

Terminal Evaluation

Latin America and the Caribbean

I. Outline of the Project

- Country: United Mexican States
- Project title: The Agricultural Machinery Test and Evaluation Project in Mexico
- Issue/Sector: Agricultural Machinery
- Cooperation scheme: Project-type Technical Cooperation
- Division in Charge: Agricultural Technical Cooperation Div., Agricultural Development Cooperation Dept.
- Total cost: 736 million Yen
- Period of Cooperation (R/D): From March 1, 1999 to February 29, 2004
- Partner Country's Implementing Organization:
 - 1) General Directorate of Cooperation and Technology Development, Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Foods (SAGARPA)
 - 2) Valle de Mexico Investigation Center of INIFAP (National Research Institute of Forestry, Agriculture and Livestock), SAGARPA
- Supporting Organization in Japan:
 - 1) Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries
 - 2) Bio-oriented Technology Research Advancement Institution

1. Background of the Project

The modernizing farm management and improvement of social and economic welfare in rural areas, through the mechanization of small and medium scale farmers and the improvement of their productivity, is important within the context of overall Mexican agricultural policy. However, progress in agricultural mechanization has been sluggish, among other things, because of the lack of active government agency participation in creating uniform standards for testing and evaluating agricultural machinery. This is essential in guaranteeing the quality and performance of agricultural machinery. Therefore the Mexican Government, through SAGARPA (formerly SAGAR), has decided to introduce a testing and evaluation system for agricultural machinery performance. To implement this important effort, the Mexican Government has requested to Japan a project-type technical cooperation for the purposes of establishing the requisite testing methods and evaluation standards, and training of technical personnel. This project started in March 1999 as a 5 years cooperation project aiming strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test.

2. Project Overview

(1) Overall Goal

Agricultural machinery with appropriate performance and safety for small and medium farmers are developed and extended.

(2) Project Purpose

Strengthen evaluation test system through drafting of the methods and standards of evaluation tests as well as through the improvement of techniques and knowledge for the execution of evaluation test.

(3) Outputs

1. The types of machinery to be dealt with in the Project are selected on the results of preliminary surveys.
2. Techniques for evaluation tests are improved.
3. Evaluation standards are drafted.
4. Experts for evaluation tests are fostered.
5. Evaluation test system is strengthened.

(4) Inputs

Japanese side:

Long-term Expert	10 persons	Equipment	149 million Yen
Short-term Expert	13 persons	Local cost	88 million Yen
Trainees received	14 persons		
		Total Cost	237 million Yen

Mexican side:

Counterpart	Total 45 persons
Land and Facilities	Test field, office and testing laboratory
Local Cost	3,275 thousand pesos

II. Evaluation team

Members of Evaluation Team

- 1) Leader: Mr. Hiroyuki ARAI, Deputy Managing Director, Agricultural Development Cooperation Dept., JICA
- 2) Agricultural Machinery: Dr. Akihiko ONODA, Director, Testing and Evaluation Dept., Bio-oriented Technology Research Advancement Institution
- 3) Evaluation Planning: Ms. Miho SASAKI, Agricultural Technical Cooperation Div., Agricultural Development Cooperation Dept., JICA
- 4) Evaluation Analysis: Mr. Isao DOJUN, Chuo Kaihatsu Corporation
- 5) Interpreter: Ms. Yuko YAGI

Period of Evaluation

from 10/September/2003 to 27/September/2003

Type of Evaluation:

Terminal

III. Results of Evaluation

1 Summary of Evaluation Results

(1) Relevance

Mexican policy on mechanization in agriculture is mentioned in the Sector Program on Agriculture, Livestock, Rural Development and Food 2001-2006. And Mexican government has been executing a program called "Alliance for Rural (Alianza para el Campo/ Alianza Contigo)" from 1996. Within this program, there is subsidy program for purchase or repair agricultural machinery to promote agricultural mechanization. In case manufacturers of agricultural machinery accept the NMX standards and produce more durable and effective machinery, farmers will be benefited in respect on selection and use of agricultural machinery. So this project is consistent with the policy and program of Mexican government and the needs of farmers.

(2) Effectiveness

11 kinds of draft standards for 7 types of agricultural machinery were already made and technical transfer regarding knowledge and experience on evaluation and test has been done for not only staff of CENEMA but also for staff of universities that has possibility to become Testing Laboratory for agricultural machinery through execution of training courses. Therefore, extent of achievement of the Project Purpose is high in respect to indicators set in PDM (Project Design Matrix). But evaluating from viewpoints of "Strengthen evaluation test system", achievement of Project Purpose or effectiveness of the Project is not so high because there is no agricultural machinery which is tested and certified based on official standards. This is due to non function of CNAPEMEA that is a organization for testing and certifying agricultural machinery produced by manufacturers.

(3) Efficiency

There are some circumstances that influenced negatively on efficiency of the Project. (Delay of improvement of facilities, assignment of counterpart personnel at the beginning stage of the Project and allocation of budget at first quarter of fiscal year, etc.) But, in the range that the Project can control, it is assessed that efficiency is high.

(4) Impact

There are several impacts as follows.

- 1) Several universities introduced the subject about the evaluation of agricultural machinery in curriculum.
- 2) CENEMA has received students of Chapingo University for field practice on the matters of agricultural machinery and staff of CENEMA educated them as a instructor.
- 3) Impact on quality improvement of products of manufacturers of agricultural machinery through feed back of results of evaluation and testing executed by the Project.
- 4) Bring better understanding about the standardization of agricultural machinery through information diffusion and participation for meeting of agricultural society, etc.

(5) Sustainability

1) Organizational aspects

SAGARPA decided to establish an Organization for Certification in INIFAP instead of CENAPEMEA and allocated necessary budget for its. SAGARPA also allocated budget for preparation of equipment and facilities for testing and evaluation of tractor to become CENEMA as a Laboratory of Testing. These measures are things necessary to establish the evaluation test system. Moreover, Alianza program that is promoting mechanization of agricultural machinery will be executed continuously, so that the organizational sustainability of CCENEMA and sustainability of the evaluation test system will be improved.

2) Financial aspects

INIFAP is a decentralized Research Public Organism, coordinated by SAGARPA with own assets and autonomous administration. This status makes easier the CENEMA operation because self income can be used for herself. But, it is necessary to allocate continuously appropriate budget for CENEMA by the Mexican government, because it is not certain that CENEMA can gain enough financial resource from self income.

3) Technical aspects

Counterpart personnel acquired capability for making testing method and draft standards and conducting training courses on agricultural machinery that this Project dealt with except tractor. There is high sustainability on this regard on condition that counterpart personnel will not transfer another position or resign.

2 Factors that promoted realization of effects

(1) Factors concerning to Planning

It was good measures for gaining good cooperation and coordination to the operation of the Project that the executive staff of SAGARPA and INIFAP assigned as counterparts of the Project.

(2) Factors concerning to the Implementation Process

Monthly meeting participated by the executive staff of SAGARPA and INIFAP was very effective for the Project to promoting better understanding on the progress and problem of the Project.

3 Factors that impeded realization of effects

(1) Factors concerning to Planning

Main negative factors were inadequate project framework that non functioning CENAPEMEA was included in as pre-condition of the Project, and Mexican side failed to activate the CENAPEMEA. Because of these factors, there is no agricultural machinery certified based on official standards made by the Project.

(2) Factors concerning to the Implementation Process

Frequent change of executive officer in SAGARPA and INIFAP influenced to the project efficiency negatively, because whenever the change of officers happened, it was necessary to explain to them about the Project. Delay of disbursement of budget for the Project also influenced negatively for smooth implementation of the activities.

4 Conclusion

There are great achievement or outputs regarding draft standards on agricultural machinery and technical transfer on evaluation and testing, but regarding tractor, degree of achievement is not sufficient.

Project Purpose regarding "Strengthen evaluation test system" will not be achieved sufficiently within cooperation period. But, there is bright perspective on strengthen evaluation test system and achievement of Project Purpose in near future, because SAGARPA decided to make an organization of certificate in INIFAP.

5 Recommendations

It is necessary to continue execution of the Alianza program. It is necessary to establish promptly a structure or organization as a organization of certification in INIFAP. Grade up of its capability and technical transfer to staff of other organization is necessary. In order to further strengthen CENEMA's skills, it is recommended to participate in regular training courses of JICA related the agricultural machinery. Assistant to the field of testing and evaluation of tractor by Mexican side and Japanese side are necessary.

6 Lessons Learned

In order to ensure the sustainability of the project, it is necessary to analyze the sustainability issues carefully at the planning stage in terms of institutional and financial aspects.