

# Increasing The Global Market Potential For Tropical Fruits

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Tropical and Subtropical Fruits  
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By

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# Malaysian Agrifood Corporation Berhad

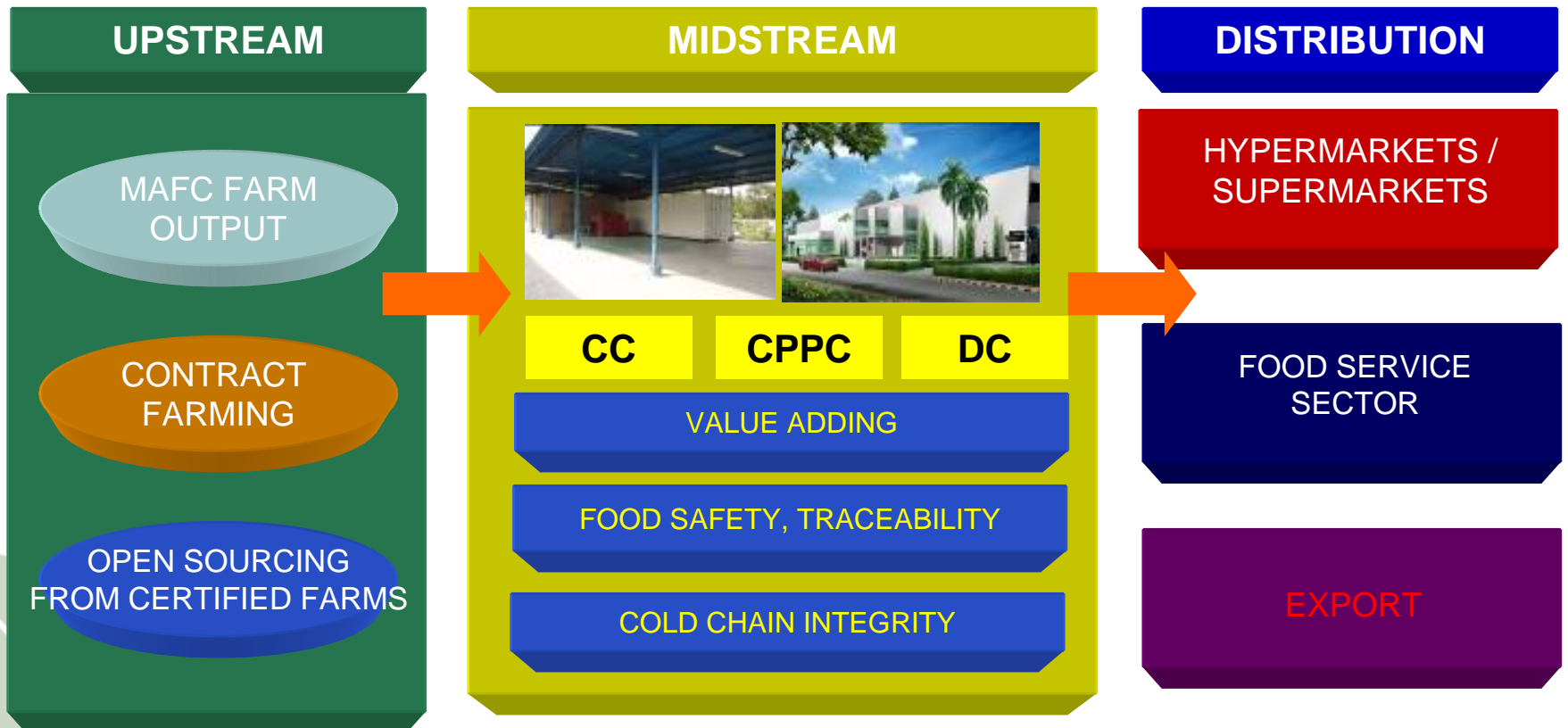
## A Food-Supply Chain Management Company

- Established in 2006 by Khazanah Nasional Berhad
- Specialized in managing the production and delivery of safe and quality food from 'farm to table'.
- Rationalizing Food Supply through Crop Aggregation
- Value Adding to the industry whilst increasing farmers income and productivity



# MAFCs Proposition

SAFE & QUALITY PRODUCE TO ALL MARKETS



## Factors Influencing Global Market Potential for Tropical Fruits

- Quantity and consistency of supply
- Fruit Quality & Production Standards
- Shelf Life & Post harvest Technologies
- Logistic Limitations

**All  
influenced  
by the  
economics  
of the  
business**

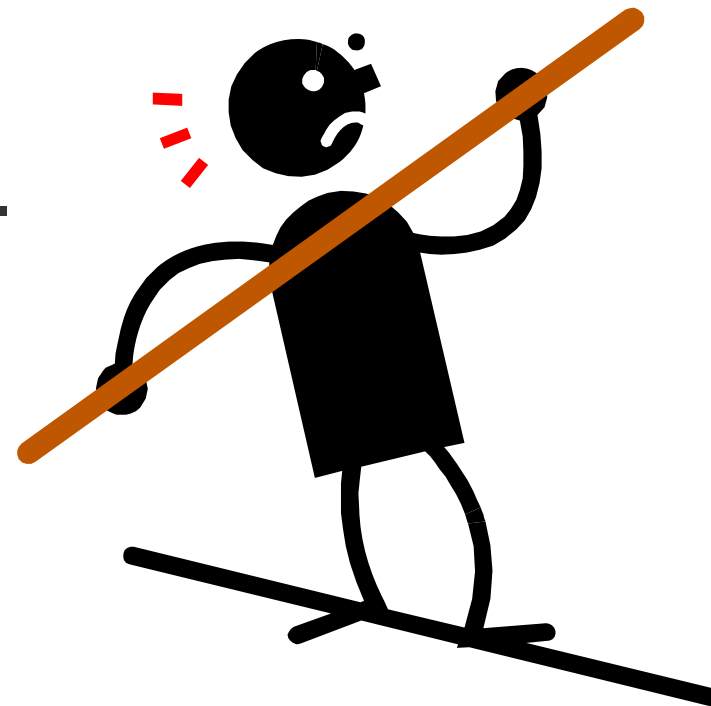
# Consistency of Tropical Fruit Supply

- Large retail chains want ;
  - Year round (12 month) availability.
  - Bigger quantities at peak periods (xmas)
  - Stable (low) prices & Stable (high) quality



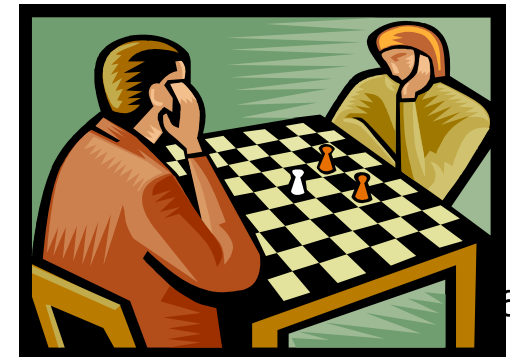
## Challenges in Tropical Fruit Supply

- Producers & Exporters face ;
  - Interruptions in production.
  - Inconsistent quality.
  - Cargo Limitations.



## Some Basic Business Challenges for Producers & Exporters of Tropical Fruits

- Limited access to “best” production technologies
- Relatively High Production & Handling Costs
- Low or modest profit margins
- High Business Risks
- Slow cash turn-around
- “consignment” nature of the business
- Difficulty to “stand still” in years of poor production /sales





About business risks..

## ***Unexpected Things Happen***



1. No fruit / Oversupply
2. No Cargo space
3. Ship is delayed
4. Exchange rate down.
5. Customer cancelled.
6. Boxes crushed.
7. On -Holiday's
8. Etc.....



## Information on Some Major Fruit Companies

Company	Company type	Production Started	Location where Main Production Started	Approx. annual turnover \$ US Billion *	Iconic crop
<b>Dole Food Co Inc</b>	private	1851	USA	6.1	Pineapple
<b>Chiquita Brands</b>	private	1885	Costa Rica	4.4	Banana
<b>Delmonte Fresh Produce</b>	private	1858	USA	3.2	Pineapple
<b>Fyffes Plc</b>	private	1880	Canary Islands	2.6	Banana
<b>Sunkist Growers Inc</b>	Cooperative	1893	USA	1.0	Citrus
<b>National Grape Coop Assoc Inc</b>	Cooperative	1933	USA	0.6	Grapes
<b>Zespri International Ltd</b>	Cooperative	1924	New Zealand	0.5	Kiwi
<b>Pacific Coast Producers</b>	Cooperative	1971	USA	0.3	Temperate Fruit & Tomatoes

## Players in the Tropical Fruit Business in SEA

- Most are Small – Medium Size businesses
  - Typically \$US 1 to 5 Million / year sales turnovers.
  - Supply base often less than 100 ha.
- Gross Profitability is typically only 10 to 15 % (or less)
  - After fixed costs, net profit is typically 5 to 10 % (or less)
  - Risks are high + Losses are common, further reducing profits.
- Most players survive on volume basis.
  - Which can be affected by supply variations.
  - Does not leave enough to invest substantially in technology



## Costly Areas For Tropical Fruit Production

- Proper Soil Preparation and Drainage
- Soil Conditioning
- Irrigation
- Fencing
- Good Quality Planting Material
- Pest and Disease Management
- Proper Packing facilities
- Road access to farms
- Cold Rooms

**Today most Tropical Fruit Farms Are Lacking in these areas mainly due to the economics of the business**



# Lanchang Modern Farm

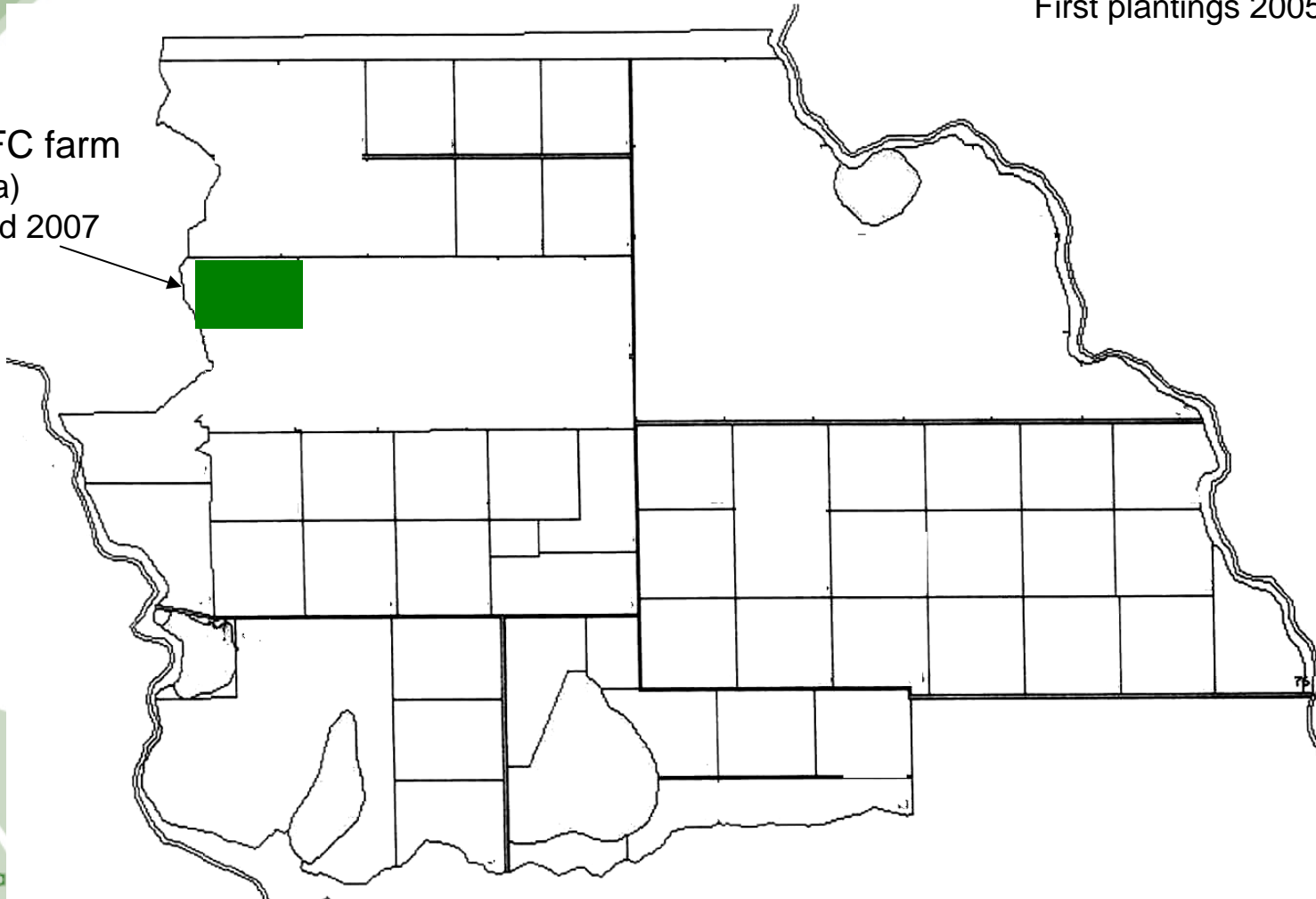


# Lanchang Modern Farm

3200 ha

First plantings 2005

MAFC farm  
(40 ha)  
started 2007







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## Area- Wide Pest Management Definition

- A long-term campaign
- Against defined pest species
- In a relatively large predefined area
- To reduce population to a non-economic status



(adapted from Lindquist D.A, 2000 Pest management strategies : Area-wide and conventional. In "Area-wide control of fruit flies and other insect pests". KH Tan ed.)

# IPPC Definitions for Pest Status

- **Pest Free Area (PFA)**

Defined in ISPM 4 ,26 and also in other draft documents.

“An area in which a specific pest does not occur, as demonstrated by scientific evidence and in which , where appropriate , this condition is being officially maintained.”

- **Area of Reduced Pest Prevalence (ALPP)**

Defined in ISPM 22 and also in other draft documents

“An area in which the occurrence of a specific pest is below an accepted threshold level ” .

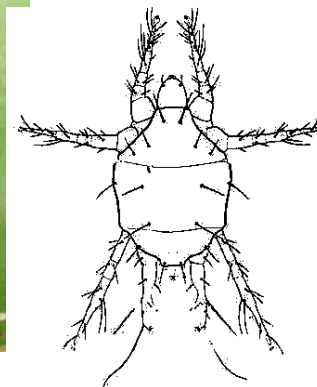
## Area Wide Pest & Disease Management Opportunity at Lanchang

- This is a large area (+ 3000 ha) dedicated to crops.
- Most of the farms are large (40 ha+)
- Mostly fruits and mainly for export.
- There are relatively few pests or disease at the start.
- The area is relatively remote, with only 3 small villages with 5 km (Paya Layman, Kg. Tres, Kg. Jergoh)

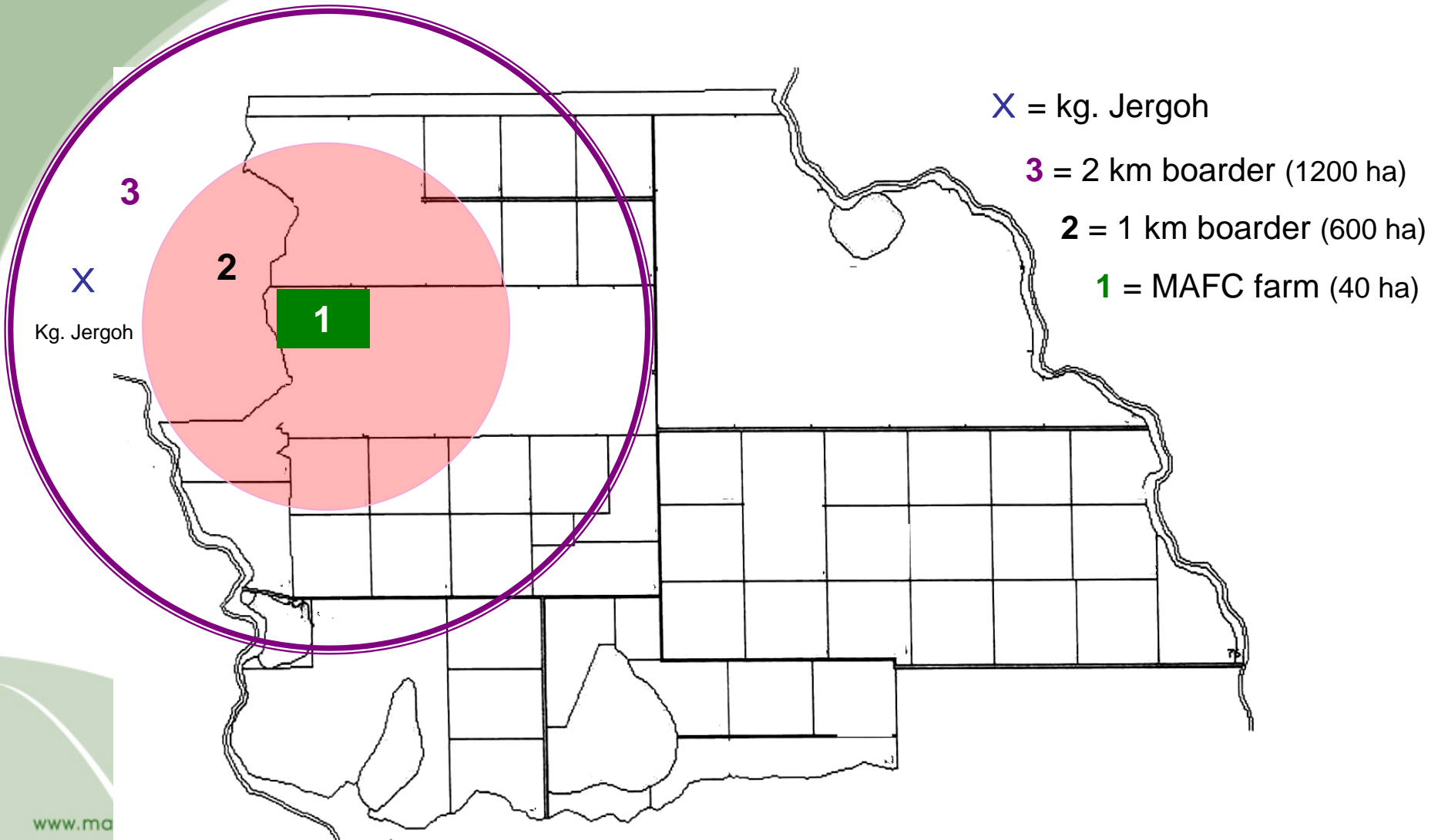
## Area-Wide Pest & Disease Management

# Pest & Disease Targets at Lanchang

- **Bacterial Dieback**
- Papaya Ring spot Virus
- **Fruit Flies**
- Scale Insects
- Mites



# AWPDM at Lanchang Modern Farm







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## Other Countries with Area-Wide Fruit Fly Management Programs

Country	Tactics Deployed
USA	SIT, BAT, MAT
South Africa	SIT
China (ROC)	MAT
Thailand	SIT
Vietnam	BAT
Australia	BAT, MAT, SIT

SIT = Sterile Insect Technique  
BAT = Protein Bait Applications  
MAT = Parapheromone lures

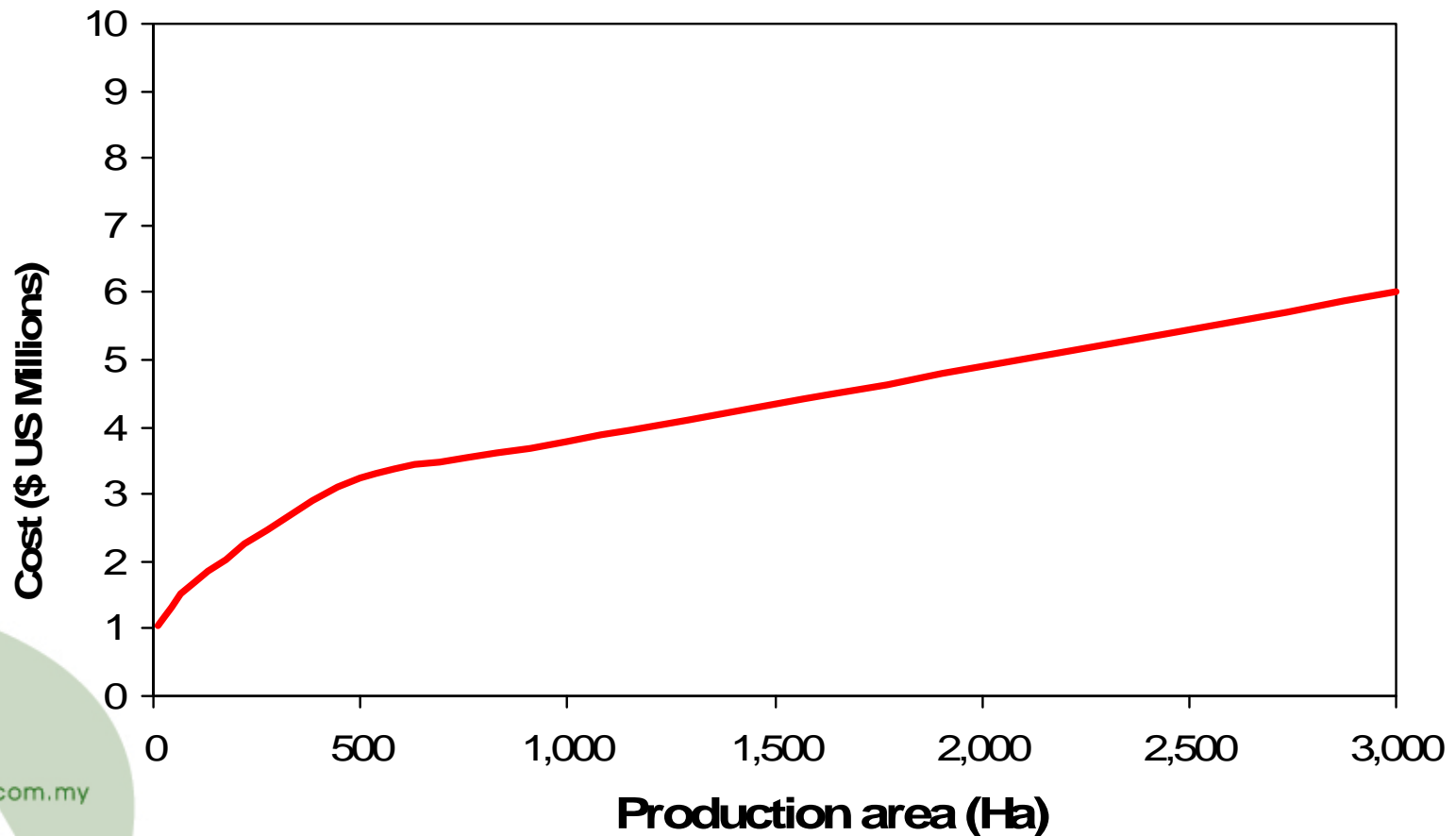


## Investments in Area Wide Pest Management by Other Countries

Year	Country	Location	Area ( Ha)	Pest Species	Cost \$ US Millions
1997	Argentina	Mendoza & San Jan Provinces	375,000	Ceratis capitata (Med Fly)	\$ US 9 Million per year
1997	Brazil	National Funding		All Fruit Flies	\$ US 13 Million per year
2005	USA	National funding to APHIS Fruit Fly Exclusion and Detection (FFED)		All Fruit Flies	\$ US 57 Million per year
2006	USA	California ( Mediterranean Fruit Fly Exclusion Program)	2155 sq. miles	Ceratis capitata (Med Fly)	\$ US 15 Million per year
2006	USA	Hawaii (HAW Fly –PM program)		4 species of Fruit fly	\$ US 1 Million per year

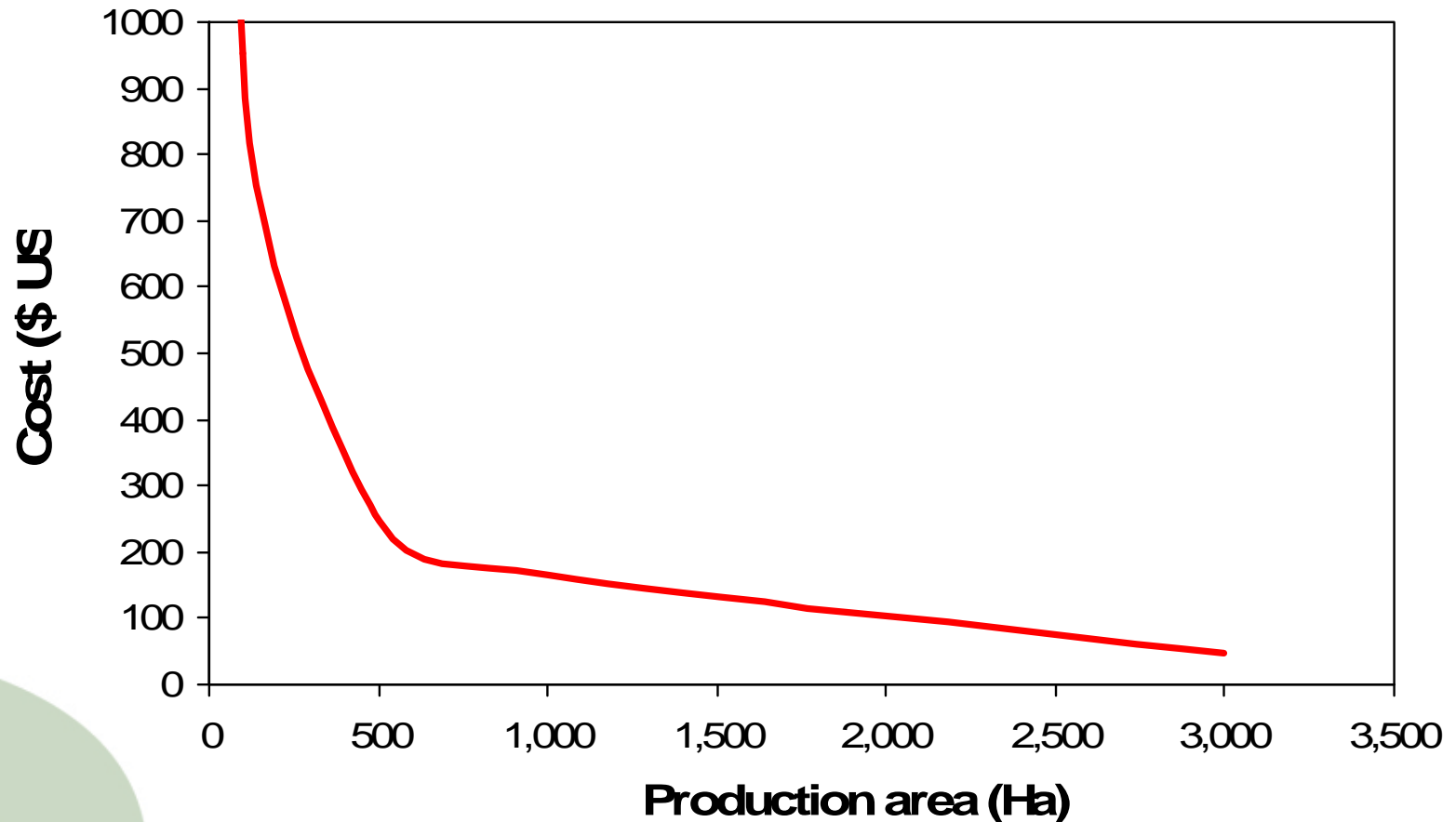
## Effect of Production Area on the Total Cost of Area-Wide Pest & Disease Management in Papaya

### ANNUAL COST

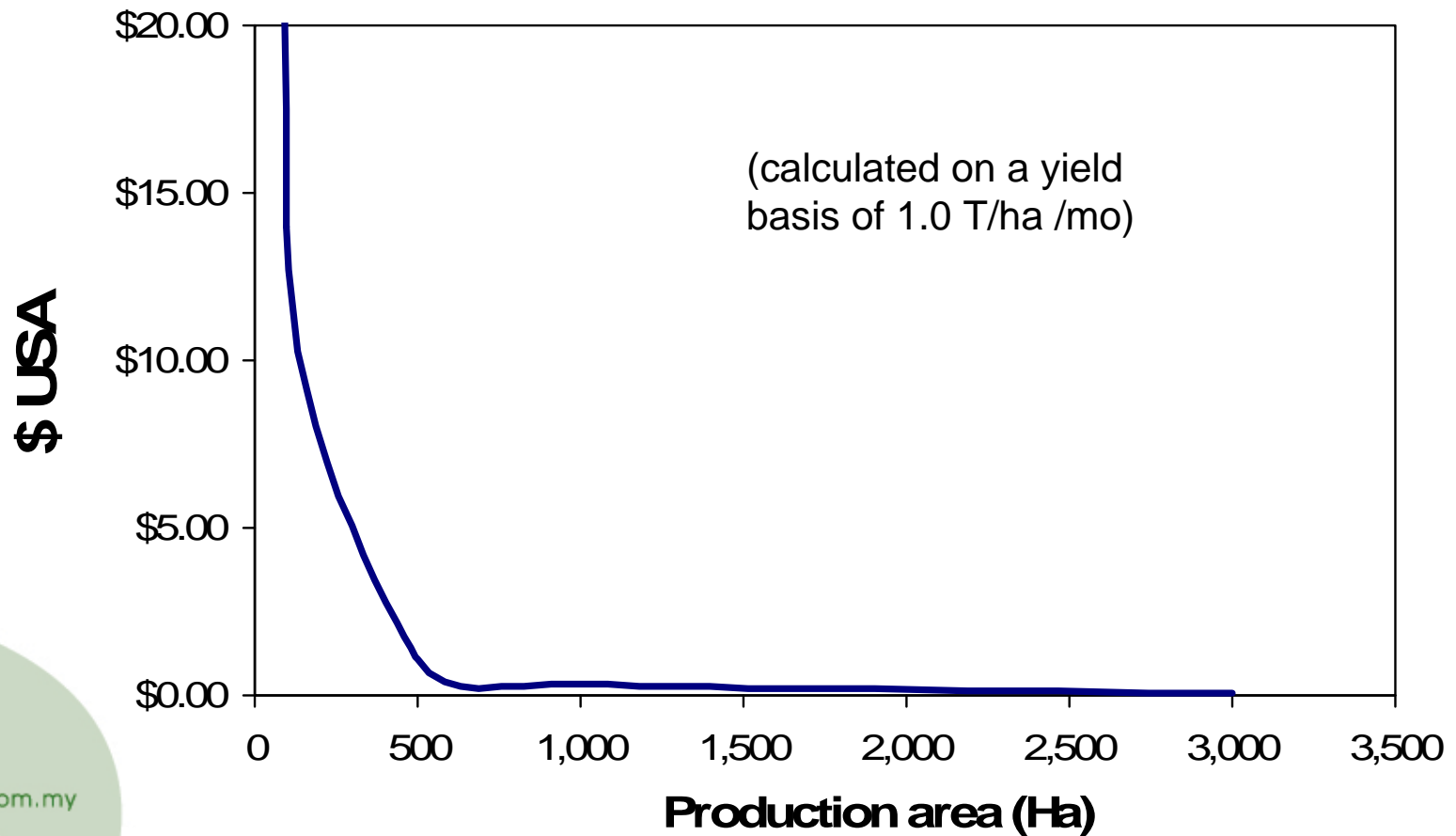


## Effect of Production Area on the Relative Cost of Area-Wide Pest & Disease Management in Papaya

Cost / Ha / Month



## Effect of Production Area on the Relative cost of Area-Wide Pest & Disease Management in Papaya Cost / Ton



# Advantages Of Area-Wide Pest & Disease Management

- Better Quality of Fruit
  - leads to a better Price / Position
- Higher Fruit Yields
  - more as export-quality ( normal is only 40%)
- Harvest at Latter Ripening Times is possible.
  - Possible to do “tree ripened” fruit
- Progressive & Sustainable farming approach
  - In line with GAP including EuroGap
- Access to Foreign Export markets
  - In line with the IPPC guidelines





# Conclusions

- The economics of Production and Export must be recognized as an important factor limiting the market potential of Tropical Fruits.
- New business models are needed in order to address the need for funding improved-technologies which are needed to move the industry forward.
- Production areas which encompass at 1000 ha or more open the opportunity for cost effective Area-Wide Pest and Disease Management Programs
  - **These in-turn will lead to numerous benefits including an improved market potential.**

# Thank you

