

1. Summary of the Project	
Country : Republic of Panama	Project Title: Project for Sustainable Rural Village Development and Dissemination Plan in Mountainous Area
Issue/Sector:	Cooperation Scheme : Technical Cooperation
Division In charge: Field Crop-Based Farming Area Team I, Rural Development Department	Total Cost (as at Evaluation): 237.225million yen
Period of Cooperation	(R/D): Signing Date: 9 Dec 2003 Period of Cooperation 15 Jan. 2004 to 14 Jan. 2007
	Partner Country's Implementing Organization Ministry of Agricultural Development, Panama (MIDA) National Agricultural Institute, Panama
	Supporting Organization in Japan:
	Related Cooperation:
1-1 Background and Summary of the Project	
<p>In Republic of Panama (hereinafter referred to as "Panama"), farming is operated by mainly small-scale farmers in hilly and mountainous area. Particularly, proportion of small-scale farmers is high around the central spine of mountain ranges extends Coclé Province, Veraguas Province, Chiriquí Province and Bocas del Toro Province and mountainous area in Herrera Province. In such mountainous region, the majority of the farming is operated by a traditional way of shifting slash-and-burn method of cultivation. However sustainable slash-and-burn method of cultivation is getting difficult due to growing population and limited cultivation area. Under this circumstance, such area is prone to soil erosion and productivity slowdown. As a result even a crop for personal self-sufficiency cannot be expected. Generally a high-yield crop using a large volume of chemical fertilizer and agrochemical is a high-cost operation for small-scale farmers. Therefore, practical farming technique for small-scale farmers and a system for its dissemination are required.</p> <p>JICA has supported development and improvement of farming technique suitable for small-scale farmers and offered training by dispatching individual experts to National Agricultural Institute (hereinafter referred as "INA") since October 2000.</p> <p>Cultural test by natural farming method, feeding trial of farm animals, and studies of utilizing natural energies and establishing ecological farm system have been conducted in the demonstration and training farm field in INA. However the appropriate techniques and related information have not been spread to rural villages due to undeveloped dissemination system in Panama. Thus farmers in such areas are still in a deprived state. In view of the foregoing, Panama Government requested Japan for support via technical cooperation aiming to improve the dissemination method of farming technique to small-scale farmers in deprived area. In response to this request, Ex-ante Evaluation was conducted in March 2003 and then technical cooperation project has been executed for three years from Jan. 2004.</p> <p>Meanwhile an intermediate delegation was dispatched in 2005 followed by a dispatch of three long-term experts (farming dissemination/chief advisor, participatory development/administration coordination and farming training planning and operation) as at Ex-post evaluation in Oct. 2006.</p>	

1-2 Project Overview	
(1) Overall Goal	
Farm productivity of small-scale farmer is improved* in the target area of the project.	
**“Farm productivity is improved” means 1) Improvement of amount of crop production 2)Improvement of knowledge of farmers, and 3) Improvement of quality of crop production	
(2) Project Purpose	
A sustainable farmer-driven dissemination model** is established.	
***“Sustainable dissemination model” means an appropriate and viable model for the target small-scale farmers.	
(3) Output	
1) Rural School*** is established and enhanced.	
***Rural School, not being a substantial school but consisting of farm fields and farmers group, intends to learn farming technique practically including analysis by farmers and promoting staff. “Rural School” was referred to as “demonstration field” in PDM1.	
2) A training for cultivating human resource aiming at dissemination of appropriate farming technique by farmer is provided in INA.	
3) The appropriate technique established at Rural School is disseminated to the surrounding areas by farmers.	
4) A system to support the farmer-driven disseminating activity is maintained.	
(4) Input (as at Evaluation)	
Japn Side:	
Long-term experts: 3 persons	Short-term experts: 4 persons
Trainees received: 6 persons	Equipments: 17.3 million yen
Local costs: 39 million yen	
Panama Side:	
Counterpart: 9 persons	
Land and Facilities, Manpower cost, Gas for vehicle etc	
Local cost: US \$ 230,924	
2. Summary of Evaluation Team	
Members of Evaluation Team	General Control/Agriculture Dissemination: Yukio Yokoi, Leader, Group II, Rural Development Department, JICA Evaluation Analysis: Jun Totsugawa, Senior Researcher, Sano Planning Co., Ltd. Planning Management : Kohei Isa, Field Crop-Based Farming Area Team I, Rural Development Department, JICA
Period of Evaluation	12 Oct. 2006 to 4 Nov. 2006
	Type of Evaluation : Ex-post evaluation

3. Summary of Evaluation Results

3-1 Project Performance

(1) Performance of the Project Purpose

The indicator to evaluate the project purpose, “Farm productivity of small-scale farmer is improved in the target area of the project”, is expected to be fully achieved before the completion of the project. Additionally it is expected that the Outputs 1 to 4 will be achieved as well, therefore it is considered that the project purpose will be achieved.

[Achievements of Output and Indicator]

Output 1: Rural School is established and enhanced.

It is considered that the Output 1 has been achieved in terms of each indicator.

(Indicator)

1. The farmer promoter, who is the member of the Rural School, develops schedule to operate the farm field with other group member.
2. The farmers of the Rural School implement 50% of the techniques introduced by the project at three Rural Schools.

As for the indicator 1, farm field operation and activity schedule is developed on a monthly basis at all Rural School. Activity schedule on a cropping season basis is also developed by the group led by a farmer promoter in addition to schedule on a weekly basis. It is noteworthy that activity schedule is developed voluntarily by a farmer's group led by their leader in Chumicosa Village, which is not included as a target area or for which farmer promoter has not been designated, in the same manner as other Rural Schools.

As for the indicator 2, it has been confirmed that 50% of the techniques introduced in the Rural School are implemented currently. As a matter of fact practical use of the introduced techniques and activities have been delayed (e.g. a rain-covered green house was destroyed by a strong wind in Paso Real Village, management system was affected by reduced growing area for agroforestry and decreased implementing member in Chumicosa Village). It is considered that these experiences contributed to define appropriate techniques in the project.

Output 2: Training for cultivating human resource aiming at dissemination of appropriate farming technique by farmer is provided in INA.

It is considered that the Output 2 has been achieved in terms of each indicator.

(Indicator)

1. Trainings for farmer promoters are implemented more than three times and for farmers at least 12 times every year.
2. Thirty training materials are developed by the completion of the project.
3. One hundred trainees attend the training every year.

As for the indicator 1, trainings for farmer promoters were implemented 11 times while that for farmers were 43 times, making some alterations to the content of the training when appropriate to suit to the local needs and conditions in the process of the project. The promoting staff at MIDA promoting office (one promoting office is placed in every province) within and outside of the target area attended the training.

As for the indicator 2, 34 of training materials related to appropriate techniques introduced in the project (25 training materials and 9 brochures related to farming technique such as hydraulic ram, and method of farming dissemination such as participatory development) have been prepared so far. The training materials cover overall techniques introduced in the project including training coverage and training items. The content of the material as well as the number of materials prepared satisfied the indicator 2.

Moreover, the total trainees during the project were 835 so far, more particularly 224 were promoting staff and farmer promoter and 611 were farmers. This result showed achievement of more than 100 trainees per year.

Output 3: The appropriate technique established at Rural School is disseminated to the surrounding areas by farmers.

In terms of the indicator, this output was not fully satisfied (ref to indicator 2).

(Indicator)

1. Exchange activities aiming dissemination and exchange of techniques and knowledge are implemented by farmers at each Rural School at least three times per year by 2007.
2. Dissemination activity is implemented by the farmer, who was involved in the activity at each Rural School, at least once per month by 2007.

Regarding the indicator 1, total 16 of farmer's networking events have been held; three times at Chumicosa Village, five times at Rio la Bija Village, four times at Los Barcedes, and four times at Paso Real Village.

In the networking events, not only providing information on the technique by the local farmer but also their skills on the technique were demonstrated in training session. Such networking events have been prompting exchanges between farmers (e.g. hydraulic ram training at Chumicosa Village Exchange, natural agrochemical training at Paso Real Village Exchange)

On the other hand, regarding the indicator 2, while the farmer promoters at the Rural School provide appropriate information and so on to each visitor, the dissemination activity at least once per month specified in the indicator has not been satisfied. In fact there is no good opportunity for the farmer promoters to know the needs in the surrounding villages on a regular basis. It is highly presumable that this particular circumstance makes the dissemination activity slow regardless of the farmer promoter's motivation.

Meanwhile other than the activities by the Rural School as part of the indicators, technique transfer activities have been implemented through NGO(Fundación Natura, PRODESO, FOCIV), and technique have been disseminated to 22 communities so far.

Output 4: A system to support the farmer-driven disseminating activity is maintained. Output 4 is highly expected to be achieved by the completion of the project from the view of each indicator.

(Indicator)

1. The meeting for exchanging opinion and information held at INA will have more than 500 attendants per year.
2. Activity coordination meeting with related dissemination organizations is held more than 12 times per year.
3. A guideline indicating sustainable farmer-driven dissemination model is developed.

Regarding the indicator 1, according to the project record the technical training and farm field inspection etc for the farmer promoters and the farmers had about 800 visitors to INA.

Regarding the indicator 2, the activity coordination meeting has been held 21 times so far (4 times as seminar, 3 times as Joint coordination committee, 8 times as Trainers meeting and 6 times as Activity coordination meeting for farm field in INA). These performances do not satisfy the indicator in terms of the number of times seemingly. However some other meetings and sessions were held efficiently when appropriate just after the commencement of the project, as a result the number of meetings held can be considered as relevant..

Regarding the indicator 3, the guideline is scheduled to be distributed in Dec. 2006. Meanwhile its significance is shown only when the guideline is practically used in dissemination activity. It is required that people related to INA and MIDA will study how to use the guideline and make a plan for that.

3-2 Summary of Evaluation Results

(1) Relevance

It is presumable that the relevance of the project is high based on the followings:

- The target of the project is small-scale farmers in deprived area, Coclé Province, Veraguas Province and Herrera Province. Therefore the project conforms to the main policy objective under the current Torrijos Government, "Poverty alleviation and disparity correction"
- The major support field of Country-specific support implementation program for Panama specified by JICA is "reducing rural poverty". Thus, the project implemented in conformity with its field.
- The four target areas of the project have been selected based on poverty indicator shown by survey of living standards in Panama. The adequacy of model as small-scale farmer in mountainous area in Panama can be confirmed.
- The counterpart organization, National Agricultural Institute (INA), is in its proper location and holds sufficient facilities for trainings. Thus it can be considered that INA is the most appropriate organization in the target area of the project from the strategic perspective. On the other hand, since INA played a part of training and study only, efficient and effective activities for technique dissemination to each rural area were not fully achieved due to lack of proper staff allocated to such activities.

(Effectiveness)

It is presumable that the effectiveness of the project is high based on the followings:

- Regarding the appropriate techniques specified in the project, it can be confirmed that such techniques have been disseminated and practically used in surrounding area and community around the Rural School through farmer exchanges and other training opportunities.
- The farmers involved in the project as a "farmer promoter" have disseminated the farming techniques learned from the project to the surrounding area, according to hearing survey and project documents.

(3) (Efficiency)

- The inputs like Japanese experts, training in Japan and equipment were provided sufficiently and to the minimum for implementing the project in terms of the timing, quantity and the period. It was therefore considered appropriate basically.
- The joint work, technical transfer and so on conducted by Japanese experts and counterpart jointly have been affected directly by delay of counterpart personnel allocation and frequent personnel changes occurred during the project. As a result the realization of the outcomes was inhibited in terms of the time and the degree of realization under such circumstances.

(4) (Impact)

- The applicability of the project received a high commendation from MIDA. Consequently, the farmer promoter system introduced by the project has been adapted to Panama's own small-scale farmer support project "Familias Unidas". Additionally, many of the appropriate techniques introduced in the project have been adapted, for example it is scheduled that 100 of hydraulic ram will be purchased and provided.
- The importance of dissemination of farming technique has been recognized in INA. As a result Dissemination and Farm Development Department has been established. The department is expected to implement and promote training related to dissemination activity strengthening cooperation with MIDA in the future.

(5) Self-sustained expansion

It can be indicated that the self-sustained expansion of INA of the project has some scope of improvement. In order to raise the degree of implementation and sustainability for the dissemination model, it is necessary to strengthen cooperation with other related organization such as MIDA. On the other hand the self-sustained expansion of Rural School is considered higher. In order to promote dissemination from Rural School to surrounding areas, further monitoring and proper support from related domestic organizations will be required.

3-3 Factors that have promoted the project

(Activities in Rural School)

In the project, flexible supports were rendered farmers for their daily living (providing medicines, transportation to surrounding city etc) in addition to providing farming technique. Hence trustworthy relationship has been built up between the staff involved in the project and the farmers; the project was promoted based on such relationship.

The farmer exchange providing opportunities of joint work and joint study was really new for the farmers who had received technical training only individually or at rural area level, and many of the farmers showed their interest.

Performing organization of the farmer exchange for the farmer groups enables to promote self-consciousness as the operator of the Rural School, thus the activities have been promoted. The exchange meeting also had positive effect to promote technical dissemination (particularly Rio la Bija Village and Paso Real Village).

(Activities in INA)

Dissemination and Farm Development Department has been established in INA. Accordingly dissemination activity to support small-scale farmers by INA and its role became clarified and the activities have been promoted (this improvement was verified by comparing to the state before establishing the department, yet some more improvement for the function of the Dissemination and Farm Development Department is still required).

3-4 Factors that have inhibited the project

Personnel changes and delay of counterpart personnel allocation in INA occurred during the project (especially before the intermediate evaluation study) have affected directly realization of the outcomes in terms of the time and the degree of realization.

Furthermore it is stated as the basic principle of the project that farmers decide and make plans themselves and minimum supports are provided based on such decision and plan. Basically the farmers accepted the basic principle as practical system. On the other hand it is notable that the activities by NGO did not include this step of self-decision but kept providing materials. It is probable that such differences in the basic principles could lead farmers to confusion in the process of dissemination to surrounding areas.

3-5 Conclusion

1. It is expected that the project will basically achieve the initial purpose under the cooperation between counterparts in Panama and Japanese experts.

2. The basis of a farmer-to-farmer dissemination model has been established through the project activities. The appropriate techniques for small-scale farmers have been presented at the demonstration farm field set up within INA and model farm field (Rural School) in the target four villages in the project. It has also been verified that even a limited economical support to farmers enables dissemination with substantial result.

3. It is scheduled that the farmer promoter system introduced by the project has been adapted to the nationwide program, "Familias Unidas", for deprived and most deprived area by Panama Government.

4. It is expected that the purpose of this project will be basically achieved, yet further enhancement of the dissemination activity for appropriate technique by own efforts will be required at Panama side in order to achieve the Overall Goal. Consequently, it is reasonable to complete the project in Jan. 2007 as originally scheduled.

3-6 Recommendations

(specific measures, recommendations and advices related to the project)

[Activities performed until the completion of the project]

1. Currently developing "Guideline for dissemination model" should be completed by the completion of the project and presentation of the guideline to related staff (INA staff, MIDA staff and promoting staff, NGO staff etc.) should be conducted. In the presentation the specific method and implementing plan should be defined.

2. Considering the significance of Dissemination and Farm Development Department, INA should define its role and function. Additionally the role of INA staff belonging to the department should be defined as well. The department should be sustainable maintaining stable relationship with dissemination system of MIDA.

3. INA should complete "Information Exchange Center" under renovation at the time of Ex-post evaluation. The maintenance and management and usage plan of the center should be included in the maintenance and management plan for demonstration farm field and equipments.

[Activities to be performed after the completion of the project (for achievement of Overall Goal)]

1. The related organizations such as INA and MIDA in Panama should formulate specific policy and plan to secure human and economic resources necessary to implement sustainable dissemination to small-scale farmers. In the process of formulating the policy and the plan, the specific role of INA for introducing the project Output (idea, technique, human resources etc) to Familias Unidas should be defined. The activity plan to promote practical use of Guideline for dissemination model being an Output of the project should be developed by INA and MIDA. After the planning step, the materials should be widely distributed and released to related organizations in farm development field in Panama.

2. As for dissemination of appropriate technique to small-scale farmers, cooperation from and communication with the related organization should be maintained and enhanced. More specifically, the regular meeting of instructors between MIDA and INA held at the beginning of PROCESO project was effective and is necessary to facilitate exchanging information on training of small-scale farmers and promotion staff.

3. The project staff's capabilities of project management and appropriate technique dissemination have been improved through activities including activities in INA and four Rural Schools during the project. Such acquired knowledge and capability of the project staff should be utilized to a maximum by MIDA and INA in order to proceed and enhance the dissemination activities further.

4. INA should secure human resource (incl. number of staff and their quality) and economical inputs and maintain and manage the demonstration farm field and equipment of INA in accordance with appropriate assignment from MIDA. In addition INA should consider possibility of increasing their income through such activities.

5. INA and MIDA should act responsibly to continue monitoring activities in the area of four Rural Schools. In addition INA and MIDA should construct a system enabling to get needs of farmers in surrounding area by conducting dissemination activity by farmer promoters on a regular basis, and support farmer promoter's activity.

3-7 Lessons Learned (Useful reference from the project for discovering, formation, implementation and management executed in the similar project)

1. JOVC (Japanese Overseas Cooperation Volunteers) in the project was effective. It is reported that the appropriate technique was disseminated to non-target area (Chiriqui Province and Ngobe Bugle Comarca), which are outside of activity area of JOCV. Some of the JOCV members and the local farmers have attended the training held in the target area to obtain and apply such technique for future activities. The flexible cooperation system between experts and JOCV members enables JOCV member to visits and to attend the project.

2. The project has achieved its expected results within a relatively short period by obtaining cooperation with such as PROCCAPA (Panama Canal Watershed Conservation Project in the Republic of Panama) and based on experience and result of JOCV members at a maximum. This favorable result was achieved based on implementation approach of JICA program, "open-mind" and learning attitude of the project staff, and active communication with related staff involved in other support programs and schemes. It is obvious that information exchange with staff involved in other project program should be executed, but such exchange is likely to be forgotten. It is necessary to confirm this particular point when implementing project hereafter.

3. When considering dissemination activity of technique, it should be noted that there are many agricultural fields such as organic agriculture in which the achievement cannot be expected in a limited short time but desired outcome can be reached slowly. Considering such conditions, the dissemination staff should always consider how to secure continuous attendance by target group. In the project two different types of techniques, organic agriculture technique in which the outcome could be seen after a long period and easier technique such as hydraulic ram having a short-term result, have been introduced. The project has succeeded in providing the target group with an incentive to attend the project activity continuously.