





# AID-FOR-TRADE: CASE STORY

## CHINESE TAIPEI



**Petén Papaya Export Project in the Republic of Guatemala**



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### **A. Project Background**

In 2001, Moscamed, a cooperative programme to eradicate the Mediterranean fruit fly (“medfly”) initiated by the governments of the United States, Mexico and Guatemala, certified that Petén province in Guatemala was no longer plagued by the insect. Although the government of Guatemala began to channel funding towards maintaining Petén’s medfly-free status shortly thereafter, local farmers lacked the means to exploit this status and continued to face difficulties boosting exports of tropical fruits, and the government itself also lacked production skills in this particular produce area.

At a time when it was seeking ways to transform its overseas Taiwan Technical Missions (TTMs) and promote cooperative aid for trade projects, the International Cooperation and Development Fund (TaiwanICDF) became aware of this unique advantage afforded to Petén. In May 2005, the organization initiated a two-month study to evaluate the feasibility of boosting exports of tropical fruits from Petén, which drew positive conclusions. In December, the TaiwanICDF’s TTM in Guatemala approached the local government in the Petén municipality of La Libertad over the provision of land, with the Petén office of the Guatemalan Ministry of Agriculture, Livestock and Food (MAGA) acting as an intermediary. Parties agreed to grant the TTM a 20-year lease, free of charge, for the purpose of establishing and operating a demonstration farm. Given the huge potential for such a project to drive rural development in the region, Guatemalan authorities also expressed their desire for the TaiwanICDF to cooperate with private enterprises and establish a fruit and vegetable production and marketing venture in Petén.

### **B. Design and Implementation**

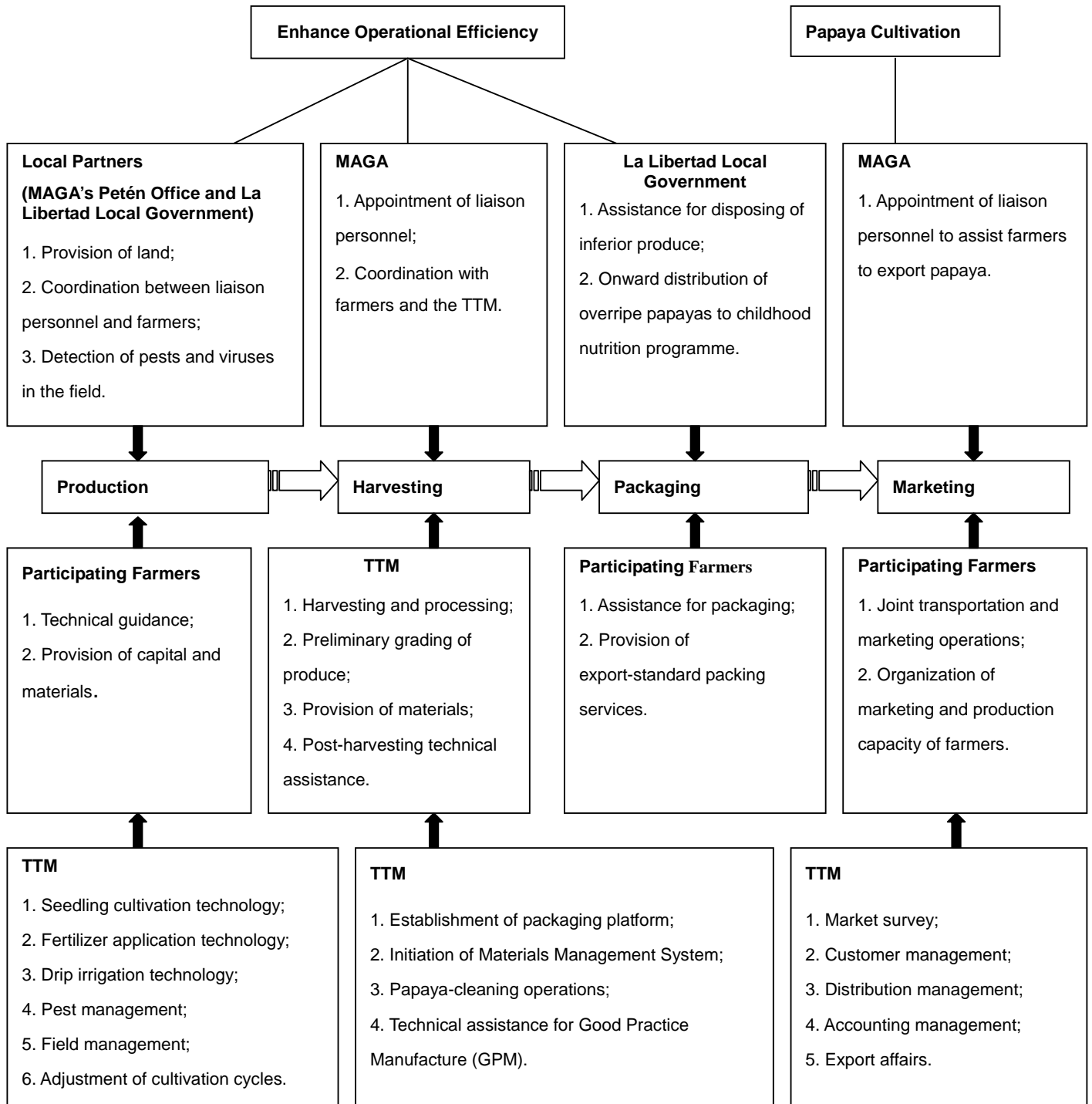
From the outset, the project was conceived with a view to nurturing an integrated papaya industry with an end-to-end series of operations running from production to harvesting, packaging and marketing. The TTM would help local farmers to work with government agencies – specifically, MAGA’s Petén office and local government in La Libertad – and provide technical assistance for these production, harvesting, packaging and marketing operations. The TTM would also oversee the establishment of a packing plant, with authorities in La Libertad providing a plot of land for lease and the MAGA assigning liaison personnel.

In 2005, authorities in La Libertad made a 71-hectare plot available to the TMM. This plot would accommodate the project, including the demonstration farm, and was provided free of charge under a 20-year lease. Ground preparation began in 2006 and was followed by the construction of drip irrigation facilities, wells and other sub-projects to establish essential infrastructure. The plot was expanded to 114.32 hectares in 2008 with the consent of authorities in La Libertad. Agricultural technicians began to propagate and cultivate papaya seedlings at the demonstration farm in January 2006 and launched a widespread planting scheme one year later. Papaya orchards were subsequently planted across 45 hectares (December 2008), 17 hectares (2007), 28 hectares (2008), 14 hectares (2009) and 31 hectares (2010).

The project made use of a 114-hectare plot, a justifiable minimum considering necessary economies of scale. The TTM used the plot as its base for the cultivation of papaya and sought to implement an innovative business model throughout Petén. Financial input was considered a necessity during the first three years of the project (2007-2009), since newly planted papayas require nine months to ripen and mature, and financial strains would be unlikely to be eased until large-scale harvesting was due to begin in the third year of the project. Unfortunately, nationwide flooding during September 2008 reduced yields for the fourth and fifth harvests, while the project sustained an additional blow when papaya ringspot virus undermined the sixth to ninth harvests.

In addition, the TTM proceeded to conduct a workshop near La Libertad with a view to assisting Petén's small-scale farmers with cultivating papayas for sale in the domestic market. Drawing on various facilities available at the demonstration farm, the mission offered courses on papaya cultivation and post-harvest processing, complemented by a series of other demonstration sessions. These activities inspired farmers and administration personnel to join the common cause of promoting the papaya industry in Petén. In accordance with Guatemalan initiatives aimed at diversifying agricultural exports, the TaiwanICDF also conducted further studies to evaluate the prospect of raising other crops with overseas market potential.

**Diagram 1: Integration of Project Operations and Processes**



### **C. Implementation and Schedule**

The TTM made initial preparations to land earmarked for the project throughout 2006.

The demonstration farm became operational in 2007 following construction of irrigation, collection, packaging and processing facilities on the plot provided by authorities in La Libertad. Mission staff from the TTM also prepared a 20-hectare papaya orchard and constructed offices and sheds for farm equipment. Workshops on “Papaya Cultivation” and “Joint Transportation and Marketing” were introduced and evaluated for participant capacity and performance. A total of 41,735 cartons of papayas worth US\$ 196,940 were sold during the year.

In 2008, the TTM managed and harvested 17 hectares of papayas, extended cultivation to a total of 28 hectares and prepared an additional 43.2 hectares for future use. Packing operations were transferred from a makeshift collection site to the newly completed packing plant following construction of supplementary facilities including an insulation room, bathrooms, a restaurant and parking lots. The main irrigation pipeline and perimeter fences for the site were also installed. Marketing activities focused on customer relations management and client-building operations in the US and Canada. A total of 111,697 cartons of papayas worth US\$ 805,947 were sold during the year.

In 2009, papayas were planted across 14 hectares for the sixth and seventh harvests. Mission staff also designed a training package, “Introduction to Good Agricultural Practices” (GAP). As part of promotional activities, the first group of participating farmers received assistance with planting over four hectares, while the second and the third groups of participating farmers received assistance with the preparation of four hectares of land. Marketing activities focused on US-specific marketing and cost-control mechanisms. A total of 51,427 cartons of papayas worth US\$ 306,593 were sold during the year.

In 2010, papayas were planted across 21.5 hectares for the eighth and ninth harvests. Mission staff also designed a second training package, “Introduction to Global Good Agricultural Practices” (GGAP). As part of promotional activities, the second and the third groups of participating farmers received assistance with planting on 9.5 hectares. Marketing activities focused on training for participating personnel and client-building operations in the US and Canada. A total of 56,622 cartons of papayas worth US\$ 202,642 were sold during the year.

## **D. Results and Achievements**

**Demonstration farm:** The TTM has overseen the construction and operation of a 114-hectare demonstration farm and promoted agricultural practices suited to the cultivation of export-standard papayas. To date, the farm has been utilized to produce 10 harvests over 90 hectares. Nearly US\$ 1.25 million has been spent on recruiting local labour and the farm provides some 80 long-term and temporary jobs per month, which has given a solid boost to the local rural economy. The packing plant meets phytosanitary and quarantine standards required of exports to the US, and TTM personnel have introduced well-defined guidelines for the grading and packaging of US-bound papayas. Officials from PIPPA, the Guatemalan agency charged with inspecting and monitoring all US-bound farm exports, have since assumed responsibility for associated operations, which are crucial to the development of Petén as a sustainable, viable base for papaya exports.

**Promotional activities:** The TTM initiated cooperative, consultative mechanisms to foster the papaya industry in Petén and promoted public relations in the community by providing consultation to local farmers on issues such as fruit production, market intelligence and pest control, irrespective of the extent of their farmland. As of November 2010, arrangements had been made with MAGA and other agencies to receive a total of 2,548 visitors on fact-finding tours of the demonstration farm. These visitors have included academic staff and students of universities and colleges, personnel from MAGA-affiliated farming organizations, local government officials from La Libertad officials and farmers keen to explore the potential for papaya cultivation.

**Marketing and sales:** As of November 2010, a total of 12 containers of papayas had been shipped to the US. At some 229 metric tonnes, these 14,472 cartons of papayas earned US\$ 132,704 in foreign exchange for Guatemala. Taking domestic sales into account, total earnings to date are US\$ 1,453,012. Additionally, assistance has been provided to the Women's Affairs Office in La Libertad: From 2008 to the end of November 2010, a total of 17,673 cartons of overripe papayas with a market value of US\$ 55,228 were donated to a childhood nutrition programme.

In 2008, the project was recognized by the World Trade Organization as one of ten outstanding technical assistance projects to assist developing countries reduce non-tariff barriers.

## E. Attachments

Attachment 1: Financial Inputs

Year	Expenses for Projects (US\$)	Revolving Fund (US\$)	Remarks
2006	29,088		Construction costs.
2007	672,108		Dedicated Fund Account established on 24 September, 2007.
2008	607,302	959,666	From opening of Fund Account to Q4, 2008.
2009	522,539	147,779	
2010	496,881 (estimated)	366,427	Data for Q4 currently unavailable.
Total	2,327,918	1,473,872	Total: US\$ 3,801,790.

Attachment 2: Project Implementation Schedule

Year	Demonstration Farm	Promotion	Marketing
2006	1. Preparation of land.		1. Surveys of distribution channels and markets.
2007	1. Construction of irrigation facilities; 2. Collection and packaging; 3. Processing facilities; 4. Planting across 17 hectares (first and second harvests).	1. Workshop on papaya cultivation introduced; 2. Joint transportation and marketing activities; 3. Evaluation of capacity and actual performance of participating farmers.	1. Marketing and market exploration; 2. Sales of 41,735 cartons worth US\$ 196,940. (US\$ 4.71/carton, the total area under production was stable in central American)
2008	1. Harvesting and management of the 17 hectares of papayas grown	1. Papaya cultivation workshop ongoing; 2. Construction of	1. Customer relations management and client-building operations in

	<p>during 2007;</p> <p>2. Planting across 28 hectares (third, fourth and fifth harvests);</p> <p>3. Transfer of papaya packaging operations from a makeshift consolidation site to the newly completed packing plant;</p> <p>4. Preparation of an additional 43.2 hectares of viable land.</p>	<p>supplementary facilities at the packing plant, including an insulation room, bathrooms, a restaurant and parking lots.</p>	<p>U.S. and Canada;</p> <p>2. Sales of 111,697 cartons worth US\$ 805,947.(US \$ 7.21 /carton, Mexico and the Belize were hit by a hurricane in 2007 and the supply of papaya were reduced in 2008)</p>
2009	<p>1. Planting across 14 hectares (sixth and seventh harvests);</p> <p>2. Design of “Introduction to Good Agricultural Practices” (GAP) package of measures.</p>	<p>1. First group of participating farmers plants on four hectares;</p> <p>2. Second and third groups of participating farmers prepare four hectares.</p>	<p>1. U.S.-specific marketing and cost controls;</p> <p>2. Sales of 51,427 cartons worth US\$ 306,593.(US\$ 5.96/carton, the total area under production was stable in central America)</p>
2010	<p>1. Planting across 21.5 hectares (eighth and ninth harvests);</p> <p>2. Design of “Introduction of the Global GAP Agricultural Practice” (GGAP) package of measures.</p>	<p>1. Second and third groups of participating farmers plant on 9.5 hectares;</p> <p>2. Training for 163 persons.</p>	<p>1. Personnel training and client-building operations in U.S. and Canada;</p> <p>2. Sales of 56,622 cartons worth US\$ 202,642.(US\$ 3.57/carton, the total area under production in Peten was increased greatly, and the supply of papaya was increased)</p>