

# Cultural and manurial practices in Cashew

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Cashew (*Anacardium Occidentale L.*) is grown in the states of Kerala, Karnataka, Andhra Pradesh, Tamil Nadu, Maharashtra, Orissa and Goa. The average annual production of cashewnut is estimated to be 500 g per tree under spontaneous and sub-spontaneous conditions. The crop, neglected till recently is now gaining its importance in the international markets. Hence, the need for upgrading the low yielding trees by proper cultural and manurial practices has become imperative. Research conducted so far clearly indicates that cashew tends to respond to cultural and manurial practices.

## Selection of Seed Material

Seeds having more than 1.06 specific gravity or 6-7 g weight, and free from fungal and insect damages are to be selected during the peak period of harvest (February-April) from consistently high yielding mother trees and having the characters like short flowering period, compact panicles with more perfect flowers, and good fruitset with medium sized nuts for raising nurseries.

## Nursery Management

The seed nuts are treated with 100 ppm cereson and soaked in water for 48 hours to hasten germination. Then they are sown in alkathene bags of 25 cm × 15 cm size, filled with garden soil mixed with well rotted compost, at a depth of 4-5 cm, keeping the stalk end upwards in a slightly tilted position. Seeds germinate in 15-20 days under adequate irrigation.

## Mainfield Preparation

After clearing the jungle growth, pits of 50 cm cube are dug at a distance of 8m × 8m and filled with compost and top soil before transplanting. Generally, the dug out soil is kept on the western side of the pit in the form of a heap to give sufficient shade to the growing seedlings.

## Sowing

Four to five months old seedlings or the cured airlayers are planted in the pits by embedding the

polyethylene bags after cutting open the bottom portions, with the onset of south-west monsoon. The seedlings are pot watered during dry periods and shaded for better survival and establishment during the initial growth periods. Chiefly because of the deeper root system, the crop is able to withstand drought during summer months. However, proper drainage has to be provided in the waterlogged areas to ascertain proper growth, as the crop is highly susceptible to ill-drainage.

## Weed Management

Weeds are great menace to the growing cashew seedlings. As chemical or manual weeding is not an economic proposition, fast growing cover crops like *Pueraria Javanica* or *Mimos invisa* are sown with the onset of monsoon to control the weeds to some extent and to prevent the soil erosion by heavy showers.

## Inter Cultivation

The soil around the base of the trees are forked once in a year to facilitate easy aeration and infiltration of rain water. With the cessation of rains, the bases are mulched with dry grass or leaves to conserve the soil moisture. However, harrowing the inter and intra row spaces will be beneficial for the tree growth.

## Fertiliser Requirement

More recently at the cashew research stations in India and elsewhere, it is indicated that the plant responds well to fertilisation. More comprehensive fertiliser experiments under All-India Co-ordinated Spices and Cashew Improvement Project have been carried out in different agroclimatic regions from 1972 onwards. On an experimental plot (Anonymous 1976) the cashew seedlings planted in 1957-58 took 10 years to bear fruit, giving an average yield of 0.19 kg per tree in 1967, at the cashew research station, Vengurla. Fertiliser application @ 666g N, 266g P and 533g K per tree during 1967 to the same plants enhanced the mean yield to 499 kg in a course of four year period. Further, experiments

with balanced fertilisers conducted on seedlings indicated that balanced fertilisation (666g N, 266g P, 533 g K) from the infancy could reduce the pre-bearing

period to 3 years and produce an average yield of 5.7 kg per tree in a course of six year period under proper agronomic management. In another experiment conducted under the same agroclimate with three plant densities (285, 190, 142 trees/ha.) three levels of FYM (0, 2.86, 5.6 trees/ha) the three levels of N (0, 25kg N, 50 kg N/ha) for a period of three years recorded the maximum out-turn from the plots having 190 trees/ha receiving 50 kg N/ha and 5.6 t FYM/ha and recorded the highest net returns per hectare over the other treatments.

Application of 600g N+25kg FYM per year per tree recorded the economic out-turn and application of phosphorus 480g P<sub>2</sub>O<sub>5</sub>, or potassium (580g K<sub>2</sub>O) or both together with nitrogen and compost (600g N+25kg FYM) did not differ to a greater extent at Vridhachalam (Tamil Nadu). Fertiliser application in different seasons did not show any increase in the efficiency of utilisation of the nutrients under the "package programme of cashew cultivation" launched by the Indian Cashewnut Development Council in the States of Tamil Nadu, Andhra Pradesh, Kerala, Karnataka, Maharashtra and Goa. The 2 acre "Demonstration plots" with 160 trees receiving 250g N, 150g P<sub>2</sub>O<sub>5</sub> and 150g K<sub>2</sub>O indicated that fertiliser application could be economically viable under field conditions.

Foliar application with 3 per cent fertiliser urea found to be beneficial at Vridhachalam. However, these formulae serve by way of tentative recommenda-

tions. Soil analyses have to provide an indication, case by case of the plant's nutritional deficiencies. While mineral fertilising itself, though technically valid, as far as the cashew is concerned, will have to be valued in terms of production costs.

#### Inter and Mixed Crops

Though intercropping is not a common practice, crops like pineapple, casuarina, coconut can be grown successfully with cashew, adopting suitable planting systems.

#### Pest Management

Among the various pests, tea mosquito, stem and root borers are most hazardous to the crop. Tea mosquito is controlled by spraying 0.05 per cent endosulfan as high volume spray or 0.10 per cent as low volume spray at the time of emergence of new flushes and panicles. The stem and root borers are controlled by mechanical removal and drenching with 0.1 per cent B.H.C. suspension. The pest is also controlled by injecting carbaryl into the tunnels or by applying phorate granules (10g/tree) or Aluminium phosphide (1-2 tablets/tree) to the tunnels. However, phytosanitary measures will help to a larger extent in controlling many of these pests.

#### REFERENCES

1. Anonymous (1976) Report of the Committee on Cashew Cultivation (ICAR).
2. Monograph on plantation crops-1 CASHEW, published by the Director, Central Plantation Crops Research Institute, Kasaragod 670 124, Kerala, India.

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