

## 終了時評価調査結果要約表

<b>1. Outline of the Project</b>	
Country : Philippines	Project title : The Project on the Development and Promotion of Location - Specific Integrated High - Yielding Rice and Rice-Based Technologies
Field : Rural Development	ODA mode : Technical Cooperation Project
Handling Dept.: Rural Development Department of JICA	Cooperation Amount : 453 million Yen
Period of Cooperation : 15 Nov. 2004 -14 Nov. 2009	Philippines related Agency : Philippine Rice Research Institute (PhilRice)
	Japanese Cooperation Agency : Ministry of Agriculture, Forestry and Fisheries, National Agriculture and Food Research Organization
<b>1-1. Background of the Project</b>	
<p>Rice is the main staple food in the Philippines. However, there is continued shortage of local production thus, it is necessary that productivity be significantly increased to attain sustainable rice self sufficiency. This can be achieved partly by developing and promoting appropriate productivity -enhancing technologies.</p> <p>In response to the request by the Government of the Philippines, JICA has assisted the Philippine Rice Research Institute (PhilRice) to enhance its capability in rice technology development and promotion. This started with the implementation of the Grant Aid from 1989 to 1991 and accelerated with the first Technical Cooperation Project (TCP1) from 1992 to 1997 and the second Technical Cooperation Project (TCP2) from 1997 to 2002. The research capabilities of PhilRice were improved through TCP1, and farming technologies, mainly for small scale rice farmers, were developed through TCP2.</p> <p>However, farm productivity of rice remains low in many rice farms at various locations in the country. Thus, PhilRice as the main source of new and improved rice technologies is expected to utilize its highly upgraded research capabilities to develop location-specific technology packages considering and analyzing various conditions such as climate, soil and social status of the farmers and farming systems. The third Technical Cooperation Project (TCP3) was proposed to the Government of Japan in 2002 to address this.</p> <p>Preparatory Study Missions were dispatched in 2003 and the framework of TCP3 was officially agreed between JICA and Philippine authorities with the signing of the Record of Discussions on 18 October 2004. The Project started on 15 November 2004.</p>	
<b>1-2 Summary of the Project</b>	
(1) Overall Goal	
<ol style="list-style-type: none"> <li>1) Productivity in the target areas of rice is increased.</li> <li>2) Agricultural income of farmers in the target areas is increased.</li> </ol>	
(2) Project Purpose	
Rice productivity of participating farmers is improved.	
(3) Output	
<ol style="list-style-type: none"> <li>1) Suitable input and location-specific technology packages are developed in each target area.</li> <li>2) Technology promotion systems focused on rice technology are established in the target areas.</li> </ol>	
(4) Input (as of July 2009)	
1) Japanese Side	

- a) Dispatch of experts: 6 long-term experts, 10 short-term experts
  - b) Counterpart training in Japan: 16 CPs
  - c) Equipment: About 76 million yen
  - d) Local cost: About 53 million yen
- 2) Philippines Side
- a) Counterpart to the experts: 30 CPs
  - b) Local Cost: About 27 million yen

## 2. Outline of the Mission

### (1) Japanese members

- |                     |   |
|---------------------|---|
| Mr. Kunihiro Tokida | Team Leader, Senior Advisor, JICA   |
| Mr. Akira Fukushima | Agronomy/Extension, Senior Researcher, Research Center for Tohoku Region, National Agricultural Research Organization         |
| Mr. Kimihiro Konno  | Evaluation Analysis, Chief, Second Business Department, VSOC Co., Ltd   |
| Ms. Akiko Miyashita | Cooperation Administration, Assistant Director, Paddy Field Based Farming Area Division 1, Rural Development Department, JICA |

### (2) Philippines members

- |                         |   |
|-------------------------|---|
| Mr. Edmund J. Sana      | Team Leader, Member, Secretary's Advisory Group, Department of Agriculture  |
| Mr. Soledad Mina-Roguel | Extension, Dean, Institute of Graduate Studies, Central Luzon State University  |
| Mr. Josue S. Falla      | Evaluation Analysis, Chief, Technology and Product Promotion Division, Philippine-Sino Center for Agricultural Technology Director II, Bureau of Postharvest Research and Extension |
| Ms. Evelyn Valeriano    | Cooperation Administration, Project Development Officer, Special Projects Coordination and Management, Assistance Division, Department of Agriculture                               |

Duration : 28 June 2009 - 25 July 2009

Evaluation Mode: Final Evaluation

## 3. Outline of the Evaluation Result

### 3-1 Confirmation of the result

#### (1) Output

- 1) (Indicator (1-1)) Productivity of rice is increased by 1 t/ha in Technology Demonstration Farms.  
Result: 6 TDFs except Cabanatuan (Central Luzon) attained the indicator in the rainy season or dry season or both seasons.
- 2) (Indicator(1-2)) One (1) location-specific technology package with at least 3 component technologies is developed for each target area.  
Result: One LSTP with more than 3 component technologies has been developed at each target area.
- 3) (Indicator (1-3)) At least 3 advanced lines for tolerance to low solar radiation are tested and at least one variety is promoted.  
Result: More than 3 lines have been tested at PhilRice Agusan, PJ7 (NSIC 146) has promoted.
- 4) (Indicator (2-1)) Extension manuals on rice or rice-based farming systems are developed for each target area.

Result: Four (4) kinds of manuals have been developed, one (1) kind manual will be developed before October 2009.

- 5) (Indicator (2-2)) At least 105 agricultural technicians and concerned government personnel as well as 140 farmers are trained at the Technology Demonstration Farm on promotion of location specific technologies.

Result: 269 ATs and 851 farmers have been trained at TDF.

(2) Project Purpose

- 1) (Indicator 1) At least 70% of participating farmers adopt at least 3 components of location-specific technologies.

Result: 100% of PFs adopted at Central Luzon and Northwest Luzon, more than 90% of PFs adopted at Northern Mindanao.

- 2) (Indicator 2) At least 70% of participating farmers increase productivity of rice by 1 t/ha.

Result: All Central Luzon TDFs and Currimao in Northwest Luzon attained the indicator. Thus four (4) TDFs out of seven (7) TDFs attained the indicator.

- 3) (Indicator 3) Income of participating farmers in TDFs from rice-based farming increased by average of 15%.

Result: All TDFs attained the indicators.

- 4) (indicator 4) Municipal LGUs establish at least 2 demonstration farms in their respective municipalities.

Result: Six (6) TDFs except Butuan City whose TDF would be finished on the November 2009 established more than 2 DFs.

### **3-2 Results of the Evaluation with the Five Criteria**

(1) Relevance

The project has high relevance based on the following points:

The Project focuses on the improvement of livelihood of Filipino farmers. Integration of component technologies including LST can respond to the needs of farmers.

The Project is consistent with the national policy on agriculture and the GMA Rice program.

It is high from the aspects of Cooperation Priority of Japan and Japans Advantage.

The targets include areas with adverse agro-climatic conditions, rain-fed, and irrigated areas with low productivity.

(2) Effectiveness

The Project's effectiveness is high based on the following points:

The Objectively Verifiable Indicators (OVIs) Items 1, 3 and 4 of the Project Purpose have been achieved. However, the OVI Item 2 which states, "At least 70% of participating farmers increase productivity of rice by 1t/ha", has not yet been achieved because only 52% of the participating farmers have been able to attain this indicator as of July 2009.

The logic between Output and Project Purpose is appropriate.

(3) Efficiency

Most of the Outputs have been achieved. Thus, the Project has high efficiency, based on the following points:

A technology promotion system has been established to enable agricultural technicians to be more efficient in helping farmers attain their productivity and profitability.

By adopting the Location-Specific Technology Package (LSTP), some farmers were able to reduce production cost thereby increasing their net income.

While some farmers' income showed significant increase, others were unable to purchase the recommended quantity of fertilizer because of its drastic price increase.

The inputs, both from Japanese and Philippine sides were found to be generally appropriate in terms of timing, duration, and fields of expertise.

(4) Impact

The project has positive impact based on the following points:

It has been observed that many non-participating farmers have adopted technologies developed in TDFs. A number of PFs initiated the promotion of technologies they have learned to non-PFs.

Both ATs and FPs/PFs of TDFs have shown willingness to teach farmers what they have learned.

Most of the stakeholders such as the LGUs, ATI, DA-RFU and NIA in the Project sites, have expressed support to DF activities, specifically in the expansion and technology dissemination to farmers.

PhilRice has adopted LST as its main strategy for increasing rice productivity of farmers.

PFs have established cooperatives to empower themselves.

Although the increase of productivity of 1 t/ha is partially achieved, the income has increased substantially due to the reduction of necessary inputs by farmers and increase of commodity price.

(5) Sustainability

Based on the forecasting of the insect population and utilization of appropriate pest-tolerant rice varieties, the farmers have reduced pesticide use.

Functionality of TDF Committees varies across sites. It is necessary to define the role of each member in the implementation of the TDF.

The methodology and approach of the Project was adopted for the rice self-sufficiency master plan of the Philippine government from 2009 to 2013.

All components of the GMA Rice Program of the DA are provided funds by the national government. LGU funding for DF operations is limited compared to TDF but it is enough, except for the travelling expenses of ATs.

TDF participants stated that they have acquired enough technology through the Project which they can do by themselves. However, if there are new technologies developed, they would like to learn it through the ATs and PhilRice. TDF participants have shared the technologies learned to non-participating farmers who practice these technologies in their areas.

(6) Conclusion

The planned activities are on schedule, and it is expected that all necessary activities will be completed by the end of the Project. Thus, the target outputs are expected to be attained. The possibility of achieving the project purpose of improving the rice productivity of participating farmers within the cooperation period is high. Thus, the Project will be terminated as scheduled.

The Project technology promotion model in establishing TDF and DF involving the LGUs and other concerned agencies is very effective. Adoption of this location specific technology promotion system in the national program can help in attaining the ultimate goal of rice self sufficiency in the Philippines.

### 3-3 Recommendations

(1) Before the end of the Project

Implementation Process

When expanding DFs, the commitment of LGU leaders should be ensured, particularly in providing adequate funds for activities and transportation allowance to ATs as well as fulfilling the obligations stipulated in the MOA.

Assessment and Monitoring

The initial assessment should be done by a multi-disciplinary team for a holistic perspective of the

situation. The reporting of DF activities from ATs should include problems and its causes in order to address the farmers' needs and establish a feedback mechanism to provide, among others, updating of new technologies.

#### Follow-up of PFs

PhilRice should follow-up PFs who have not attained the targeted increase of 1 t/ha of rice production by identifying its causes and taking the necessary countermeasures in close collaboration with LGUs and other concerned agencies.

#### Improvement of Agricultural Technologists' Guide

The ATs Guide's publication is timely for the utilization in DF activities. For mass dissemination of the module employed in the Project it should be improved.

#### Efficient utilization of trained ATs

The number of ATs at TDF is 269. However, only 32 worked at DFs. It is necessary to utilize all the trained ATs to expand DF activities.

#### Seminar and workshop

The planned seminars and workshops per area and the overall national workshop shall be pursued, inviting LGUs (selected provinces, cities and municipalities) and other cooperating agencies such as GMA Rice Program Directorate, DA-RFU and ATI. The outputs should include a 5-year plan on the expansion of TDF and DF approach, among others.

#### (2) After the end of the Project

In developing an LST, it is necessary to pay considerable attention not only to agro-climatic but also to the socio-economic conditions of the farmers. Thus, PhilRice has to come up with different options for LST adoption in consideration of the different capabilities of the farmers.

#### Market-oriented production

Encourage farmers to be more market-oriented in their off-season vegetable production by, for example, diversifying their vegetable crops to avoid market saturation.

#### Continue development of in-bred rice varieties

Considering the high price of hybrid varieties and unstable production in areas with adverse conditions, it is recommended to continuously develop and promote in-bred varieties to be incorporated in the LST packages.

#### PalayCheck for non-irrigated areas

*PalayCheck* being used for irrigated areas might not be suitable for non-irrigated areas. Thus, *PalayCheck* for non-irrigated areas should also be developed.

#### (3) On the DA

When an LGU and a national government agency are implementing similar programs in the same area, the program promoting LST should be prioritized to more accurately address the needs of the community.

### **3-4 Lesson and Learned**

From the experience of the Project, the following lessons were drawn for consideration in future program and projects.

- (1) Implementing agencies should exert more effort in defining the roles and in engaging the active participation of other concerned agencies at onset of project implementation.
- (2) Project implementers should not only focus on the numerical targets but also on the implementation process.
- (3) In selecting the project sites, baseline data and initial analysis should be considered.

(4) It is essential to establish physical structure which serves as venue for learning, socialization and other activities by the farmers.