

CARD Project Evaluation Summary Sheet

Project Number and Name: <i>036/04 Assessing the effectiveness of Farmer Field Schools for Implementation of Citrus IPM in Vietnam</i>																													
Vietnamese Institution(s): Southern Regional Plant Protection Department																													
Australian Partner Institution(s): Centre for Horticulture & Plant Sciences, University of Western Sydney																													
Date Approved: February 2005	Date Commenced: February 2005	Date Completed: April 2009																											
Total Budget (A\$): 330,026	From:																												
	AusAid:	185,778																											
	Australian Inst.:	82,365																											
	Vietnamese Inst.:	61,883																											
Project Abstract (from Proposal):																													
<p>Citrus is an important fruit crop in Vietnam and the government is encouraging further diversification into fruit production. However, productivity and production of citrus in Vietnam are low and citrus cultivation has not developed significantly over the past few years, largely because of the serious damage of pests and diseases. Integrated pest management (IPM) is widely recognised as the most effective and sustainable method of pest and disease control. Viet Nam has a well-developed National IPM program, managed by the Plant Protection Department (PPD). This farmer participatory training and research program using Farmer Field Schools (FFS) has trained more than 500,000 farmers in IPM technologies for rice, vegetable, cotton, tea, soybean, peanut, and sweet potato crops. However, no FFSs have been conducted in citrus IPM because of a limited capability in specific citrus IPM research in Vietnam. This project will build on the excellent IPM training capabilities of the PPD, the extensive experience of a team of researchers from the University of Western Sydney (UWS) in citrus IPM and a citrus IPM curriculum developed in a previous CARD project to undertake FFS in the Mekong Delta and Central Coast regions of Vietnam. The effectiveness of FFS in enhancing farmer knowledge in citriculture will be assessed.</p>																													
Objectives:																													
<ol style="list-style-type: none"> 1. Conduct training of Trainers (TOT) for master trainers in citrus IPM 2. Master trainers conduct Farmer Field Schools (FFS) in their local region 3. Assess the effectiveness of the FFS model in increasing farmer knowledge in citrus IPM 																													
Reports Produced/Milestones Completed:																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Milestone</th> <th style="width: 20%;">Scheduled</th> <th style="width: 20%;">Completed</th> </tr> </thead> <tbody> <tr> <td>MS1: Contract signed</td> <td>February 05</td> <td>February 05</td> </tr> <tr> <td>MS2: 1st six-monthly report</td> <td>August 05</td> <td>August 05</td> </tr> <tr> <td>MS3: Master trainer training manual and competency assessment of Master Trainers trained in Year 1 as assessed by successful completion of training</td> <td>September 05</td> <td>September 05</td> </tr> <tr> <td>MS4: 2nd six-monthly report</td> <td>February 06</td> <td>April 06</td> </tr> <tr> <td>MS5: Farmer participants engagement in attaining IPM knowledge</td> <td>February 06</td> <td>May 06</td> </tr> <tr> <td>MS6: 3rd six-monthly report</td> <td>August 06</td> <td>December 06</td> </tr> <tr> <td>MS7: Farmer participants applying IPM knowledge</td> <td>February 07 (Revised)</td> <td>November 07</td> </tr> <tr> <td>MS8: Project completion</td> <td>February 07</td> <td>April 09</td> </tr> </tbody> </table>			Milestone	Scheduled	Completed	MS1: Contract signed	February 05	February 05	MS2: 1 st six-monthly report	August 05	August 05	MS3: Master trainer training manual and competency assessment of Master Trainers trained in Year 1 as assessed by successful completion of training	September 05	September 05	MS4: 2 nd six-monthly report	February 06	April 06	MS5: Farmer participants engagement in attaining IPM knowledge	February 06	May 06	MS6: 3 rd six-monthly report	August 06	December 06	MS7: Farmer participants applying IPM knowledge	February 07 (Revised)	November 07	MS8: Project completion	February 07	April 09
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Evaluation Team:																													
<ol style="list-style-type: none"> 1. Vu Hai Nam, GFA Company 2. Marlo Rankin, CARD 3. Nguyen Van Ly, National Institute of Agricultural Planning and Projection 	Date of Evaluation: Field visit: June 1 st -3 rd , 2009	Project Completion Impact Evaluation (PCIE)																											

Evaluation Summary	Score a/	Comments
Relevance	3.5	<ul style="list-style-type: none"> • Productivity of citrus in Vietnam has traditionally been low and citrus cultivation has not developed significantly in recent years, due to serious damage of pests and diseases. A lack of skills in ICM extension for citrus has also contributed to this problem. Therefore this project was important to develop a network of skilled extension staff that can support citrus farmers in Vietnam through the delivery of citrus ICM FFS. Findings from the PCIE show that the project correctly addressed the real needs of both citrus farmers and local plant protection staff. The evaluation workshop conducted by the project team and the revision of training materials to focus more on ICM was a critical step towards making the project more relevant to farmers during the implementation period. • However at a higher level, the question still remains whether citrus is considered a priority by the Government of Vietnam for R&D investment in agriculture (e.g. national citrus ICM/IPM program) or if funds could be more effectively used for other crops that have the potential to be more productive and profitable for farmers.
Effectiveness	4	<ul style="list-style-type: none"> • All outputs of the project have been satisfactorily achieved. The quality of trainings and the training materials were highly appreciated by the interviewed farmers with good levels of adoption of ICM practices. The quality of the trainers was also evaluated to be of a high standard in general. • The Vietnamese project partners were highly enthusiastic and proactive during the lifespan of the project and effectively managed to coordinate the TOTs and delivery of FFS in 12 provinces. In some provinces additional FFS have been funded by provincial governments during the life of the project, using the training resources developed in the project. • Adoption of ICM by FFS participants was relatively high with many farmers interviewed continuing to apply knowledge and skills
Efficiency	3.5	<ul style="list-style-type: none"> • The estimated cost of running the FFS was calculated by the project team as AUD\$71/participant per season. However in relation to the total cost of the project and number of farmers trained, this was calculated as AUD\$146/farmer which includes all the development costs including the TOT and technical input into the project from Australian scientists. • Given that the estimated cost of running the FFS per participant is less than half that of the project costs per participant, the question is raised about the costs associated with developing the FFS extension model and whether the project could have achieved the same outcome (i.e. no. of farmers trained) at a lower cost. It also raises questions about the feasibility of scaling up the extension model to other provinces where citrus is produced in the absence of additional government funding.
Impact	4	<ul style="list-style-type: none"> • This project has shown early signs of positive economic, social and environmental impact. The assessment conducted by the project and result of the interviews made by the PCIE team with participating farmers confirmed that the major economic impact of the FFS is a decrease in input costs due to changes in orchard management practices (improved husbandry, reduction in higher cost pesticides, less applications and lower labour costs). • Regarding social impact, after the FFSs were completed many farmer clubs have been established so that farmers can share their experiences in ICM. In one district

		it was reported that over 60% of farmers in one village had copied the techniques from the trained farmers which suggested that farmer-to-farmer extension could be effective in this area in the future. The proportion of female trainers was also particularly high (>30%). Initial promising results of positive environmental impact were reported by an increase in natural enemies in farmer orchards (e.g. green ants) which is likely to be a consequence of the shift away from use of broad-spectrum pesticides towards more environmentally and human safe pesticides. Anecdotal evidence was also reported about improved water quality.
Sustainability	3.5	<ul style="list-style-type: none"> • In relation to ongoing implementation of ICM practices by farmers and delivery of FFS by trainers, findings from the mission suggest that there are some efforts from local agencies such as district agriculture offices and sub-PPDs, or local farmers to maintain the positive results of FFSs but they are scattered and potentially not sustainable. • Insufficient funding to coordinate FFSs for citrus and pay for trainers was reported by all district DARDs as the major problem to sustaining project activities and they seemed unwilling to trial the user-pays option at this stage. In the three districts visited by the PCIE, farmers have established farmer clubs and sometimes contact the trainers for consultations. • These efforts are positive signals for ongoing implementation of ICM practices by farmers who were involved in the original project and are also a positive indicator that the farmer-to-farmer extension model could work in these areas. • In relation to the potential for scaling up the citrus IPM/ICM extension model, this appears only likely to work if national/provincial governments were prepared to invest in the additional development costs associated with training of additional trainers and covering the costs of at least the first season of FFS for farmers.
Average Score	3.7	<ul style="list-style-type: none"> • Based on the PCIE team findings, this project can be considered to have successfully achieved its objectives and satisfactorily delivered all outputs. In relation to the relevance, effectiveness and efficiency of the project, the evaluation found that overall the project had performed satisfactorily when assessed against these factors.

Overall Assessment b/: Satisfactory

Major Problems Identified:

In general, the implementation of the project ran smoothly as a result of much effort put into coordinating the TOT and FFS by the Vietnamese project partners. The only major problem encountered in project delivery was the delay in submission of the project completion report due to changes in the Australian project team. However there are some other issues and constraints that existed outside of the project that had an impact on the extent of project success. These included:

1. Management and development of pesticide markets are very weak. There is no list for pesticides registered for citrus and some pesticides which are currently marketed and used for citrus actually have high toxicity for natural enemies and can be dangerous to human health. Not all pesticides recommended by the IPM training are readily available in all local areas and sometimes the cost of these is higher than chemical alternatives.
2. Low planting rates of certified disease free citrus seedlings mean that the spread of Huanglongbing (citrus greening disease) is an ongoing problem for citrus production and IPM practices alone cannot reduce the spread of this disease without the planting of disease-free seedlings.
3. Unless farmers establish farmer groups/clubs and commit to implementing ICM/IPM practices in their area, then individual IPM efforts can fail. Some farmers participating in the project reported that their orchards were continuously attacked by pests from the surrounding environment and this makes them fail in applying IPM.
4. Although the costs for farmers participating in FFS for a season were calculated to be low (1.6% of net profit), the costs

of developing an FFS program extend beyond the associated costs with simply delivering the FFS training courses. Additional costs associated with this extension model include the development of TOT curriculum and training programs and evaluating and updating the skills of trainers. These costs were considered to be substantial to provincial DARD/PPD stakeholders and without additional government funding, maintenance of the existing extension network and scaling up of this model to other provinces appears unlikely.

Lessons Learned:

- TOT and participation in FFS for citrus farmers has proven to be an effective extension model to increase farmer knowledge in citrus ICM and has shown good levels of adoption of practices particularly in relation to shifting away from more toxic broad spectrum pesticides towards more environmentally friendly pesticides and increased use of natural enemies.
- Holding an evaluation workshop after the first season of the FFS in IPM with all project participants was a particularly valuable exercise as it allowed project leaders to identify the need for broader citrus crop management training and to revise the training program accordingly. This had a big impact on increasing the relevance of the project to trainers and farmers.
- The extent of variation in training styles and capacity of the trainers trained through the TOT program could potentially have been reduced if a more detailed training manual had been developed that included guidelines for the delivery of FFS to farmers, intended learning outcomes, evaluation sheets for training sessions etc.

Recommendations:

This project has led to the development of a skilled network of citrus ICM trainers that did not exist prior to project intervention. The FFS model has demonstrated that it has been an effective approach to changing the knowledge, attitudes and practices of citrus farmers through the application of ICM techniques on citrus and has also shown that there is potential for the development of a lower cost farmer-to-farmer extension model in certain project areas where farmers have completed the FFS training and farmer clubs have formed. While there is potential for scaling up this extension model to other provinces where citrus is grown, at this stage it appears unlikely to occur without the support of national government program for citrus. It is unlikely that sufficient trainers currently exist and therefore additional costs would be associated with training trainers and establishing the extension network for citrus in other provinces. Given the high pest and disease pressures in citrus production in Vietnam, the question still remains whether citrus is considered a priority by the Government of Vietnam for R&D investment in agriculture or if funds could be more effectively used for other crops that have the potential to be more productive and profitable for farmers. Further assessment of the citrus industry would need to be done in order for the government to be able to make an informed decision on this issue.

a/ 1 = worst, 5 = best

b/ Highly Satisfactory, Satisfactory, Moderately Satisfactory, Un-satisfactory