

CARD Project Evaluation Summary Sheet

Project Number and Name: (052/04VIE) Management of <i>Phytophthora</i> diseases in Vietnam horticulture			
Vietnamese Institution(s): National Institute of Plant Protection			
Australian Partner Institution(s): Faculty of Agriculture, Food and Natural Resources, The University of Sydney, NSW			
Date Approved: 28 Apr. 05	Date Commenced: April 2005		Date Completed: April 2007
Project Budget (A\$)	Total: 395,224	From AusAID: 235,820 Australian Institution: 100,084 Vietnamese Institution: 59,320	
Project Abstract (from Proposal): Diseases caused by <i>Phytophthora</i> pathogens affect a wide range of fruit, vegetable, timber and other agricultural crops in Vietnam, resulting in reductions of up to 70% in yield in some seasons, with consequent economic losses. The effective management of these diseases is currently limited by the lack of knowledge and understanding of <i>Phytophthora</i> diseases at the scientific, extension and farmer levels, however in previous research on durian and cocoa we have demonstrated sustainable and effective control of these diseases through farm management. This project aims to extend recommendations to a wider range of horticultural crops throughout Vietnam, thereby improving smallholder outcomes by reducing crop losses due to <i>Phytophthora</i> diseases of pineapple, citrus, black pepper, rubber, litchi, tomato and potato, identified as priority crops in each area. The Australian and Vietnamese project team will run a series of training workshops, supervise short research projects to develop integrated disease management recommendations, and organize specialist training in Australia for selected scientific staff. Scientific staff will train Provincial Plant Protection Sub-Division staff, who will then supervise participatory research and other extension activities involving smallholder farmers.			
Objectives: - <i>Overall objective:</i> To extend sustainable and effective disease control and management recommendations to a range of horticultural crops throughout Vietnam to reduce crop losses due to <i>Phytophthora</i> and improve farmer incomes. - <i>Specific objectives:</i> <ul style="list-style-type: none"> ➤ Improve institutional capacity to diagnose and development a range of appreciate management strategies for the disease ➤ Improve extension capacity in diagnosis and implementation of integrated management strategies ➤ Improve farmer awareness of <i>Phytophthora</i> disease ➤ Reduce yield and quality loss 			
Milestones Completed:	Y/N		Y/N
1. Contract signed	Y		Y
2. 1st Six-monthly report	Y		Y
3. 2nd Six-monthly report	Y		
4. Vietnamese staff competent in diagnostic and research management skills.	Y		
		1. 3rd Six-monthly report	
		2. Improved <i>Phytophthora</i> disease management by farmers in target provinces.	
		3. Project Completion report	Y
Reports Produced (Title/Date): <ol style="list-style-type: none"> 1. 1st Six-monthly report (July 2005) 2. 2nd Six-monthly report (January 2006) 3. Vietnamese staff competent in diagnostic and research management skills. (January 2007) 4. 3rd Six-monthly report (July 2006) 5. Improved <i>Phytophthora</i> disease management by farmers in target provinces. (September 2007) 6. Project Completion report (September 2007) 			

Evaluation Team: 1. Mr. Nguyen Viet Hai (Team Leader), Science Technology and Environment Department 2. Mr. Dinh Vu Thanh, Science Technology and Environment Department 3. Mr. Lam Van Man, Agri. Engineering and Post Harvest Technology (Hanoi) 4. Mrs. Do Thi Thanh Van, Animal Husbandry Institute 5. Mr. Keith Milligan, CARD		Date of Evaluation: March 19 th to 21 st 2007	Project Completion Evaluation (PCIE)
Evaluation summary	Score a/	Comments	
Relevance	3.5	<ul style="list-style-type: none"> The project has demonstrated misdiagnosis for <i>phytophthora</i> has underestimated the occurrence and therefore the likely impact on perennial and annual crops. Project Objectives remain highly relevant. 	
Impact	3	<ul style="list-style-type: none"> Capacity of Vietnamese researchers was improved as the results of the project outputs. There is little evidence to suggest that while extension workers trained have new knowledge, their ability for field diagnosis could be significantly improved and farmers ability to identify and manage the disease was relatively low. The farm benefit/cost analysis showed that net financial benefits for potato farms with project were VND 10.4 and 18.4 million per ha in year 1 and year 2, respectively. Lack of availability of chemicals at the provincial level is likely to significantly limit impact 	
Effectiveness	3	<ul style="list-style-type: none"> The project addressed the key problems related to the management of the <i>Phytophthora</i> diseases, including researchers' capacity in diagnosis and development of management strategies Extension workers' were trained in diagnosis and implementation of management strategies, as were participating farmers, but competency at these levels was not tested and while discussions during the field visits showed improved awareness, skills in diagnosis depended on links with laboratories with results either taking too long to get back or not getting back to extension workers and farmers. For annual crops, simple technologies, such as crop rotations will have major impacts on prevalence of disease. In pineapple monoculture growing areas farmers themselves had worked out that a rotation with either maize or peanuts significantly reduced the incidence of disease without the need for chemical control. 	
Efficiency	3.5	<ul style="list-style-type: none"> It appears that the development of training materials and the use of Australian expertise was efficient. Most of the project resources were used for training and for demonstrations of chemical treatments. The efficiency could perhaps be improved by development of operational diagnosis support, disease forecasting and greater knowledge and skills at the district level. Competency assessment was limited to "satisfaction" of training, and some assessment of improved diagnostic capability. However the evidence to support a conclusion that competencies at extension worker or farmer level in the application of knowledge and skills has been significantly improved would enable a higher 	

		<p>efficiency rating.</p> <ul style="list-style-type: none"> The project attempted to cover a wide range of crops, both perennial and annual in many provinces. This facilitated knowledge and skills development for many provincial staff. However the confidence of extension staff and the lack of support facilities (e.g. efficient laboratory diagnosis) indicates that a less ambitious approach might have resulted in a more practical application to management
Sustainability	3	<ul style="list-style-type: none"> For researchers, the skills could be applied in the future, but it was unclear for further improvement. For extension workers, awareness and knowledge has increased but application of this to provide support to farmers is questionable. For farmers, they do not know how to purchase chemicals for treatment and where to get books of <i>Phytophthora</i> diseases.
Average Score	3.2	<ul style="list-style-type: none"> The major issues relating to competencies at the district and farmer level in identification, management and prevention of disease, together with the lack of chemicals suggests that the potential impact identified in potato (and potentially many other crops) is unlikely to be realised.

Overall Assessment b/: Moderately Satisfactory

Recommendations:

- Increase of knowledge of the disease (disease identification and management) is urgent need, especially for extension workers and farmers through appreciate training approaches.
- Alternative management strategies of the disease should be developed, such as biological management (crop rotation and so on) to overcome limitation of chemical in treatment and further negative effect to the environment
- The potential for chemical control is very high, but extension support and chemical treatment delivery systems are major limitations that should be addressed.

a/ 1 = worst 5 = best

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