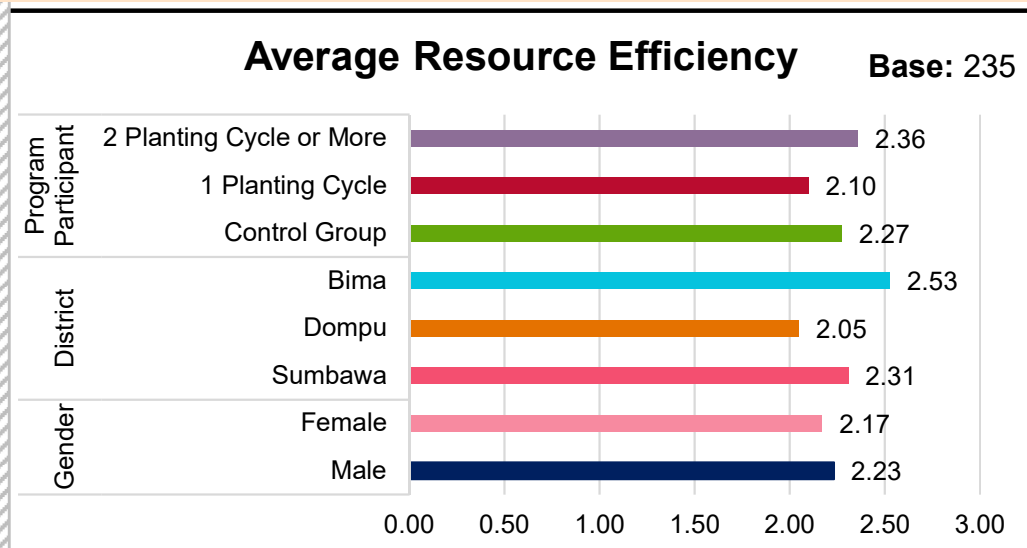
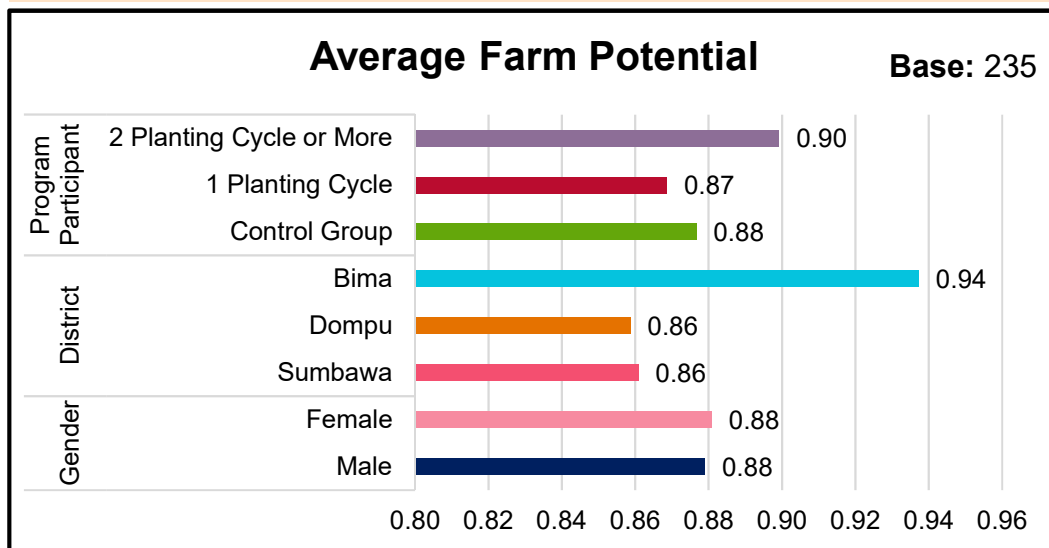
- Agriculture Financing Model farmers using NK seeds produce average yields around 15% higher than the average yields of Control Group farmers using non-NK seeds.
- The perceptions of NK seeds among farmers in Sumbawa are good and many have said that they have big stems with crops having good quality. However, many have mentioned that those seeds are not suitable for certain locations (i.e. locations with higher moisture levels).
- The average crop price differential between the two groups is extremely small.

- Agriculture Financing Model farmers using both insecticides & fungicides on average produce yields 9% higher than the average yields produced by Control Group farmers using neither insecticides nor fungicides.
- Insecticides and fungicides were not given as part of the Agriculture Financing Model input package. Some farmers have demanded the inclusion but some also would like to pick and choose which products to use on their own, depending on the respective area.
- The average crop price differential between the two groups is extremely small.

4.4 Economic

Farm Potential & Resource Efficiency

This section examines farm potential and resource efficiency according to groups, districts, and genders.



SIA 2017 The 2 planting cycles or more farmers has the highest farm potential rate of 0.86, followed by both the 1 planting cycle farmers and the control group farmers by 0.79. Farmers in Bima has the highest farm potential, which is 0.94.

SIA 2017 The “2 planting cycles or more” farmers generate the highest resource efficiency rate of 2.66 while farmers in Bima generate the highest rate compared to farmers in the other districts, which amounts to 3.09.

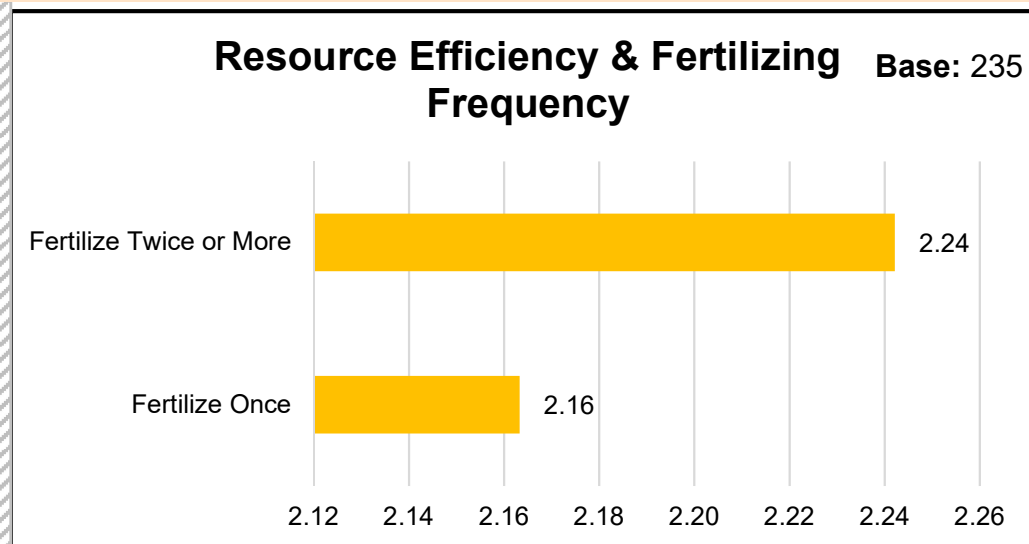
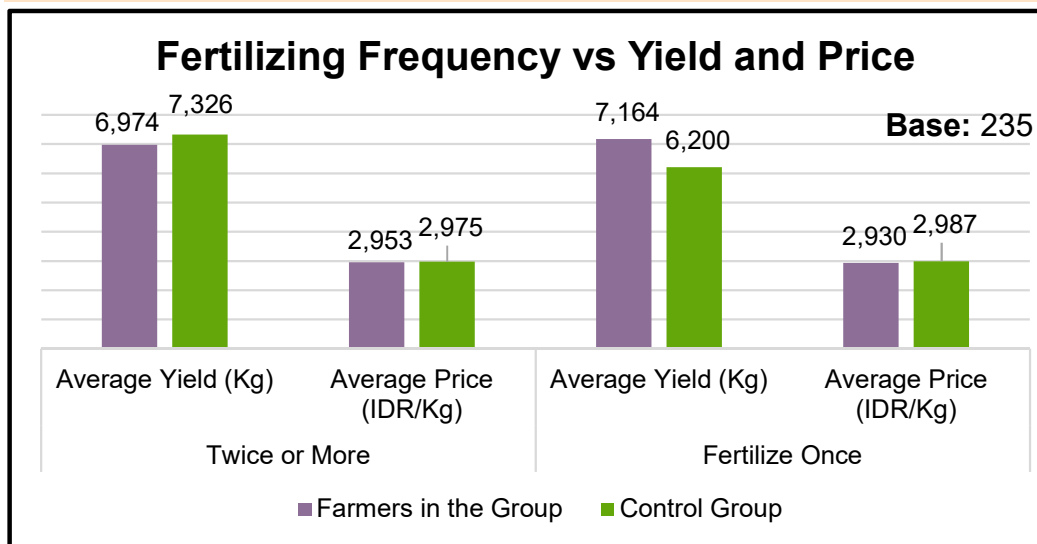
- Farm potential achievement refers to the level of productivity (yields) of farmers divided by the maximum yields per hectare.
- In this case, the maximum yield per hectare used for the purpose of this calculation was set at 8 tons/ha.
- The 2 planting cycles or more farmers (0.90) have a marginally higher farm potential rate compared to that of the other farmer groups.
- The farm potential rate is slightly higher this year because of higher average yields.
- Farmers in Bima (0.94) have a considerably higher farm potential rate than those of farmers in Dompu and Sumbawa.

- Farm resource efficiency refers to the ratio of income earned (revenue) divided by the costs of investment in the farm. The higher the resource efficiency ratio is, the more efficient the farmers are.
- The 2 planting cycles or more farmers (2.36) have a higher resource efficiency rate compared to the 1 planting cycle farmers (2.10) and the control group farmers (2.27).
- The resource efficiency rate of farmers this year is lower than that of last year’s respondents partly because of lower corn prices.
- Farmers in Bima do not only have the highest farm potential, but they, on average, also have the highest resource efficiency rate, which amounts to 2.53.

4.4 Economic

Fertilizer Application Frequency Impact

This section shows the impact arising from the frequency of fertilizer application on the key economic indicators.



Farmers applying fertilizers twice or more produce average yields ~30% higher than the average yields of those applying fertilizers only once. The average crop price is almost equal for both groups.



The resource efficiency rate of farmers applying fertilizers twice or more (3.06) is significantly higher than that of farmers applying fertilizers only once (2.38).

- In this year’s survey, the differential in yields between farmers applying fertilizers twice or more and those applying fertilizers once is very marginal.
- Despite fertilizer shortages, there is no significant difference in productivity.
- The average crop price is almost equal for both groups.

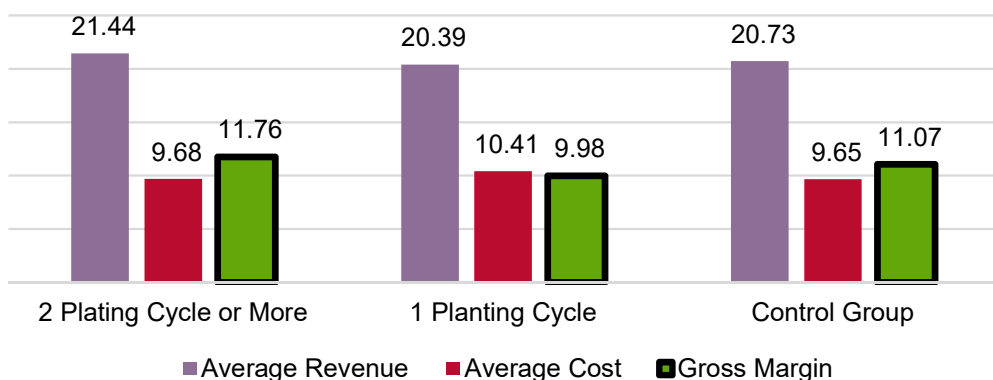
- Farm resource efficiency refers to the ratio of income earned (revenue) divided by the costs of investment in the farm. The higher the resource efficiency ratio is, the more efficient the farmers are. This value is compared between farmers who fertilize twice and farmers who fertilize only once.
- There is no major difference in the resource efficiency rate between farmers applying fertilizers twice or more and those applying fertilizers once as the value for the average yields of each group is almost the same.

4.4 Economic

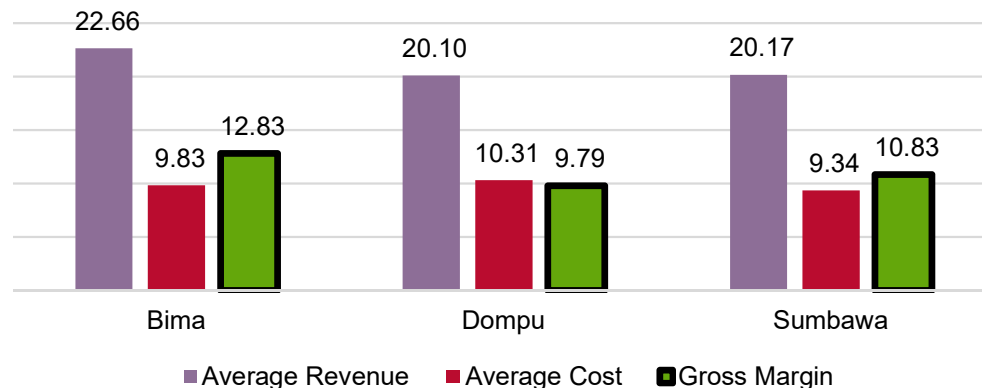
Gross Margin

This section examines the gross margin, revenue, and total costs according to groups and districts.

Gross Margin, Revenue and Cost Groups (in million IDR) Base: 235



Gross Margin, Revenue and Cost Districts (in million IDR) Base: 235



The average gross margin for the “2 planting cycles or more” farmers amounts to 14.9 million/ha, followed by 13.0 million/ha for the “1 planting cycle” farmers and 12.7 million/ha for the control group farmers.



The average gross margin for farmers in Bima amounts to 17.7 million/ha, followed by farmers in Dompu and Sumbawa with the average gross margin of 11.9 million/ha and 11.8 million/ha, respectively.

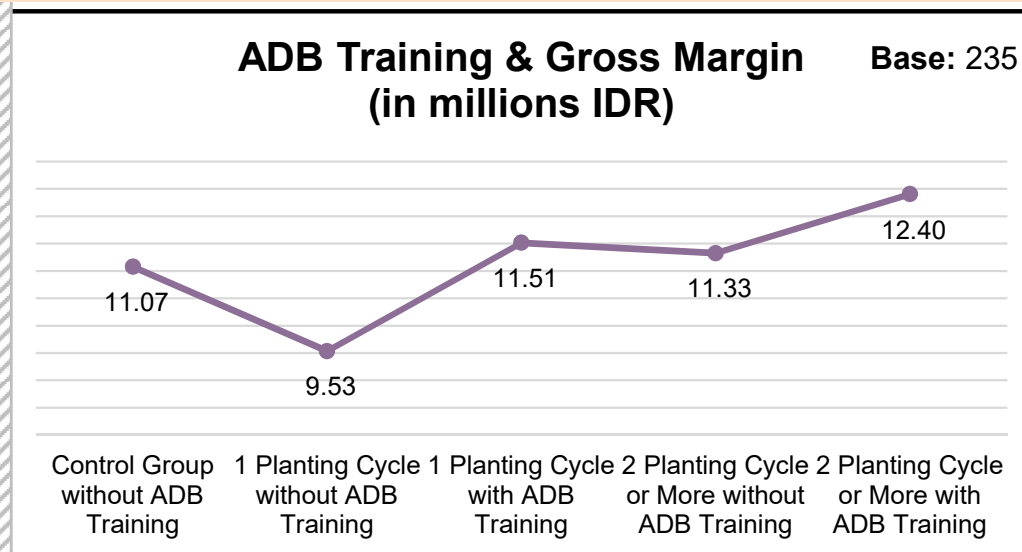
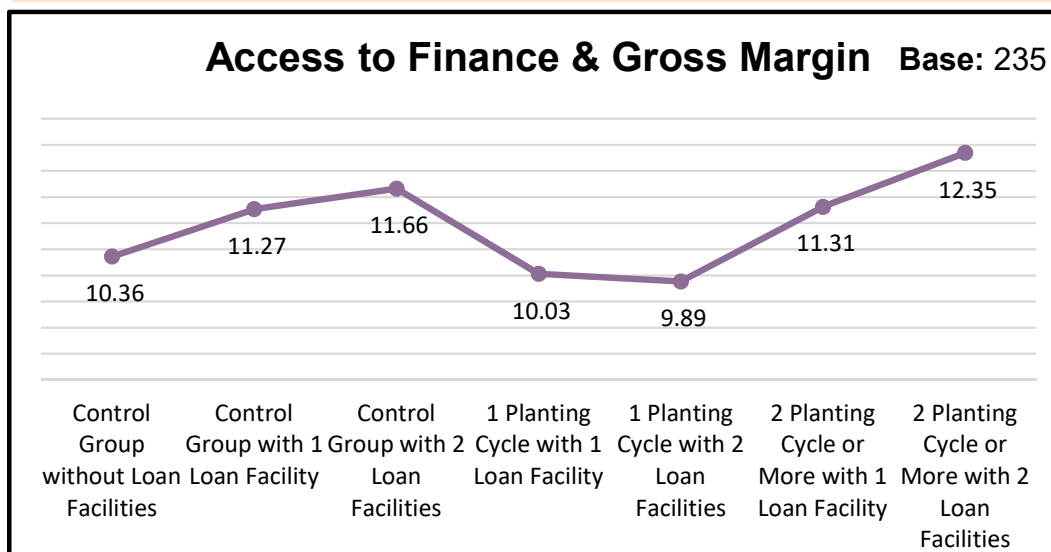
- Farmers’ gross margins in this year’s surveys are lower than those of farmers in last year’s survey for the three groups.
- This is mainly due to corn prices that are lower this year which result in lower farm revenues and a slight increase in the costs compared to last year’s production cost.
- Farmers joining the Agriculture Financing Model for 2 or more cycles have a better gross margin than those of the other two groups. However, the “1 planting cycle” farmers generate the lowest average gross margin .

- Farmers in Bima still have the highest gross margin compared to farmers in Dompu and Sumbawa even if the average gross margin in the area decreases quit significantly.
- The production cost in Dompu is higher than the production cost in the other districts and coupled with lower corn prices in the market, farmers in Dompu generate the lowest average gross margin.

4.4 Economic

Access to Finance, ADB Training with Gross Margin

This section examines the effect of having access to finance and ADB training with the Gross Margin of farmers



Farmers with access to finance have a better average gross margin. The 2 planting cycles or more farmers with financial access from BPR generate the highest average gross margin amounting to IDR 14.9 million per hectare.



Farmers with access to ADB training have a higher average gross margin compared to those with no access to ADB training among the three groups.

- The chart compares the gross margin of farmers with no access to finance, those with access to 1 source of finance, and those with access to 2 sources of finance.
- Control group farmers with more access to finance (2 sources of finance) have a higher average gross margin than those of farmers with access to 1 source of finance and farmers with no access at all. The same findings are also found in the 2 planting cycles or more farmers.

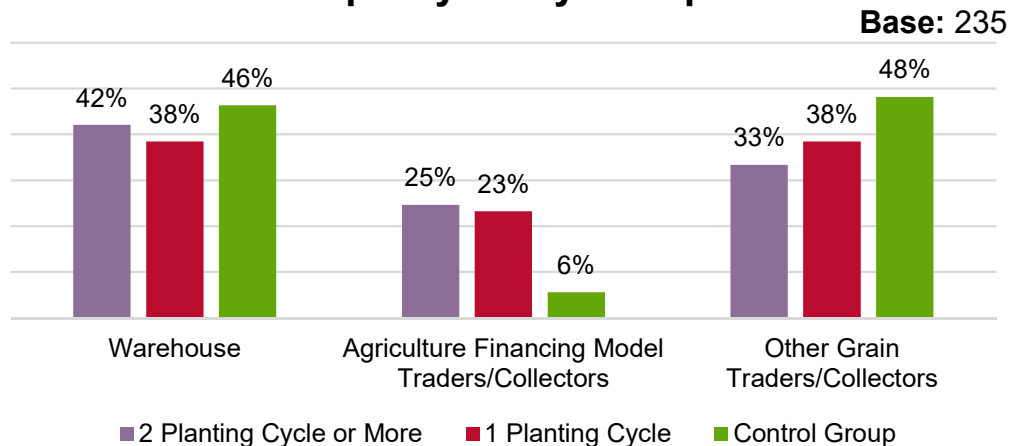
- Farmers with access to growing protocol training (ADB training) tend to have a higher gross margin compared to those without training for the three groups.
- Farmers who been involved in the corn credit model in more cycles would have more chances to attend training, justifying their higher average gross margin.
- This suggests that access to growing protocol training is vital.

4.4 Economic

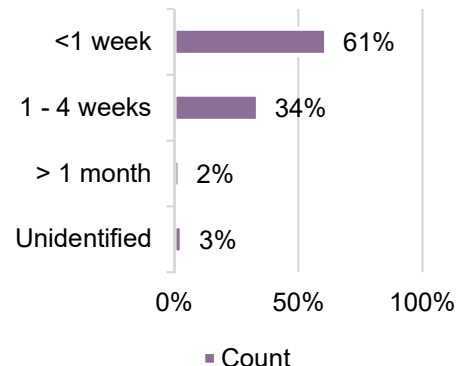
Crop Buyers

This section examines buyers of farmers' crops for the groups.

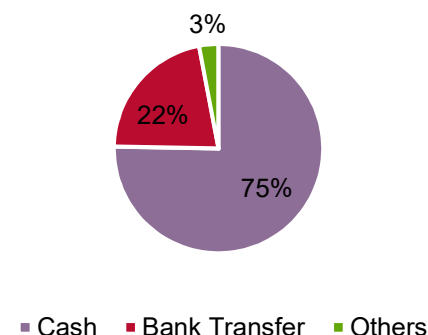
Crop Buyers by Groups



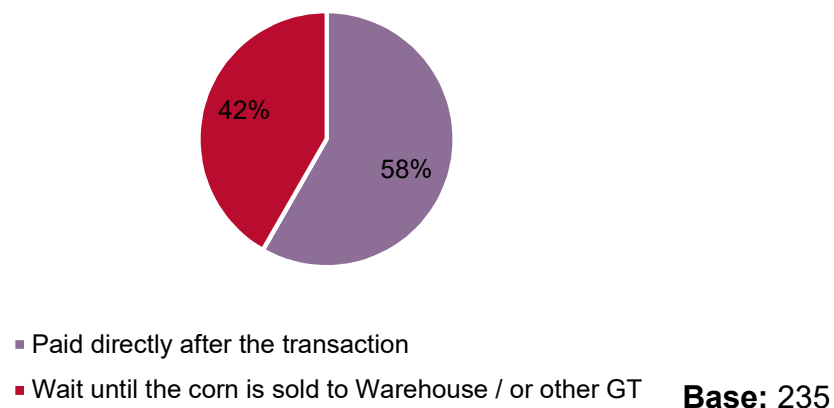
Payment Timeframe



Payment Method from GT/Warehouse to Farmers



Payment Process from Grain Traders / Warehouse to Farmers



- In total, most Agriculture Financing Model farmers typically sell their produce to traders that are part of the Agriculture Financing Model and other grain traders coming to their field to pick up the crops. The main reasons are those farmers do not need to allocate a budget for transport and there are no warehouses in their area.
- A significant number of farmers, i.e. 42% of the 2 planting cycles or more farmers and 38% of the 1 planting cycle farmers, sell their produce directly to the warehouse because they can obtain a higher price, and better and more accurate scale.
- Over half of the total respondents (58%) say that they get paid directly after crop transactions.
- In terms of payment timeframe, 61% of the respondents say that the payment takes less than a week.
- The most common payment method is cash (75%), followed by Bank Transfer (22%).



Main Findings:

4.1 Farmer Profile

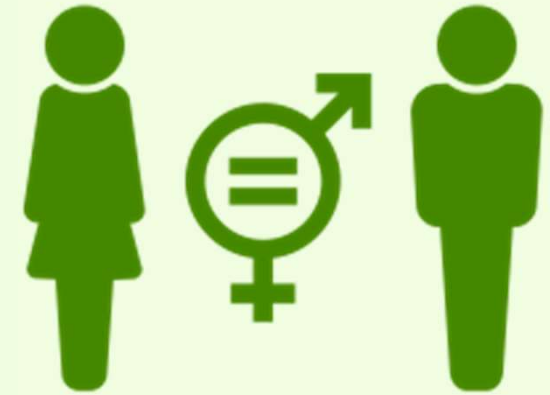
4.2 Contextual Information

4.3 Business Model

4.4 Economic

4.5 Gender Equality

4.6 Additional Observations



“Absolute equality not possible . What is possible, we can honor the qualities in each person, that would reduce this gap”

Litymunshi

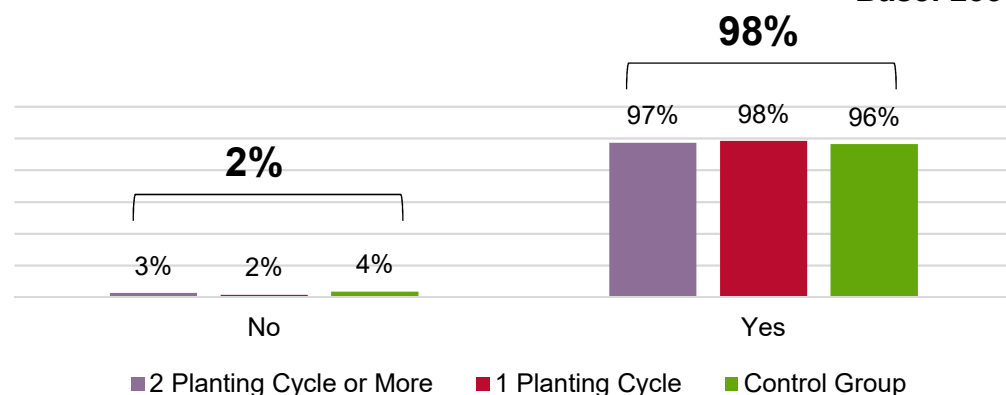
4.5 Gender Equality

Women Participation

This section examines the level of participation of women in the corn farming profession.

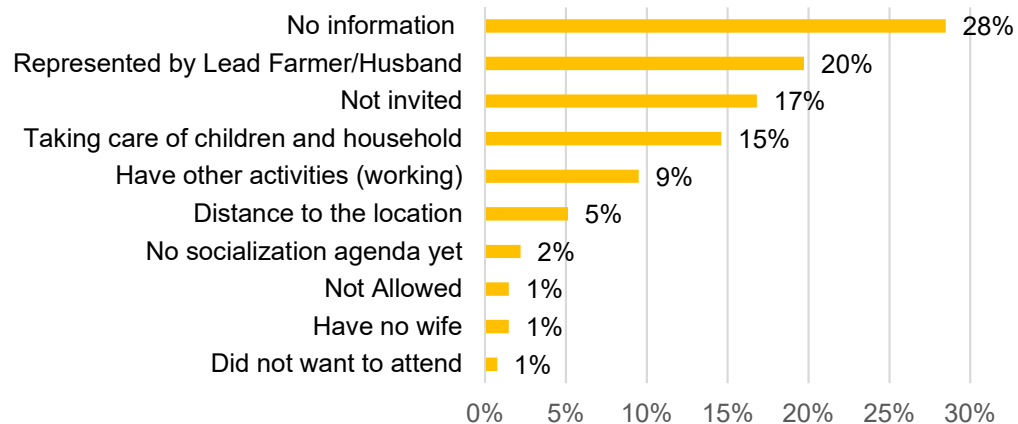
Role of Women in Deciding Corn Farming as a Profession

Base: 253



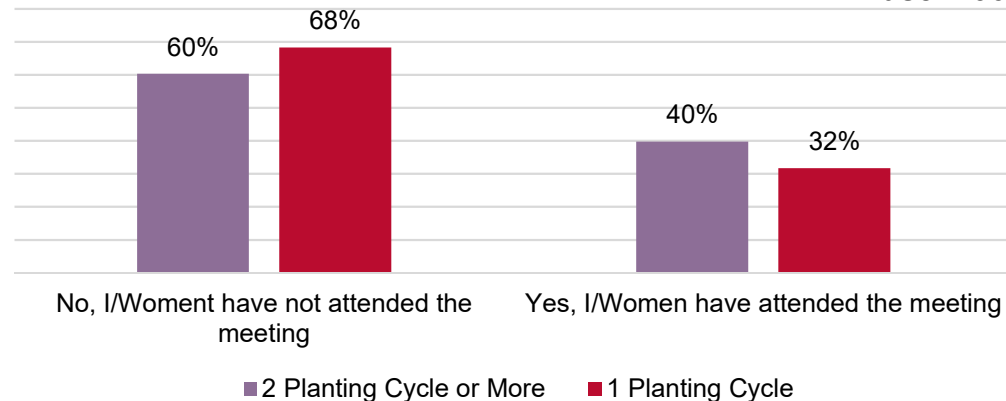
Reasons for Women Not Attending the Meetings

Base: 137



Women Participation in BPR Pesisir Akbar or Syngenta Meeting

Base: 196

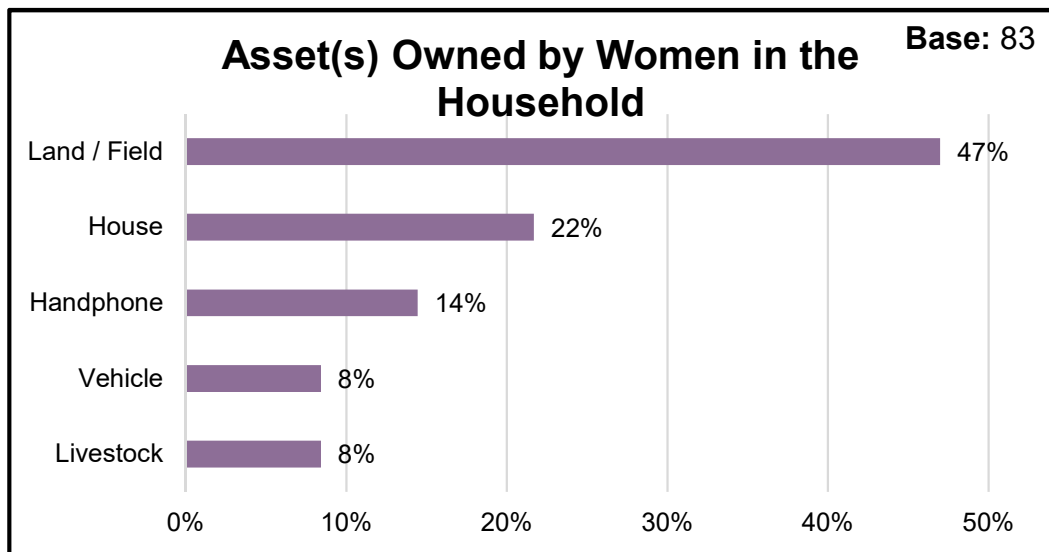
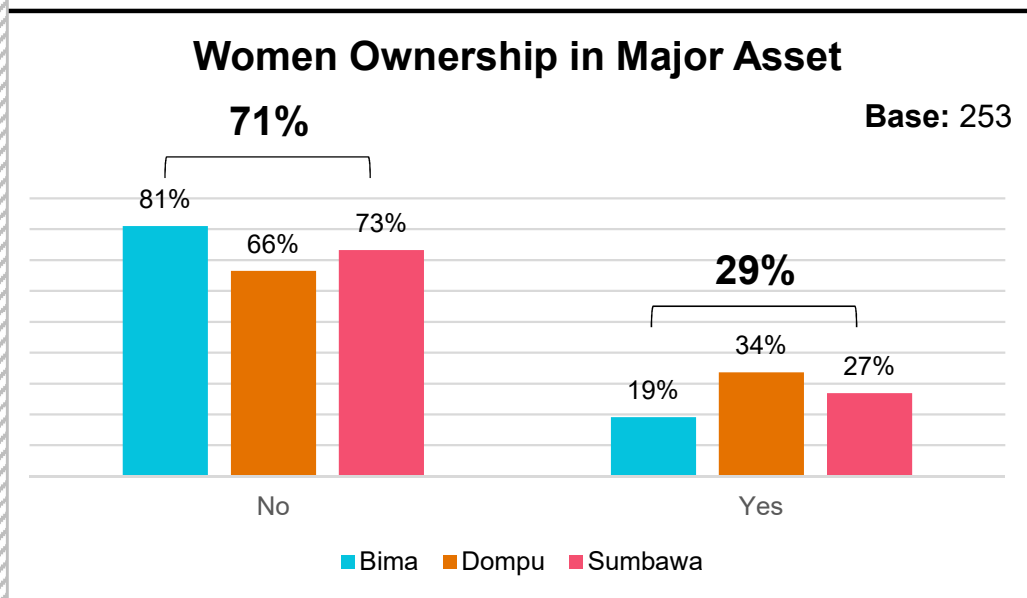
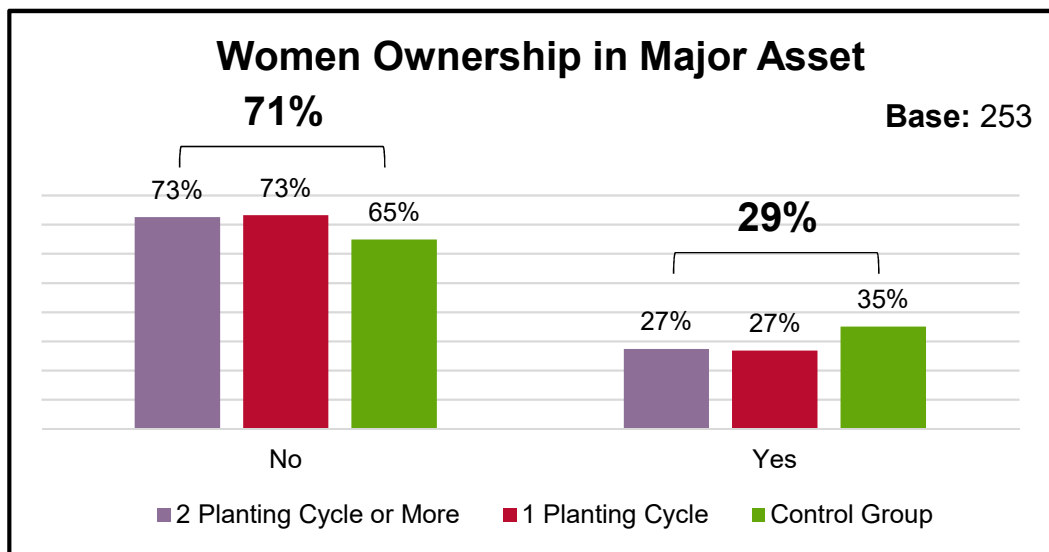


- Women in the area have a huge influence in deciding whether or not their household does corn farming as a profession as shown by the survey results.
- Around 98% of the total respondents say that women play a role in deciding to plant corn as a profession.
- The majority of the Agriculture Financing Model farmers (60-68%) say that women in their household do not attend meetings hosted by Bank BPR Pesisir Akbar or Syngenta.
- Some of the top reasons why women do not attend those meetings include: 'no information was provided (unaware of the meeting) – 28%', 'represented by the lead farmer/ husband – 20%', and 'not invited – 17%'.

4.5 Gender Equality

Access to Wealth / Asset Ownership

This section evaluates asset ownership among farmer households.



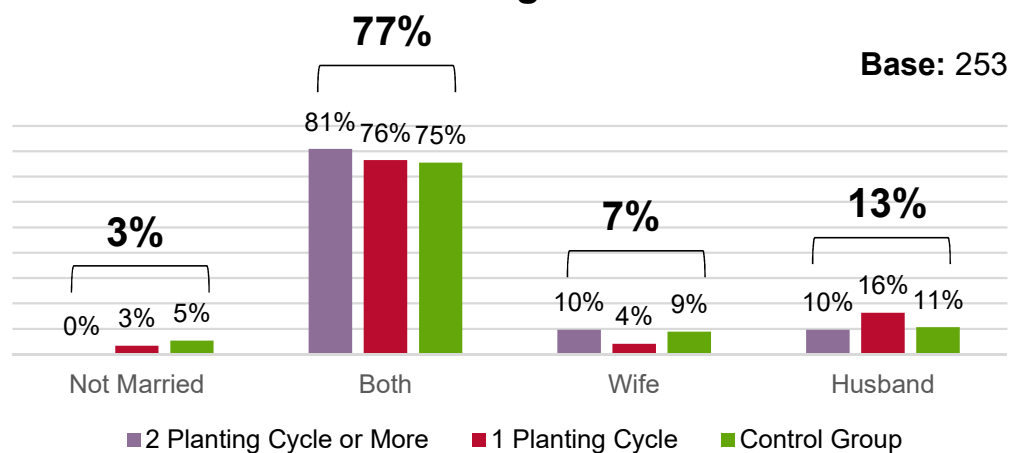
- Major assets include agricultural land, livestock (excl. poultry), farm equipment, houses, non-agricultural land, mobile phones, and vehicles
- Only around 29% of the total respondents say that women co-own such major assets in their household.
- A greater number of control group farmers (35%) say that they themselves or the women in their household own major assets compared to Agriculture Financing Model farmers (27%).
- There are more women in Dompu (34%) who own major assets compared to in Sumbawa (27%) and Bima (19%).
- Some of the most common assets owned by women include Land (47%) and House (22%).

4.5 Gender Equality

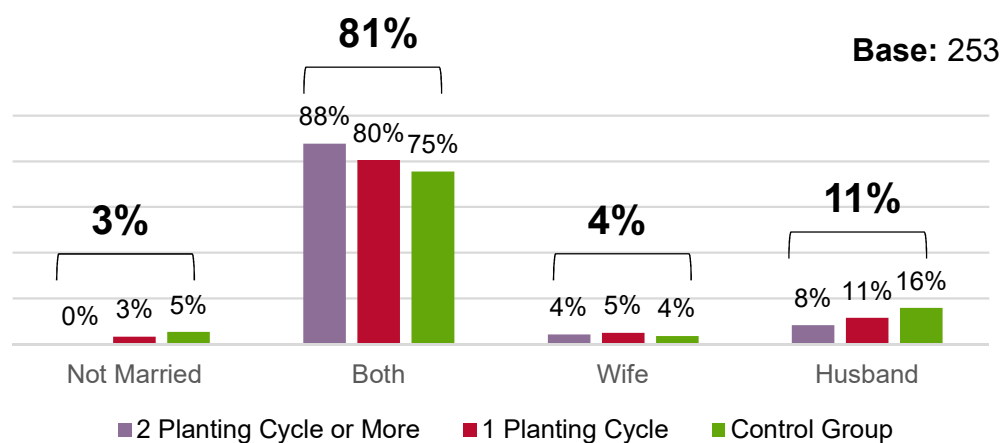
Access to Wealth / Asset Ownership

This section evaluates the decision maker in the household with regard to assets and loans.

Decision Maker in Purchasing, Selling and/or Transferring Land and Asset



Decision Maker in Obtaining and Usage of Loans



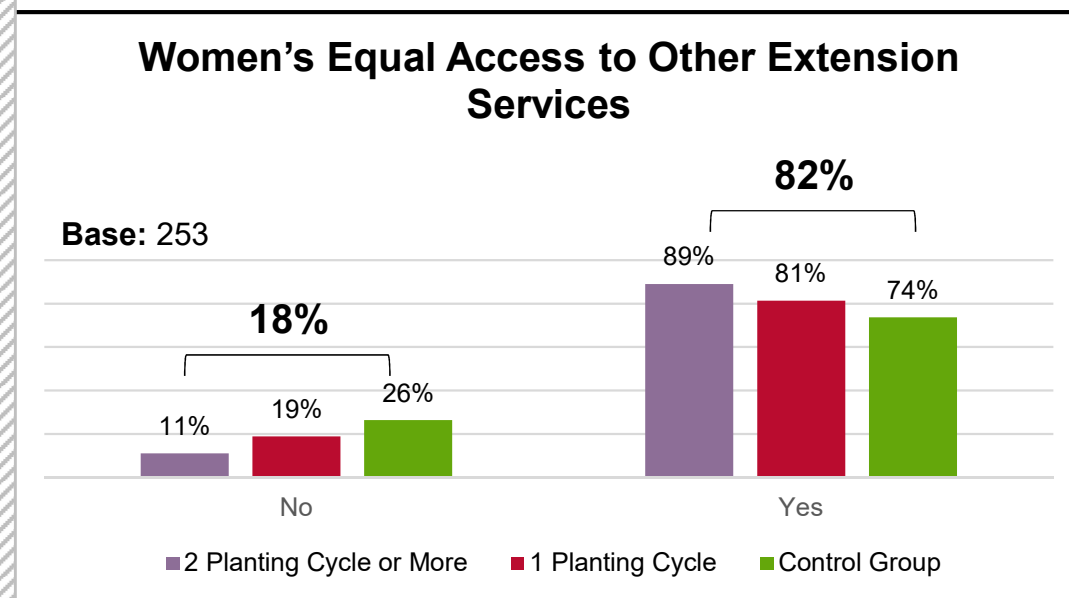
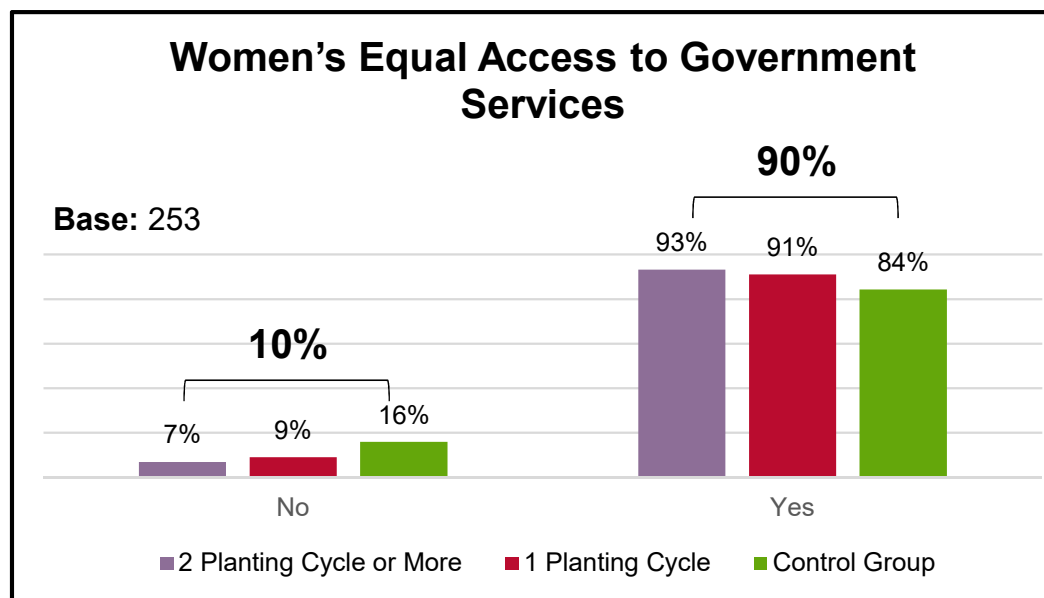
- In deciding whether to purchase, sell or transfer an asset in the form of a plot of land, most respondents say that they decide the matter together – 77% of the respondents.
- There is no major difference among the three groups.

- In deciding to obtain loans and how the loans will be used, most respondents say that both the husband and the wife decide it together – 81% of the respondents.
- There is no major difference among the three groups.
- Based on the survey results, women play a significant role in making important decisions in their household.

4.5 Gender Equality

Access to Wealth / Asset Ownership

This section evaluates women's access to government and other extension services.



- The majority of respondents (90%) say that women have equal access to government services.
- Farmers say that both men and women get the same opportunity to access such services and have equal rights. There is no special treatment based on gender and both men and women have the same rights to information.
- The minority of farmers stating that women do not get equal access say that they are represented by their husband and they are generally unaware of the services from the government.

- Other extension services include economic support, technical assistance, and training.
- The majority of respondents (82%) say that women have equal access to other extension services as well. Most of them think that men and women get the same opportunities to access the services and, as a result, women are sometimes able to make additional income from other sources.

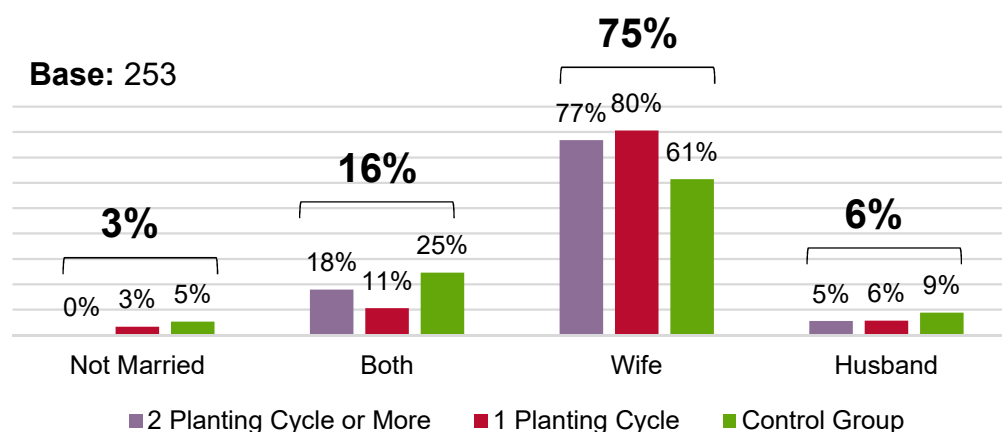
4.5 Gender Equality

Decision Making

This section evaluates the ability to make decisions in their household and community.

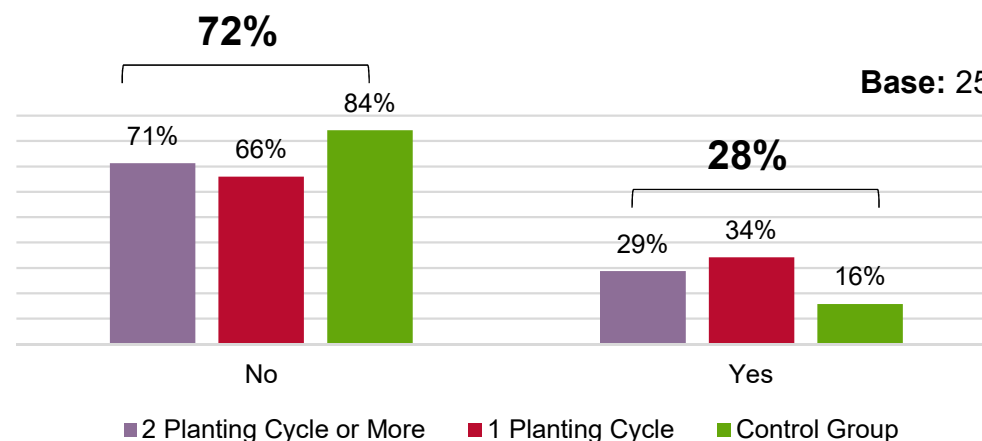
Household Financial Management

Base: 253



Women Participation in Socio-economic Groups in the Community

Base: 253



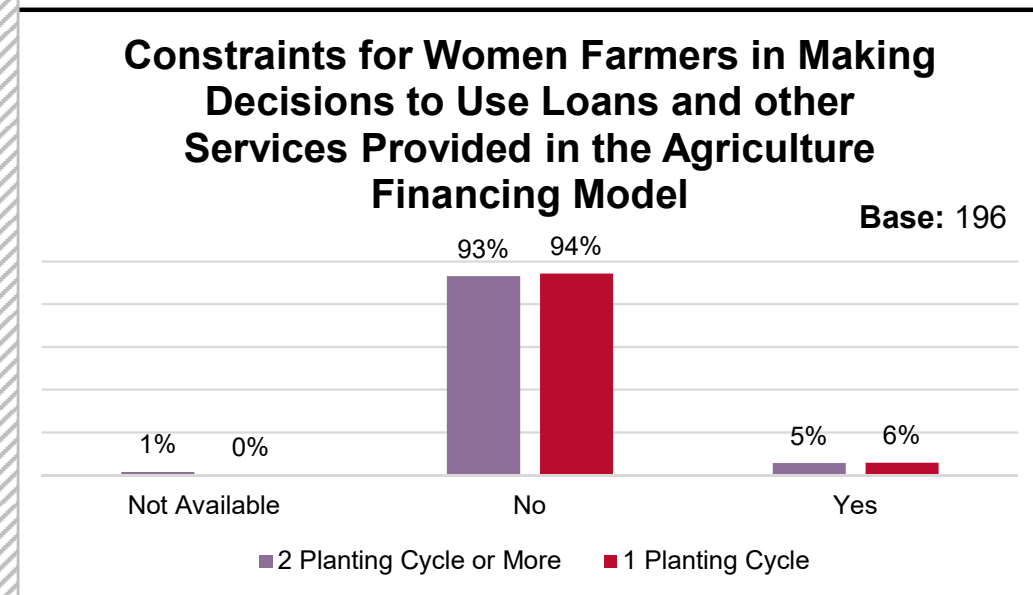
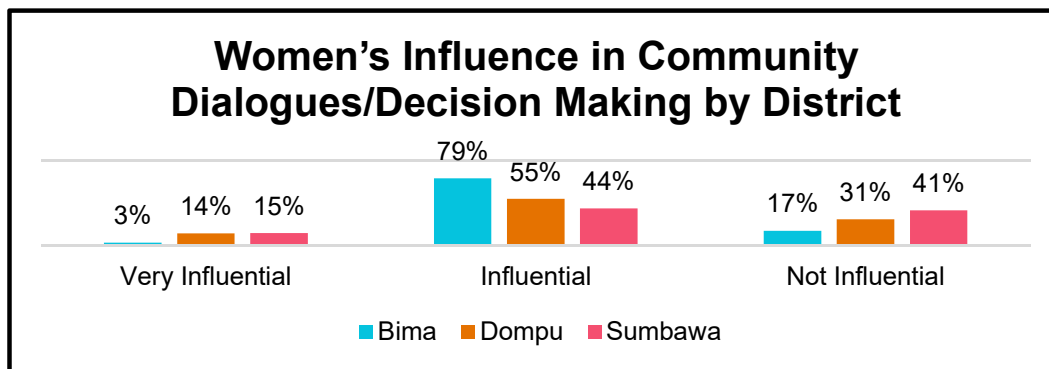
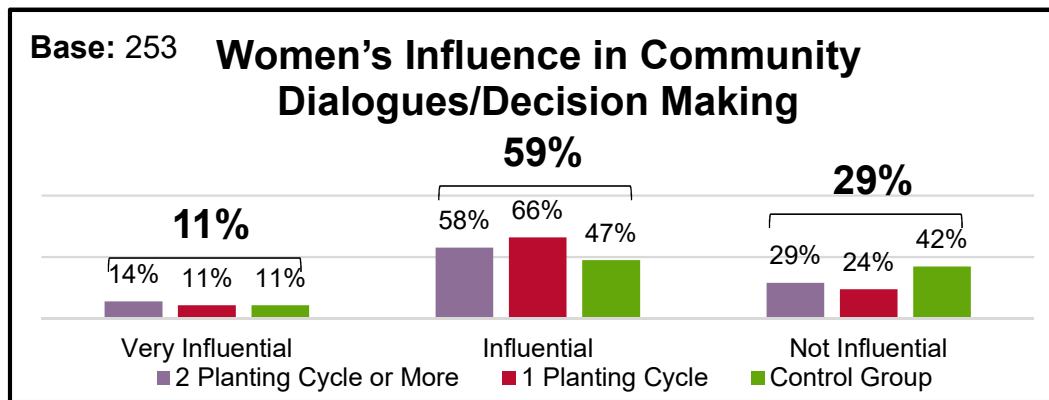
- The majority of respondents (75%) say that Women play a role as a household financial manager while 16% say that the husband and the wife control their household finances together.
- These findings are consistent in the three groups.

- Most of the respondents (72%) say that women do not actively participate in socio-economic groups in the community aside from the Agriculture Financing Model.
- Socio-economic groups in this case may include agricultural producer groups, credit or microfinance groups, mutual help or insurance groups, trade or business associations, civic or charitable groups, local government groups, religious groups, and other women groups.
- More Agriculture Financing Model farmers (29-34%) say that women actively participate in socio-economic groups in the community than control group farmers (16%).

4.5 Gender Equality

Decision Making

This section evaluates the ability to make decisions in their household and community.



- The majority of the Agriculture Financing Model farmers do not think that women face any constraints in making decisions to use loans or access the services offered by the model.
- Even though men typically dominate the decision-making process, women are generally still able to contribute their thoughts and support in making decisions with the approval of the husband.

- Most of the respondents (59%) say that women have a significant influence on community dialogues and decision making at community level. However, there is a significantly higher percentage of control group farmers (42%) who do not think that women exercise an enormous influence on community dialogues.
- There are a greater number of farmers in Sumbawa (41%) who do not think that women have an influential role in community dialogues/decision making compared to those in the other districts.



Main Findings:

4.1 Farmer Profile

4.2 Contextual Information

4.3 Business Model

4.4 Economic

4.5 Gender Equality

4.6 Additional Observations



“
The ultimate goal of farming is not
the growing of crops, but the
cultivation and perfection of human
beings.”

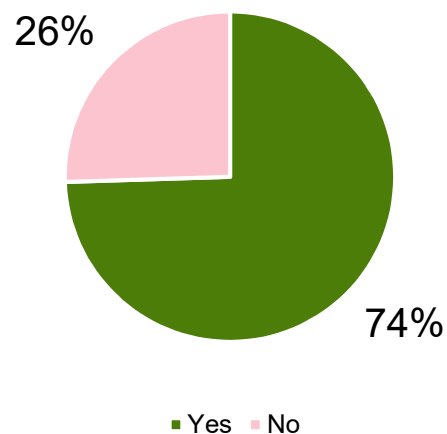
Masanobu Fukuoka

4.6 Additional Observations

Agriculture Financing Model Referral

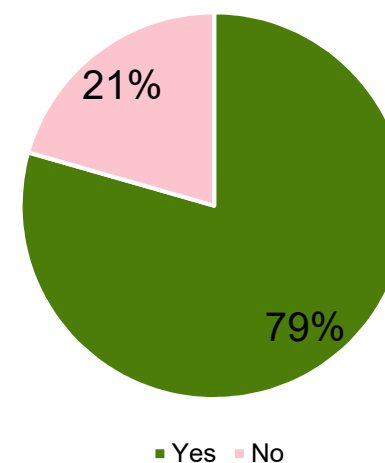
This section evaluates the willingness of farmers in recommending the model to other farmers.

Would you recommend the Agriculture Financing Model to other farmers?



Base: 196

Have you recommended the Agriculture Financing Model to other farmers?



Base: 146

- We have asked farmers joining the Agriculture Financing Model (2 planting cycles or more and 1 planting cycle) if they would recommend the model they join to their fellow farmers or not.
- The majority of the Agriculture Financing Model farmers (74%) say that they would be happy to recommend the model.
- This indicates that the majority of the farmers joining the model are satisfied with the services offered by the model.
- For the reasons why they do not recommend the model to their fellow farmers, refer to the following slides on the sections *farmer comments* and *field observation*.

- For the Agriculture Financing Model farmers expressing willingness to recommend the model to their fellow farmers, we have asked them if they have done it or not.
- As many as 79% of the farmers expressing willingness to recommend the model have recommended the Agriculture Financing Model to other farmers.

4.6 Additional Observations

Agriculture Financing Model in the Words of Farmers in Bima, Dompu and Sumbawa

This section quotes some comments from farmers about the positives and some suggestions for the model

Positives

“Very helpful to us as poor farmers, because if there is no loan we will not be able to do corn cultivation”

“It is easier for farmers to grow corn because of the availability of inputs from this model”

“Possibility of getting the initial capital to grow corn with lower interest rates”

“Model help farmers and we do not borrow from loan sharks or cooperatives in the village with big interest”

“Good seeds and cash that can be used as planting capital”

Suggestions

“Disbursement should be done earlier in October to avoid scarcity of fertilizer.”

“Increase loan amount, decrease interest rate and stretch the loan period to 8 months.”

“Give cash loans only, accelerate disbursement, package it with fertilizers..”

“There must be socialization for all farmers. Both members and lead farmers. So that farmers can get satisfactory results..”

“Frozen funds should be clarified as they are not able to be claimed even if credit has been paid and there are too many deductions for insurance reasons..”

4.6 Additional Observations

Field Observations



Access to Finance

Control Group Farmers:

- **Control group farmers have more flexibility to control their finance** as they typically obtain all cash loans from other banks and sources. As a result, they are able to allocate more money to purchase fertilizers early at a reasonable price.

Agriculture Financing Model Farmers:

- Most farmers are **unaware of the breakdown of the loan details**.
- Many **farmers do not know that they have a bank account** from Bank BPR as a result from joining the Agriculture Financing Model.
- **Farmers want the loan to be disbursed earlier** (early September or October in order to purchase fertilizers and other inputs required to start planting on time).
- **As a result from late disbursement of loan, many farmers took additional loan** from other local banks, family or loan shark. Many of these additional loans were acquired with very high interest rates.
- Many farmers demand to **increase the cash component of the loan**. Farmers want greater flexibility to control their finances and purchase the necessary inputs as required.



Crops Insurance

Agriculture Financing Model Farmers:

- **Lack of information on crop insurance coverage**, some farmers do not understand the functions and benefits of crop insurance.
- A farmer in Kempo experienced **slow response to claims** even after reporting it to the lead farmer and having an insurance representative visit the field. No confirmation on whether the claim was accepted or declined.
- **Lack of insurance coverage** is a major issue for farmers as many have harvest failures because of pests and diseases instead of cyclones. For instance, in Donggo, more farmers need insurance for cyclones while other regions need coverage on pest and diseases.

4.6 Additional Observations

Field Observations



Competitor

- An alternative corn farmer loan model in Dompu is provided by the provincial bank, **Bank NTB**. The credit program is under their micro-finance loan portfolio (**Kredit Usaha Kecil – KUR**).
- The **credit program from Bank NTB is disbursed in two batches**, the first batch in October when farmers require cash to buy inputs and the second batch nearer to the harvest period in January or February, where the farmers use the loan to pay for labour.
- The **interest rate of the credit** from Bank NTB is around **1% - 2% per month**.



SMS Service

Agriculture Financing Model Farmers:

- **Socialization of the SMS service is very minimal**, not many Agriculture Financing Model farmers are aware of the service platform.
- **Almost no farmers use the SMS service platform** to post questions or report on crop conditions.

Information Training



Agriculture Financing Model Farmers:

- **Lead farmers do not share the lessons learnt from the trainings** provided by Syngenta and Bank BPR to their farmer members.
- **Only lead farmers and some farmer members have the printed modules**. The ones who do, do not really utilize it well.

YIELD



- Yield **varies** for each respondent across different groups and districts throughout the interview process. The lowest yield found was **0.7 tons/ha** because of crop failure and the highest yield was **15 tons/ha**.
- If the yield is **lower than 3 ton/ha**, farmers consider this **harvest failure**.



- The **use of pesticide increased** as pests are more resistant throughout the years.
- The **Gramoxone** usage depends on the land condition, new land need less Gramoxone.
- In some areas like Kilo, farmers use Gramoxone twice.

4.6 Additional Observations

Field Observations



Agricultural Inputs

Agriculture Financing Model Farmers:

- **Some farmers did not receive a full package of the agricultural inputs.** Therefore, they need to purchase additional inputs in kiosk, sometimes with a secondary credit.
- Farmers would like to be able to **customize their loan package**, because they have different needs in regards to pesticides and herbicides depending on their area and land condition.

Fertilizer



Agriculture Financing Model Farmers:

- **Fertilizer availability affects the price.** During the peak of the corn planting season, price of fertilizers significantly increases.
- In August, before the start of the corn planting season, the price of subsidised fertilizer is around IDR 90,000 – IDR 125,000 per sack.
- The price of subsidised fertilizer in October is around IDR 130,000 – 160,000 per sack while non-subsidised fertilizer is sold at around IDR 300,000 per sack.

Price of Corn & Place to sell it



- **Price varies depending on the quality** of the harvest, normally it ranges from around IDR 2,100 – IDR 3,000 per kg.
- **Market price of corn has declined significantly** compared to last year.
- **Agriculture Financing Model Farmers typically sell their harvest to Grain Traders** because they pick-up the harvest directly in the field.

4.6 Additional Observations

Field Observations



Labour Cost

- In some subdistricts like Donggo, farmers provide lunch for the labourers in exchange for help in harvesting their crops as they use the **gotong-royong system (mutual cooperation)**.
- **Land preparation cost depend on the type/slope of the land.**
 - Flat land: ~IDR 2,000,000
 - Steep land: ~IDR 3,500,000 – IDR 4,000,000

Child Labour



- In some areas, **farmers employ children** to help them during land preparation or harvest period.
- Usually, they are their own child or relatives. Children still go to school and they help out after school or during holidays.
- Children are usually paid around half of the amount of a typical labor wage in the area (IDR 30,000 – IDR 50,000 / day).



Gender Equality

- **Women have a big influence in the community** and most farmers believe women has the **bigger role in managing household issues**.
- Male farmers are typically more active in community discussions.
- In some areas, **women are paid less than men:**
 - Female labourer: ~IDR 80,000
 - Male labourer: ~IDR 100,000

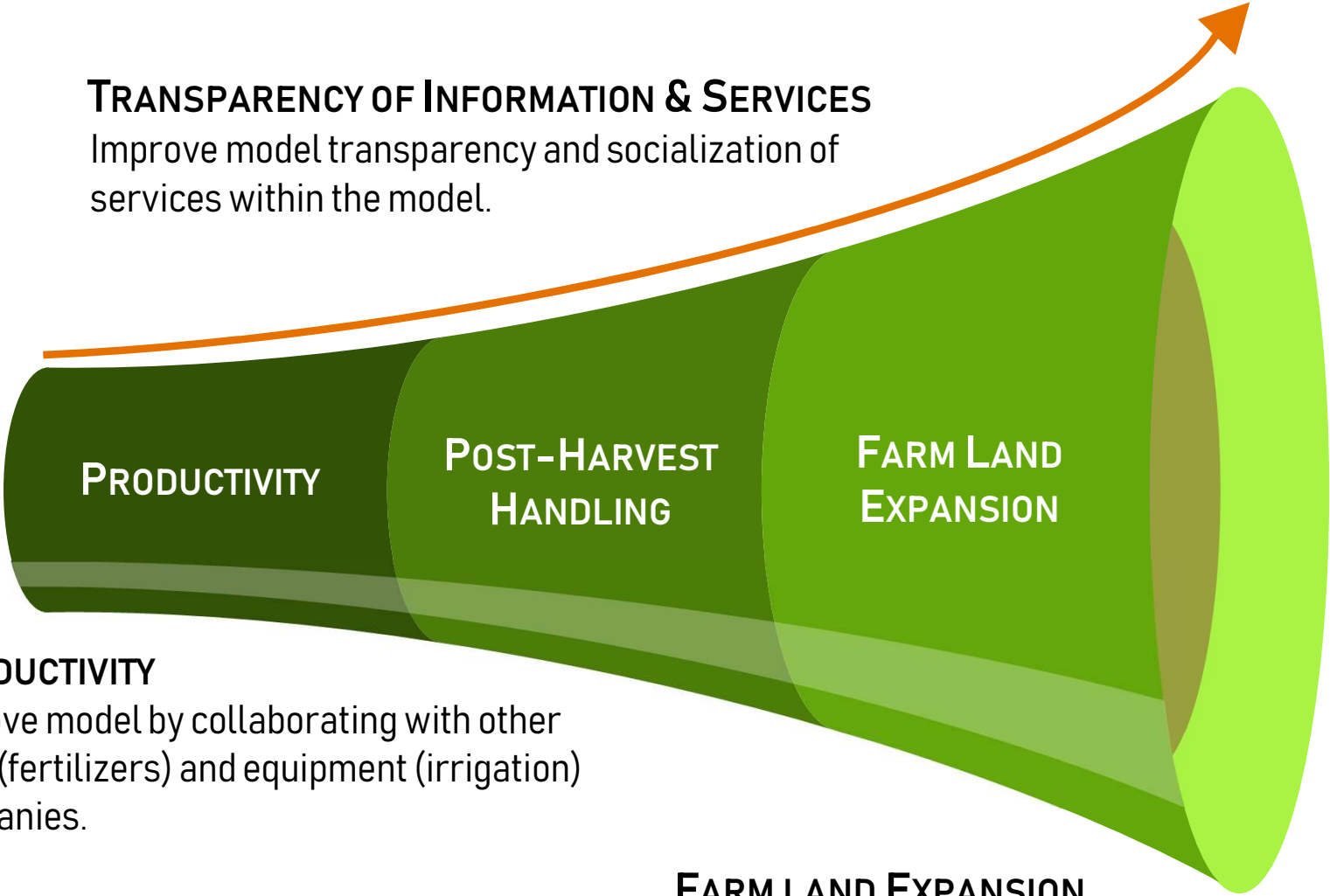


Recommendations

05

Recommendations

Overview



TRANSPARENCY OF INFORMATION & SERVICES

Improve model transparency and socialization of services within the model.

PRODUCTIVITY

POST-HARVEST HANDLING

FARM LAND EXPANSION

OUTCOME



Improvement in Farmer's overall economic livelihood conditions and rapid growth of the model

PRODUCTIVITY

Improve model by collaborating with other input (fertilizers) and equipment (irrigation) companies.

POST-HARVEST HANDLING

Work with aggregators to improve post-harvest system.

FARM LAND EXPANSION

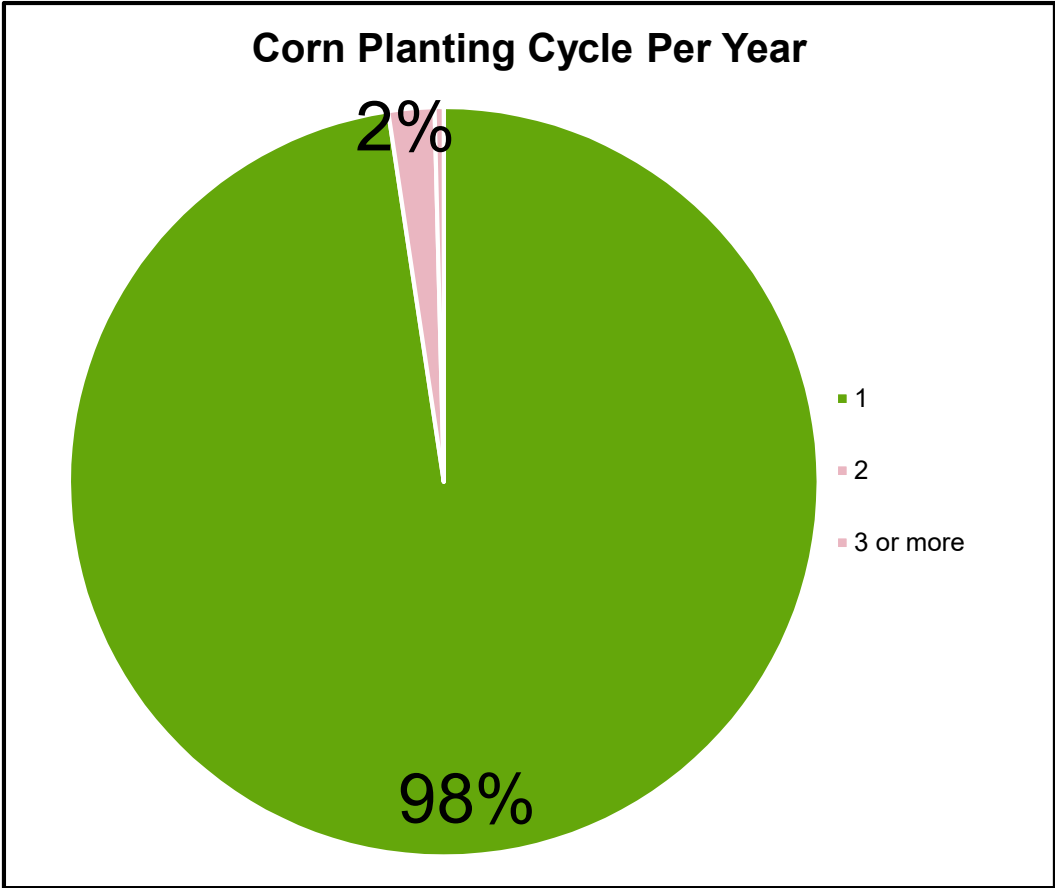
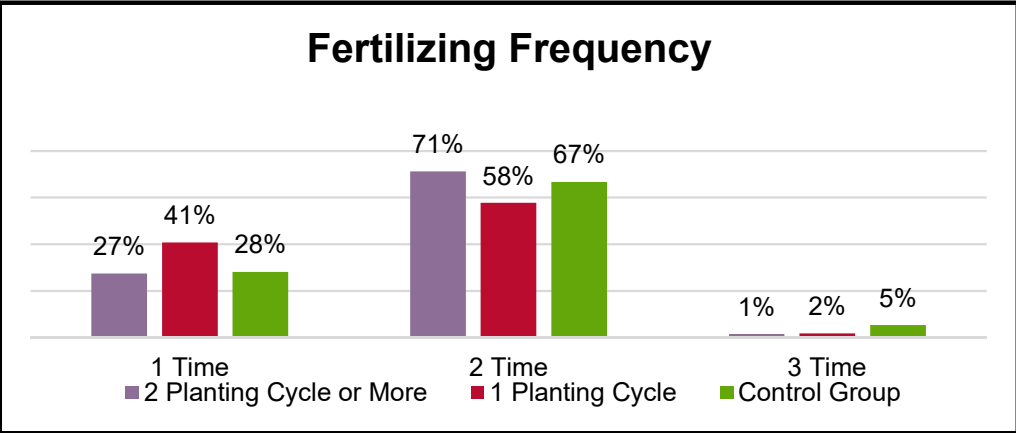
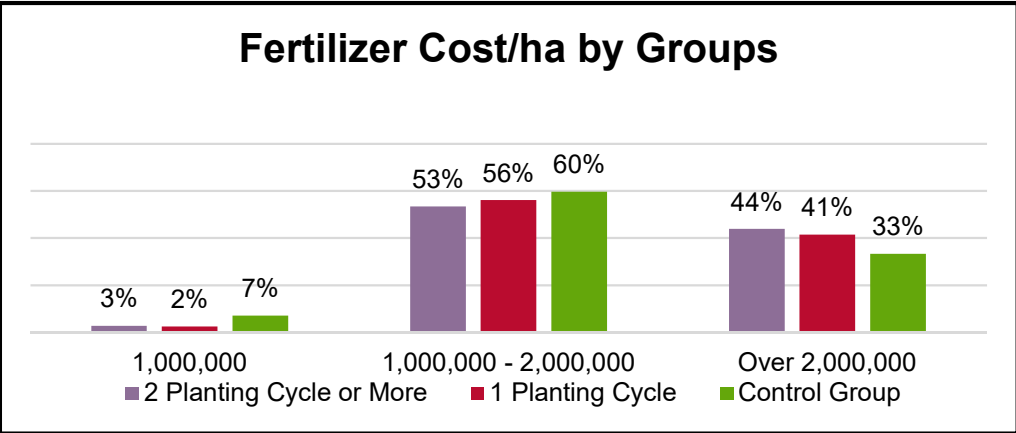
Expand farm area / number of cycles to generate more income from corn farming or other crops.

Recommendations

#1: Collaborative Model with Input / Equipment Companies

Survey/Field Observations:

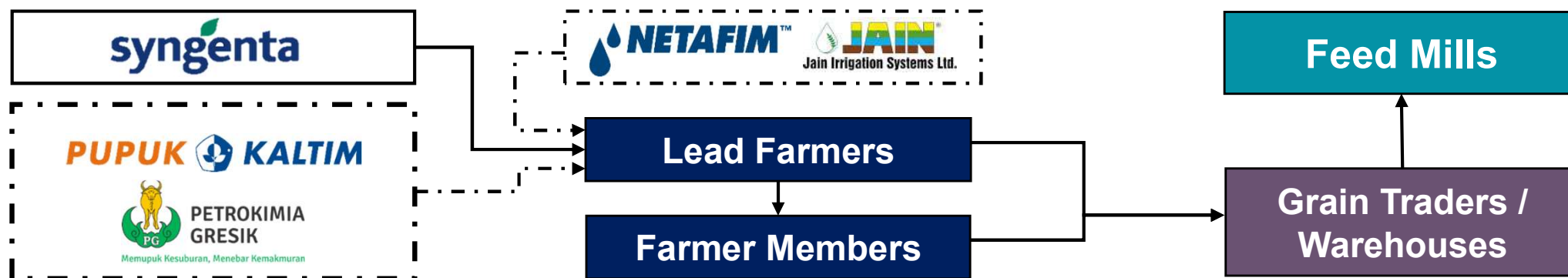
- **Fertilizer Availability / Price:** The recommended fertilizer application per planting season is at least two times. Many farmers still fertilize once because of fertilizer shortage and the high cost of non-subsidized fertilizer. Even though it is not clearly shown in the survey results, being able to fertilize twice a planting season is a key productivity success factor farmers in the Sumbawa area.
- **One Planting Cycle:** Almost all the farmers only plant one cycle annually because of the weather conditions and having no access to irrigation technology. Farmers tend to choose to leave their plots empty or plant less profitable crops like beans which means that they are not maximizing their asset potential.





Recommendations

#1: Collaborative Model with Input / Equipment Companies

Potential Solution:	
Formalize Partnership with a Fertilizer Company	Collaborate with Irrigation Equipment Providers
<ul style="list-style-type: none"> Syngenta technology package and the access to finance would be much more effective if its part of a more complete technical package that creates step change in yield per hectare, and improves the possibility of farmers to do crop rotation. Formalize collaboration with a fertilizer company to ensure availability of fertilizers. Include fertilizers as part of the input package distributed at the beginning of the planting season. 	<ul style="list-style-type: none"> Collaborate with Irrigation equipment companies such as Netafim (drip irrigation) which will enable farmers to plant more cycles of corn. Drip irrigation have been proven to be successful in corn planting elsewhere and this also reduces the risk of weather. Drip irrigation will open the door to a crop rotation system that can also give the farmers more options and diversification as well as better agronomic practices. Explore possibility of including a separate financial product for the irrigation component.



Potential Value:		
 <ul style="list-style-type: none"> Greater farmer productivity as fertilizer availability is ensured. Cost to obtain fertilizers can also potentially be reduced. Improve farmer engagement and satisfactory towards the model as they consider fertilizers as the most critical input. 	<p>2/3 Planting Cycle</p> 	<ul style="list-style-type: none"> Farmers will have the ability to plant more than 1 planting cycle, thus maximizing their asset and household income. Distribute the cost of member acquisition and demo plots with more partners (irrigation companies, fertilizers).

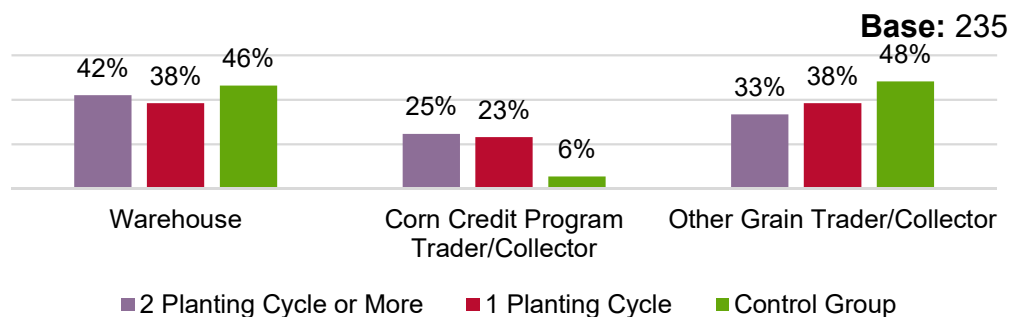
Recommendations

#2: Farmer Livelihood Continuous Improvement

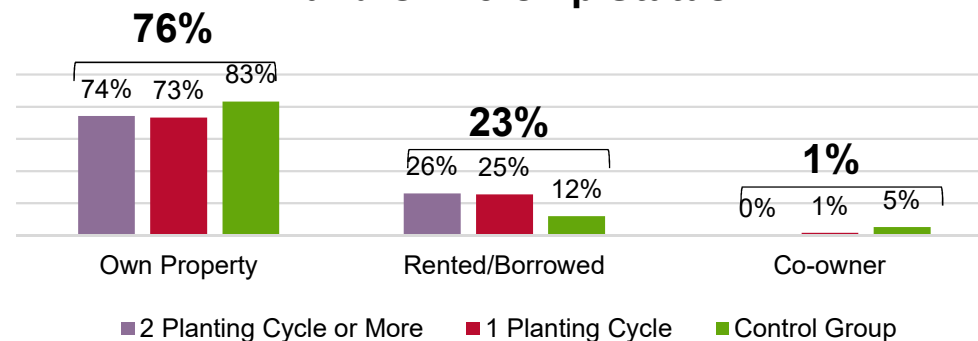
Survey/Field Observations:

- The main quality consideration of crop buyers is the moisture level of the corn. Post-harvest activities such as storage, transportation and treatment of corn affects the moisture level and price of corn. Farmers typically sell their corn directly after shelling.
- Many farmers have encountered post-harvest losses by having an inadequate post-harvest treatment facilities such as dryers and storage areas, limited flexibility in selling their crops and determining the buyers of their crops.
- Field observation and survey shows an increasing number of farmers who plant corn in other areas because of the model, sometimes in areas far from their home. However, farmers livelihood in the area are still poor.

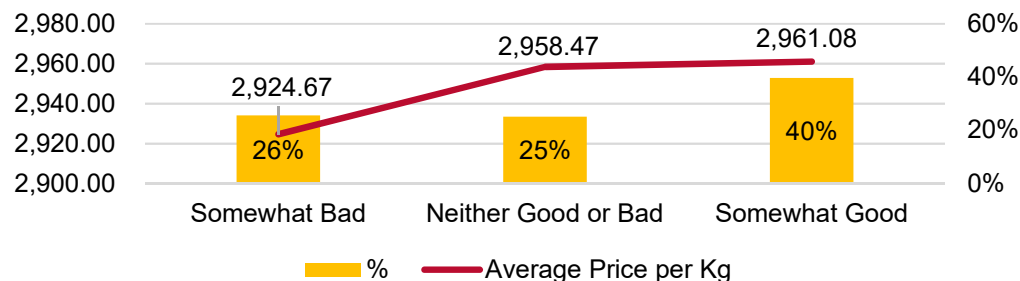
Crop Buyers by Groups



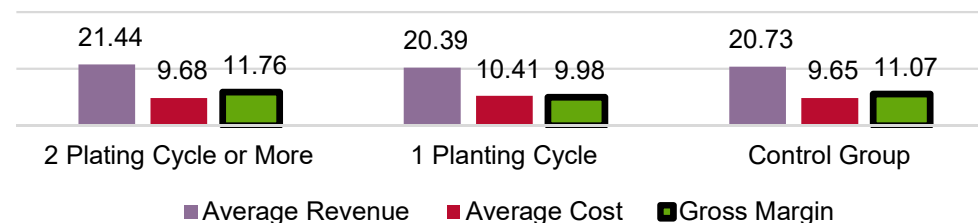
Land Ownership Status



Quality of Crops and Price per Kg



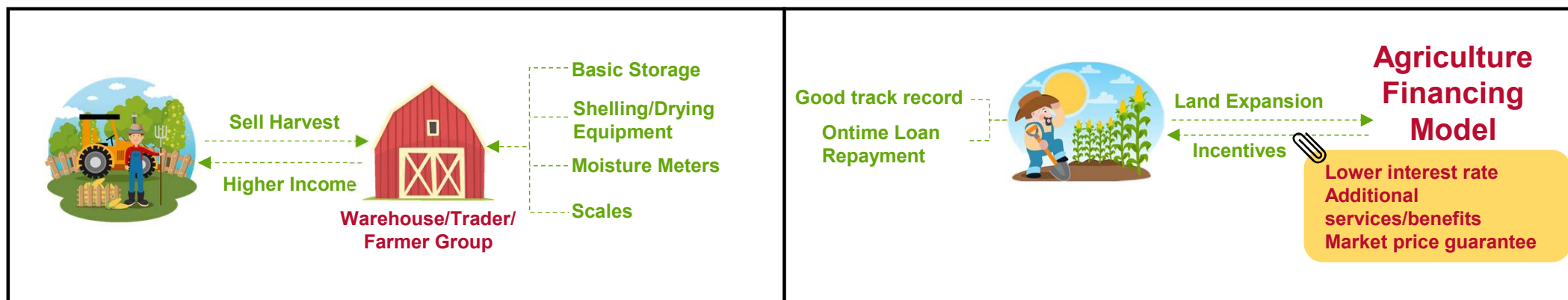
Gross Margin, Revenue and Cost Groups (in million IDR)

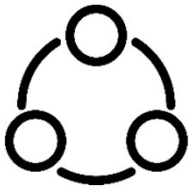



Recommendations

#2: Farmer Livelihood Continuous Improvement

Potential Solution:	
Post-harvest Handling Improvements	Provide Incentives for Farmers to Expand
<ul style="list-style-type: none"> Work with aggregators – either commercial traders, end buyers and/or farmer organizations that are willing to invest in storage (physical or even storage bags), shelling equipment, dryers, scales and moisture meters. This allows for storage and enables sales at different points in the year, lower moisture content of corn and the ability to know for sure what the moisture is upon sale. This unlocks the access to new types of customers with higher price per kg of corn. 	<ul style="list-style-type: none"> Identify the minimum size for a farm family (based on corn) to be economically viable and are able to produce the type of quality and efficiencies that the market requires. Encourage proven farmers (farmers with good track record) to expand by providing them with access to capital with better rates/services. Incentives can be promoted for active farmers who have successfully returned heir loan in previous phases. Incentives can be in the form of lower interest, additional services/benefits, market price guarantee, etc.



Potential Value:	
 <ul style="list-style-type: none"> Farmers obtain better prices for the corn and have more post-harvest flexibility. Grain Traders / Warehouses have loyal quality suppliers. 	 <ul style="list-style-type: none"> Farmer's will have greater income (higher price per kg of corn) from corn farming contributing to a better livelihood to their household. Land area coverage under the model will continue to increase.

Recommendations

#3: Improving Model Transparency and Socialization of Services

Survey/Field Observations:

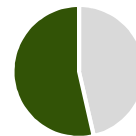
- Many farmers are not aware of the breakdown of the loan, the services included in the model and the benefits of being the Agriculture Financing Model. Many farmers do not know the exact amount inputs that are included, the amount of loan that is allocated for the different services (insurance, interest).
- The level of participation in the socialization of services and the access of training is still considerably low in Growing Protocol, Financial Literacy, and Insurance. Only lead farmers and some farmer members have access to the services.

“There must be socialization for all farmers. Both members and lead farmers. So that farmers can get satisfactory results..”

“The package content of the model is unclear, we don't know what we are suppose to receive..”

“We do not know the amount of loan frozen, dedicated to interest, insurance, and input products...”

Stats from the Agriculture Financing Model Farmers:



- Only 46% of the farmers have access to ADB Growing Protocol.



- Only 28% of the farmers have training in ADB Growing Protocol.



- 28% farmers have attended socialization to access to finance.



- Only 8% farmers have attended a financial literacy training.



- Only 29% farmers receive printed modules from the model.

Recommendations

#3: Improving Model Transparency and Socialization of Services

Potential Solution:

Distribute Model Module/Information

- Providing farmers with printed materials of the loan breakdown during the disbursement of loan, listing all the components in the loan with the associated cost.

Improve Socialization of Services

- Conduct additional info sessions to socialize services such as financial literacy, growing protocol training and insurance to increase the knowledge and awareness of farmers.
- Provide additional incentives for progressive/lead farmers and empower them to be the agents of change in the community to enable their farmer members / other farmers in the community to improve their farming practices and livelihood.

Corn Credit Program – Loan Package

Total Loan:	IDR 10,000,000
Cash Component	
Fertilizers	IDR X
Labor Cost	IDR X
Vouchers	
Gramoxone (x bottles)	IDR X
Calaris	IDR X
Amistar	IDR X
NK7328	IDR X
Others	
Bank Interest	IDR X
Insurance	IDR X



Potential Value:



- Improve farmer's trust on the model, increase their motivation and engagement to fulfill their loan obligations.



- Farmer's can improve their productivity and overall livelihood by being exposed to the services in the model.



Corn Farmer Profiles

06

Corn Farmer Profiles

Stories of Corn Farmers in NTB



MARCELINA HABIBAH

46 years old

Marcelina Habibah is a corn farmer from October to June and a weaver from July to September. Marcelina have been a member of the Agriculture Financing Model model for 2 corn planting cycles. She manages agriculture land in two districts, Bima and Dompu. One with an area of 1 hectare in Donggo sub-district and 3 hectares in Pekat sub-district around 100 km away from her residence. This year's harvest decreased from 10 tons/ha to 7 tons/ha due to the lack of rainfall in her farming area.

Corn Farmer Profiles

Stories of Corn Farmers in NTB



LIADIN

46 years old

Liadin has joined the Agriculture Financing Model model for 2 planting cycles. He manages 4 hectares of land. The land is in two different locations. 3 hectares are located in the densely populated village, about 90 km from the residence, while the other 1 hectare is in Madaprama village, where he resides with his family. The harvest from the last planting cycle is not much different from last year, which is around 8-9 tons/ha. However, this year the price has declined slightly. Last year's price reached IDR 3,500/kg, but this year corn is only priced at IDR 2,900/kg.

P.S: The house in the photograph was built from the sale of corn in the last 2 years.

Corn Farmer Profiles

Stories of Corn Farmers in NTB



SALMAH

62 years old

Salmah is a 62 years old female corn farmer in Tolo'oi Village, Tarano subdistrict in Kabupaten Sumbawa. She owns an area of 8 hectares. But only 5 hectares of the area is managed alone, while the other 3 hectares are rented to farmers from outside the village. She is getting around IDR 2-2.5 million/ha of from the land she is renting. The farmers who rent her plot are mostly from Palama Village in Donggo subdistrict. Salmah's activities are very dependent on the season. In December until June she is a corn farmer and in July to November she is a trader of daily necessities.

Corn Farmer Profiles

Stories of Corn Farmers in NTB



RUKMINI

43 years old

Rukmini is a lead farmer from Mbuju Village. She manages 3 ha of land. The last harvest she got 6 tons/ha and was sold directly to the warehouse at a price of IDR 3,000/kg because she obtains a higher price for her crop. Rukmini said that there is a decline in the number of farmer members in her group in the last few years. In the coming planting cycle, she is not sure about the number of farmers who will still join the model because many have concerns related to the high insurance premiums, the process of insurance claims. She claims that the insurance provided has limited coverage and hence not very beneficial for farmers.

Corn Farmer Profiles

Stories of Corn Farmers in NTB

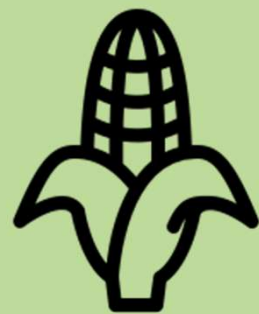


Jamaluddin

50 years old

Jamaluddin is a corn farmer in the Village of Riwo in the sub-district of Woja, Dompu. The Agriculture Financing Model model in his village is relatively recent. It was only the last 2 years and the farmers in his village are still part of the Village of Mumbu (neighboring village) group chaired by Pak Muhammad. People in his village are very enthusiastic to join the model. There are currently talks ongoing in his village to form their own farmer group. Jamaluddin owns 8 hectares of land, but only 5 hectares are managed due to limited capital. In the last harvest he only yielded 6 tons/ha and it was sold at IDR 2,900/kg.

P.S: The picture above was taken when Jamaluddin explained that the NK7328 corn is typically large and tall.



**Snippets from Impact
Assessment Survey
Implementation**



THANK YOU