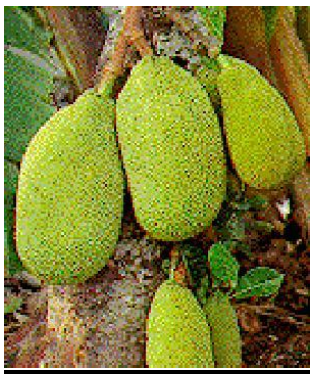
NANGKA (*Artocarpus heterophyllus* Lam)
TECHNOLOGY PACKAGE



NANGKA (*Artocarpus heterophyllus* Lam)

1. Local Name: Nangka

2. Varietal Recommendation

Clone	*Characteristics*
J29	Fairly large, oval fruit (10kg) with greenish yellow skin. Pulp is large, thick, orangy, fine, firm and sweet. Less latex.
J31	Small to medium sized, elongated frit (6kg). Greenish-yellow skin. Pulp is round with small seeds. Pulp is deep yellow, firm, fine, sweet and strongly aromatic.
Mastura	Average fruit size of 15-25kg. Pulp is golden yellow with a pleasant after-taste.

3. Soil Requirement
It is a hardy tree, but does best on deep, loamy soil.

4. Spacing
9m x 9m (123 trees/ha)

5. Fertiliser Application

Year	Time of Application	Type of fertiliser	Amount/Year (kg)	Rate/Application (kg)
0	At planting	Rock Phosphate Dolomite Organic manure	0.20 0.10 5-10	0.20 0.10 5-10
1	Every 3 months	15:15:15	0.50	0.13
2	Every 3 months	15:15:15	1.00	0.25
3	Every 4 months	15:15:15	1.50	0.50
4	Every 4 months	12:12:17:2+TE	2.00	0.67
5	Every 4 months	12:12:17:2+TE	3.00	1.00
6	Every 4 months	12:12:17:2+TE	4.00	1.33
7	Every 4 months	12:12:17:2+TE	5.00	1.67
8 onwards	Every 4 months	12:12:17:2+TE	6.00	2.00

6. Weed Control

Cover crop is recommended to reduce weeds.

7. Pruning

Allow one central leader (trunk) to develop and space branches evenly.

8. Vegetative Period

3-4 years

9. Economic Life

5-10 years will maximum yield at 5-7 years.

10. Yield

4 – 12 t/ha/yr at third to fifth year, increasing to 20-30 tonnes/ha/year from the sixth year.

11. Pest of Jackfruit

11.1 Fruit borer

Damage symptoms:
Larva bores and feeds in the fruits and seeds causing it to rot. Frass is seen on the outside.

Control:
i) Bagging of fruits
ii) Collect and destroy affected fruits

11.2 Stem borer

Damage symptoms:
Larvae tunnels in the branches and stems, resulting in dieback. Affected trees can collapse during strong winds.

Control:
i) Collect and destroy affected plant parts.
ii) Cover puncture holes with mud

11.3 Fruit flies

Damage symptoms:
The larvae feed on the fruit, resulting in poor quality fruit and rotten ones.

Control:
i) Bagging of fruit.
ii) Collect and destroy affected fruits
iii) Trapping with fruit fly bait

12. Diseases of Jackfruit

12.1 Jackfruit Wilt/Dieback

This disease is caused by the bacterium, *Erwinia carotovora*. Dieback of branches occurs. This is usually the first obvious symptom that is observed. White latex can be seen oozing out of the dark stains on the branches. When the infected bark is removed, a brown patch can be observed underneath. When a branch is infected, the leaves turn yellow to brown, wilt and drop. As the disease

spreads between branches, the whole tree eventually wilts and dies. Fruits from infected trees are smaller and they ripen prematurely.

Disease control

Since this is a bacterial disease, there is no chemical cure. Plant tolerant cultivars, if available. Observe good management practices, by sterilizing pruning implements after each pruning. Look out for any insects that may be helping to spread the disease.

12.2 Pink disease

This disease which is caused by the fungus, *Erythricium salmonicolor*, is usually serious in high-density planted areas or under shade during high rainfall.
Symptoms include silky-white mycelial threads on the bark of branches and trunk. Under wet conditions, they turn slightly pink in color and rough pink encrustrations are formed. The bark later cracks and the branches dry up and wilt.

Disease control

Avoid close planting or intense shading. Prune off infected parts of the plant, and practice good field hygiene by removing all plant debris. Monitor the disease in the field closely for recurrence of the disease. At the moment, there is no fungicide registered with the Malaysian Pesticide Board for jackfruit.

12.3 Foot Rot

The disease is caused by *Phytophthora palmivora*. The base of the tree becomes black and watery resulting in yellowing of leaves, wilting and death of tree.

Disease control

(i) Clean base of affected trees
(ii) Apply Fosetyl aluminium or Metalaxyl at the recommended rate