

VALUE ADDITION OF COCOA

Cocoa (*Theobroma cacao*) is a commercial plantation crop whose seeds yield flavoured cocoa powder on fermentation. Cocoa had become an important plantation crop by the 16th century in the South and Central America and the Caribbean Islands. The major producers of cocoa in world are Peru, Mexico, Ecuador, Brazil, Nigeria, Indonesia, Ghana, Spain, Britain, Portugal, Holland and France.

Cacao and Cocoa

Cacao is essentially the botanical name and refers the tree, the pods and the unfermented beans from the pods.

Cocoa refers to the manufactured product from the seeds.

Varieties

There are three varietal types in cocoa

- 1) **Criollo**: Criollo cocoa typically has red or yellow pods, containing 20-30 ivory or very pale purple beans. The beans are considered to have a finer flavour than other varieties. The pods have bumpy or warty skin with pointed tips.



- 2) **Forastero**: Forastero pods may also be red or yellow, as well as orange or purple. The beans themselves are very dark purple and are relatively flat compared to those of the Criollo. Most of the chocolate produced in the world today is made from Forastero beans.



- 3) **Trinitario**: The hard pod red or yellow, round and which are typically not pointed, relatively smooth skin contains 30 or more beans of variable color.



Trinitario along with Criollo provides the basis for “flavour beans” used to enhance the flavour of today's chocolates.

- Kerala Agricultural University has released 7 improved clones of Forastero type namely CCRP-1, CCRP-2, CCRP-3, CCRP-4, CCRP-5, CCRP-6, CCRP-7 and 3 hybrids CCRP-8, CCRP-9, CCRP-10.

- Central Plantation Crops Research Institute, Vittal has released one clone named as VTLCC-1 and 4 hybrids namely VTLCH1, VTLCH2, VTLCH3 and VTLCH4.

Production in India

Cocoa is a crop of tropics. In India cocoa is cultivated in the southern parts of the country for the past 40 years. States like Kerala, Karnataka, Goa, some parts of Maharashtra, Pondicherry, Tamil Nadu, Andhra Pradesh, Orissa, West Bengal offer considerable scope for its further development as these areas are coastal belts where coconut is grown under irrigated condition and cocoa is found as an adaptive companion crop in irrigated coconut and arecanut gardens because of its need for partial shade. Research on cocoa in India was initiated by the research-cum-demonstration unit of the Cadbury India Ltd. established at Chundale in Kerala in 1965. The research activity was taken over by the Central Plantation Crops Research Institute in early 1960s, and Kerala Agricultural University in 1970s. The biggest assembly of germplasm in India is being maintained at the Kerala Agricultural University which is one of the strongest in the world.

Production in Kerala

Congenial conditions for the growth of cocoa can be found all over Kerala. The South West and South East monsoons result in heavy rainfall over long period and the soil are well drained but capable of retaining moisture. The plains adjoining the hills and stretching to the coasts are renowned for profitable cultivation of a number of plantation crops like coconut, arecanut, rubber, cashew which provide shade for cocoa plants.

Both in terms of geographical and plant population, Kerala is the leading cocoa producer in the country. The total area under cocoa cultivation in the state has spread out to 15,894 hectares in 2016-17 (According to Directorate of Cashew

nut and Cocoa development). The scope for the crop has increased in the state due to the proliferation of chocolate manufacturing firms.

The size of India's chocolate confectionary market is approximately Rs 12,000 crore. The country has exported **27,603.77 MT** of cocoa products to the world for worth of **Rs.1,350.84 crores** during the year 2018-19.

- There are two main crops in a year, the first from September to January and the second from April to June
- All the pods in the tree do not ripen at a time
- The development of pod takes 5-6months from fertilisation to flowering and then to full ripeness
- The ripe pod remains on tree without damage for about 5-7days