

# Terminal Evaluation

## Latin America and the Caribbean

### 1. Outline of the Project

**Country:**

Panama

**Project title:**

The Cattle Productivity Improvement Project

**Issue/Sector:**

Animal Industries

**Cooperation scheme:**

Project-type Technical Cooperation

**Division in charge:**

Livestock and Horticulture Division, Agricultural Development Cooperation Department

**Total cost:**

**Period of Cooperation** 11 April 1998 - 10 April 2003

**Partner Country's Implementing Organization:**

The University of Panama (UP)

**Supporting Organization in Japan:**

Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries of Japan

**Related Cooperation:****1-1 Background of the Project**

Stock breeding in Panama is an important industry, which accounted for about 40% of the whole agricultural sector (shares 10% of GDP). However, 90% of the livestock farmers were small and medium scaled, having just immature techniques and low productivity. Their income was low and unsteady as they were very weak in farming management. As Panama joined the World Trade Organization (WTO), the productivity improvement and income stability of those small and medium scaled farms became an urgent task. Under the circumstances, the government of Panama requested the government of Japan for a Project-type Technical Cooperation to improve livestock techniques suitable to the small and medium scale farmers, to promote cattle breeding in Panama and to enhance international competitiveness.

**1-2 Project Overview**

For the improvement of productivity and income stability of small and medium scaled farmers in Panama, the project implemented cooperation, such as development and instruction of techniques for forage production management, feeding management, reproductive management and organizing manuals, setting the University of Panama (UP) as an implementing organization.

**(1) Overall Goal**

To contribute to the improvement of the income of small-scale farmers.

**(2) Project Purpose**

Cattle productivity of small-scale farms by suitable cattle production technology.

**(3) Outputs**

- 1) Methods for forage production management are established, suitable to local areas.
- 2) Methods for feeding management are established suitable to local areas.
- 3) Methods for reproductive management are established suitable to the project areas.
- 4) Counterparts, extension workers, Officials of Ministry of Agricultural Development (MIDA) and model farmers are given training to learn adequate methods of cattle production.

#### (4) Inputs

Japanese side:

Long-term Experts	10	Equipment	121 million yen
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Short-term Experts	16	Local Cost	60 million yen
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Trainees received	21		
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Panamanian Side:

Counterparts	11		
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Land and Facilities

Facilities Maintenance Cost	350	Thousand US dollar (47 million yen)	
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Local Cost	79	Thousand US dollar (10 million yen)	
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## 2. Evaluation Team

**Members of Evaluation Team** Leader: Kozo INADA, Deputy Managing Director, Agricultural Department Cooperation Department, JICA

Breeding/Forge Production/Feeding Management: Kenichi ARIYAMA, Director, Animal Hygiene Division, Tokachi Station, National Livestock Breeding Center

Agricultural Policy Cooperation: Kazuhisa SHIMAZAKI, Section Chief, Technical Cooperation Division, International Affairs Department, General Food Policy Bureau, Ministry of Agriculture, Forestry and Fisheries

Planning Evaluation: Hidetaka FUNO, Deputy Director, Livestock and Horticulture Division, Agricultural Development Cooperation Department, JICA

Evaluation Analysis: Masanobu SAKURAI, Naigai Engineering Co., Ltd.

**Period of Evaluation** 13 November 2002 - 24 November 2002

**Type of Evaluation:** Terminal Evaluation

## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

#### (1) Relevance

The government of Panama announced the agricultural livestock sector strategy, "Panama Rural Plan 2001 - 2004", emphasizing its policy for rural development as a countermeasure against rural poverty and trade liberalization. In the meantime, domestic producer price for raw milk has decreased as a result of the international competition. The farmers wished to improve the productivity to cope with the lowering milk price. To cope with these situations, the Panama government specified the Azuero region where small-scale farmers were concentrated as the priority area for solving the issue and introduced a financial support plan with the aims of productivity improvement at small-scale farms. Therefore, the project was matched with the national policy and the social needs of Panama.

#### (2) Effectiveness

By taking the daily record of the farm activities, it was revealed how the managing status of stock breeding farms and appropriate technique for each farm could be selected and introduced. Through the dispensing methods of silage (forage fermented and stored at silo), enough forage was assured in dry season, enabling milk production even in the dry season. As the capability of milking cow improved, the milk yield was increased. Through the instruction of maintaining the nutritional status for cow and breeding management, first delivery became earlier, and the lifetime milking period became longer. Although the coverage of indicators of the project purpose was limited to the model farms, those indicators have reached the target level, and the project resulted in the improvement of productivity of those farms.

### (3) Efficiency

Dispatch of experts, inputs of equipment and acceptance of training participants were appropriately implemented, and the coordination with other cooperation schemes such as grassroots grant assistance of Japan and senior volunteer was promoted. As for the inputs for the project activities, construction of demonstration facilities were delayed, and the drought had adverse effects to the project. However, as a whole, the project was appropriate.

### (4) Impact

There was some positive impacts as follows.

- 1) The extension system developed by the project was referred to in organizing the section for extension services of the Panama Livestock Promotion Plan.
- 2) The UP considered establishing the "PROMEGA Institute (the institute for Cattle Productivity Improvement Plan)" for the support and continuous development of small-scale livestock farmers.
- 3) MIDA established a master's degree course for agricultural extension in UP to train agricultural extension workers.
- 4) The Agricultural National Institute was preparing for lessons utilizing the business diagnosis manual which was developed through the project.
- 5) Model farms hired workers and generated employment opportunities in the region.
- 6) Forestation of shade trees (trees that made shades where cattle hide from heat) and making waste land into grass land helped preserve the environment.
- 7) Through extension activities utilizing mass media, the project activities were widely notified to the public.
- 8) One of the model farmers was awarded with a prize from the president of Panama as an excellent cattle farmer.

### (5) Sustainability

- 1) Institutionally, MIDA established a master's degree course for agricultural extension in UP. In addition, establishment of the PROMEGA Institute, which takes a major role of the succeeding project in this field as a part of the Panama university, has been under consideration, and it began to foster extension workers.
- 2) Financially, the government of Panama has assured a budget of 100,000 US dollars per year for the project even after the termination of the cooperation. The Institute will increase its income by selling milk.
- 3) Technically, the majority of the counterpart personnel will work continuously in each field even after the end of the cooperation. Not only the model farmers, but also neighboring farmers have introduced several techniques improved through the project on their farms. Therefore, sustainability has been assured.

## **3-2 Factors that promoted realization of effects**

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### (1) Factors Concerning the Planning

In Panama, every time the administration changes, the ministers as well as the senior official level of departments used to be changed. The consistency in policy has not been secured in many cases. However, the UP had stable and affluent staff and could manage the project within the budget of UP. Selecting UP as the implementing organization led to the stable management of the project due to its superiority to governmental agencies both in terms of the personnel and budget.

### (2) Factors concerning the Implementation Process

With the efforts from UP, three counterparts in three different fields worked as full-time staff during most of the cooperation period, which enhanced the efficiency of the project.

## **3-3 Factors that impeded realization of effects**

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### (1) Factors Concerning The Planning

At the planning stage of the project, the project included only the development of techniques and did not included its extension part, therefore extension of the acquired techniques remained as an issue of future subject.

### (2) Factors concerning the Implementation Process

At the beginning of the project, the techniques demonstrated and established in the project farm were planned to be transferred to the other model farms using the demonstration farms in the project site. However, the preparation of facilities of the demonstration farm was delayed, and the experts, together with counterparts, had to go directly to the model farms to demonstrate and transfer the techniques.

### **3-4 Conclusion**

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Even though the project was affected by the delay of preparation of the demonstration exhibiting farms and drought, the technical transfer was steadily implemented in each field. The project purpose will be accomplished within the cooperation period and will be terminated as planned.

### **3-5 Recommendations**

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(1) It is recommended to establish a system for the appropriate usage and maintenance/management of delivered equipment by JICA.

(2) It is recommended to assure necessary budget and to continuously allocate the appropriate personnel to enhance the activities now implemented by the counterparts for the accomplishment of the overall goal.

(3) Economic incentives are one of the keys for the effective extension of the appropriate techniques to small-scale farmers. Therefore, it is necessary that the project provides positive support in farm management to small-scale cattle farmers.

(4) In order to achieve the overall goal, the Panama side should extend the production techniques developed by the project to other small-scale cattle farmers in Azuero and other regions. In such cases, MIDA should play the main role, and it is important to establish close relationship between MIDA and the related institutions, to assure water during dry seasons, to provide user-friendly finance for small-scale farmers and to improve the milk quality and sanitary condition for the livestock animals.

### **3-6 Lessons Learned**

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(1) In designing a project framework for supporting small-scale farmers, it is critically important to consider carefully not only the development of appropriate technique, but also the extension methods of the techniques to small-scale farmers.

(2) Because the scope of the indicators set for the project was limited to the model farmers, there was a great gap between the project purpose and the indicators in the PDM. Due to this, the true achievement of the project purpose was not measured enough. For a future project, it is necessary to pay attention to the indicators so that they represent the project purpose appropriately.

(3) If a farm management model is required to be developed for the target groups of small-scale farms, to increase the feasibility of the model, it should be developed considering relevance of the size of initial investment and operating fund.

### **3-7 Follow-up Situation**

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One Follow-up expert on improvement and extension of the cattle Productivity improvement technology has been dispatched from 24 November 2003 to 23 November 2005).