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| ACIAR_inline PC |
|  | Annual report |
| Project: | Uptake of agricultural technologies and best practices amongst farmers in Battambang and Pailin provinces, Cambodia |
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# Progress summary

2018-2019 (Year 2) has been a busy period for the research team. The three main data collection objectives (i.e., 1-3) have continued, with statistical analysis of the quantitative survey undertaken, village leaders from all 13 villages interviewed, and household interviews with farmers underway. The village leader interviews have been transcribed and translated by PRD, with analysis underway by the project leader. PRD is also undertaking the 300-400 household qualitative interviews with cassava farmers, as well as transcribing and translating those interviews (2/13 villages completed). The household interviews will be completed in late 2019 or early 2020, with the first half of 2020 allocated for completion of transcription and translation. The final social science data collection will be a follow-up quantitative survey, replicating much of the initial survey with the aim of updating farmer perceptions for comparison.

Late-2018 to mid-2019 has focused on preparations for the mid-project meeting. The majority of the research team will attend and present findings concerning objectives 1-3, with objective 4 (i.e., implementation, uptake) the topic of the final discussion during the meeting. Numerous outputs will be tabled and discussed at the mid-project meeting, including preliminary findings from the cassava field trials, analysis of the household surveys, and interviews with the village leaders. A meta review paper on extension has been drafted by the project leader, which will be circulated prior to the meeting.

Additional capacity building and activities have also taken place during this time. Sophanarra Phan has continued with his master’s degree (to be completed in 2019/2020), while an honours student (Alexander, an ACIAR Sustainable Development Awardee) has collaborated with the project leader (and Tin Aye) on a pest and disease knowledge exchange, with the student conducting on-farm visits with Eric Wilson (Montgomery’s assistant) to measure on-farm behaviour change. Finally, Bannon (a second ACIAR Sustainable Development Awardee) has begun her analysis of indebtedness and micro-credit amongst ‘de facto female-headed households’, analysing data from the quantitative survey, household interviews, and interviews with village leaders.

**Outputs underway for mid-project meeting**

1. **Report 1**: Establish a baseline survey for farmers in the 12 villages, emphasising agricultural crops, practices, and household characteristics.
	* *Report to be tabled at mid-project meeting.*
2. **Report 2**: Identify Farmer PSPs with reference to agricultural technologies. Identify differences amongst sub-groups of farmers or households, with specific attention to the perceptions and experiences of female farmers, female-headed households, the poor, and the marginalised.
	* *Report to be tabled at mid-project meeting.*
3. **Report 5**: Identification of the technologies that experts associate with farmer PSPs. Specific attention to female farmer PSPs and those of poor and marginalised.
	* *Report to be tabled at mid-project meeting.*
4. **Briefing notes 1**: Monitoring and evaluation update on cassava demonstration for ACIAR and partners.
	* *Report to be tabled at mid-project meeting.*
5. **Pamphlets 1**: In Khmer and pictorially, publicise the full economic costs of sustainable cassava production.
	* Amended in response to farmer desires for information on pest and disease - *Pamphlet to be tabled at mid-project meeting.*
6. **Academic publication:** Meta review paper on extension drafted and with co-authors. Paper to be circulated in lead-up to mid-project meeting.

# Achievements against project activities and outputs/milestones

## Achievements to date

#### Objective 1: Determine farmer PSPs with reference to agricultural technologies and best practices.

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| No. | Activity | Outputs/milestones | Completion date | Comments |
| 1.1 | Focus groups\* | 1. **Report 1**: Establish a baseline survey for farmers in the 12 villages, emphasising agricultural crops, practices, and household characteristics.
2. **Report 2**: Identify Farmer PSPs with reference to agricultural technologies. Identify differences amongst sub-groups of farmers or households, with specific attention to the perceptions and experiences of female farmers, female-headed households, the poor, and the marginalised.
3. **Report 3**: Update trends in farmer perceptions (by sub-groupings). Determine response and perception of demonstration of farmer-identified crop, technology, or practice.
4. **Report 4**: Update trends in farmer perceptions (by sub-groupings). Determine response and perception of demonstration of farmer-identified crop, technology, or practice.

**Publication 1**: Paper exploring farmer perceptions of PSPs.  | 1. 09.2019
2. 09.2019
3. 09.2019
4. 09.2019
5. 12.2019
 | \*In response to requests from farmers during the household surveys, the focus groups have been adapted to focus on responses to pest and disease.* Each of the reports and publication #1 are being completed for the mid-project meeting, where they will be presented and discussed.
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| 1.2 | Home Visits |
| 1.3 | Semi-structured interviews |
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#### Objective 2: Determine the feasibility of farmer-preferred PSPs, and the degree of alignment with existing and available agricultural technologies, using expert opinion.

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| No. | Activity | Outputs/milestones | Completion date | Comments |
| 2.1 | Delphi Panel Survey | **Report 5**: Identification of the technologies that experts associate with farmer PSPs. Specific attention to female farmer PSPs and those of poor and marginalised. | ongoing | Interviews with village leaders have been completed. Additional interviews with experts have been shifted to take place in year 3 of the project, along with the follow-up interviews with village leaders. |

#### Objective 3: Determine the feasibility of farmer-preferred PSPs, and the degree of alignment with existing and available agricultural technologies, using expert opinion.

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| No. | Activity | Outputs/milestones | Completion date | Comments |
| 3.1  | Trial of cassava best practices in Battambang and Pailin. | 1. Soil samples of demonstration sites.
2. Plant first cassava crop
3. Harvest cassava
4. Soil sample and analysis.
5. Plant year 2 cassava.
6. Plant year 3 cassava
7. **Briefing notes 1**: Monitoring and evaluation update on cassava demonstration for ACIAR and partners.
8. **Pamphlets 1**: In Khmer and pictorially, publicise the full economic costs of sustainable cassava production.
 | 1-6 Year 1&27. 09.20198. 09.2019 | Cassava has been planted and harvested for both year 1 and 2, with year 3 crops planted in May/July of 2019.The briefing note and pamphlet will be completed for the mid-project meeting and presented there for discussion. |
| 3.2 | Trial of farmer-chosen transitions or agricultural technology(ies). | 1. Identify and plan for farmer chosen demonstration.
2. Soil sample and analysis.
3. Implement farmer chosen demonstration
 | ongoing | The farmer-chosen ag-tec was the transition to fruit tree production, which is ongoing. |

#### Objective 4: Measure adoption of agricultural technologies by farmers in Battambang and Pailin to explain why some groups adopt technologies and how organisations can align future efforts to improve adoption amongst different farmer sub-groups.

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| No. | Activity | Outputs/milestones | Completion date | Comments |
| All outputs and activities for objective 4 happen in years 3&4. |

## Summary of achievements to date (for ACIAR website)

**This Summary will be published on the ACIAR website** and should be written in  dot- point format, minimising the use of scientific jargon and acronyms **(no more than 250 words).**

Please note that this summary will be made publicly available on ACIAR's website and in other communication materials. Do not include any commercially or institutionally-sensitive material in this summary (this information should be included in section 8).

* More than 400 household surveys have been undertaken and statistically analyzed.
* Interviews with all 13 village leaders have been undertaken, exploring themes of village composition, leadership, climate, history, economics, infrastructure, and problem-solutions.
* Interviews with farmer households are ongoing, with transcriptions and translations of two (of 13) villages completed.
* The second season of cassava has been harvested, and the third crop planted. Data analysis is ongoing.
* The farmer-chosen transitions – from cassava to fruit tree production – has been implemented on two demonstration farms. We continue to monitor their progress, especially given the growing popularity of the transition to durian, longan, and mango in the region.
* Two knowledge exchanges (a form of focus group discussions) have taken place on the topic of cassava pest and disease reduction; additional farm visits have been undertaken in order to measure behaviour change amongst participating farmers.

**Project Stories**

If your project has a significant impact story or standout achievement that could potentially be shared by the ACIAR Outreach Team, please provide further information via question prompts at the link. [Project Stories](https://www.cognitoforms.com/ACIAR1/ProjectStories)*.*

# Impacts

## Scientific impacts

Impacts are not yet known. We have data for two years of cassava trials at two demonstration farms, but it is premature to draw conclusions from only two years of data.

## Capacity impacts

Training has been conducted for the Cambodian NGO in the context of social science data collection. Additionally, Sophanarra Phan’s master’s degree is progressing well and will be completed in late 2019 or early 2020.

## Community impacts

A very interesting observation is the widespread transition of cassava farms to fruit tree production in the area. This may be occurring on road-adjacent properties (leading to our perception that such transitions are increasing) but it is evident that farmers in the region – when possible – are diversifying on-farm practices with this introduction of fruit tree production. Given that this was a finding from the survey of farmers (i.e., in response to ‘what they would like to do with their land?’), we feel that the project is well-attuned to ongoing practices and changes in the region and will improve the potential impacts of the research.

### Economic impacts

Impacts are not yet known.

### Social impacts

Impacts are not yet known.

### Environmental impacts

Impacts are not yet known.

## Communication and dissemination activities

Communications and dissemination will begin following the mid-project meeting, when the presentation will be developed into reports and academic publications.

# Training activities

PRD social science training.

Sophanarra’s master’s degree.

Three awardees of the ACIAR prize for sustainable development.

# Intellectual property

N/A

# Variations to future activities

We will revisit the budget following the mid-project meeting, at which time we will open the project to discussions of outreach and engagement – possibly requiring changed to budget and allocations.

# Variations to personnel

Andreas Alexander, Le-Anne Bannon, and Naomi Parris-Piper have been awarded ACIAR awards for sustainable development and have begun or are beginning their studies on topics related to the project.

# Problems and opportunities

The mid-project meeting represents a critical point for the project. We have a substantial amount of data and an associated opportunity to produce useful findings for farmers as they struggle with the potential ‘bust’ of cassava due to price variability, pest and disease outbreak, and soil decline. We are actively researching farmers at a critical point in the traditional boom-bust cycle and therefore have an opportunity to contribute to what is known and/or assumed about such periods.

# Budget

Same as variation.

# Appendices

N/A