

Country Name Socialist Republic of Viet Nam	Strengthening the Capacities for the Field of Management of Vietnam's Crop Production Sector for Improving the Productivity and Quality of Crop's Products														
I. Project Outline															
Background	<p>In Viet Nam, the advances on breeding and development of new plant varieties had substantially contributed to the increased crop production at the time of ex-ante evaluation (2010). The achievements of science and technology for developing many types of agro-bio chemicals had also supported the improved yield of crops. However, the pollution of environment and unsafety of agriproducts to impact the human health had become serious for the reason of using too much agro-bio chemicals. In order to meet the increasing demand of people on the high quality products, Government of Viet Nam (GOV) had been implementing various policies and programs on improving the quality and productivity of crops. They included Plant Variety Protection (PVP) to encourage breeding and developing new plant varieties, and management and monitoring on production and distribution of Safe Crop (SC). Department of Crop Production (DCP) under Ministry of Agriculture and Rural Development (MARD) was designated for the state-level management of crop production sub-sector including functions for PVP and monitoring on SC. However, DCP did not have sufficient experience in these important areas, as it had not been long since the department was established.</p>														
Objectives of the Project	<p>(PVP) Through establishing the Distinctness, Uniformity and Stability (DUS) testing method¹ and improving administrative procedures for examination of applied plant varieties and the awareness of breeders, seed companies and extension workers, the project aimed at improving the ability of examination for PVP system, thereby promoting registration of new varieties.</p> <p>(SC) Through improving the capacity of instructors to instruct techniques of producing safe crop to farmers and the awareness of the stakeholders, the project aimed at improving the awareness and production techniques on safe crop, thereby improving agricultural products in Viet Nam in terms of safety.</p> <ol style="list-style-type: none"> Overall Goal: (PVP) Registration of new varieties is promoted through strengthening PVP system. (SC) Agricultural products in Vietnam are improved in terms of safety through reinforcing and disseminating safe crop production practices. Project Purpose: (PVP) Ability of examination for PVP system to promote breeding and introduce new varieties is improved. (SC) Awareness and production techniques on safe crop are improved. 														
Activities of the Project	<ol style="list-style-type: none"> Project Site: (PVP) Van Lam, Tu Liem, Quang Ngai and Baria-Vung Tau Stations of National Center for Plant and Fertilizer Testing (NCPFT)² (SC) Hung Yen, Ha Nam, Quang Ninh, Hai Phong, Thai Binh, and Hoa Binh Provinces Main Activities: (PVP) (1) Improve administrative procedures for examination of applied plant varieties; (2) Revise and develop Test Guidelines (TGs), implement DUS tests and conduct trainings on DUS tests; and (3) Develop brochure on PVP system and hold seminars and orientation meetings to raise awareness on PVP system for stakeholders such as breeders, seed companies, government officers etc. (SC) Implement extension and promotion activities on safe crop production to officers in charge of safe crop and farmers and formulate guideline for raising awareness and supporting farmers on safe crop production etc. Inputs (to carry out above activities) <table border="0" data-bbox="272 1435 1559 1753"> <tr> <td data-bbox="272 1435 975 1469">Japanese Side</td> <td data-bbox="975 1435 1559 1469">Vietnamese Side</td> </tr> <tr> <td data-bbox="272 1469 975 1529">1) Experts: 3 persons (long term) and 12 persons (short term)</td> <td data-bbox="975 1469 1559 1529">1. Staff allocated: 61 persons</td> </tr> <tr> <td data-bbox="272 1529 975 1563">2) Trainees Received in Japan: 38 persons</td> <td data-bbox="975 1529 1559 1563">2. Local operation cost: Rent for office, soil improvement, trainings, workshops etc.</td> </tr> <tr> <td data-bbox="272 1563 975 1624">3) Trainees Received in Third Countries (Thailand, Indonesia and Korea): 47 persons</td> <td></td> </tr> <tr> <td data-bbox="272 1624 975 1720">4) Equipment: vehicles, net house, cold storage room, tractors and other tools for soil preparation, camera, RHS color chart, ruler, color printer, computer etc.</td> <td></td> </tr> <tr> <td data-bbox="272 1720 975 1753">5) Local operation cost</td> <td></td> </tr> </table> 			Japanese Side	Vietnamese Side	1) Experts: 3 persons (long term) and 12 persons (short term)	1. Staff allocated: 61 persons	2) Trainees Received in Japan: 38 persons	2. Local operation cost: Rent for office, soil improvement, trainings, workshops etc.	3) Trainees Received in Third Countries (Thailand, Indonesia and Korea): 47 persons		4) Equipment: vehicles, net house, cold storage room, tractors and other tools for soil preparation, camera, RHS color chart, ruler, color printer, computer etc.		5) Local operation cost	
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Project Period	July 2010 – June 2014 (Extension Period: January 2014 – June 2014)	Project Cost	(ex-ante) 300 million yen, (actual) 272 million yen												
Implementing Agency	<p>(PVP) Department of Crop Production (DCP) (Plant Variety Protection Office (PVPO), National Center for Plant and Fertilizer Testing (NCPFT)/ National Center for Plant Testing (NCPT)), Ministry of Agriculture and Rural Development (MARD)</p> <p>(SC) DCP (Food Crop Division (FCD)), MARD; Department of Agriculture and Rural Development (DARD)</p>														
Cooperation Agency in Japan	The Ministry of Agriculture, Forestry and Fisheries														

¹ DUS test is a test to check and confirm whether an applied variety is distinct (D) from existing varieties, sufficiently uniform (U) and stable (S).

² In July 2012, NCPFT was divided into two centers, namely National Center for Plant Testing (NCPT) and National Center for Fertilizer Testing. Since then, NCPT has been assigned to be involved in implementing the PVP component of the project, and Van Lam, Tu Liem, Quang Ngai and Baria-Vung Tau stations are still under the management of NCPT at the time of ex-post evaluation.

II. Result of the Evaluation

1 Relevance

<Consistency with the Development Policy of Viet Nam at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Viet Nam's development policies such as "promotion of new plant varieties" and "securing food safety" as set forth in "National Socio-Economic Development Plan (NSED) (2006-2010)", "MARD Five Year Plan (2006-2010)", "The Ordinance on Food Hygiene and Safety (2003)", "NSED (2011-2015)" and "MARD Five Year Plan (2011-2015)" etc.

<Consistency with the Development Needs of Viet Nam at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Viet Nam's development needs for plant varieties protection and securing safety of agricultural products at the times of both ex-ante evaluation and project completion.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan's ODA policy as stated in the Country Assistance Program for Viet Nam (2009) (which included strengthening of the plant species protection system and securing of safety of agricultural and fishery products and foods).

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose had been achieved by the time of project completion. As for PVP, a test was conducted to check the understanding level of technical knowledge on DUS test at NCPT and four test stations under NCPT (16 people in total were checked). The average score among them was 85/100 points. Evaluation by the check sheet was also conducted to check whether project counterparts (C/Ps) can undertake each task of DUS test (18 people in total were checked). The average score among them, which was 2.4/5 points before project implementation, was improved to 4.2/5 points at project completion. As for SC, while only less than 4% of model farmers (114 model farmers in total) had conducted field record keeping before project implementation, all the model farmers kept field records at the time of project completion. According to the results of the questionnaire survey, 66.7% of instructors of pilot provinces answered that 80-90% of model farmers satisfied the criteria of Basic GAP³, 22.2% of them answered 60-70%, and 11.1% answered 100%. All three model sites of pilot provinces were certified as "safe crop production field", and one site of semi-pilot provinces was also certified.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have continued to the time of ex-post evaluation. As for PVP, the number of DUS test implemented annually has been approximately 200 at Van Lam station (mainly in charge of rice), approximately 100 at Tu Liem station (mainly in charge of corn), two to four at Quang Ngai station (in charge of watermelon and sugarcane only) and approximately 55 at Baria-Vung Tau station (mainly in charge of tropical vegetables) after project completion. According to NCPT, approximately 80% on average of staff in NCPT test stations who are in charge of DUS test can conduct examinations of DUS including identification/setting up of example varieties properly at the time of ex-post evaluation. As for SC, according to DCP and DARDs, all of 114 model farmers have continued to keep field records and more than 90 model farmers have continuously satisfied the criteria of Basic GAP since project completion. According to DCP, five pilot/semi-pilot areas (all three model sites of pilot provinces and two model sites of semi-pilot provinces) have continuously been certified as "safe crop production field" since project completion.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been achieved by the time of ex-post evaluation. As for PVP, the number of plant varieties applied and granted to PVP system both domestically and abroad has continuously been increased year by year. As for SC, the number of farmers, cooperatives and companies who practice "GAP (also known as VietGAP (Vietnamese GAP); including Basic GAP)" in pilot/semi-pilot provinces has been increased since project completion.

<Other Impacts at the time of Ex-post Evaluation>

According to DCP and DARDs, more than 60% of DUS testers at NCPT and its stations are women, and the project contributed to increasing the role of women in PVP system through providing technical trainings to improve their skills.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) (PVP) Ability of examination for PVP system to promote breeding and introduce new varieties is improved.	70 to 80% of Counterpart Staff in charge of DUS test can conduct examinations of DUS properly. (At least Level 3 (out of 5 levels) is achieved for all the items listed in "PVP/DUS Examination Capacity Check List")	Status of the Achievement: achieved (continued) (Project Completion) The average score of the check sheet was 2.4/5 points before project implementation, which was improved to 4.2/5 points at project completion. (Ex-post Evaluation) Approximately 80% on average of staff in NCPT test stations who are in charge of DUS test can conduct examinations of DUS properly.
(Project Purpose) (SC) Awareness and production techniques on safe crop are improved.	1. 114 number of model farmers keep records of production processes.	Status of the Achievement: achieved (continued) (Project Completion) All the model farmers kept field records. (Ex-post Evaluation) All the model farmers have kept field records.
	2. Based on the concept of "Basic GAP", 90 number of model farmers satisfied the criteria of "Basic GAP".	Status of the Achievement: achieved (continued) (Project Completion) 66.7% of instructors of pilot provinces answered that 80-90% of model farmers satisfied the criteria of Basic GAP. (Ex-post Evaluation) More than 90 model farmers have continuously satisfied

³ Basic GAP is Good Agricultural Practice (GAP) which determined the basic matters of safety production that farmers tend to accept such as keeping records of production processes.

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	3. More than four (4) numbers of pilot/semi-pilot areas of the Project certificated as “Safe crop production” fields.	Status of the Achievement: achieved (continued) (Project Completion) Three model sites of pilot provinces and one model site of semi-pilot provinces were certified as “safe crop production field”. (Ex-post Evaluation) Three model sites of pilot provinces and two model sites of semi-pilot provinces have been certified as “safe crop production field”.																																																											
(Overall Goal) (PVP) Registration of new varieties is promoted through strengthening PVP system.	Plant species and varieties applied and registered to PVP system continuously increases.	(Ex-post Evaluation) achieved The number of plant varieties applied and granted has continuously been increased. [Number of Varieties Applied and Granted to PVP System] <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">No. of Varieties Applied</th> <th colspan="2">No. of Varieties Granted</th> </tr> <tr> <th>Domestic</th> <th>Abroad</th> <th>Domestic</th> <th>Abroad</th> </tr> </thead> <tbody> <tr><td>2008</td><td>22</td><td>10</td><td>7</td><td>6</td></tr> <tr><td>2009</td><td>34</td><td>10</td><td>4</td><td>7</td></tr> <tr><td>2010</td><td>49</td><td>18</td><td>19</td><td>4</td></tr> <tr><td>2011</td><td>27</td><td>25</td><td>33</td><td>27</td></tr> <tr><td>2012</td><td>81</td><td>23</td><td>22</td><td>19</td></tr> <tr><td>2013</td><td>60</td><td>32</td><td>31</td><td>35</td></tr> <tr><td>2014</td><td>83</td><td>26</td><td>25</td><td>13</td></tr> <tr><td>2015</td><td>107</td><td>41</td><td>34</td><td>26</td></tr> <tr><td>2016</td><td>162</td><td>23</td><td>36</td><td>20</td></tr> <tr><td>2017</td><td>206</td><td>60</td><td>84</td><td>25</td></tr> </tbody> </table>	Year	No. of Varieties Applied		No. of Varieties Granted		Domestic	Abroad	Domestic	Abroad	2008	22	10	7	6	2009	34	10	4	7	2010	49	18	19	4	2011	27	25	33	27	2012	81	23	22	19	2013	60	32	31	35	2014	83	26	25	13	2015	107	41	34	26	2016	162	23	36	20	2017	206	60	84	25
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(Overall Goal) (SC) Agricultural products in Vietnam are improved in terms of safety through reinforcing and disseminating safe crop production practices.	The number of farmers, cooperatives and companies who practice “GAP (including Basic GAP)” is increased.	(Ex-post Evaluation) achieved The number of farmers, cooperatives and companies who practice “GAP (including Basic GAP)” in pilot/semi-pilot provinces has been increased. [Number of Farmers, Cooperatives and Companies Practicing GAP at the Time of Ex-Post Evaluation] ⁴ <table border="1"> <thead> <tr> <th>Province</th> <th>No. of farmers who practice GAP</th> <th>No. of cooperatives that practice GAP</th> <th>No. of companies that practice GAP</th> </tr> </thead> <tbody> <tr><td>Hung Yen</td><td>196</td><td>6</td><td>2</td></tr> <tr><td>Ha Nam</td><td>150</td><td>4</td><td>2</td></tr> <tr><td>Quang Ninh</td><td>95</td><td>2</td><td>4</td></tr> <tr><td>Hai Phong</td><td>N/A</td><td>N/A</td><td>N/A</td></tr> <tr><td>Thai Binh</td><td>150</td><td>2</td><td>1</td></tr> <tr><td>Hoa Binh</td><td>334</td><td>10</td><td>2</td></tr> </tbody> </table>	Province	No. of farmers who practice GAP	No. of cooperatives that practice GAP	No. of companies that practice GAP	Hung Yen	196	6	2	Ha Nam	150	4	2	Quang Ninh	95	2	4	Hai Phong	N/A	N/A	N/A	Thai Binh	150	2	1	Hoa Binh	334	10	2																															
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Source: Terminal Evaluation Report, Project Completion Report, questionnaire survey to DCP, PVPO, NCPT and DARDs

3 Efficiency

While the project cost was within the plan, the project period exceeded the plan (ratio against plan: 91%, 114%, respectively), as technical supports by Japanese experts were still necessary for revising TGs and preparing DUS test implementation manual for tomato, chrysanthemum and cucumber. Therefore, the efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

The needs for promotion of new plant varieties and securing food safety are stated in “NSEDP (2016-2020)”, “MARD Five Year Plan (2016-2020)” and “National Strategy for the Development of Intellectual Property including PVP until 2030” (under preparation) etc.

<Institutional Aspect>

As for PVP, PVPO is responsible for drafting and examining TGs and managing PVP application and registration, and the number of staff is four at the time of ex-post evaluation, while the required number is nine. The number of staff is not sufficient, particularly under the situation where the number of PVP application has been increasing. However, it is difficult to recruit new staff due to the tight rule on employment of officials in Vietnamese governmental organizations. Thus, PVPO has proposed a plan to become a self-financed organization, which is under consideration by MARD and is likely to be approved, so that PVPO would be able to use collected fees from PVP-related services for employing new staff. NCPT is responsible for implementing DUS tests and verifying test results, and there are 28 staff (three at the headquarters (HQ) and 25 at stations) in charge of DUS tests. According to NCPT, the number of staff is sufficient to conduct the above duties properly. As for SC, according to DCP (FCD), it has two management level staff and five experts at the time of ex-post evaluation, which is sufficient to manage safe crop production including promoting VietGAP and conducting training of trainers (TOTs) for technical officers in provincial DARDs. The number of staff in charge of crop production management is 57 in total in Hoa Binh DARD, approximately 300 in total in Hai Phong DARD, 158 in total in Thai Binh DARD, 12 in total (for management of agro-forestry-fishery food safety) in Hung Yen DARD, while the number of staff was not available in Quang Ninh DARD and Ha Nam DARD. Nonetheless, according to all of these DARDs, the number of staff is sufficient to manage crop production including providing technical instructions to farmers and monitoring farming activities at sites for safe crop production.

<Technical Aspect>

As for PVP, C/Ps still work for DCP, PVPO and NCPT at the time of ex-post evaluation. According to PVPO, its staff have sufficient skills to perform above duties. Since 2015, PVPO has drafted more than 20 TGs for new species which the International Union for the Protection of New Varieties of Plants (UPOV) has not yet issued, and the PVP system in Viet Nam has been operated well. All of three staff

⁴ Data on the number of farmers, cooperatives and companies who practiced “GAP (including Basic GAP)” before project implementation was not available in existing documents.

at NCPT HQ have master's degrees and have participated in training courses on DUS test in Japan and Holland. All of them have 10 to 20 years of work experience in the relevant fields. All of 25 staff in NCPT stations have bachelor's degrees or higher degrees. Thus, the skill level of these staff is sufficient to perform above duties. While the internal training system has not been established in NCPT due to limited financial resources, NCPT has often organized on-site visit and observation of DUS growing test among DUS testers to improve their techniques on DUS test. Revised TGs, newly prepared TGs and DUS test implementation manuals which were prepared under the project are still utilized at PVPO and NCPT. The majority of equipment procured under the project are still used in a good condition except for a camera, two tractors, a net house and the database software in Van Lam station and Tu Liem station⁵. As for SC, the majority of C/Ps still work for DCP and provincial DARDs at the time of ex-post evaluation. Three out of seven staff at DCP (FCD) have master's degrees and four have doctoral degrees. Some staff have participated in overseas short-term training courses on crop production, and thus, their skills are sufficient to perform above duties. Moreover, DCP has been implementing the JICA-funded "Project for Improvement of Reliability of Safe Crop Production in the Northern Region (2016-2021)" (the Phase 2 of this project), in which its staff have more opportunities to participate in training courses to improve their skills. According to provincial DARDs, the skill level of staff is generally sufficient to perform above duties. DCP has organized three TOT courses at the central level and four TOT courses at the provincial level under the above-mentioned Phase 2 of this project, in which technical officers of Hung Yen, Ha Nam and Thai Binh DARDs have participated. Those in Quang Ninh, Hai Phong and Hoa Binh DARDs are supposed to participate in TOT courses from October 2018. The manual on the implementation of Basic GAP produced under the project is still utilized by DARDs and farmers. Most equipment procured under the project are still used in a good condition except for two cameras, which were broken and replaced by new ones.

<Financial Aspect>

As for PVP, the amount of budget allocation for PVPO has been 1.5 billion VND in 2015, 1.6 billion VND in 2016 and 2.1 billion VND in 2017. According to PVPO, the allocated amount is sufficient to perform above duties. MARD has also allocated approximately two billion VND to NCPT annually since 2015. However, because there are many staff working for NCPT not in charge of DUS test and NCPT has to secure the allocated budget to pay salaries and other expenditures for these staff as well, budget for DUS test has been rather limited. Nonetheless, according to Circular No. 207/2016/TT-BTC on collecting and utilizing fees for DUS test, NCPT is permitted to collect more fees for DUS growing test. As for SC, while DCP has received approximately 20 billion VND annually from MARD, it has to spend the amount to cover expenses of many assigned duties, and thus only limited amount (approximately 500 to 600 million VND) has been allocated for promotion of safe crop production. DCP (FCD) has been handling this difficulty by integrating activities of promoting safe crop production in some other programs and calling for supports from foreign donors and the private sector etc. Detailed information on budget allocation in provincial DARDs was not available, however, according to provincial DARDs, although they have limited budget to cover all of their duties, they have still managed and allocated necessary budget to promote safe crop production including instructing farmers and monitoring farming activities at sites.

<Evaluation Result>

Therefore, the sustainability of the effects through the project is fair.

5 Summary of the Evaluation

The project achieved the Project Purpose and the Overall Goal: As for PVP, the majority of staff in charge of DUS test have been able to conduct examinations of DUS properly, and plant varieties applied and registered to PVP system have been increased. As for SC, all the model farmers have kept field records and the majority of pilot/semi-pilot areas have been certificated as "safe crop production" fields, and the number of farmers, cooperatives and companies who practice GAP has been increased. For the sustainability, some problems were found such as insufficient number of staff in PVPO and the lack of budget allocation in NCPT, DCP (FCD) and provincial DARDs. However, no major problem was observed in terms of the policy and technical aspects. As for the efficiency, the project period exceeded the plan.

Considering all of the above points, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- As stated above, two NCPT stations have problems with the database software developed under the project. While they have requested the software developer to fix the problem whenever it happens, the system still does not run smoothly, and there are also some functions that are not convenient for users and thus need to be upgraded. It is recommended that DCP should allocate budget to outsource the database software upgrade for all stations.

Lessons Learned for JICA:

- As stated above, two tractors at NCPT stations have not been repaired properly due to unavailability of spare parts in local markets. When procuring equipment in future projects, it should be carefully checked whether its spare parts would be available and can be easily purchased locally before purchasing such equipment.

⁵ The camera in Van Lam station has been repaired several times, however, it is not in a good condition. The tractor in Van Lam station had been used in wetland for rice and was broken in 2017. As the tractor was Japanese-made and its spare parts are not available in local markets, it could not be repaired. The tractor in Tu Liem station had been used so frequently and continuously, and was broken in 2017. As spare parts are not available, Tu Liem station asked a local shop to cast the broken part and has continued to use the tractor. The roof and insect netting along sidewalls of the net house in Tu Liem station were damaged by a typhoon in 2017, however, the skeleton of the net house is still in a good condition. The database software at Van Lam and Tu Liem stations are still used, however, problems occur frequently. While they requested the software company to fix problems, the software is still operated unstably.



Staff of Baria-Vung Tau station is observing and measuring some characteristics of rice



Staff of Van Lam station is checking seed samples in cold storage room