# Feed the Future: Innovation Lab for Integrated Pest Management Trip Report

**Country(s) Visited:** Vietnam and Cambodia

**Dates of Travel:** December 1st – December 16th, 2018

**Travelers' Names and Affiliations:**

Daniel Sumner, Virginia Tech
IPM Innovation Lab Management Entity
Assistant Director, Women and Gender in International Development
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**Purpose of Trip:**

The purpose of this trip was to conduct a gender-focused impact assessment of IPM practices being designed and disseminated by the *IPM for exportable fruit crops in Vietnam* and *Ecologically-based Participatory IPM packages for Rice in Cambodia (EPIC)* IPM IL projects. The assessment sought to document gender-based constraints and opportunities linked to the application of IPM practices and determine if the application of IPM generated new opportunities for women and men and/or created new gender-based inequities. The assessment specifically focused on: identification of potential changes regarding the amount of time and effort required for pest management tasks; distinguishing between how men and women benefit from capacity development and training activities; and documenting the extent to which men and women participate in decision-making linked to pest management. In both Cambodia and Vietnam, assessment activities included semi-structured interviews with farmers applying recommended IPM practices.

**Sites Visited:**

*Vietnam*:

- My Tinh An Dragon Fruit Cooperative (My Tinh An Commune, Cho Gao District, Tien Giang Province)
- Tan Phong Edor Longan Farmer Group (Tan Phong Commune, Cai Lay District, Tien Gian Province)
- Tan Thuan Tay Mango Farmer Group (Tan Thuan Tay Commune, Cao Lanh City, Dong Thap Province)
- Long Tri Dragon Fruit Cooperative (Long Tri Commune, Chau Thanh District, Long An Province)

*Cambodia*:

- Roving Village (Trang District, Takeo Province)
- Kandaul Village (Bati District, Takeo Province)

## Executive Summary:

Daniel Sumner (Assistant Director for Virginia Tech's Women and Gender in International Development program), on behalf of the IPM IL Management Entity, collaborated with IPM Innovation Lab implementing partners from the "IPM for exportable fruit crops in Vietnam" project (Vietnam) and Ecologically-based Participatory IPM packages for rice in Cambodia (EPIC) (Cambodia) to conduct a gender-focused impact evaluation of each project's respective research and outreach activities. The overall purpose of both evaluations was to utilize qualitative assessment methods to document anticipated and unanticipated gender impacts from farmers implementing IPM IL recommended pest management practices.

Initial findings from both Vietnam and Cambodia indicate that women and men can differently experience the benefits (and costs) from applying IPM practices. Gender-based differences include how IPM application changed the amount of time and effort men and women spend on pest management and the ways men and women benefit (or did not benefit) from capacity development programs. Likewise, we documented how intra-household decision-making, including decisions linked to investing and applying new agricultural technologies or management practices, is rooted in conventional gender norms framing women's and men's expected roles in intra-household decisions.

## Description of Activities/Observations:

Gender-focused Assessment: A total of 34 farmers were interviewed as part of the gender-focused evaluation. In Vietnam, 15 farmers were interviewed (13 men and 6 women). In Cambodia, 19 farmers were interviewed (10 men and 9 women). Interviews were semi-structured in nature and primarily focused on collecting stories/narratives of how respondent's agricultural practices, livelihoods, or household dynamics changed (or did not change) as a result of implementing pest management practices recommended by the IPM Innovation Lab. Additional questions were asked to elicit additional information on farmers experiences with IPM, including: advantages and disadvantages of implementing IPM, potential differences in how IPM implementation change the amount of time and effort men and women spend on pest management, and gendered differences in the ways men and women benefit (or do not benefit) from capacity development programs. For both evaluations, the methods were inspired by the Most Significant Change (MSC) technique and the INGENAES Technology Assessment Toolkit.

*Trip Schedule*

**Nov 29, 2018:** Depart United States for Vietnam

**Nov 30, 2018:** Travel Day (in transit to Vietnam)

**Dec 1, 2018:** Landed in Ho Chi Minh City and arrived at the Tan Son Nhat Saigon Hotel

**Dec 3, 2018:** Met with the SOFRI team to discuss ongoing project research and outreach activities. Training workshop with SOFRI team members on the Most Significant Change (MSC) technique and its use for a gender-focused evaluation of the project's research and outreach activities. Piloted the interview guide with 2 farmers from the My Tinh An Dragon Fruit Cooperative in My Tinh An commune. Revised the interview guide for all subsequent interviews.

**Dec 4, 2018:** Data Collection in Tan Phong Commune. Interviewed 5 farmers (3 men and 2 women) from the Tan Phong Edor Longan Farmer Group.

**Dec 5, 2018:** Data Collection in Tan Thuan Tay Commune. Interviewed 4 farmers (2 men and 2

**Dec 6, 2018:** MSC Story Selection workshop and discuss next steps for the gender-focused evaluation

**Dec 7, 2018:** Data Collection in Lon Tri Commune. Interviewed 4 farmers from the Lon Tri Dragon Fruit Cooperative (2 men and 2 women). Traveled to Ho Chi Min City (from My Tho). Wrote up notes from MSC Story Selection Workshop with SOFRI team.

**Dec 8, 2018:** Arrive in Phnom Penh (from Ho Chi Minh City). Wrote up notes from farmer interviews conducted on 12/8. Began initial qualitative data analysis of farmer interviews.

**Dec 9, 2018:** Rest Day

**Dec 10, 2018:** National Holiday in Cambodia – Prepared training materials for introductory training workshop. Prepare interview guides and research methods for the next day's team meeting.

**Dec 11, 2018:** Met with the EPIC team to discuss ongoing project research and outreach activities. Training workshop with EPIC team members (IRRI staff and CEDAC partners) on the Most Significant Change (MSC) technique and its use for a gender-focused evaluation of the EPIC project's research and outreach activities.

**Dec 12, 2018:** Data collection in Roveing Village. Interviewed 10 farmers (6 men and 4 women). Additional key informant interviews conducted with IRRI project staff..

**Dec 13, 2018:** Data collection in Kandaul Village. Interviewed 9 farmers (4 men and 5 women). Returned to Phnom Penh in the afternoon. Prepared materials for the next day's MSC Story Selection workshop.

**Dec 14, 2018:** MSC Story Selection workshop and discuss next steps for the gender-focused evaluation

**Dec 15-16, 2018:** Sumner returned to the U.S.

Summary of Preliminary Findings:

Initial findings from both Vietnam and Cambodia indicate that women and men can differently experience the benefits (and costs) from applying IPM practices including differences in how IPM application changed in the amount of time and effort men and women spend on pest management and gendered differences in the ways men and women benefited (or did not benefit) from capacity development programs. Likewise, we documented how intra-household decision-making, including decisions linked to investing and applying new agricultural technologies or management practices is rooted in conventional gender norms framing women's and men's expected roles in intra-household decisions.

*Vietnam*

Stories of Change

Table 1 indicates the final list of themes of change that were determined at the conclusion of the story selection workshop. Six SOFRI staff members reviewed and analyzed all of the stories collected from project beneficiaries. Table 2 is a summary of the final list of themes and indicates whether that theme was expressed in change stories from women and/or men benefiting from SOFRI research and outreach activities.

In addition to determining and discussing the themes that emerged from analyzing farmer's stories of change, the team identified the two (at most two) stories that best represented each

identified theme of change – which stories represented the most "significant" change. It was up to the team to team to determine what made a story "significant" – i.e. a story that is representative, interesting, or exemplary of the relevant theme of change. Sumner served only as a facilitator for the teams discussion and did not directly participate in the decisions of "significance". The project team determined that a story was considered "significant if it was the most interesting story from that theme of change and was the most representative story from that theme of change.

Table 1. Exportable Fruit Crops Themes and Stories of Change

| Theme of Change | Number of Stories from Women Farmers | Number of Stories from Men Farmers | Total Number of Stories |
|---|---|---|---|
| Food Safety for the customer | 0 | 4 | 4 |
| Skill to apply IPM practices | 3 | 2 | 5 |
| Reduced labor cost | 1 | 0 | 1 |
| Increased labor cost | 1 | 3 | 4 |
| Improved knowledge | 7 | 8 | 15 |
| More stable income | 0 | 3 | 3 |
| Higher Income | 1 | 0 | 1 |
| Improved Environment | 3 | 2 | 5 |
| Increased Power and Influence in the community | 2 | 3 | 5 |
| Think about the future | 1 | 2 | 3 |
| Improved health of producer | 7 | 8 | 15 |

*Cambodia*

Initial results suggest application of recommended rodent management practices directly impacts men's and women's responsibilities with regards to pest management and rice farming. Women and children are more involved in rodent management following recommended practices vs. conventional management. In conventional rodent management, especially when electric fences were used, women were not actively involved. However, when following recommended rodent management practices, especially when ceasing to use electric fences, women are more active in setting traps and collecting trapped rats. Male and female respondents indicated following the recommended rodent management practices can reduce amount of time spent on rodent management. Male farmers reported additional time for other activities on their rice farm and many female respondents indicated time to focus on existing off-farm businesses.

Stories of Change

Table 2 indicates the final list of themes of change that were determined at the conclusion of the story selection workshop. Two EPIC project staff members and two assessment team members from CEDAC reviewed and analyzed all of the stories collected from project beneficiaries from Roveing and Kandaul villages. Table 2 is a summary of the final list of themes

and indicates whether that theme was expressed in change stories from women and/or men benefiting from EPIC research and outreach activities.

In addition to determining and discussing the themes that emerged from analyzing farmer's stories of change, the team identified the two (at most two) stories that best represented each identified theme of change – which stories represented the most "significant" change. It was up to the team to team to determine what made a story "significant" – i.e. a story that is representative, interesting, or exemplary of the relevant theme of change. Sumner only served only as a facilitator for the teams' discussion and did not directly participate in the decisions of "significance". The project team determined that a story was considered "significant" if: the story was representative of other farmer stories for that theme of change.

Table 2. EPIC - Theme and Stories of change

| Theme of Change | Number of Stories from Women Farmers | Number of Stories from Men Farmers | Total Number of Stories |
|---|---|---|---|
| ***Social Changes: Farmer Level*** | **19** | | |
| Change in Knowledge and Practice Following Recommendations | 2 | 3 | 5 |
| Capacity to Use the Technology | 2 | 6 | 8 |
| Overall Satisfaction | 2 | 2 | 4 |
| Adjusting Recommendations (IRRI – IPM IL Objectives) – Farmer Innovation | 0 | 2 | 2 |
| ***Social Changes: Household Level*** | **3** | | |
| Improved Family Life | 1 | 2 | 3 |
| ***Social Changes: Community Level*** | **15** | | |
| More Community Engagement and Coordination | 1 | 4 | 5 |
| Reduced Safety Risk | 1 | 3 | 4 |
| Rat Meat | 2 | 0 | 2 |
| Changed Roles and Responsibilities in Farm and House | 2 | 2 | 4 |
| ***Time Use*** | **20** | | |
| No Change or Limitations | 2 | 1 | 3 |
| More time for other things | 2 | 4 | 6 |
| Less labor or less time intensive | 5 | 5 | 10 |
| ***Rice Production*** | **40** | | |
| Rice grows well | 1 | 1 | 2 |
| Changes in cost of inputs | 1 | 2 | 3 |
| Changes in labor patterns (includes hired labor) | 1 | 3 | 4 |
| Higher Yield | 3 | 10 | 13 |
| Higher Profit and Extended | 2 | 4 | 6 |

| | | | |
|---|---|---|---|
| Benefits | | | |
| Reduced rat population and low damage | 5 | 7 | 12 |

*Cambodia and Vietnam*

Participation in Capacity-building Activities

- Men are primarily seen as "farmers" by community members and research/agricultural extension staff. "Men do the work, so they are the ones who need to attend training".
- Respondents indicated that despite efforts by IPM IL project staff (SOFRI and IRRI), sponsored trainings/workshops are mostly men as "women are too busy with other activities to attend trainings".
- However, men and women both reported that joint attendance at a training/workshop is important and help the household with applying the information practices learned. If the primary male decision-maker and primary female decision-maker (typically husband and wife) for a household were able to attend a training or workshop it would make the decision to try innovative pest management technologies/management practices considerably easier. One male respondent indicated that he would not have to spend so much time convincing his wife if she was able to attend a meeting/workshop and learn about the IPM practices herself.
- Both men and women (more men) reported that they had more self-confidence after participating in SOFRI sponsored trainings/workshops.

Decision-making

- Results from the semi-structured interviews indicate that patriarchal gender norms and attitudes are influential in framing who within the household should be involved in decisions linked to cash-crop fruit production and trying/applying innovative pest management technologies/management practices. The majority of respondents indicated that cash-crop fruit production was primarily men's responsibility. Men needed to get information that could help them make more informed decisions.
- However, respondents (especially male respondents) emphasized the importance of collaboration and consultation. "A husband needs to convince his wife about the value of innovation (new) pest management technologies/management practices. However, further probing suggests that this "joint" decision-making is more superficial with most women having little influence in decisions related to cash-crop fruit production or major decisions regarding the income from cash-crop fruit production.
- Despite the continued prevalence of attitudes and norms perpetuating inequitable intra-household decision-making dynamics. Some of the women and men interviewed indicated that alternative decision-making dynamics are increasing (norms and attitudes shifting).

## Training Activities Conducted:

| Program type (workshop, seminar, field day, short course, etc.) | Date | Audience | Number of Participants | | Training Provider (US university, host country institution, etc.) | Training Objective |
|---|---|---|---|---|---|---|
| | | | Men | Women | | |
| Workshop | Dec. 3 | SOFRI Can Tho University | 3 | 6 | Virginia Tech | Introduction to the MSC technique and mixed-methods evaluation methods |
| Workshop | Dec. 11 | IRRI | 2 | 2 | Virginia Tech | Introduction to the MSC technique and mixed-methods evaluation methods |

## Suggestions, Recommendations, and/or Follow-up Items:

1) The methodology for the gender-focused evaluations proved effective in documenting the ways applying IPM practices could differently impact women and men. This method could be a rapid qualitative evaluation tool that current IPM IL PIs could utilize in their own evaluation activities. The Most Significant Change technique allowed us to capture the most important changes (or lack of change) in farmers own word. The semi-structured portions of the individual interviews (adapted from the INGENAES framework) allowed us to probe specific topics in more depth.

2) Both the SOFRI and IRRI team reported that the gender assessment methodology we used during this trip should be conducted in accompaniment with an IPM IL project's quantitative evaluation activities. Qualitative evaluations, using the methodology utilized in this trip, would be able to collect valuable information that could provide more context to broad patterns identified in a quantitative end-line evaluation.

3) Results from assessment activities in both countries indicated that gender-based barriers continue to affect the ability of women to participate in IPM IL sponsored training and workshops, despite the active efforts of both projects to encourage the participation of women farmers. Potential solutions identified by the project partners included: host trainings and workshops at times and locations that would reduce the travel time for women to attend. Both project teams also discussed the potential of hosting meals for training attendees so as to reduce time constraints for women who are often responsible for food preparation. The SOFRI team also suggested that short time child-care during the duration of training events would also help women attend their trainings and workshops.
4) Household methodologies, extension and outreach methodologies that engage all adult household members in extension and outreach activities so as to promote a shared family approach to agricultural development, could be an effective in addressing some of the gender-based

constraints identified in this trip. Respondents, in both countries viewed joint attendance in workshops and trainings as desirable, joint attendance would help facilitate some of the barriers related to sharing and applying information related to IPM implementation. Household methodologies could also be used to as a means to start addressing inequitable gender norms and attitudes.

## List of Contacts Made

Team/participants in workshop and fieldwork for gender-focused evaluations (Vietnam and Cambodia)

| Name | Title/Organization | Contact Info (address, phone, email) |
|---|---|---|
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