

MANGO PROCESSING AND OPPORTUNITIES

by

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INTRODUCTION

Mango is the 2nd largest most used fruit (28.2%) after banana (29.4%) in the world. The largest mango producing country is India with an annual output of 15,188,000 tonnes while Philippines ranks 10th with 800,551 tonnes, (FAO 2014, Table 1).

Table 1. World Top 10 Mango Producing Countries (FAO, 2014)

Rank	Country	Production (Tonnes)
1.	India	15,188,000
2.	China, mainland	4,350,000
3.	Thailand	2,600,000
4.	Indonesia	2,131,139
5.	Pakistan	1,888,449
6.	Mexico	1,827,314
7.	Brazil	1,249,521
8.	Bangladesh	889,176
9.	Nigeria	850,000
10.	Philippines	800,551

Philippine Mango (*Mangifera Indica*), though number 10th in the list, it has the greatest advantages:

- 1. besides its unique tangy taste and aroma, but particularly due to its**
- 2. physiological characteristics of firm pulp which set the Philippine mango the best raw material for manufacturing /processing, especially but not limited to mango drying without necessarily transforming the pulp into another state or condition nor additive to make it firm;**

These characteristics are the Philippines' most competitive advantage over the other mango varieties in the world, be it in processed, semi-processed (frozen), and fresh forms; On the other hand,

3. mango is the only fruit that can be **artificially induced to flowering** and fruiting; and
4. mango is the only fruit in the Philippines that **can be harvested at the same time.**

As a nation and in the light of AEC integration, we should harness this peculiar competitive advantage. We, both in the government and private sector **planners**, decision **makers**, **enablers** and **actors**, must put our heart and must create the mindset that will **enhance the competitiveness of our Philippine mango**, like but not limited to:

1. more product development;
2. improvement of product presentation and packaging;
3. advertising cum tourism;
4. product consumption delivery and execution (kiosks for smoothies) and the like.

In ZamPen Region, Zamboanga del Norte is # 4 while Zamboanga City is # 14 top mango producer in the country and has the capacity of producing export quality mangoes.

We must harness the mango supply spike situation of mangoes in conjunction of the oversupply situation of other food products like sardines into semi-processing.



HISTORICAL BACKGROUND

Historically and traditionally, farm prices of mangoes were at the lowest at P5.00 per kg and some were even rotting in the farm, more pronounced for the last 3 years during April to July and even extended to August this year BECAUSE OF NATURAL FLOWERING DUE TO CLIMATE CHANGE - TO UNUSUALLY PROLONGED DRY AND EXTREMELY HOT WEATHER SITUATION. The seasonality of the harvest of mangoes and that of sardines give us the opportunities of processing them into higher value if not acquiring semi-processing equipment and facility for maintaining the freshness of the harvest.

PROCESSING TECHNOLOGY OF MANGOES

Existing Technology

Dried Mango – total processing period is 2.5 to 3 days with a drying time between 6 to 8 hours depending on the size and thickness of the mangoes. Percentage recovery is between 13% to 15%.

- **Yellow Sliced Mangoes are ripened about 4 days from harvest for yellow sweetened mangoes; Green Sliced Mangoes are processed right upon harvest for green sweetened mangoes.**
- **Candied Mangoes – comes from the sides of the mangoes alongside the seed. This is usually mixed with other products like coconut and tamarind;**
- **Chocoloate-coated Mangoes;**

- 2 Puree - comes from pure mango pulp mixed with mango juice and water;**
- 3. Juice - comes from pasteurized mango solution and water;**
- 4. Mango Halves or diced in Syrup; and**
- 5. Blast Frozen Mango.**

Latest Available Technology

Individual Quick Freezing Technology (IQF)

This technology individually freezes the diced or sliced mangoes or any minute or tiny food products like sardines and anchovies, minced meat, diced or minced onions, etc.

The smallest capacity of this equipment of 1,000 kgs per hour can freeze diced mangoes of 2mmx2mm, in size in just 4 minutes, individually piece by piece without sticking together over a long period of storage time, technology-wise of up to 18 months.

Total investment cost for the equipment alone is US\$500,000. This machine is multi purpose, it can also be used, for ZamPen, basically for mangoes and other fruits and also for sardines.

This formula on IQF technology must be in place and investment must be made available as quickly as possible. LET US DO IT NOW.



Other Investment Opportunities in the Mango Supply Chain:

1. Production – Mango fruit production is investment ready.
2. Logistics – Plastic Container Crates, Fruit Trucks and Container Vans
3. Exportation – Fresh Mango to Europe.

Other Investment Issues & Concerns:

1. Financing availability
2. – Soft Loan
3. – Grant – Associations & Cooperatives

Current Projects of PMIFI:

1. 5-Country Int'l. Mango Festival &
2. Mango Fruit Production Investment Promotion Caravan

3. P10 million grant for PMIFI Mango Industry Enhancement & Empowerment Project:

A. Rehabilitation of Mango Trees and Production;

B. Price Stabilization – complete mango tree inventory for production and harvest planning, etc.

C. Mango Trading/Marketing Assistance;

D. Reactivation/reorganization of regl, prol, city mango producers assns.

E. Postharvest Efficiency Project – plastic crates, harvest gears; training of more sorters.

4. Irradiation Facility – quarantine treatment of fruitfly for mango exports to USA, New Zealand & Australia. P1 80 million

5. Individual Quick Freezing Facilities Project Proposal preparation stage.

Key to Successful Mango Industry:

- The mango industry is composed of small farmers situated in packets nationwide;
 - Unlike the banana and pineapple industries which are owned and operated by multi nationals and corporate farms, the mango producers must be organized from the municipal to provincial or regional, to be able to tap grants for funding requirements of the associations business concerns, both from the national government agencies, from the LGUs and foreign funding institutions like WB, etc.
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As President of PMIFI, I challenge all the officials of LGU, of NGAs (DTI, DA, DOST) and the mango producers to organize, empower and capacitate your local associations for a successful mango industry.

THANK YOU

