

### 1. Varieties

- Hawaiian Solo selections, namely Sunrise and Waimanalo
- Export Variety is Sunrise

### 2. Yield

- 60 to 80 tonnes/ha

### 3. Climate & Soil Requirements

- Can be planted throughout the year. Land should be well drained and aerated.
- Fertile soil with a pH of 6 -7 is preferable.

### 4. Planting time

- Plant during wet, hot months (October to March) for good establishment.
- However if irrigation is available, papaya can be planted at anytime of the year.

### 5. Seed Rate

- 1,667 plants/ha

### 6. Spacing

- 3m between rows and 2m between plants within rows (1667 plants per hectare).



### 7. Land Preparation

- Two ploughings and two harrowings are recommended for good soil tilth. Apply poultry manure after first ploughing at 5t/ha.
- In heavy soils deep ploughing is needed for aeration and proper soil drainage.
- On flats, make raised beds (ridges) at least 45cm high and 3m apart.

### 8. Planting

- Propagation of papaya is by seed. Seedlings are raised in nursery for transplanting or seeds can be directly planted in fields.
- Seedlings for transplanting are ready in 6 – 8weeks after sowing and 2 plants per site is recommended till flowering which is then thinned to 1hermaphrodite plant/site. The sex of the plant can only be determined at flowering stage.

### 9. Fertilizer

- Papaya has high nitrogen requirement. Lack of nitrogen will be shown by slow growth, pale green leaves and reduction in number and size of leaves. Potassium is needed for tree vigour and high productivity.
- NPK 13:13:21 application rates is as follow:
  - a) Basal – 90g/plant (half mixed at the bottom of the hole and the reminder spread around the plant after it has been carefully removed from the polythene bag.
  - b) 2nd quarter – 140g/plant
  - c) 3rd & 4th quarter – 230g/plant and thereafter the same amount every 3 months for the economic life of the crop (i.e. 3 years)
- Application of Boron (Borax Pentahydrate) at 10g/plant at planting and 10g before flowering at 3 months thereafter at every 6 monthly interval.

### 10. Irrigation Requirements

- Can use low-level sprinklers, drip irrigation

or flood irrigation. Irrigate young seedlings daily, young plants weekly and matured plants (4 – 5months after planting) should be irrigated upon determining the soil moisture at 5 – 10cm depth by feeling the soil with hand (sticky soil is wet – no irrigation), (friable & firm soil is moist – little irrigation), and loose and soft/hard is dry soil regular irrigation needed.

### 11. Flowering & Fruiting

- Flowering and fruit development occurs 4 – 6 months after transplanting.
- Fruits mature in 60 – 70 days from fruit set.

### 12. Thinning the Crop

- Hermaphrodite fruits are in demand, therefore flowers should be carefully inspected during thinning of plants to remove male and female plants. However female plants can be kept if no hermaphrodite plant found on the site.
- Thin out unproductive wood to increase flowering and fruiting and removal of young fruits for allowing development of quality fruits (2 fruits/node).
- Thinning of fruits to be done during fruit set





at short intervals as more fruiting occurs.

### 13. Weed Control

- During the early stages of growth, ring weeding is the best method of control until such time when plants become well established (3 months from planting), Glyphosate at 150ml to 200ml/15L of water (Sold as Round up, Champion 450, Rainbow & Rambo)

### 14. Pest & Disease Control

- a) Fruit Flies (*Bactrocera passiflorae*) – Female flies lay eggs under the skin of ripe, fallen, damaged or rotten fruits deteriorate the quality of fruit.

*Control:* Harvest fruits at colour break, spray Protein bait & Malathion at 30ml/15L of water on the plants and good field sanitation (remove & bury fallen fruits).

- b) Anthracnose (*Colletotrichum spp*) – attacks ripe fruit; sunken brown spots that enlarge and result in rot as fruit ripens.

*Control:* Apply Benomyl at 10g/15L of water. (Sold as Benlate) or use Kocide at 30g/15L of water to prevent fungal infections and spray the whole field as when symptoms appear.

- c) Root rot (*Phytophthora palmivora*) – yellowing and collapse of older leaves, younger leaves wilt and die. In young trees, whole root becomes soft, and wet rot extending to the trunk, older trees the tap root usually decays.

*Control:* Plant trees on ridges, use Kocide at 30g/15L of water to prevent fungal infections during wet weather. Sundomil at 50g/15L of water.

### 15. Fruit Deformities

#### *Bumpiness*

- This deformity appears on the skin giving

the fruit an uneven surface and is associated with Boron (B) deficiency. Application of Borax Pentahydrate is recommended (see fertilizer rates).

#### *Lumpiness*

- Lumps are formed in the flesh of the fruits are associated with water stress during the dry season. Irrigate papaya plants as when required in the dry season.

### 16. Harvest and Yield

- Papaya fruits are ready for harvest in 8 – 10 months after transplanting.
- Harvesting at colour break is recommended to retain quality fruits.
- Harvest once or twice a week during the cooler months and twice or three times a week during the warmer months.
- With good management, one can expect 80 tonnes of fruit/ha within the economic bearing life of 3 years.

### 17. Market

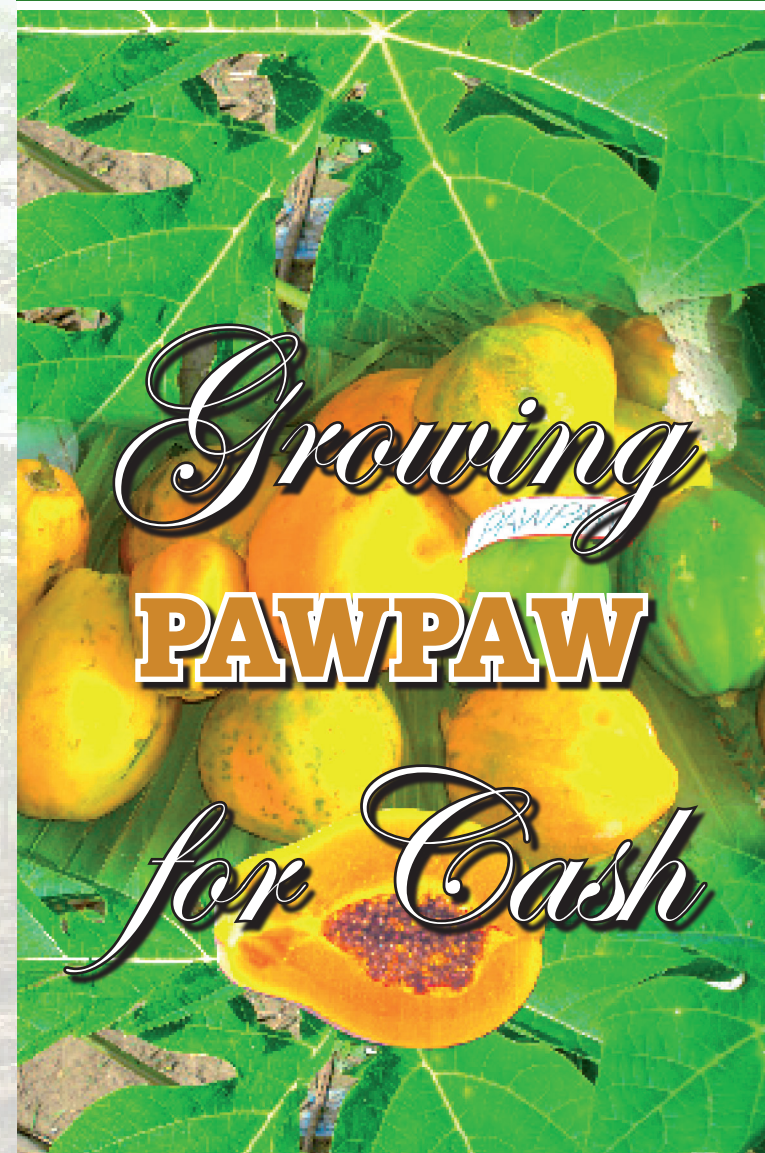
- Fresh fruit are currently exported to Australia, New Zealand and Japan. Hermaphrodite fruits are usually preferred and the minimum weight of fruit required for export market is 350g/fruit.
- There is a high demand for papaya in the local markets.



For more information contact: Ministry of Agriculture, Private Mail, Raiwaqa.  
Phone: (+679) 338 4233 Fax (+679) 338 7157 / Website: [www.agriculture.gov.fj](http://www.agriculture.gov.fj)  
Facebook: Ministry of Agriculture Fiji Twitter: Fiji Agriculture  
Email: [agrihelp@govnet.gov.fj](mailto:agrihelp@govnet.gov.fj)



Ministry of Agriculture



Farmer's Leaflet 2015