**JACKFRUIT**

Jackfruit (Artocarpus heterophyllus), a member of the Moraceae family is an important tropical fruit crop of India. It is interesting to note that jackfruit originated in the tropical rainforests of the Western Ghats. The jackfruit tree is widely cultivated in the wet and semi-wet tropical regions of India, Bangladesh, Nepal, Sri Lanka, Vietnam, Thailand, Malaysia, Indonesia, and the Philippines. It is also found across Africa, throughout Brazil and the Caribbean islands.

Jack is popularly known as the poor man’s food in the eastern and southern parts of India. The trees are grown in homestead gardens of Kerala, Tamil Nadu, Goa, Karnataka, Maharashtra, Assam, Bihar, Tripura, UP, West Bengal and the foothills of the Himalayas. Absence of organized marketing strategies among the growers result in wastage of major quantity of fruits produced in these states.

The fleshy carpel which is botanically the perianth is the edible portion. Apart from its use as a table fruit, jack is a popular fruit for preparation of chips, subji, cutlet, pickles and papad. The fruit has good potential for value addition into several products such as squash, jam, candy, halwa, etc. The ripe bulbs can be preserved for more than a year in sugar syrup or in the form of sweetened pulp. The unripe mature bulbs can be blanched and dehydrated for further use throughout the year. Seed is a rich source of starch and a delicacy during the season. The timber is highly valued for its strength and sought for construction and furniture.

Jackfruit is a source of complete nutrition to the consumers. The fruit is equivalent to avocado and olive in terms of the healthy mix of nutrients for human dietary needs. It is rich in vitamin B and C, potassium, calcium, iron, proteins and high level of carbohydrates and is therefore an affordable and readily available supplement to our staple food. Jackfruit is rich in phytonutrients such as lignans, isoflavones and saponins, which have anti-cancerous and anti-aging properties. These phyto-nutrients help in eliminating cancer causing free radicals from the body and also slows down the degeneration of cells that can lead to degenerative diseases.

The presence of high fiber in jackfruit prevents constipation and helps in smooth bowel movement. These fibers also offer protection to mucous membrane by driving away the carcinogenic chemicals from the large intestine. Due to the presence of simple sugars like fructose and sucrose, jack is considered as an immediate energy booster. The presence of copper, an important mineral which plays a key role in the thyroid metabolism, makes jackfruit an ideal fruit to maintain a healthy thyroid, especially for women.

Jackfruit can be grown in a wide variety of soils but it grows well in rich, deep, alluvial and well drained soil. It can also be grown in open textured or lateritic soil provided sufficient nutrients are available.

For commercial planting, square system with 12 m spacing is ideal. June through September is the ideal season for planting. Budlings are the preferred propagule for plantation. Adequate irrigation and nutrition are needed for regular and good cropping. More than one year old budlings should be planted in pits of 90x90x90 cm filled with FYM or compost. One kilogram of dolomite can be added while filling the pits. For obtaining high productivity, the following fertilizer schedule is recommended. Apply fertilizers equally three times in a year. Additionally, give a yearly dosage of 20 to 60 kg of FYM based on plant age.

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Age of plant</th>
<th>1 to 3 years</th>
<th>4 to 7 years</th>
<th>7 and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (g)</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Phosphorus (g)</td>
<td>120</td>
<td>240</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Potash (g)</td>
<td>60</td>
<td>120</td>
<td>240</td>
<td></td>
</tr>
</tbody>
</table>

Jack trees are trained to a single stem. Early side branches should be removed so that a uniform smooth trunk develops for a height of 1.5 to 2 m and then side branches should be permitted to arise. Flower buds appear on the trunk which should be kept free of vegetative growth.

**PLANT PROTECTION**

Pests: Brown weevil
Bores into the tender buds, shoots and fruits.

Managed by destroying fallen fruits and buds, collection and destruction of grubs and adults.

**FRUIT ROT**

Caused by a fungus called Rhizopus artocarpi. Young fruits are affected and drop prematurely. Prevent further spread by destroying the affected fruits.

These are the most popular commercial varieties identified and selected by Homegrown Biotech:

i) Jack Honey dew
ii) Jack Rose
iii) Jack Gumless
iv) Jack Daeng Suriya
v) Jack J 33