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2024 Khmer Agriculture for the Future Accelerator

BASELINE EVALUATION REPORT

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Implemented by: *Impact Hub Phnom Penh*

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Organized by: IMPACT HUB Phnom Penh

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LIST OF ABBREVIATIONS

AC	Agricultural Cooperative
CRA	Climate Resilient Agriculture
IHPP	Impact Hub Phnom Penh
KAF	Khmer Agriculture for the Future

EXECUTIVE SUMMARY

Under the umbrella of the Nurture Programme which is designed to enhance the climate resilience of smallholder farmers, the 2024 Khmer Agriculture for the Future (KAF) Accelerator program, led by Impact Hub Phnom Penh, supports ventures and agricultural cooperatives (ACs) in four Cambodian provinces: Banteay Meanchey, Battambang, Oddar Meanchey, and Preah Vihear. It aims to enhance their entrepreneurship and CRA capabilities and extend their impact on farmers. Ultimately, the accelerator strives to encourage the adoption of CRA and agroecological practices among small-holder farmers, aiming to boost yields and incomes.

This baseline evaluation assessed eight ventures participating in the KAF Accelerator program and 119 farmers in their value chains, examining ventures' business performance, farmers' agricultural performance, climate-resilient agriculture (CRA) adoption, and venture-farmer relationships across four provinces in Cambodia. Highlights of findings are as follows:

Venture and Participant Profile

- Eight ventures participated in the baseline assessment, with equal gender distribution in both program participation and venture ownership (50% women-led).
- Female farmers represent 61% of ventures' combined value chains, indicating strong engagement with women in agriculture.
- Ventures collectively serve 12,066 farmers and generated aggregate revenue of USD $4,235,218 in the past 12 months (October 2023-September 2024).
- The median monthly revenue in the past 12 months per venture was USD $39,114, with 159 total paid staff employed at the time of data collection.

Farmer Demographics

- The sample included 119 farmers across four provinces: Battambang (44%), Preah Vihear (24%), Banteay Meanchey (24%), and Oddar Meanchey (8%).
- Gender distribution showed higher male representation (62%) compared to female (38%). 33% of interviewed farmers identified as Indigenous Peoples, and 16% held "Poor" status.

Agricultural Performance

- Median land use (3.82 ha) exceeded the national average of 2.1 ha, indicating farmers in the sample have relatively larger-scale operations.
- Rice cultivation dominated (83% of farmers), followed by vegetables (40%) and cassava (22%). Vegetable cultivation, though using smaller land areas (median 0.32 ha), contributed substantially to farmer income.
- Rice yields in the sample outperformed provincial averages across all four provinces. Cassava yields in the sample also outperformed the provincial average in Oddar Meanchey, but underperformed in Preah Vihear. The overall higher-than-average performance demonstrates the value of connecting small-holder farmers to ventures and ACs with robust market access and quality inputs.
- Despite strong female representation of farmers in the value chain, there exist significant gender disparities in median agricultural net income, with male farmers earning twice the median income of females. This indicates the need for further attention to understand and address gender income disparities.
- The average net income from agricultural production in the KAF Accelerator sample is 9,863,373 riels per farmer, which is more than double the average income of farmers in the 2023 KAF Incubator sample (4,683,575 riels). The income

advantage is also reflected across all crop types and could be attributed to consistently higher crop yields across all production types. Overall, these figures suggest that farmers participating in the value chains of larger companies and ACs earn higher incomes.

CRA Awareness and Venture Engagement

- Over half of farmers were familiar with CRA concepts, with 71% learning about CRA through ventures and ACs, underscoring the important roles of ventures and ACs in sharing CRA knowledge and techniques.
- Farmers primarily engaged with ventures as suppliers (66%), customers (61%), and training recipients (50%).
- Farmers chose to work with ventures and ACs primarily for better market access, improved pricing, and access to affordable services that sometimes come with financial assistance like lending and subsidies. 85% of farmers reported moderate to high satisfaction with ventures' products and services. Primary benefits reported included better yields (60%) and improved income (43%).

Implications

1. Farmers in the KAF Accelerator ventures' value chains significantly outperform both provincial benchmarks in CAS 2023 and farmers from the 2023 KAF Incubator baseline. This high performance suggests that engagement with ventures and ACs, particularly with larger and more well-established ventures, can provide substantial positive impacts for small-holder farmers, validating the program's theory of change regarding the value of cultivating and supporting agricultural ventures and ACs.
2. The high awareness of CRA concepts and satisfaction with venture services demonstrates effective knowledge transfer. This indicates strong potential for scaling climate-resilient practices through the continued expansion of venture and AC operations.
3. The program currently reaches predominantly larger-scale smallholder farmers (average 3.82 ha versus national average of 2.1 ha), highlighting an opportunity to expand support to smaller-scale producers. In addition, discrepancies between venture-reported farmer land sizes and actual measurements suggest ventures need to update their databases more regularly for accurate targeting and monitoring.
4. Finally, the program shows strong potential for promoting women's empowerment in agriculture with high female representation in both ventures and farmers in their value chains. However, the major gender income gap among interviewed farmers requires further attention and strategies to increase female farmers' economic capacities.

PROJECT SUMMARY

Background and Objectives

Cambodia is ranked 149th out of 180 countries for vulnerability and readiness to adapt to climate change. Floods, droughts, and heat waves are increasing year by year. Poverty is still prominent, with an average per capita income of $321 in rural areas. With 24% of Cambodia's GDP still coming from agriculture and 76% of Cambodia's 16.5 million people living in rural areas, primarily relying on climate-sensitive sectors, climate-resilient farming is crucial.

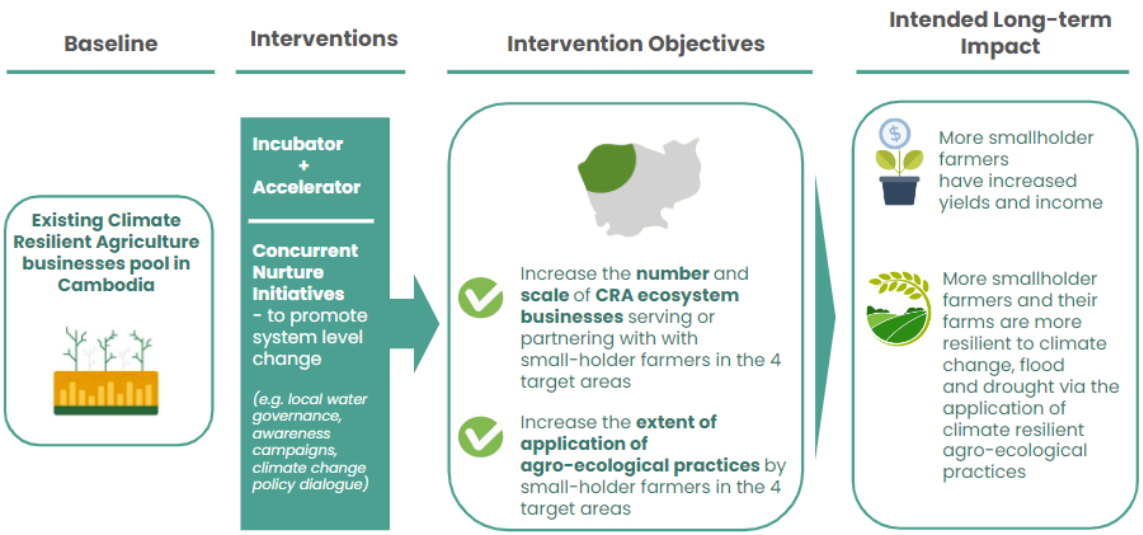
The Nurture Programme addresses the climate resilience of small-holder farmers using a systemic approach addressing a range of problems associated with financial, technical, institutional, and informational gaps, preventing farmers from transitioning to greater levels of resilience. The overall objective is to strengthen the climate resilience of small-holder farmers by enabling farmers' access to CRA and agroecological services and products.

The 2024 KAF Accelerator under the Nurture Programme is implemented by Impact Hub Phnom Penh to leverage the roles of mature ventures and agriculture cooperatives in four provinces (Battambang, Banteay Meanchey, Oddar Meanchey, Preah Vihear) to support small-holder farmers. The program provides capacity building for eight businesses and ACs (referred to as "ventures" from here on) through a bootcamp, masterclasses, 1-on-1 mentorship, monetary grants, and technical assistance.

Project Summary

Title	Khmer Agriculture for the Future Accelerator 2024
Starting Date	September 2024
Duration	Six months
Partners	Nurture Programme, Khmer Enterprise
Target Area	Battambang, Banteay Meanchey, Oddar Meanchey, Preah Vihear
Direct beneficiaries	Climate-resilient agriculture ventures and agricultural cooperatives ("CRA venture")
Indirect beneficiaries	Small-holder farmers (owning 0.5-5 ha of land)
Goal	• Strengthen CRA ventures in the value chain of smallholder farmers, thereby • Indirectly support vulnerable smallholder farming households and their communities to be more resilient to climate change and have increased incomes through the climate-proofing of agroecological farming systems

Theory of Change



METHODOLOGY

Evaluation Purpose

This baseline evaluation aims to assess the current state of the strategic objective and outcome-level indicators for participating ventures and farmers in their value chains at the start of the accelerator phase. Specifically, the baseline evaluation intends to examine:

- The progress of CRA ventures in scaling their businesses and agroecological practices.
- Changes in small-holder farmers' agricultural results in the face of climate change and the contribution of venture-provided CRA products and services.

Data collected during the baseline will help inform an assessment of the project impact and recommendations for any necessary adjustments in project strategy and design.

Evaluation Design

The evaluation used a mix-method approach with a nonexperimental, pre-post design, conducted with two stakeholders: participating ventures and small-holder farmers in their value chain.[1] Detected changes will **not be causally attributed** to the project due to the absence of a comparison group. However, the pre-post design will reveal any significant change at the outcome level through a baseline and endline value comparison of outcome and impact indicators.

Assessment is conducted at two points:

- Baseline (the current phase of this evaluation), at the start of the program;
- Endline, after the program ends.

The following impact and outcome indicators were selected to guide the evaluation:

Type of Indicator	Indicator Description	Indicator Definition	Data Collection Tool	Target
Impact	Farmer's livelihood	% of smallholder farmers that increased net agriculture income by at least 25%	Farmer Phone Survey	25%
		% of farmers that experienced a 25% increase in yields	Farmer Phone Survey	25%
	Farmer's application of CRA practices	Farmers' feedback about CRA products and how they supported farmers	Farmer Phone Survey	Stories
Outcome	CRA ventures' reach to farmers	Number of smallholder **farmers** (as customers or suppliers/partners) who accessed the promoted CRA-oriented products of ventures	Venture Business Diagnostics	50
	CRA ventures' scale	Number of new economic beneficiaries/**customers** that ventures work with	Venture Business Diagnostics	25
		Average increase in ventures' monthly **revenue**	Venture Business Diagnostics	30%

[1] Small-holder farmers in the value chains of participating ventures are not directly engaged in KAF Accelerator activities but will be considered direct beneficiaries of the Nurture project.

		Number of additional paid **staff** hired by participating ventures	Venture Business Diagnostics	10
		Number of CRA **products**/services that have a potentially viable business model	Venture Business Diagnostics	14
		The most significant changes the ventures experienced since joining the program	Participants' Reflection Mentor's Observation	Stories
	Participants' growth	The most significant changes the participants experienced since joining the program regarding personal growth, technical knowledge, soft skills, network, etc.	Participants' Reflection	Stories
	Participants' satisfaction	NPS Score	Participant Endline Survey	60
		Participants' feedback about the program	Participant Endline Survey & Reflection	Stories

Table 1. KAF Accelerator impact and outcome indicator list.

Sampling Strategy

For the evaluation of participating ventures, all ventures selected for the 2024 KAF Accelerator program participated in evaluating business performance.

For the evaluation of farmers, **a sample of 119 farmers** in the value chain of **eight** ventures in the Accelerator and in the four targeted provinces (Battambang, Banteay Meanchey, Oddar Meanchey, Preah Vihear) was constructed using convenience sampling. The minimum sample size is 119, calculated according to the formula: n = [z2 * p * (1 - p) / e2] / [1 + (z2 * p * (1 - p) / (e2 * N))] where:

- z = 1.96 for a confidence level (α) of 95%
- p = proportion (expressed as a decimal) = number of agricultural holdings between 1-5 ha in 4 provinces (189,000) / total number of agricultural holdings (2,226,000) = 8.49%[2]
- N = population size = 12,066 farmers in the value chain of participants
- e = margin of error = 0.0.5

Priority of selection was given to farmers in Nurture's targeted districts in the above provinces. Farmers' phone contacts were provided by participating ventures.

Tools

Data were collected using **two** main quantitative tools below. These tools were developed in English and translated into Khmer by the responsible data collectors before implementation.

- **A business screening** with venture participants to evaluate participating ventures' state of business, including revenue, customer size, employment size, CRA products and services, and reach to small-holder farmers.
- **A farmer interview form** to evaluate farmers' CRA/agroecological practices, agriculture productions, and income. The form is adapted from Nurture's definitions and survey of CRA/agroecological practices.

[2] Calculated based on data retrieved from The Cambodiproductionagriculturala Agriculture Survey (CAS) 2021 Final Report (p. 53), Table 1: Total agricultural area, by size classifications, holdings reporting, Zone level, 2021.

Data Collection and Analysis

Baseline data collection was conducted between 28 October 2024 and 3 December 2024. The M&E Lead supervised the quality control of the data collection process, provided technical support to the enumerators, performed data cleaning, and conducted the analysis. Enumerators were responsible for logistical arrangements for data collection and data entry and for assisting in data cleaning. All data collected is compiled and kept in a centralized, protected Google Sheet for storage.

Evaluation Timeline

The following table presents the evaluation schedule and personnel in real time.

Activity	Month	Duration	Responsible
Program Launch & Initial Planning			
Finalize M&E Plan / M&E ToR	Sept 2024	1 week	M&E Lead
Orientation for M&E team	Sept 2024	1 day	M&E Lead
Baseline Evaluation			
Design Baseline Data Collection Tools	Sept 2024	1 week	M&E Lead
Create Farmer Sample Size	Oct 2024	1 week	M&E Lead, Project Manager
Training for Enumerators / Data Collectors	Oct 2024	1 day	M&E Lead
Baseline Data Collection (CRA Ventures)	Oct 2024	1 week	Project Manager
Baseline Data Collection (Farmers)	Oct-Dec	6 weeks	Field Officers
Data Entry & Initial Analysis	Dec	2 weeks	M&E Lead
Baseline Report Development & Submission	Dec	2 weeks	M&E Lead

Table 2. KAF Accelerator baseline evaluation timeline.

Evaluation Team

Position	Name	Responsibilities
M&E Lead	Anh Nguyen	The M&E Lead oversees overall evaluation design, planning, coordination, and methods and tool development. They provide training to field officers for the fieldwork. They are responsible for developing the M&E framework, analyzing evaluation results, and developing the baseline evaluation report.
Field Officers	Phum Impact Battambang	The Field Officers are responsible for conducting surveys with farmers and cleaning quantitative farmer

		data for the baseline evaluation report.
Project Manager	Chermeng Thang	The Project Manager oversees project activities and coordinates with venture participants to collect farmers' contacts for the baseline evaluation. He also collects quantitative data about the baseline performance of participating ventures.

Table 3. KAF Accelerator Baseline evaluation team.

Limitations

Lack of attribution. The study is not experimental in design due to logistical difficulty in randomizing and contacting farmers in control and experimental groups, thus limiting causal attribution of observed changes to project activities.

Recalling bias. This evaluation relies on self-reporting, thus suffering from possible wrong estimations due to recalling data from a long period of time in the past, particularly for questions about net income. To minimize these risks, the enumerators were trained to understand better the intention of each question and to employ different surveying techniques to help farmers recall information.

Gender and geographical representation. Despite attempts to ensure gender representativeness in the farmer sample, the final sample did not achieve the targeted 51% female ratio from Nurture's gender-mainstreaming commitment and an equal provincial representation due to disproportionate samples and difficulties reaching farmers.

Imperfect estimation of land usage and ownership: Although the Nurture program defines farmers as those owning between 0.5 and 5 hectares of land, several interviewed farmers also rent land. As a result, the data in this evaluation represents the amount of land used for cultivation rather than the amount of land owned.

Ethical Considerations

The following measures and principles of ethical considerations were carried out:

- The informed consent form was read to the surveyed farmers before starting the survey to ensure they understood that their participation in the process was voluntary and how to contact the project.
- All the data was kept confidential, and all the personal indicators would be eliminated after the project evaluation analysis.
- Consent was obtained through verbal agreement and a screenshot of the phone call.

EVALUATION RESULTS

1. Ventures

1.1. Demographics

Eight ventures were included in the baseline assessment at the start of the Accelerator program.

Geographic Area Distribution

Of the eight ventures, three are based in Phnom Penh, two in Battambang, and one in each of the other provinces.

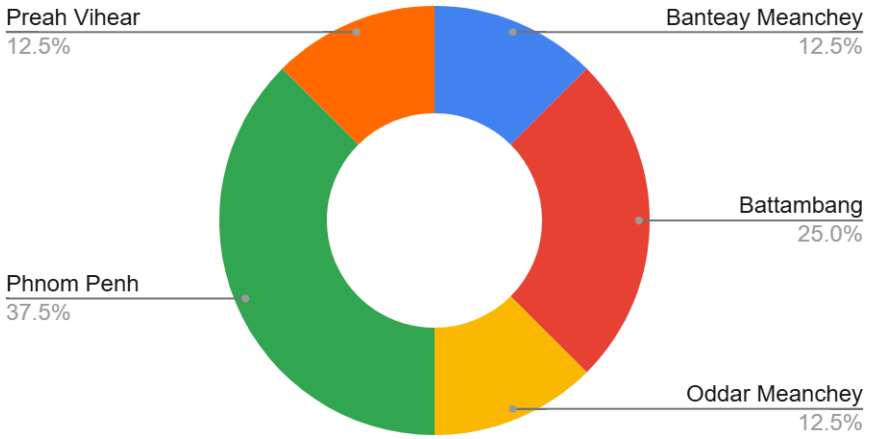


Figure 1. Breakdown of ventures by headquarters location (N=8)

Gender Distribution

Five out of eight ventures are owned or run by women. In addition, female farmers represent 53%[3] of the value chains of all ventures combined, suggesting that these ventures are engaging with a predominantly female agricultural workforce.

The equal representation in leadership, coupled with the majority of female farmers in the value chains, suggests that the program is contributing to women's empowerment in agriculture. Women-led ventures may also have a greater focus on or success in engaging with female farmers, creating opportunities for inclusive growth.

1.2. Business Capacity and Performance

At the start of the KAF Incubator programs, all ventures were invited to a business screening call to collect business performance information, including revenue, customer size, staff size, CRA products and services, and number of farmers in their value chain.

Business Performance Metrics

[3] Data from one venture's farmers is excluded from this calculation as the number of female farmers in their value chain was unclear.

Aggregated revenue of all ventures in the past 12 months (Oct 2023-Sept 2024) - USD
Median monthly revenue of each venture in the past 12 months (Oct 2023-Sept 2024) - USD
Number of economic beneficiaries/customers that ventures work with
Aggregated number of paid staff hired by all ventures, excluding seasonal workers
Total number of CRA products/services from all ventures
Number of smallholder farmers who accessed the promoted CRA-oriented products of ventures
% of female farmers

Table 4. Business performance metrics of ventures tracked by the KAF Accelerator (N=8)

It should be noted that the ventures are diverse in revenue and staff sizes, ranging from under $10,000 to more than $100,000 in average monthly revenue and 5 to 55 paid staff. Therefore, it is expected that evaluation of ventures' performance at the endline would also show diverse growth.

2. Farmers

2.1. Demographics

Sample Size

Based on ventures' provided contacts, an initial sample frame small-holder farmers (owning 0.5-5 ha of land) in the value chain of eight ventures in the four target provinces included 351 contacts. These farmers are screened based on two criteria:

- Whether farmers currently own 0.5-5 ha of land or planting (rented land does not count);
- Whether farmers are producing vegetables, rice, cassava, or poultry, which are the priority of the KAF Accelerator program.

Only 114 farmers passed the screening criteria and participated in the interviews. Five additional female farmers who owned between 5-10 ha in priority districts in Oddar Meanchey were subsequently interviewed to meet the minimum sampling frame and to increase provincial representation.[4] The final sample size is **119 farmers** interviewed via phone calls. All observations were included in the analysis.

Geographic Distribution

Although the study aimed for geographical distribution parity, due to stringent screening criteria and disproportionate focus of participating ventures, the geographical distribution of farmers is imbalanced. Interviewed small-holder farmers are concentrated in Battambang (44%), followed by Preah Vihear (24%) and Banteay Meanchey (24%). Only 8% of interviewed farmers are from Oddar Meanchey, with half owning 0.5-5 ha and the remaining half owning 5-10 ha of land for cultivation.

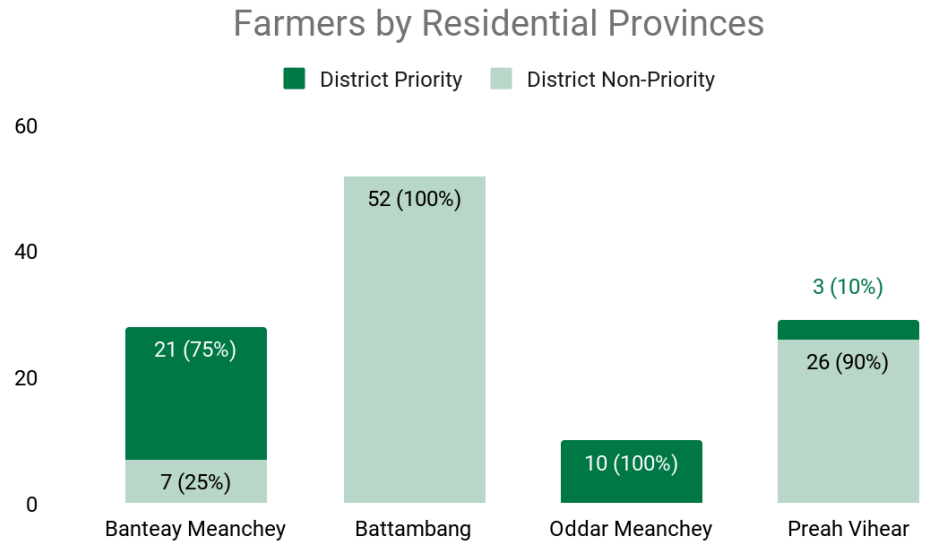


Figure 2. Geographical distribution of the sample (N=119)

Of the 119 interviewed farmers, only **29%** are from Nurture's priority districts, coming from Banteay Meanchey, Oddar Meanchey, and Preah Vihear. No interviewed Battambang farmers are from Nurture's priority areas at the district level.

[4] The inclusion of farmers owning 5-10 ha of land to meet the minimum sample size was agreed between the Nurture Programme's M&E Officer and IHPP M&E Lead.

Gender and LNOB Category Distribution

There is a significantly higher percentage of male farmers (62%) than female farmers (38%) in the overall sample and particularly in Battambang and Banteay Meanchey. Preah Vihear has slightly more female farmers in the sample size than male farmers.

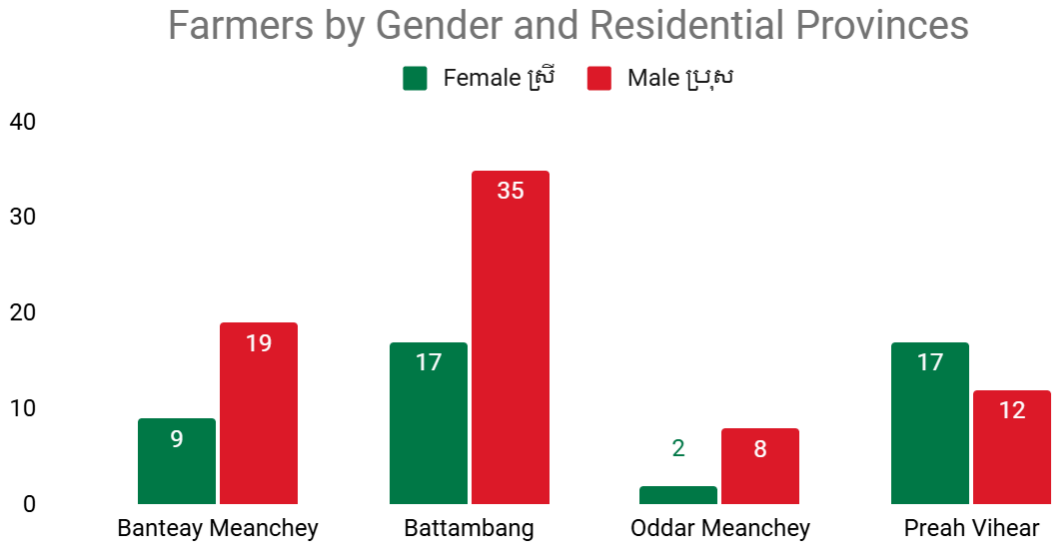


Figure 3. Gender distribution of the sample by province (N=119)

At the district level, the gender breakdown of farmers in the district priority versus non-priority is similar.

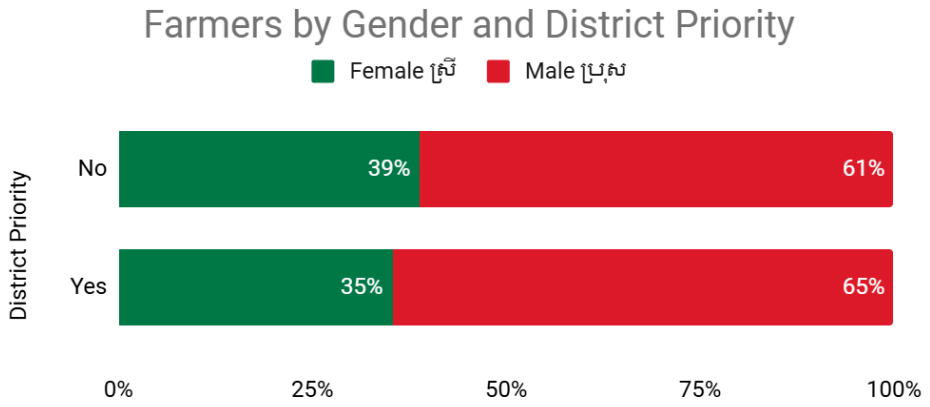


Figure 4. Gender distribution of the sample by district priority (N=119)

More than half of the interviewed farmers are the heads of their households (53%). About 16% held "Poor" status. Only a couple of farmers identified as persons living with a disability, internally displaced persons, or LGBTQIA+/Queer. About 19% of farmers did not identify with any NOLB or specific categories.

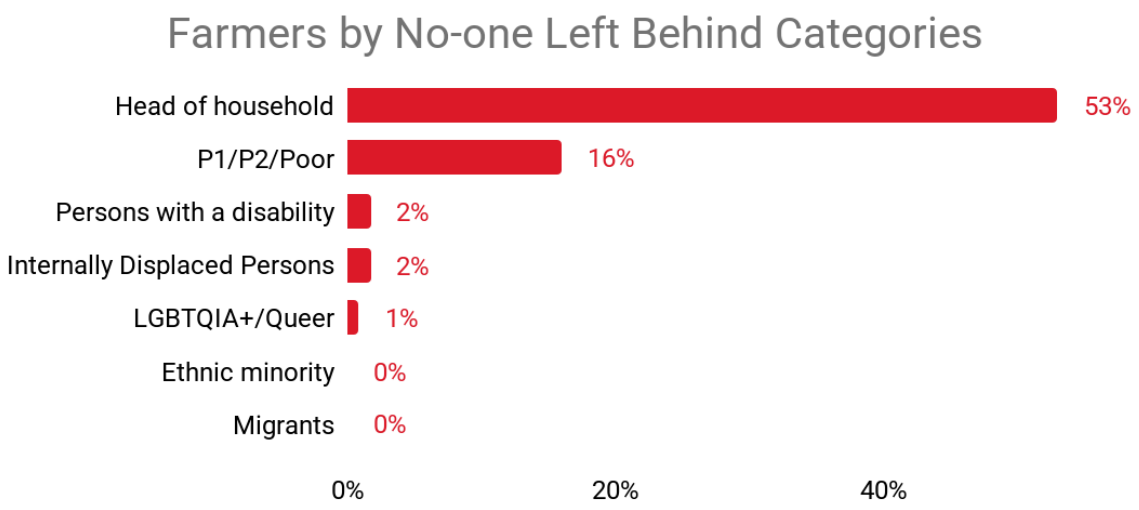


Figure 5. Leave-No-One-Behind distribution of the sample (N=119)

Of the 34 farmers residing in Nurture's prioritized districts, 25 farmers identified with one of the specific categories. The majority of them self-identified as the heads of household.

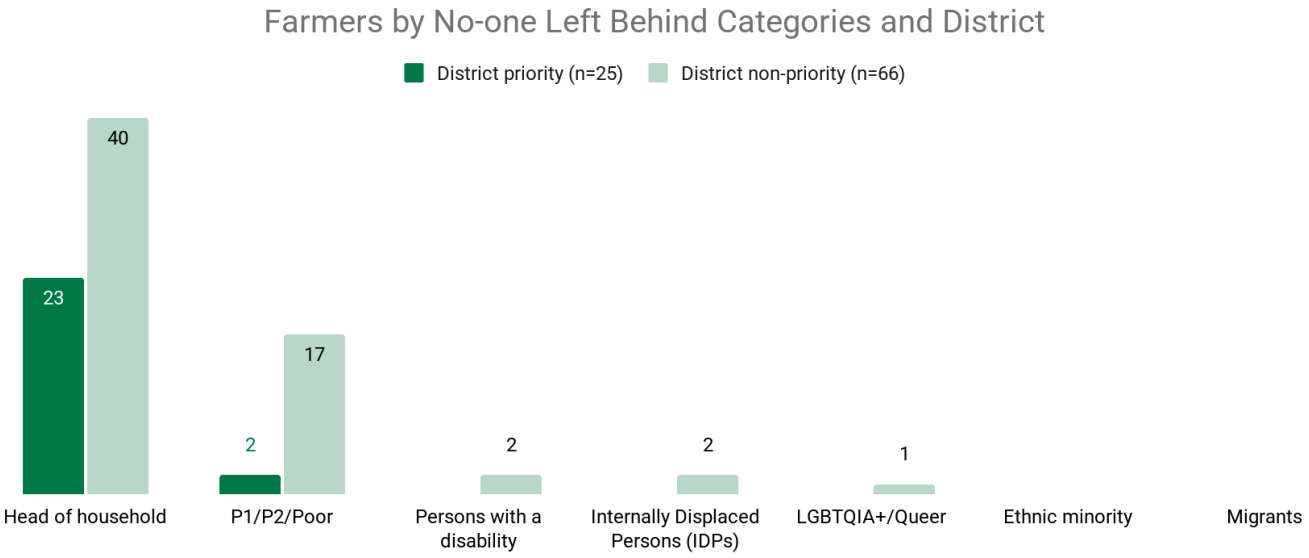


Figure 6. Farmer breakdown by specific group affiliation and district priority (N=119)

Age

The age of interviewed farmers ranges from 19 to 71, with the majority of farmers falling in the 30-39 and 40-49 age groups. Female farmers' median age (41 years old) is marginally lower than male farmers' (45 years old). Farmers in Banteay Meanchey have the highest median age (49 years old), and those in Oddar Meanchey have the lowest (40 years old). Farmers from priority districts have less variance in their ages, ranging from 30 to 67.

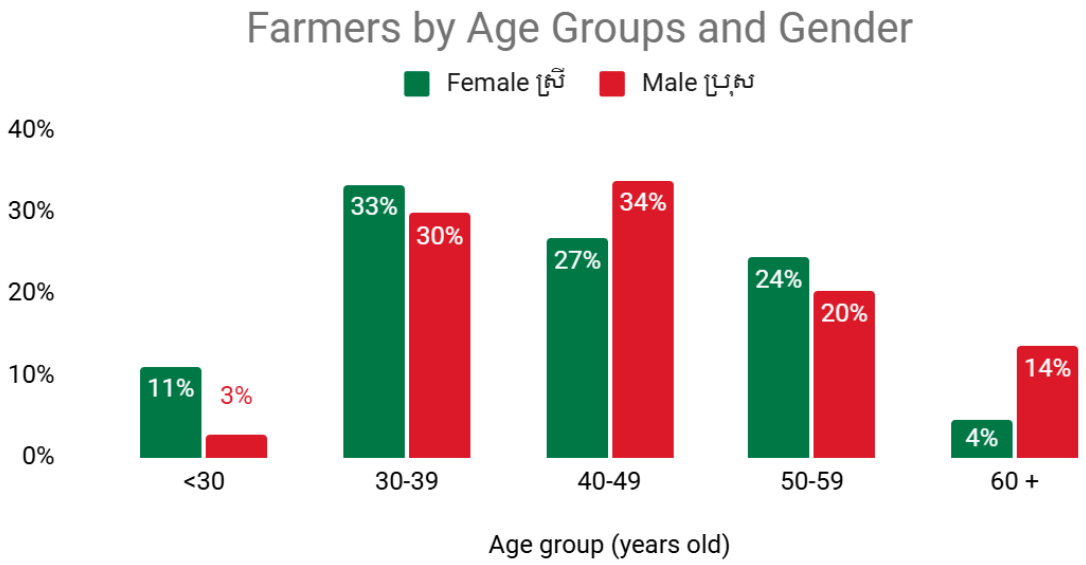


Figure 7. Age distribution of the sample by gender (N=119)

2.2. Agricultural Yield & Income

Land use

Overall, on average, farmers in the sample size use **3.82** ha of land for cultivation, own **2.8** ha, and rent **3.2** ha. The amount of land *used* ranges between **0.48** ha and **15.1** ha, whereas the amount of land *owned* ranges between **0.48** ha and **8** ha. The average land size of 3.82 hectares among farmers in the KAF Accelerator Baseline Evaluation indicates that these farmers have larger-scale agricultural operations compared to farmers in Cambodia in general, whose average size of land is 2.1 ha according to Cambodia Agriculture Survey 2023.[5]

Compared to their male counterparts, interviewed female farmers tend to use, own, and rent a marginally smaller amount of land on average. In terms of provincial differences, interviewed farmers in Battambang tend to rent a larger size of land (4 ha on average) compared to farmers in other provinces (1-2 ha on average). Note that the land size used and owned in Oddar Meanchey is high because half of the interviewed farmers from this province owned between 5 and 10 ha.

Interviewed farmers residing in prioritized districts vs. those in non-prioritized districts use a similar average amount of land for planting. However, those in proritized districts tend to own less and rent more land.

[5] The Cambodia Agriculture Survey 2023 Complete Report (p. 28), distributed on December 19, 2024 in the *CAS 2022 & CAS 2023 Release Workshop* by the National Institute of Statistics, Ministry of Planning.

	Land used for cultivation			Land owned			Land rented		
	Average size	Minimum size	Maximum size	Average size	Minimum size	Maximum size	Average size	Minimum size	Maximum size
Overall	3.82	0.48	15.10	2.80	0.48	8.00	3.20	0.48	12.00
Gender									
Female ស្រី	3.64	0.80	12.50	2.68	0.80	7.00	2.90	0.48	9.50
Male ប្រុស	3.93	0.48	15.10	2.88	0.48	8.00	3.42	0.50	12.00
Provinces									
Banteay Meanchey	3.23	0.48	10.00	2.73	0.48	5.00	2.29	0.50	7.00
Battambang	4.09	0.48	15.10	2.28	0.48	5.00	4.13	0.48	12.00
Oddar Meanchey	5.60	2.00	8.00	5.15	2.00	8.00	2.25	1.00	3.50
Preah Vihear	3.33	0.84	6.00	2.96	0.84	5.00	1.33	1.00	2.00
District									
Priority	3.81	0.48	15.10	2.53	0.48	5.00	3.71	0.48	12.00
Non-priority	3.87	0.48	8.00	3.47	0.48	8.00	1.67	0.50	3.50

Table 5. Amount of land used, owned, and rented by gender, province, and district priority (N=119)

Overall Agricultural Yield and Net Income

Across 119 interviewed farmers, between November 2023 and October 2024, rice is commonly grown in all provinces. Vegetables are popular crops in Banteay Meanchey and Battambang, whereas cassava is a common choice for farmers in Oddar Meanchey and Preah Vihear. Farmers from district priority areas have higher yields in all crops yet significantly lower numbers of poultry owned.

	Vegetables (kg/ha)	Rice (kg/ha)	Cassava (kg/ha)	Poultry (bird)
Overall	10,000	2,500	10,000	20
Gender				
Female ស្រី	6,250	2,550	10,000	19
Male ប្រុស	12,000	2,500	10,000	25
Provinces				
Banteay Meanchey	10,000	4,000	No Match	30
Battambang	10,365	3,500	No Match	15
Oddar Meanchey	82,500[6]	1,500	11,450	20
Preah Vihear	No Match	2,000	7,500	19
District				
Priority	16,250	3,000	10,725	20
Non-priority	10,000	2,500	7,750	86

Table 6. Median agricultural yield per farmer between November 2023 and October 2024 by geography and gender (N=119)

In general, between November 2023 and October 2024, farmers in the sample earn 5,220,000 riels per person in median net income from rice, vegetables, cassava, and poultry production combined. Male farmers earn twice the median net income of females, suggesting a significant gender gap in agricultural income.

In addition, in terms of geographical differences, a farmer in Banteay Meanchey typically would earn 12,275,000 riels from agricultural activities between November 2023 and October 2024. In contrast, a farmer in Oddar Meanchey or Preah Vihear would earn less than 3,000,000 riels. This suggests a major geographical difference in agricultural earnings. Farmers in Nurture's prioritized districts earn about the same as those in non-prioritized areas in median agricultural net income.

	Number of farmers	Median Net Income (riel)
Overall	119	5,220,000
Gender		
Female ស្រី	45	3,540,000

[6] There was only farmer from Oddar Meanchey that grow vegetables in only 0.001 ha of land. Therefore, vegetable yield in Oddar Meanchey is *not* representativeand should be treated as outlier.

Male ប្រុស	74	7,213,500
Provinces		
Banteay Meanchey	28	12,275,000
Battambang	52	7,775,368
Oddar Meanchey	10	2,762,500
Preah Vihear	29	2,870,000
District		
Priority	34	5,857,500
Non-priority	85	5,200,000

Table 7. Median agricultural net income per farmer between November 2023 and October 2024 by geography and gender (n=119)

The majority of farmers, regardless of their agricultural outputs, earn less than 10,000,000 riel, followed by those earning between 10,000,000 and 19,999,999 riel. Less than 10% of farmers reported a net income loss.

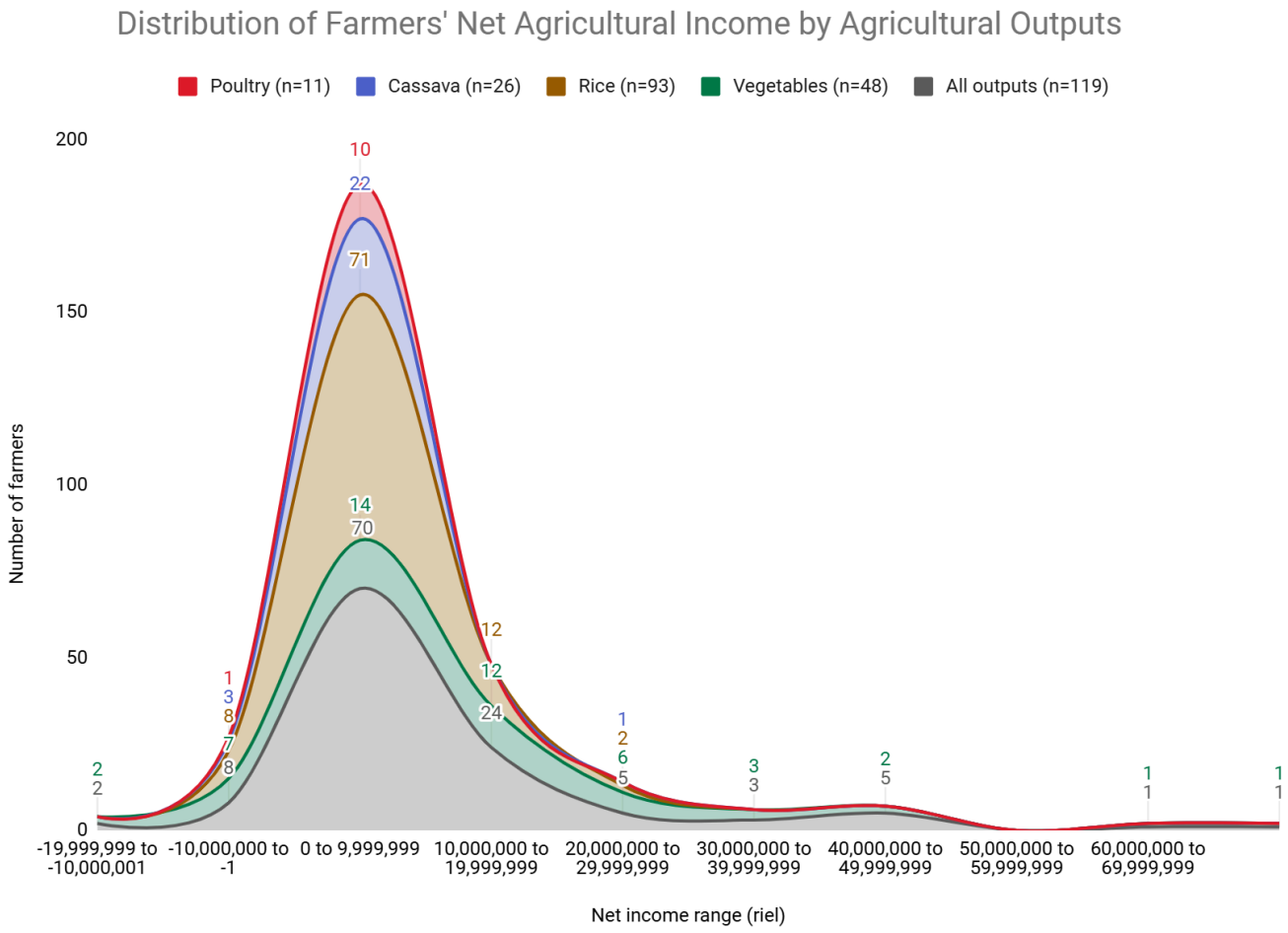


Figure 8. Distribution of farmers' total net income by agricultural outputs (N=119)

Vegetables Yield and Income

In the past 12 months (November 2023 - October 2024), only 48 out of 119 interviewed farmers (40%) grew vegetables, most coming from Battambang (67%) and Banteay Meanchey (31%). Only one farmer resides in Oddar Meanchey, and none is from Preah Vihear. Of these vegetable farmers, about a quarter reside in district priority. One in every four vegetable farmers is female.

	Number of farmers growing vegetables	Median area of land used (ha)	Median yield (KG/ha)	Median net income (riel)
Overall	48	0.32	10,000	3,400,000
Gender				
Female ស្រី	12	0.60	6,250	3,050,000
Male ប្រុស	36	0.24	12,000	3,400,000
Provinces				
Banteay Meanchey	15	0.46	10,000	4,500,000
Battambang	32	0.32	10,365	2,100,000
Oddar Meanchey	1	0.001	82,500	-312,500
Preah Vihear	0	No Match	No Match	No Match
District				
Priority	11	0.24	16,250	6,825,000
Non-priority	37	0.39	10,000	2,500,000

Table 8. Summary of vegetable cultivation and results by geography and gender (n=48)

Overall, a farmer typically uses only 0.32 ha of land for vegetable cultivation, which brings about 10,000 kg/ha in yield and 3,400,000 riel in net income. Female farmers tend to use a larger plot of land for vegetable cultivation than male farmers (0.6 vs 0.24 ha). Their median net income from vegetables is only marginally higher than that of their male counterparts.

Banteay Meanchey vegetable farmers tend to use a slightly larger plot of land but earn double the median net income compared to those from Battambang. Farmers residing in priority districts tend to use marginally smaller land areas yet earn almost triple the net income of those from non-priority areas.

Collectively, interviewed farmers grew 25 different types of vegetables. Cucumber, culantro, gourd, long bean, and spinach are the most popular types of vegetables across the board.

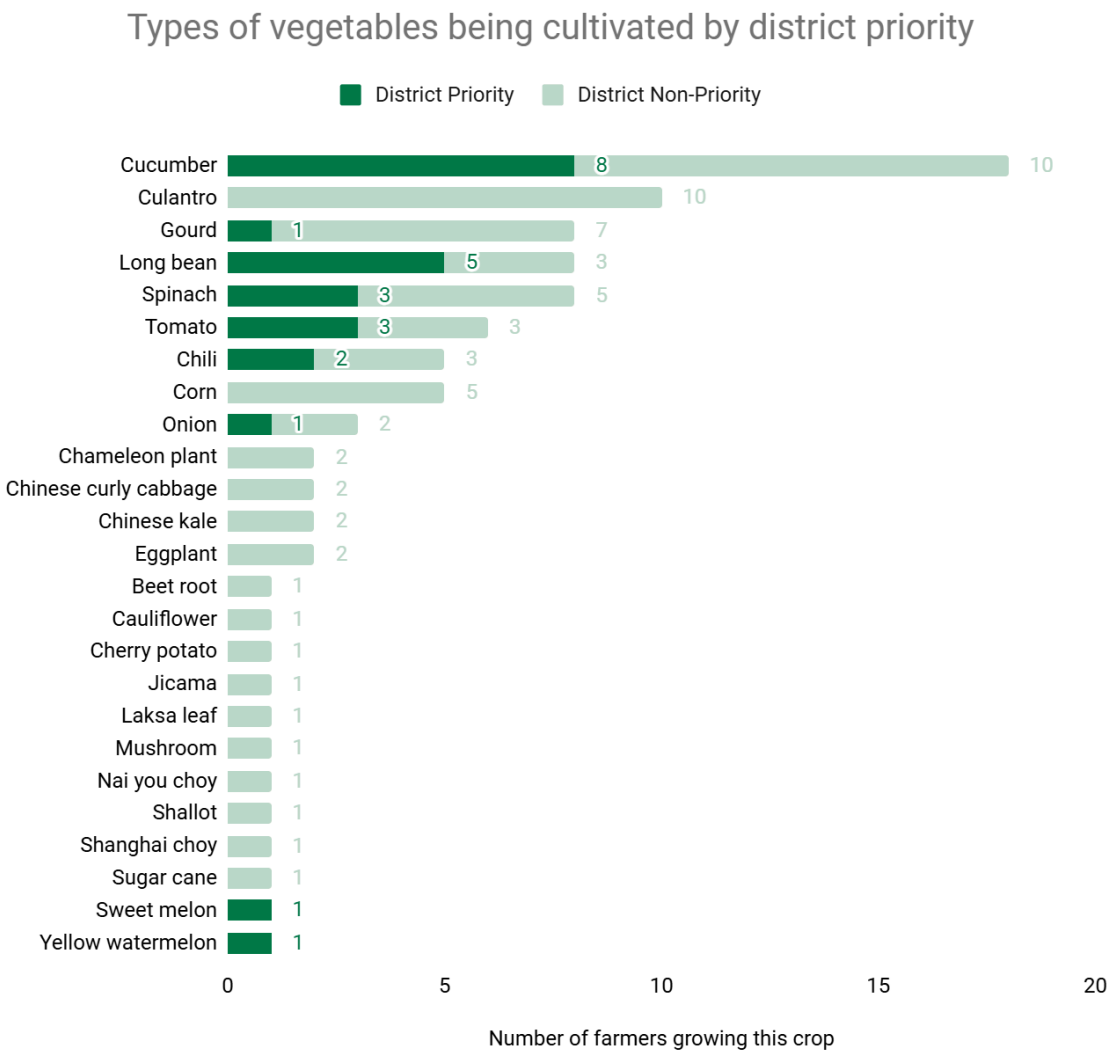


Figure 9. Types of vegetables being cultivated by district priority (n=48)

In the districts prioritized by Nurture's program, cucumber and long bean are the most popular vegetables for cultivation. Compared to Battambang farmers, Banteay Meanchey farmers have higher median yields in chili, long bean, tomato, spinach, and corn, and lower yields in gourd and cucumber.

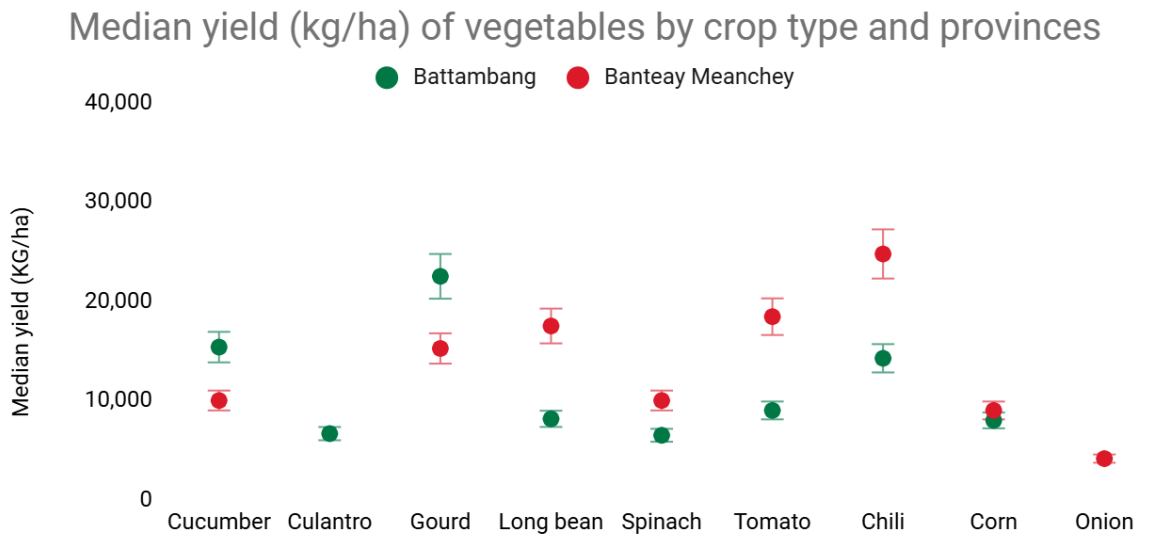


Figure 10. Median yield (kg/ha) from most popular vegetables by provinces (n=48)

Overall, mushrooms contribute the most to farmers' income, followed by cherry potatoes, gourds, cucumbers, tomatoes, and long beans. This is also the case for female farmers, whereas for male farmers, cherry potatoes are the biggest income contributor, followed by sweet melons, yellow watermelons, and spinach.

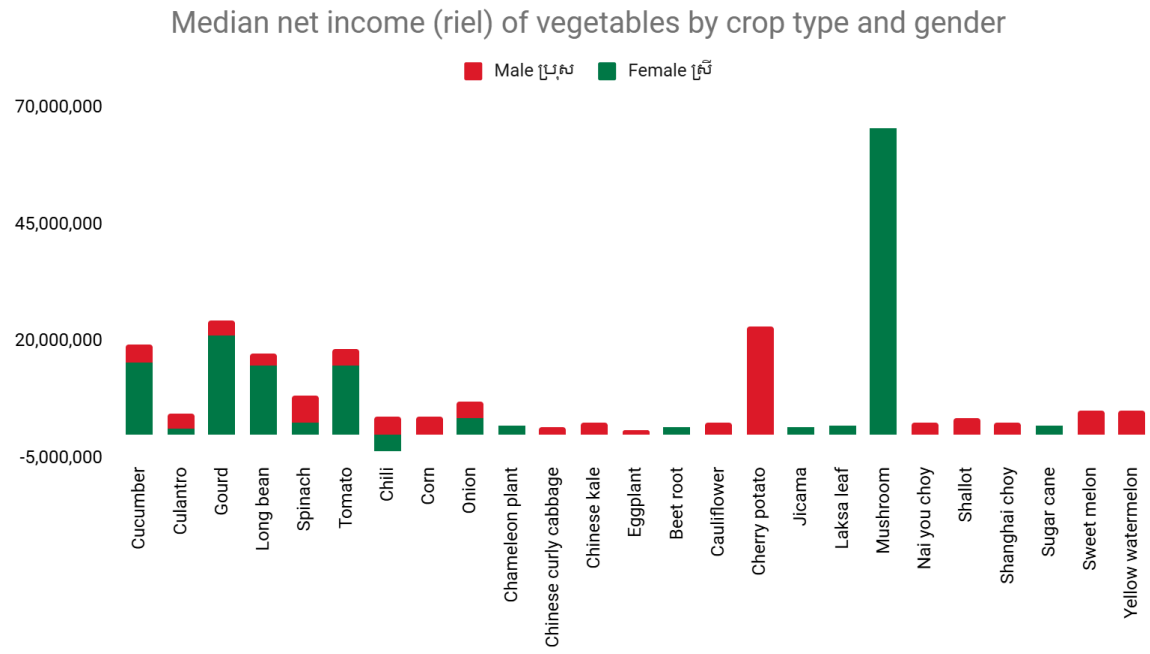


Figure 11. Median net income (riel) from vegetables by crop type and gender (n=48)

In district priority (n=11), gourds, chili, cucumber, and tomato contribute the most to farmers' income, whereas in non-prioritized areas, mushrooms, cherry potatoes, gourds, and spinach are. In Banteay Meanchey, farmers gain the most net income from chili, tomato, and long bean, compared to mushrooms, cherry potatoes, and gourds in Battambang.

Rice Yield and Income

Most interviewed farmers (83%) grew rice between November 2023 and October 2024. About a third of them reside in Nurture's prioritized areas, and about 40% of them are female farmers. Rice farmers are spread across all four provinces, with 37% living in Battambang, 28% in Preah Vihear, 24% in Banteay Meanchey, and 10% in Oddar Meanchey.

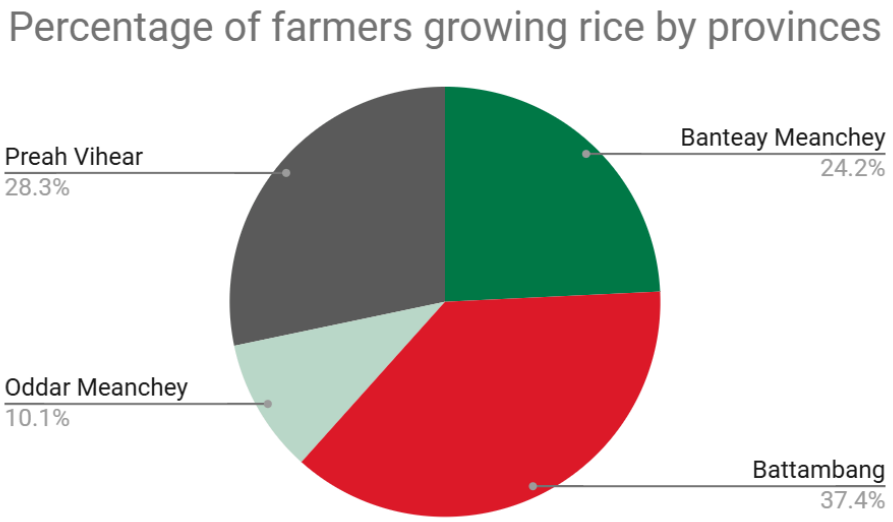


Figure 12. Rice farmer distribution by provinces (n=99)

Overall, a small-holder farmer typically uses 2 ha of land for rice cultivation, which brings about 2,500 kg/ha in yield and 2,000,000 riel in net income. Common types of rice being cultivated are Neang Am, Romdoul, Sro Ngea, Neang Khun, OM54, and Sen Kra Oub. Although the median area of land used for rice cultivation is the same for female farmers and male farmers, male farmers earn slightly higher income after subtracting all expenses.

Across four provinces, Banteay Meanchey farmers reported the highest median yield (4,000 kg/ha) and earnings (3,300,000 riels per farmer) from rice than all other provinces, whereas farmers in Oddar Meanchey reported the lowest (only 1,500 kg/ha and 600,000 riels per farmer, respectively). Battambang farmers tend to use the largest plot of land for rice cultivation (3 ha), whereas Preah Vihear farmers reported the smallest median size of land (1.3 ha).

Compared to their counterparts in district non-priority, interviewed farmers residing in district priority of the Nurture program typically use smaller pieces of land for rice cultivation, have higher yield productivity (3,000 kg/ha), but lower total production and, therefore, slightly lower median net income.

	Number of farmers growing rice	Median area of land used (ha)	Median yield (KG/ha)	Median net income (riel)
Overall	99	2.00	2,500	2,000,000
Gender				
Female ស្រី	40	2.00	2,550	1,965,000
Male ប្រុស	59	2.00	2,500	2,250,000
Provinces				

Banteay Meanchey	24	2.00	4,000	3,300,000
Battambang	37	3.00	3,500	2,850,000
Oddar Meanchey	10	2.00	1,500	600,000
Preah Vihear	28	1.30	2,000	1,800,000
District				
Priority	32	2.00	3,000	1,937,500
Non-priority	67	3.22	2,500	2,015,000

Table 9. Summary of rice cultivation and results by geography and gender (n=99)

Cassava Yield and Income

Overall, only 22% of farmers interviewed grew cassava between November 2023 and October 2024, concentrating in Preah Vihear and Oddar Meanchey. Nearly half of them reside in district priority, and 39% are female farmers.

A farmer typically uses 1,35 ha of land for cassava cultivation, which brings about 10,000 kg/ha in yield and 1,275,000 riel in net income. Male farmers typically use double the size of land for cassava cultivation compared to female farmers. They have the same level of median yield, however. Farmers residing in district priority tend to use slightly more land to grow cassava, have higher median yield, and earn marginally higher in net income compared to those in district non-priority.

	Number of farmers growing cassava	Median area of land used (ha)	Median yield (KG/ha)	Median net income (riel)
Overall	26	1.35	10,000	1,275,000
Gender				
Female ស្រី	10	1.00	10,000	2,225,000
Male ប្រុស	16	2.00	10,000	1,275,000
Provinces				
Banteay Meanchey	0	No Match	No Match	No Match
Battambang	0	No Match	No Match	No Match
Oddar Meanchey	9	2.00	11,450	1,225,000
Preah Vihear	17	1.00	7,500	1,300,000
District				
Priority	12	2.00	10,725	1,312,500
Non-priority	14	1.48	7,750	1,275,000

Table 10. Summary of cassava cultivation and results by geography and gender (n=26)

Poultry Yield and Income

Overall, a quarter of farmers in the sample raise poultry. About a third of these farmers reside in Nurture's prioritized districts. Slightly more than half of them are female, and most of them are in Battambang and Preah Vihear (36% each). The most popular poultry to raise is chicken, with 90% of poultry farmers raising. Some also raise ducks, and only one farmer raises gooses.

A farmer typically owns 20 birds and earns around 220,000 riels in net income. It is noted that several farmers raise poultry for self-consumption rather than for sale.

	Number of farmers raising poultry	Median number of birds owned	Median net income (riel)
Overall	30	20	220,000
Gender			
Female ស្រី	17	19	225,000
Male ប្រុស	13	25	200,000
Provinces			
Banteay Meanchey	5	30	800,000
Battambang	11	15	105,000
Oddar Meanchey	3	20	145,000
Preah Vihear	11	19	212,500
District			
Priority	9	20	200,000
Non-priority	21	86	225,000

Table 11. Summary of poultry raising and results by geography and gender (n=26)

2.3. Experiences with CRA Ventures and CRA Products

Value Chain Role

All interviewed farmers are from the value chain of seven out of eight ventures in the Khmer Agriculture for the Future Accelerator program, with the exception of one venture whose business model focuses on working with depots rather than directly with farmers. Therefore, no farmers within its value chain were identified for the sample.

Most farmers in the baseline assessment engage with accelerated ventures in several roles, primarily as suppliers of agricultural outputs (66%), customers of agricultural inputs (61%), and receivers of different agricultural training (50%). One farmer reported being only an AC member without providing or receiving any products or services.

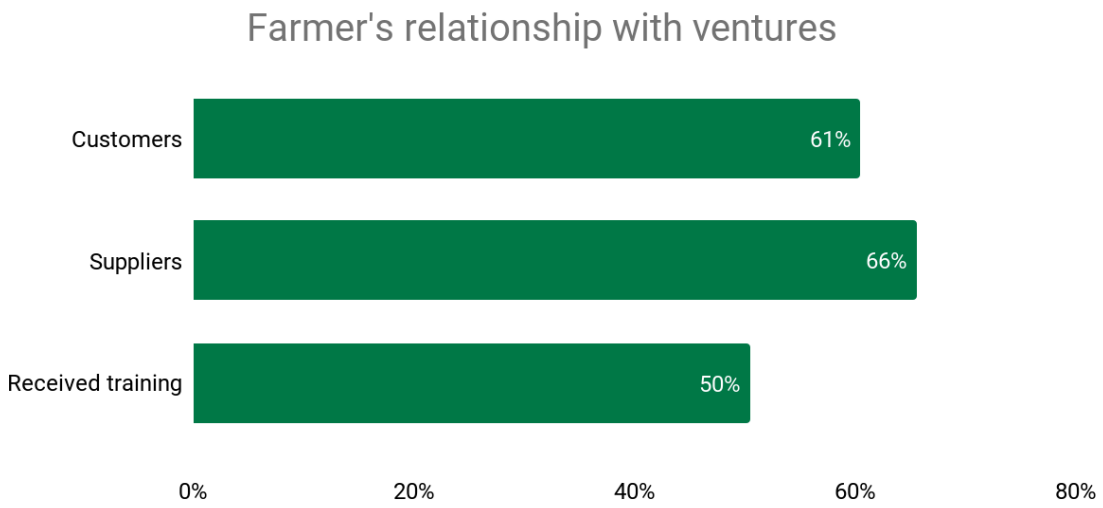


Figure 13. Distribution of farmers by relationships with ventures (N=119)

Awareness of CRA concepts

More than half of the farmers have heard of the term 'Climate Resilience Agriculture' (CRA) at the time of the interviews. Awareness among female farmers is slightly higher compared to male farmers. Farmers in priority and non-priority districts demonstrate marginal differences in awareness of CRA.

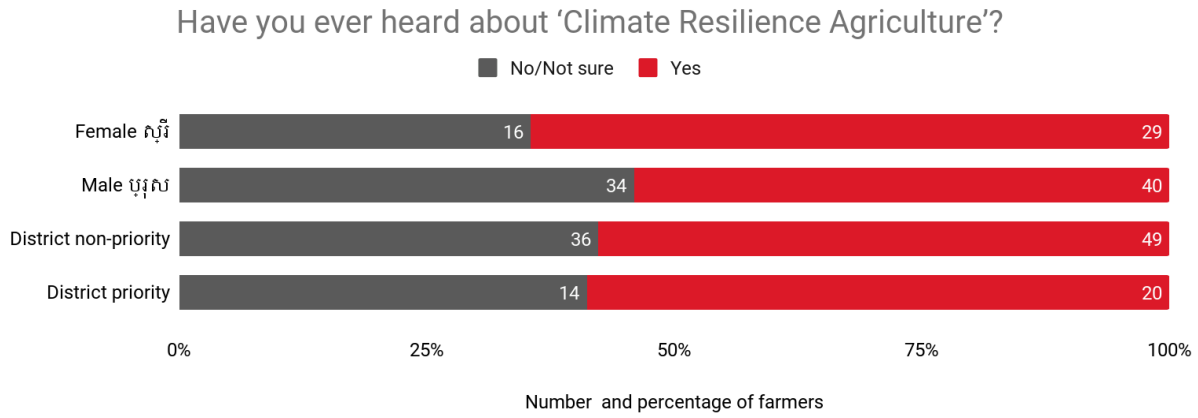


Figure 14. Farmers' awareness of CRA by gender and district priority (N=119)

Farmers from most ventures show a mix of awareness levels, but there are generally more "Yes" responses than "No/Not sure" responses across the sample. A few farmers shared that their common CRA practices are choosing resilient crop varieties, covering crops, growing organic rice, and using different watering techniques taught by the AC.

For farmers who have heard about CRA, 71% learned about it through the ventures and ACs. A small percentage (7%) learned about CRA through other NGOs, such as iDE, GIZ, and HEKS, or through their family and surroundings (4%). Two-thirds of these farmers have learned about CRA in the last three years.

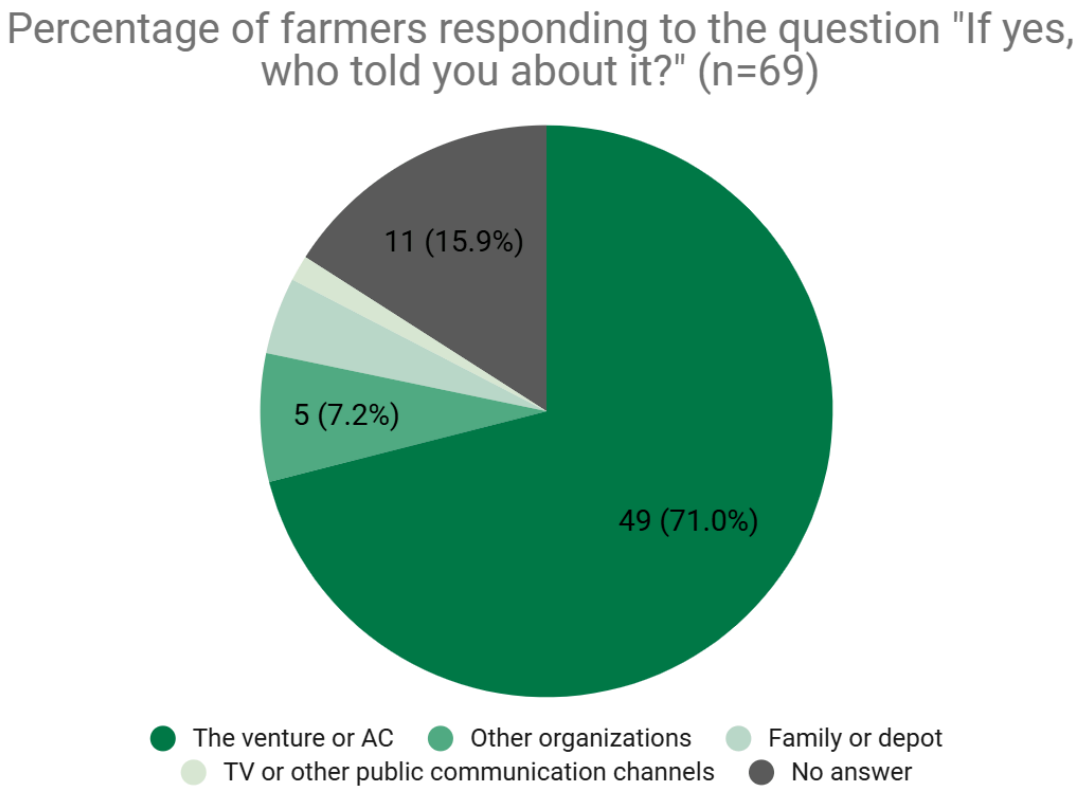


Figure 15. Channels through which farmers heard about CRA (n=69)

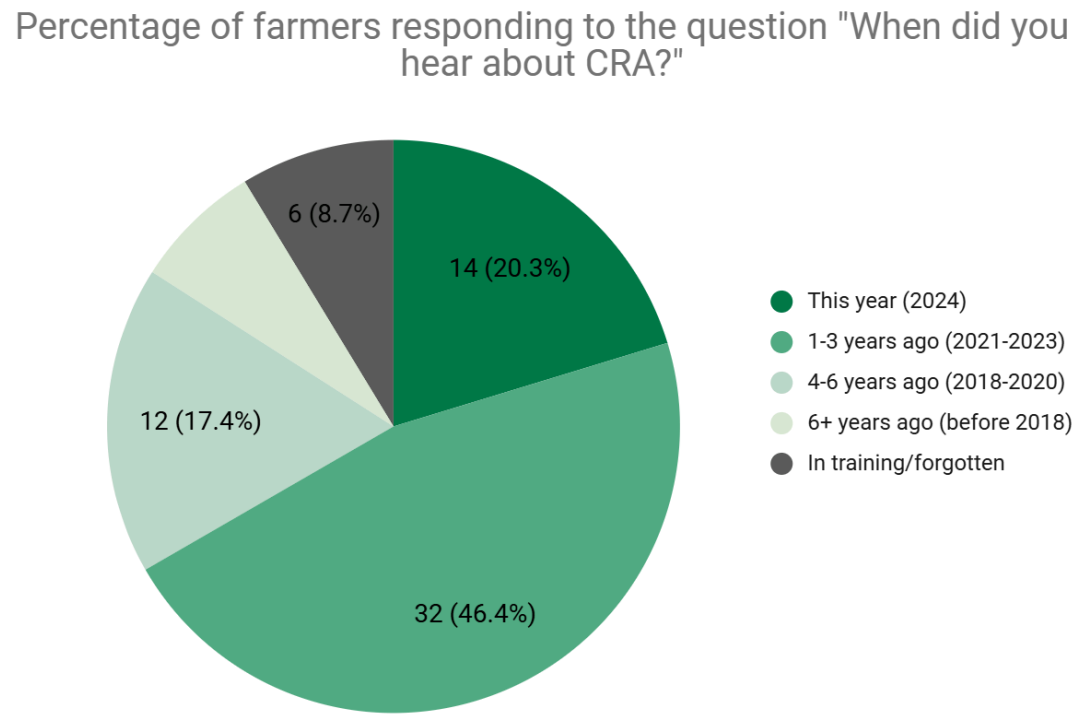


Figure 16. When farmers first heard about CRA (n=69)

Experiences with ventures' products and services

Interviewed farmers typically received different agricultural inputs from ventures, primarily seed varieties and organic and inorganic fertilizers, and subsequently sold vegetables, rice, and cassava. In some cases, farmers also received pesticides/herbicides and other types of equipment needed for effective farming, such as net houses, plastic to cover crops, gates, hoses, ropes, and so on. Most farmers learned about these products through ventures/ACs' advertisement and outreach efforts. A handful of farmers learned about them through a family member or friend, and one farmer after seeing the product showcase in a shop.

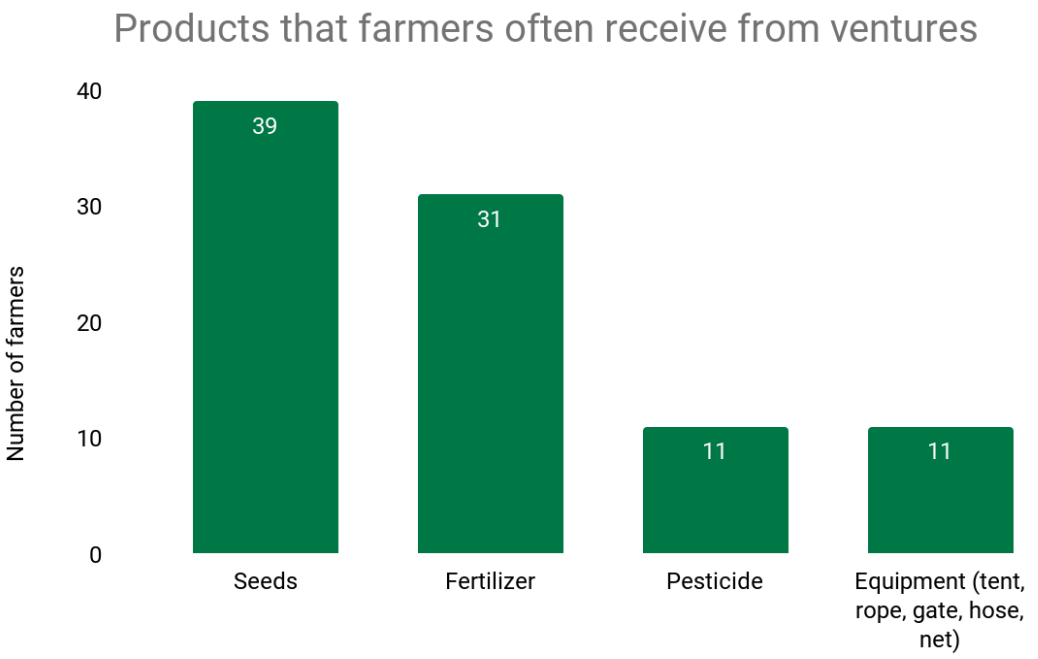


Figure 17. Types of products that farmers receive from ventures (n=100)

When farmers were asked about factors that influenced their decision to use the ventures' products and services, having better access to the market and better selling prices was the most common reason, with 25 farmers citing this as a reason. Affordable products and services from ventures were the second most important factor, with 18 farmers selecting this reason. Several farmers also suggested the opportunity to learn farming techniques, options for financial assistance such as lending and subsidies, and access to good seed varieties were important factors for them to work with the ventures/ACs.

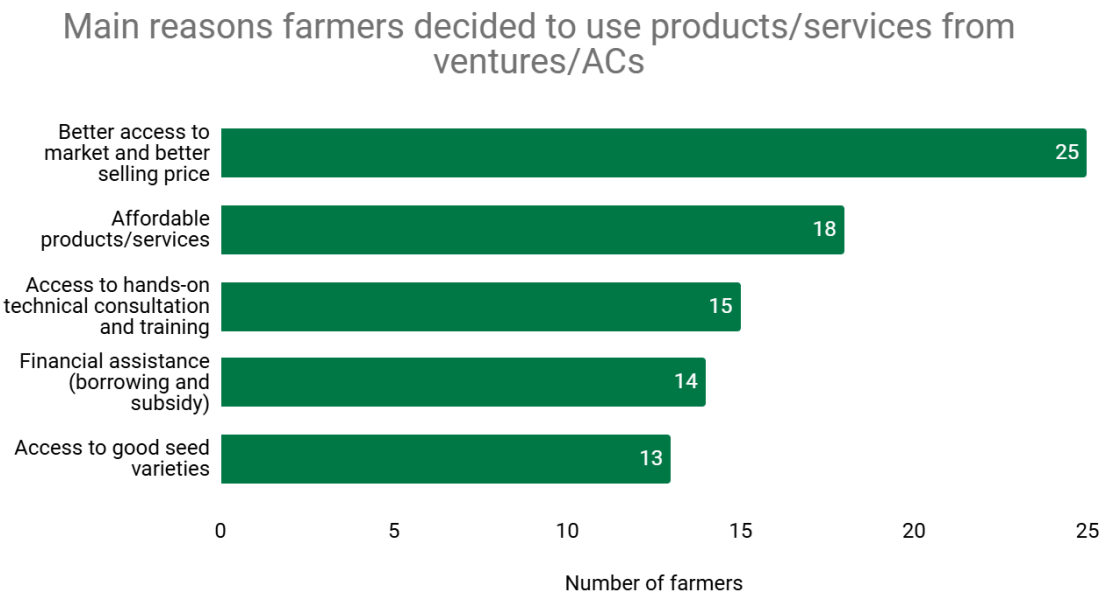


Figure 18. Main reasons farmers decided to use products and services from ventures/ACs (n=93)

More than half (56%) of farmers were highly satisfied with the ventures' products and services and shared that they "really love" the products/services and are "so happy." These farmers are considered 'promoters', which means they are highly likely to recommend the products/services to others. About 29% of farmers felt relatively satisfied and are considered 'passive' consumers. 15% of farmers, however, indicated dissatisfaction or mixed feelings. Some suggested that the varieties of seed they got from the venture were not "pure" as they wished. These farmers are considered 'detractors' and have a likelihood of sharing their negative experiences with other people.

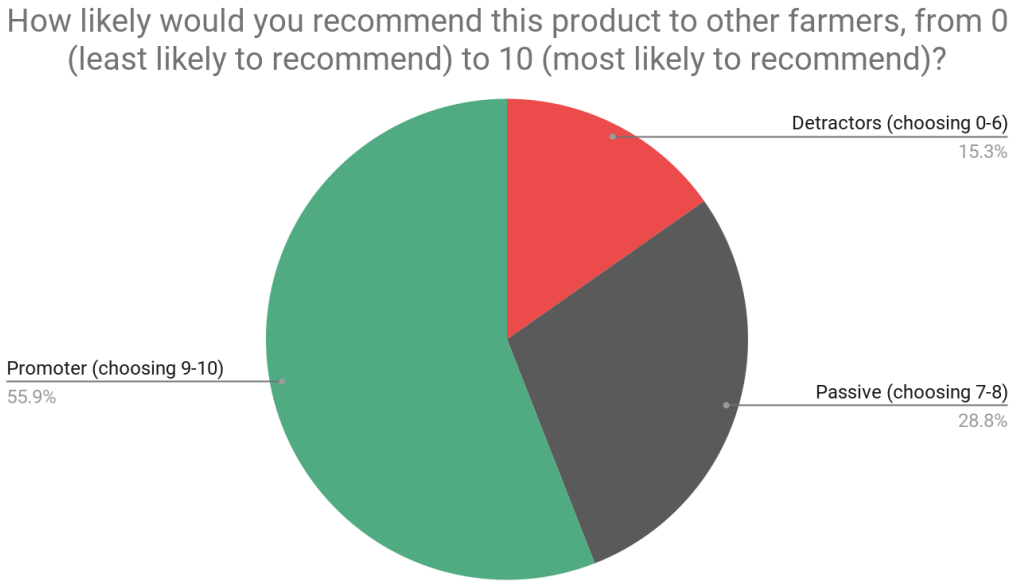


Figure 19. Farmers' likelihood of recommending products and services from ventures/ACs with other farmers (n=118)

The majority of farmers observed better yield (60%) and better income (43%) after using the products and services offered by ventures/ACs, suggesting overall positive impacts

that ventures have. About 15% of farmers also observed increased soil quality, and 13% shared that the outputs had stronger stems, were more disease-resistant, and produced larger and higher quality fruits or rice nuts. Consistent with previous feedback, about 9% of farmers did not find the products beneficial.

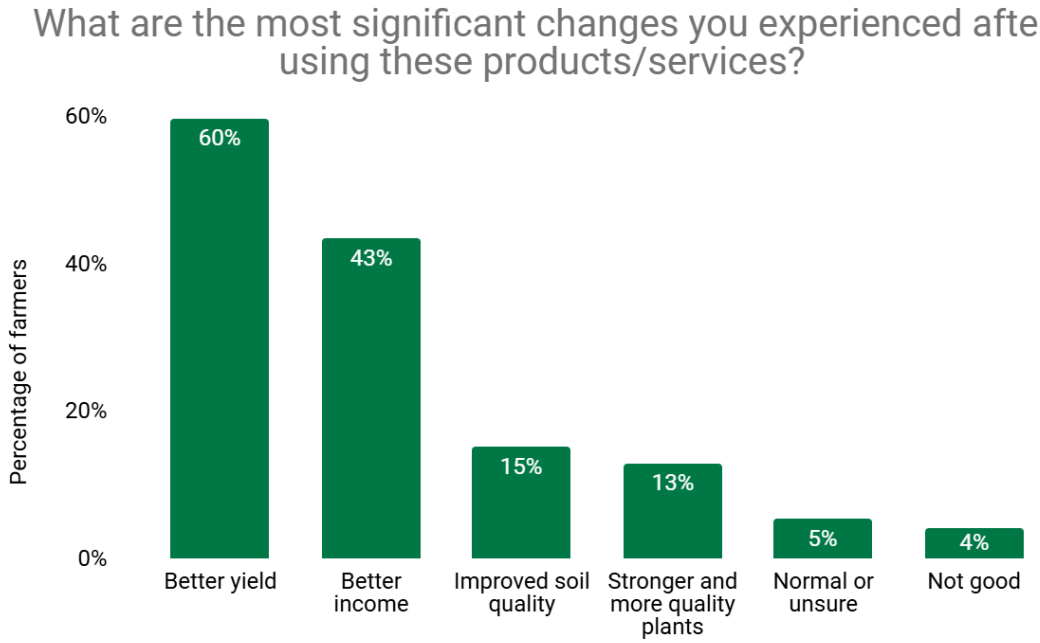


Figure 20. Most significant changes that farmers experienced after using products and services from ventures/ACs (n=92)

When asked, "What challenges did you encounter while adopting these products?" four out of every five farmers did not encounter any difficulties. For the 21% of farmers that encountered challenges, the top cited difficulty was different types of pests and diseases as farmers could not use pesticides and herbicides, or these products did not work as effectively. In a few of these cases, farmers opted to use chemical products instead as a solution. A very small number of farmers also shared that delays or the long wait for payment from AC was another challenge.

Farmers were also asked about competitors of the ventures/ACs within their access. About **65%** of farmers could identify an alternative to the ventures. In most of those cases, the competitors are local depots, dealers, distributors, and markets, where many farmers could buy fertilizers and pesticides. A few farmers also identified a different venture to which they could sell their products. Two farmers mentioned NGOs like iDE as another alternative. Echoing their previous feedback about the ventures/ACs' products, the majority of farmers noted that with ACs, farmers could sell for higher prices, buy at lower costs, and have debt options, although payments would take longer. A handful of farmers also noted that they could access organic fertilizers at ACs, while some others shared that they could find both at ACs and local depots.

FINDINGS AND IMPLICATIONS

Baseline Measurement across Indicators

The report's findings suggest the following baseline measures for KAF Acceleratorr's impact indicators.

No	Nurture LF's Indicators codes	Indicators (by logic Intervention)	Target	Baseline Starting Measure
Impact Indicator: Vulnerable smallholder farming households and their communities are more resilient to climate change and have increased incomes through climate proofing of agroecological farming systems.				
1	IP.2	IP1. % of smallholder farmers that increased net agriculture income by at least 25%	25%	0
2	OC.1	IP2. % of farmers that experienced a 25% increase in yields	25%	0
3		Farmers' feedback about CRA products and how they supported farmers	-	Stories
Outcomes Indicator: Vulnerable smallholder farmers use the promoted inputs, services, practices or technologies that allow for CRA				
4	OC.3.1	Number of smallholder farmers (as customers or suppliers/partners) who accessed the promoted CRA-oriented products of ventures	50	12,066
Outcomes Indicator: Incubated ventures increase business growth				
5		OCB1. Average increase in ventures' monthly revenue in the past 12 months	30%	USD 39,114
6	O.P.3.2.1	OCB 2. Number of new economic beneficiaries/customers that ventures work with	25	0
7		OCB 3. Number of additional paid staff hired by participating ventures	10	159
8		OCB 4. # of CRA products and/or services that have a potentially viable business model	14	17
9		The most significant changes the ventures experienced since joining the program	-	Stories
Outcomes Indicator: Participants experienced personal growth and were satisfied with the program				
10		Participants' feedback about the program	-	Stories
11		OCP 6. NPS Score	60	-

Table 12. Baseline measures of impact and outcome indicators.

Findings and Lessons Learned

Overall participant profile and farmer characteristics

The gender distribution of program participants and of participating ventures' owners are balanced. However, among the farmers interviewed, male representation is high, at 62%, suggesting that farmers' data are less representative of female farmers' perspectives.

The ventures involved in the program served over 12,000 farmers in total, yet initially, they reported only 351 farmers owning between 0.5 and 5 hectares of land. After screening, this number decreased to 114. This indicates that these ventures primarily work with larger-scale producers, as only about 1% (114 out of 12,066) of farmers in their value chain own less than 5 hectares of land.

Interviewed farmers use, on average, 3.82 ha of land for cultivation, which is higher than the 2.1 ha in the average household agricultural holding size of Cambodian farmers in 2023.[7] This indicates that small-holder farmers in ventures' value chains are relatively larger in scale.

Cultivation patterns and performance

The majority of farmers (83%) grow rice, with a typical small-holder farmer cultivating 2 hectares of land for rice production, yielding about 2,500 kg/ha. While the median rice yield per farmer in the sample is lower than the national average (3,140 kg/ha), a province-by-province comparison shows that farmers in the sample perform better than their provincial averages. Specifically, KAF Accelerator farmers in Banteay Meanchey achieve an average yield of 3,726 kg/ha compared to the provincial average of 2,770 kg/ha. Similar patterns are seen in Battambang (3,450 vs 2,990 kg/ha), Oddar Meanchey (1,735 vs 1,570 kg/ha), and Preah Vihear (2,057 vs 1,650 kg/ha).[8] **This suggests that farmers in KAF Accelerator ventures' value chains are outperforming their local peers. This underscores the value of connecting farmers to ventures and ACs with robust market access and quality inputs.**

Vegetables are popular for farmers in Banteay Meanchey and Battambang, whereas cassava is more common in Oddar Meanchey and Preah Vihear. Vegetable cultivation typically takes 0.32 ha of land per farmer and contributes the most to farmers' median income compared to rice, cassava, and poultry. Cucumbers, gourds, and long beans are both popular choices of vegetables and major income contributors compared to other vegetables for farmers in the sample.

For cassava, KAF Accelerator farmers in Oddar Meanchey produce a higher average cassava yield per farmer (16,539 kg/ha) compared to local peers (13,660 kg/ha).[9] In contrast, KAF Accelerator farmers in Preah Vihear underperform, averaging 9,672 kg/ha per farmer compared to the provincial average of 12,790 kg/ha per farmer.

One in four farmers in the KAF Accelerator sample raises poultry, with chickens being the most commonly raised type, reflecting trends observed nationwide. On average, a farmer in the sample owns 20 birds, slightly below the area average of 24 birds per household.[10]

[7] The Cambodia Agriculture Survey 2023 Complete Report (p. 28).
[8] The Cambodia Agriculture Survey 2023 Complete Report (p. 32), Map 3.3: Non-aromatic paddy rice yield, by provinces: 2023.
[9] The Cambodia Agriculture Survey 2023 Complete Report (p. 34), Map 3.8: Cassava production yield, by provinces: 2023.
[10] The Cambodia Agriculture Survey 2023 Complete Report (p. 16), Table 1.3: Summary indicators, livestock and poultry activity.

This pattern is consistent across provinces, except in Banteay Meanchey, where farmers own a median of 30 birds per household.

In terms of net income, most farmers in the KAF Accelerator sample earn between 0 and 9,999,999 riels from their agricultural activities. **The average net income from agricultural production in the KAF Accelerator sample is 9,863,373 riels per farmer (with a median of 5,220,000 riels[11]), which is more than double the average income of farmers in the 2023 KAF Incubator sample (4,683,575 riels).** The income advantage is also reflected across all crop types, with KAF Accelerator farmers earning higher average incomes than Incubator farmers: rice (3,933,664 vs 2,171,282 riels), vegetables (7,403,318 vs 1,212,263 riels), and cassava (3,093,423 vs 2,590,323 riels). This higher income could be attributed to consistently higher crop yields across all production types in the KAF Accelerator sample compared to the Incubator sample: rice (2,500 vs 2,200 kg/ha), vegetables (10,000 vs 1,458 kg/ha), and cassava (10,000 vs 7,500 kg/ha). **Overall, these figures suggest that farmers participating in the value chains of larger companies and ACs earn higher incomes.**

Experiences using ventures and ACs' products and services

More than half of the farmers interviewed were familiar with the term "Climate Resilient Agriculture" (CRA), with 71% attributing their knowledge to the ventures and ACs they engage with. Farmers reported receiving various agricultural inputs, such as improved seed varieties, fertilizers (both organic and inorganic), and other resources from the ventures and ACs. These inputs allowed them to grow vegetables, rice, and cassava more effectively and subsequently sold in bulk to ventures and ACs.

Farmers chose to work with ventures and ACs primarily for better market access, improved pricing, and access to affordable services that sometimes come with financial assistance like lending and subsidies. Most farmers shared that they had improved yields and higher incomes after using products and services provided by these ventures and ACs.

These demonstrate the **important roles of ventures and ACs in sharing CRA knowledge, particularly via offering services, training, and setting standards**, which could further improve farmers' agricultural performances and, thereby, their resilience to climate challenges.

[11] The majority of the analysis in this report presents median values for yield and income to account for outliers. However, average values are included in the discussion to facilitate comparisons with national and provincial benchmarks, as well as the 2023 KAF Incubator data.

ANNEXES

Annex 1. Baseline & Endline Business Screening Protocol

#	Collection Date	Data Collector	Venture name	Total revenue in the most recent 12 months (Oct 2023-sept 2024)	Average monthly revenue in the most recent 12 months (Oct 2023-sept 2024)	Number of customers in the most recent 12 months	Number of paid staff hired at the moment (not counting seasonal workers)	Number of CRA products/ services	Number of farmers in the value chain	# female farmers

Table 13. Baseline & endline business screening questions

Annex 2. Farmer Interview Protocol

1. Farmer's Phone Number:

This will be ID to match the farmer's data with other information.

Screening criteria:

2. Do you currently own 0.5-5 ha of land or planting (rented land does not count)?

☐ Yes ☐ No (end the interview)

3. Are you producing either the following: vegetables, rice, cassava, or poultry?

☐ Yes ☐ No (end the interview)

Introduction

Hi [INTERVIEWEE], My name is [NAME], and we are representatives from Impact Hub Phnom Penh, an organization that supports small businesses across many sectors, including agriculture. We are currently conducting surveys to better understand your climate-resilient and agroecological practices in farming. I have been introduced by [VENTURE'S NAME] to speak with you. May I invite you to be a part of this interview? It'll take about 30 minutes.

Let me share briefly with you the context of this survey. Our organization supports ventures and agriculture cooperatives like [VENTURE'S NAME]. We want to understand how the products and services of these ventures impact you as a customer/supplier. We'd like to interview you two times – today and one more time next year, around this same time.

We want to include some of your sharings in our reports to our funders and in a public report online. Potentially, we may also want to feature you and a photo of yourself or your farm in a case study. We can exclude your name from this sharing if you wish. Would that be okay with you? We have included information in this consent form. If you agree to these requests, please sign your name here.

Do you have any questions before we start?

4. Data collector's name: ☐ Pheakdey Tous ☐ Soban Tours
5. Date of interview (DD/MM/YYYY): _____

Data collection details

6. Data collection round: KAF Accelerator 2024
7. Data collection phase: ☐ Baseline ☐ Endline
8. Data collector's rights and consent:

I have been informed that my personal data (name and contact number) will be collected, stored, processed, and protected according to the HEKS/EPER Data Processing and Protection Policy published. I understand that I have the right to access, correct, or have my personal data erased. I can withdraw my hereby given consent anytime.

If I have questions or complaints regarding this Consent Declaration, I can contact at any time the following:

- Impact Hub Phnom Penh, the concerned HEKS/EPER partner organization, at phnompenh@impacthub.net / 015 674 048

- or HEKS/EPER's data protection officer at dataprotection@heks.ch / + 41 44 360 8843.

☐ I agree to the processing of my personal data.

Signature:

Basic farmers' info

9. Interviewee's rights and consent:

I have been informed that my personal data (name, gender, age, place of residence, interview answers) will be collected and used to analyze the performance of the Khmer Agriculture for the Future projects under the NURTURES program (also called "HEKS/EPER"). I am aware that my data are stored, processed, and protected according to the HEKS/EPER Data Processing and Protection Policy, which is published at https://en.heks.ch/vs-data-protection.

I understand that I have the right to access, correct, or have my personal data erased. I can withdraw my hereby given consent anytime.

If I have questions or complaints regarding this Consent Declaration, I can contact at any time the following:

- Impact Hub Phnom Penh, the concerned HEKS/EPER partner organization, at phnompenh@impacthub.net / 015 674 048
- or HEKS/EPER's data protection officer at dataprotection@heks.ch / + 41 44 360 8843.

I have read the data processing principles myself, or the principles were explained to me by the interviewer and are clear to me.

☐ I agree to the processing of my personal data.

Take a screenshot of the call as proof.

10. Interviewee's name:

11. Interviewee's residential location:

Province:	☐ Banteay Meanchey	☐ Battambang	☐ Oddar Meanchey	☐ Preah Vihear
District:	☐ Krong Paoy Paet ☐ Krong Serei Saophoan ☐ Malai ☐ Mongkol Borei ☐ Ou Chrov ☐ Phnum Srok ☐ Preah Netr Preah ☐ Svay Chek ☐ Thma Puok	☐ Aek Phnum ☐ Banan ☐ Bavel ☐ Kamrieng ☐ Koas Krala ☐ Krong Bat Dambang ☐ Moung Ruessei ☐ Phnom Proek ☐ Rotonak Mondol ☐ Rukhak Kiri	☐ Anlong Veaeng ☐ Banteay Ampil ☐ Chong Kal ☐ Krong Samraong ☐ Trapeang Prasat	☐ Chey Saen ☐ Chhaeb ☐ Choam Khsant ☐ Krong Preah Vihear ☐ Kuleaen ☐ Rovieng ☐ Sangkom Thmei ☐ Tbaeng Mean Chey

		☐ Samlout ☐ Sampov Lun ☐ Sangkae ☐ Thma Koul		
Village:				
Commune:				

12. Interviewee's gender:

☐ Female ស្រី ☐ Male ប្រុស ☐ Non-binary ណុន បែណារី

☐ Other ផ្សេងទៀត (specify):_____

13. Interviewee's age: _____

14. LNOB categories: Do you belong to or identify with any of the following groups? (Select all that apply):

This information is collected to assess your self-identification with the rightsholder groups we intend to support. Help us aggregate non-identifiable information to improve our services. Sharing of this information is voluntary.

☐ P1/P2/Poor (if 'Poor,' specify reason: _____)

☐ Head of household (meaning: main income earner of the household)

☐ LGBTQIA+/Queer

☐ Youth (18-30 years old)

☐ Indigenous peoples

☐ Ethnic minority

☐ Persons with a disability/disabilities

☐ Internally Displaced Persons (IDPs)

☐ Migration

☐ Other (specify): _____

☐ I do not wish to answer

15. Name of Head of household: _____

16. Comment from data collector about interviewee's affiliation to discriminated/disadvantaged groups, if any: _____

Agricultural Yield & Income

17. How many ha of land do you use for planting? _____

18. How many ha of planting land is the land you own? _____

19. Have you rented any land for planting? If yes, how many ha?_____

Fill in the table below for the following questions:

20. In the past 12 months (Nov 2023 - Oct 2024), which did you grow the following (check all that apply)?

☐ vegetable (specify: _____)

☐ rice

☐ cassava

☐ poultry (specify: _____)

Examples of vegetables: Cauliflower, Chili, Chinese kale, Cucumber, Eggplant, Green garlic, Ivy gourd, Lettuce, Morning glory, Pumpkin, Spinach, Squash/Winter squash, Yard long bean

21. In the past 12 months (Nov 2023 - Oct 2024):

Crop type	KG produced per hectare	Amount of ha this crop is planted on	KG total produced (auto-calculated)	KG sold	Price per KG sold	Estimated expenses (seeds, fertilizers, labor)	Gross Income (Riels) (auto-calculated)	Net Income (Riels) (auto-calculated)

Type of poultry (birds)	Number of birds owned	Number of Birds Sold	Poultry Selling price (ensure to use the same unit as last 2 questions)	Estimated expenses (feed, labor) (in riels)	Number of Eggs produced	Number of Eggs Sold	Egg Selling Price (ensure to use the same unit as last 2 questions)

Experiences using CRA products

22. The venture that the interviewee works with:

☐ សហគមន៍កសិកម្មតាសីសាមគ្គី (Tasey Samaki Agricultural Cooperative)

☐ សហភាពសហគមន៍កសិកម្មបាត់ដំបង (Battambang Union of Agricultural Cooperatives)

☐ សហគមន៍កសិកម្មភូមិខ្ពុំ (Phum Khtum Agricultural Cooperative)

☐ សហភាពសហគមន៍កសិកម្មព្រះវិហារ (Preah Vihear Meanchey Union of Agricultural Cooperative)

☐ សហគមន៍កសិកម្មបូរីអភិវឌ្ឍន៍ (Borey Akpiwat Agricultural Cooperative)

☐ ខេមប៊ូឌាន ស្តេនដាត ឌីវេឡុបមិន & សឹបផ្លាយ (Cambodian Standard Development & Supply Co., Ltd)

☐ រោងជាងផលិតឧបករណ៍កសិកម្មឬស្សីកែវ (Larano)

☐ ខេមអេហ្គ្រីឡាឡា (Lala Garden)

23. Interviewee's role in the venture's value chain:

☐ customer ☐ supplier ☐ receive training ☐ other (specify):_____

24. Have you ever heard about 'Climate Resilience Agriculture'? ☐ Yes ☐ No/Unsure

25. If yes, who told you about it?

26. And when?

27. What products/services are you using from ventures/AC? Tell us more about it

28. How did you learn about this product/service?

29. What made you decide to use this product/service?

30. Where have you applied this product/service (s) on your farm?

31. How satisfied are you with the products/services you've used?

32. What are the most significant changes you experienced after using them (soil quality? yield? income?)

33. What challenges did you encounter while adopting these products?

34. Have these challenges been resolved, and if yes, how?

35. Is there anyone else offering this kind of product/service to you other than the venture/AC?

36. How do you compare the product offered by the venture versus by other people?

If there is a climate-resilient agriculture component to the product, ask farmers to compare CRA vs non-CRA product (e.g. organic vs. chemical fertilizer)

37. How likely would you recommend this product to other farmers? (from 0-10)

Thank you. Data collection is now complete. We will call you again in a year to ask if anything has changed.