



# Mangosteen and Rambutan

## - *New companions for coconut*

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Coconut is a crop prefers to grow along with other companion crops. Hence coconut based cropping system is promoted where ever it grown. It enables better utilization of natural resources and improves the soil fertility due to the continuous biomass addition by the subsidiary crops also for generating higher income from coconut garden. Besides, coconut as a mono crop does not fully utilize the basic resources like soil, water and sunlight available in the garden. These holdings neither provide gainful employment opportunities for the family labour throughout the year nor generate sufficient income to meet the family requirement. Several crops like cocoa, nutmeg, clove, cinnamon etc are identified through research as good companion crops for coconut. Farmers are looking for best companion crops in coconut garden. In a scientifically planted coconut garden at a spacing of 25 feet x 25 feet, only 25% of soil is being used by coconut and the remaining soil is left aside for growing suitable inter/mixed crops.

Now with the increase in labour cost, farmers are thinking of cultivating more suitable money spinning companion crops in coconut garden which gives higher income with lesser cost. Two new conventional fruit crops that attract the farmers as money spinning intercrops in coconut garden are Mangosteen and Rambutan. Farmers in costal Karnataka and some parts of Kerala have already successfully tried these crops in coconut garden as companion crops. These two crops were introduced in India in the 19th century. Cultivation



of Rambutan and Mangosteen is becoming popular in the western coast, particularly Kerala and Karnataka. Currently, there is good market for these fruits. According to farmers of Kerala, the entire production of Rambutan and Mangosteen is getting sold within a week during the harvest season, which shows the increasing demand for these nontraditional fruits among the people. Since these fruits are not popular in the market, most people may not get the chance to taste these wonderful fruits. But on tasting the juicy flesh, people may feel that why I was not aware of this fruit before. Such an impact of these fruits are slowly finding ground in states like Kerala and Karnataka. Mangosteen along with the attractive red color of Rambutan has caught the attention of farmers of south India.



Rambutan (*Nephelium lappaceum*) is propagated through budded plants which start yielding from the third year of planting. But 50% of the seedlings may be male which cannot bear fruit. Rambutan shall be planted in 3 X 3 ft pits in the middle of two rows of coconut palm at a spacing of 25 X 25 ft. It needs to undergo training and pruning in order to arrest the plant growing wild. This is done either by cutting down the height of the plant after 6 – 8 months of planting and after new shoots sprout and mature, at a height of less than 3 feet. While doing this, one must make sure that the plants have at least 10 leaves beneath the cutting portion to protect the plant from dying out. It requires deep, well-drained soils. Acid soils (pH 5.5 to 6.5) with high organic matter are very suitable but most important are a good supply of suitable water and protection from wind. Rambutan being a hard wood tree needs very little maintenance and the life expectancy of this plant is considered to be more than 40 years. Post harvest pruning is the major critical job for arresting the wild growth of the plant and to maintain its lateral growth and shape. Fruiting of young trees is spread from December to August due to extended flowering patterns. As trees mature, they settle into one main fruiting per year. Rambutan fruits take 120-150 days to ripen after flowering and can remain in the tree upto 30 days after ripening without any damage leaving the farmer with no compulsion to sell out his produce but rather enable him to do it in a suitable manner so as to realize the best value for the fruit.

Mangosteen (*Garcinia mangostana*) is delicious and juicy and is one of the popular tropical fruits considered to have better potential due to its high medicinal value. It comprises of an impressive list of essential nutrients which are required for normal growth and development and overall nutritional well-being. It contains no saturated fats. It is rich in dietary fiber and is a good source of vitamin C which is a powerful water soluble anti-oxidant. Consumption of fruits rich in vitamin-C helps human body develop resistance against viral diseases. Fresh fruit is a moderate source of B-complex vitamins such as thiamin and niacin. It is propagated

through seedlings.

A spacing of 25 to 30 ft is recommended for planting these fruit plants. In coconut garden one plant can be planted in the middle of two rows of coconut palms planted at a wider spacing of 9x9 ft or in the boundaries. Planting is preferably done at the beginning of the rainy season. Pits of 1.2 x 1.2 x 1.3 m are prepared at least 30 days in advance, enriched with organic matter and top soil and left to weather. The young tree is put in place very carefully so as not to injure the root and is given heavy watering. Partial shading with palm fronds or by other means should be given in the initial years. Average yield of a full-grown Mangosteen tree is about 500 fruits. The yield steadily increases up to the 30th year of bearing when 1,000 to 2,000 fruits can be obtained. In Tamil Nadu, individual trees between the ages of 20 and 45 years have borne 2,000 to 3,000 fruits. Productivity gradually declines thereafter, though the tree will be fruiting even at 100 years of age.

The harvesting season of mangosteen is between April and June and for rambutan between May and August. Rambutan is more popular among growers due to its early yielding feature and mangosteen is considered to have a better potential due to its high medicinal value. Many of the farmers in coastal Karnataka and Kerala are interested in taking up the cultivation of both these fruits. 1 kg pack of Rambutan and Mangosteen on an average fetches Rs. 200 at the farm gate. Of course these two crops are remunerative high value inter crops in coconut garden for future and farmers will get an income of around Rs. 1,50,000 to Rs.2,00,000 per acre from these crops. Many farmers from coastal Karnataka and Kerala in the western region have taken up cultivation of both these fruit crops. The seedlings/grafts of these crops are also available at sales counters of Kerala Agricultural University, Mannuthy Phone. 0487-2438011, Regional Agricultural Research Station, Ambalavayal Phone. 04936-260421 and Indian Institute of Horticulture, Bengaluru, Phone: 080 2844 6386 ■