



[The Need]

Manufacturers
Distributors

[The Team]

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[The Vision]

MangifeTek as Harvest Technologies for Enhancing Mango Production is envisioned to increase the potential export yield by reducing the harvest-related losses by 67%.

Problem

The most popular mango variety in the Philippines is known as "Manila Super" which ranks 3rd as the most important fruit, providing a source of livelihood to about **2.5 M farmers**. It has proven to be advantageous in terms of superior quality, ideal tropical conditions of the country and strong drive among domestic processors. Despite these advantages, the industry will **need to address several constraints** at the farm level.

From 2010 to 2014, the farmgate price of Carabao mango increased by roughly 8%, while the **cash cost of inputs** (e.g. fertilizers, flower inducers) **increased by 23%** thereby significantly **deteriorating the profitability** of mango production (BAS, 2010; PSA, 2015). Furthermore, there are **few exporters** with Vapor Heat Treatment and **Hot Water Treatment** facilities required for fresh mango entry into the Japanese and Korean markets (Briones et al., 2013; Hambloch, 2015). Finally, the equipment for **handling and packaging** are **greatly inadequate** and graders have **no formal training on sorting or proper handling**. As a result of this, post-harvest fruit **damage and rejection rates** climb up to **50%** (Field Research, 2016).

The Philippines ranks 7th in fresh and dried mango, getting 4% share in the global market, and 9th in 2013 as top producing mango producers with 800k MT, the country has to cope with the industry's demand. Pre, during & post-harvest facility are **necessary** to aid our declining production.

Solution

MangifeTek is composed of three (3) products being used in different phenological stages of mango.



Mango Power Spray Nozzle (Pre-harvest)

MPSN has one orifice at the top and two orifices nozzle forming an angle of 45° for wider swath width. It is more effective in reducing pests count while decreasing the volume of chemicals by half, thus significant reduction of input cost. It has a spray capacity of 2.79 ha/day.



Mango Mechanical Fruit Picker (On-harvest)

MMFP has significant improvement on reducing latex stains of the mangoes by 72% and mechanical bruising without reducing picking capacity as compared to conventional "Siqqao".

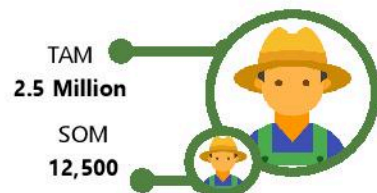


Mango Integrated Postharvest Facility (Post-harvest)

MIPF is has hot water treatment at a preset time & temperature & bubbles for even distribution of heat. It increases the shelf life by treating diseases caused by anthracnose and stem-end rot. Mishandling is reduced because it is fully automated.

Addressable Market

The Philippines being one of the top producers of mango in the whole world, it has 2.5 million mango farmers. By extracting 5% of the TAM, the fair market size is **12,500**.



Market Validation

The MangifeTek products were pilot tested in three (3) mango farms in Davao region. 100 pieces of MPSN were already sold in the local government units. During agricultural exhibits, the farmers show strong interest in using all products of MangifeTek.

Competitive Advantage

MangifeTek has **high product innovation** because it has done numerous tests to fit farmers' need. It is a **solution to specific problems** (ex. latex) and innovations is done at farmers level. The price is higher due to **additional specifications**. Loyalty and popularity are low but can **be improved** by training and product demonstration.

Technology/IP Development/Status/Plans



Business Model/Distribution Channel



Licensing is the most viable model. Sale of technology is also an option.



Business to business (B2B) and **direct selling** are two distribution channels. Direct selling is appropriate for MPSN and MMFP. Farm Support Service Center should be established for MIPF.

