



STATUS OF PITAYA CULTIVATION IN MALAYSIA

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CONTENTS



- Introduction
- Crop Policy
- Botany
- Crop Requirement
- Crop Status
- Market Access
- Disease Threat
- Strength
- Conclusion - The Way Forward

INTRODUCTION



LOCAL NAME

- Dragon Pearl Fruit (Chinese)
- Dragon Fruit (English)
- Buah Naga (BM version I)
- Buah Mata Naga (BM version II)



OFFICIAL NAME

- DRAGON FRUIT
- BUAH MATA NAGA



INTRODUCTION



- ❖ **Botanical Name:** *Hylocereus undatus*
- ❖ **Common Name:** Pitaya; Pitahaya; Dragon Fruit; Buah Mata Naga
- ❖ **Family:** Cactaceae
- ❖ **Origin:** South America
- ❖ **Other Name:** Night Blooming Cactus
- ❖ **Main Types:**
 - 1) Red fruit - white flesh;
 - 2) Red fruit - red flesh;
 - 3) Yellow fruit - white flesh

RED FRUIT & WHITE FLESH TYPE



RED FRUIT & RED FLESH TYPE



YELLOW FRUIT & WHITE FLESH TYPE





CROP POLICY



Balance of Trade Plan

Starfruit

Pineapple

Guava

Papaya

Jackfruit

Mandarin orange

Banana

Durian

Mango

Rambutan

Watermelon

- No concerted development plan for pitaya
- Achievement strictly due to Private Sector initiative



BOTANY



- ❖ **Climber** : triangular succulent stem with thorns
- ❖ **Adventitious Roots**
- ❖ **Flowers** : single (with strong aroma)
: receptive from 9pm to 12 midnight
- ❖ **Cross pollinated** (mainly bats and bees)
- ❖ **Fruit maturity** : 31-34 days (from anthesis)
- ❖ **Fruit** : Berry type & elongated in shape
Av wt 250 g – 600 g (depending on variety)
Brix content 17 - 21%



CROP REQUIREMENT



- ❖ Tropical climate (✓)
- ❖ Temperature: 25-30°C (✓)
- ❖ Rainfall: 500-1,500 mm per annum (?)
- Distinct wet & dry spells (?)
- ❖ Loose soils with 10-30% sands (✓)
- Well drained soils (✓)
- ❖ Terrain : $\leq 6^\circ$ slope (✓)



CROP STATUS (1/3)



NATIONAL PITAYA ACREAGE (2002-2006)

Year	Acreage (Ha)
2002	47.3
2003	69.6
2004	210
2005	435.8
2006	927.4



CROP STATUS (2/3)



NATIONAL PITAYA ACREAGE (2006)

STATE	ACREAGE (HA)
JOHOR	326.7
NEGRI SEMBILAN	139.6
PAHANG	93.4
PERAK	82.2
MELAKA	47.2
PULAU PINANG	38.5
KEDAH	35.9
SELANGOR	31.7
KEDAH	-
PERLIS	-
SABAH	102.5
SARAWAK	-
W.P. LABUAN	2.0
TOTAL	927.4



CROP STATUS (3/3)



NATIONAL PITAYA PRODUCTION (2006)

National Acreage	927.4 ha
Production Area	363.2 ha
Total Production	2,534.2 tons
Production value	RM12,670,755



MARKET ACCESS (APPROVED)



JAPAN	Frozen jackfruit / durian / mangosteen Fresh banana / pineapple
AUSTRALIA	Frozen durian Cuttings - orchid / mum / aster / anthurium Fresh foliages
CHINA	Frozen durian Fresh papaya / rambutan / mangosteen / longan / watermelon / pineapple Coconut (old and young nuts) Cuttings - orchid / mum / anthurium / ornamental
USA	Orchid - cuttings and plantlets
SOUTH KOREA	Fresh pineapple / banana Young coconut Frozen durian Cuttings - orchid / mum Fresh foliages



MARKET ACCESS (UNDER NEGOTIATION)



JAPAN	Fresh - harumanis mango / papaya / star fruit / bell pepper
AUSTRALIA	Fresh – pineapple / papaya / star fruit / mangosteen
CHINA	Fresh – durian / cempedak / star fruit / nangka
USA	Fresh – star fruit / papaya / nangka / pineapple / rambutan
SOUTH KOREA	Fresh – durian / mangosteen / rambutan / mango / papaya / star fruit / guava

(PITAYA IS NOT IN THE NEGOTIATION LIST WITH ANY COUNTRY AT THE MOMENT)



DISEASE THREAT



Fungal diseases : *Alternaria tenuissima*

Alternaria alternata

Botryosphaeria sp.

Collectotrichum sp.

Bacteria disease : *Erwinia caratova*

(soft rot disease)

- serious threat to pitaya industry



DISEASE THREAT



(*Erwinia* Soft Rot Disease)



STRENGTH



- **Red pitaya variety**
- **Potential downstream activities**
 - wine / enzyme / culinary / *confectioneries*
- **Domestic market support**
- **Potential export market**
 - Europe / East Asia / US



CONCLUSION THE WAY FORWARD



- **control of soft rot disease**
- **GAP for cultivation of pitaya**
- **Planting material production protocols**
- **Policy support**
- **R & D support**
- **Market access negotiations**
- **Downstream exploitations**



**JABATAN
PERTANIAN**

