

Avocado – The butter fruit can be grown in plains as well as in high ranges. This fruit has high fat content, hence commonly known as ‘Butter Fruit’ in India. It is a high value crop with good export potential.

Avocado is an ancient sub tropical fruit originated from Central America and Mexico and is a good source of nutrients. Commercial cultivation of avocados is limited to south Indian states like Kerala, Tamil Nadu, Maharashtra and Karnataka.

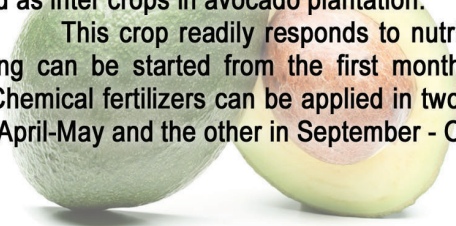
The scientific name of the crop is “*Persea americana*”, which belongs to the family Lauraceae. Fuerte, Pinkerton, Purple hybrid, Hass, Trapp, Pullock and Round are the commercially important varieties of avocado. Among these varieties, Pullock, Purple hybrid, Fuerte and Round are more suitable for Kerala condition.

This crop can be grown in a wide variety of soils except in poorly drained soils. The tree is particularly sensitive to water logging. The optimum pH should be between 5.0 and 7.0 for better growth and yield.

Avocado is a typical dioecious tree. Male and female flowers are seen in the same plant. However the timing of the male and female phases is distinct. The female phase starts first and at the end of female phase (which last 2 to 4 hours), the flower will close and the stigma is receptive to pollen. On the second day the same flower re-opens in the male phase and sheds its pollen. This type of flowering behavior is known as, ‘synchronous dichogamy’. Hence pollination within the plant is not possible. So, it is recommended to plant two seedlings or other wise use grafted avocado for planting.

For planting, dig pits of size 90 x 90 cm and fill the pits with farm yard manure and top soil in 1:1 ratio. Plant to plant spacing depends on cultivar and growth habit of the plants. Generally, a plant spacing of 8m to 10m is recommended in avocado plantation. More spacing should be given for varieties with wide spreading nature (fuerte). Vegetables, pulse crops, ginger, turmeric, strawberry etc, can be used as inter crops in avocado plantation.

This crop readily responds to nutrients. Hence manuring can be started from the first month of planting itself. Chemical fertilizers can be applied in two split doses, one at April-May and the other in September - October.



Recommendation of fertilizers and manures for an avocado plant:

Tree age (In years)	Tree / year			
	Organic manure (kg)	Urea (g)	Rajphos (g)	Muriate of Potash (g)
1 - 3	25	85	100	60
4-6	35	160	175	100
7-10	40	320	175	210
More than 10 years	50	435	225	275

Generally, the soils having pH value above 7.0 will show iron deficiency which can be corrected by adding chelated iron, 30-35 g/tree.

Crop can be raised through seeds from selected mother plants. For commercial cultivation it is desirable to use grafted plants which will starts flowering from third year onwards.

Though it is a natural rain fed crop, irrigation will result in better yield. Mulching should be carried out to avoid any moisture stress during summer season. In case of heavy rains or flooding, water should be drained out as avocado plants are sensitive to water stagnation. Drip irrigation is the preferred method for avocado. Pruning is rarely done in an avocado plantation except in upright cultivars such as ‘Pollock’. In varieties with spreading canopy (fuerte), unnecessary branches can be thinned out.

The common pests that attack avocado are mealy bugs, scales and mites. They can be effectively controlled by application of biocontrol agent ‘*Verticillium leccani*’. In order to control mites spraying spyromecifen (3ml/10 L) is effective. Diseases mainly observed in avocado plantations are fruit spot, leaf spot and root rot which can be controlled by spraying Carbendazim (1g/L). The intensity of pest and disease incidence widely vary with variety, soil type and moisture/climate conditions.

Seedlings take around 5-6 years for bearing, whereas, grafted plants give early bearing (3-4 years). The avocado starts flowering from December and sets fruits in April-May. The mature fruits will be ripe, within 5-10 days after harvest.

Avocado is emerging as the most remunerative fruit crop. The yield of avocado will vary with the variety. However 10-12 year old tree will produce an average yield of 300-400 fruits/tree. On an average rupees ten thousand can be earned from a matured avocado tree.

