

Small Cardamom in India

Cardamom (*Elettaria cardamomum* Maton) is one of the oldest known spices in the world. Evergreen forests of Western Ghats of South India are considered as the centre of origin as well as natural habitat of cardamom. Cardamom is commercially cultivated for its dried fruits (capsules), which is also referred as cardamom of commerce.

Types/cultivars

Based on adaptability, nature of panicle, shape and size of capsules, the cultivars are categorized into Malabar, Mysore and Vazhukka. The cultivar Malabar with a prostrate panicle (panicles spreading on ground) is widely grown in Karnataka, while the cultivar Mysore, characterized with erect panicles is extensively cultivated in Kerala and parts of Tamil Nadu. Whereas, the cultivar Vazhukka, a natural hybrid between Malabar and Mysore types with a distinct semi-erect (pendent) panicle, is the most popular cultivar in Kerala.

Climate and soil

The crop thrives well in regions which receive a well-distributed annual rainfall of 1500-2500 mm with a mean temperature of 15°C to 35°C, relative humidity of 75-90% and 600-1200 m above MSL. Cardamom grows luxuriantly in forest loam soils, which are generally acidic in nature with a pH range of 5.5-6.5. Growth of cardamom is enhanced, when planted in humus rich soils with low to medium available phosphorus and medium to high available potassium.

Varieties

Released varieties/selections of cardamom with high yield potential and superior capsule characters from different research organizations are given in Table 1. Apart from these, farmers varieties like Njallani green gold, Vander cardamom, Panikulangara No. 1, Palakuzhi selection and Valley green bold are also grown in cardamom growing tracts of the country.

Propagation

Propagation by vegetative means through suckers is considered to be the most preferred method. Production of planting materials from seeds and through tissue culture are alternative methods of propagation. Seedling propagated plants may not be true to its parent.

International Scenario

Cardamom is generally produced in the tropical regions of the world. Guatemala is the largest cardamom producing country followed by India. The total world production of this spice is around 35,000 MT per annum (source: Spices Board). Consumption of cardamom has sharply increased throughout the world during the last two decades. The major consuming countries of cardamom are the Middle Eastern countries, India, Pakistan, European countries, the US, and Japan. Middle Eastern countries such as Saudi Arabia and the United Arab Emirates, and South-East Asian countries such as India, etc., account for more than 60% of the world's consumption. Saudi Arabia is the single largest importer of Cardamom in the world, followed by Kuwait.

Table 1. Released cardamom varieties/ selections

Selection/ Variety	Cultivar	Important features	Area of adaptability	Average yield (Kg/ha)
ICAR-Indian Institute of Spices Research, Regional Station, Appangala-571 201, Dist. Kodagu, Karnataka				
Appangala-1	Malabar	Suitable for intensive cultivation both under monocrop and mixed crop conditions. Early maturing variety, highly adaptive and produces 89% bold capsules. (Potential yield 1322 kg dry capsules/ha).	All cardamom growing tracts of Karnataka and Wayanad of Kerala	745
Appangala-2	Malabar	High yielding and resistant to <i>Cardamom mosaic virus</i> /Katte	All cardamom growing tracts of Karnataka and Wayanad of Kerala	927
IISR Avinash	Malabar	Rhizome rot resistant, high yielder and suitable for planting in valleys. Produces 51% bold, dark green capsules. (Potential yield 1483 kg dry capsules/ha).	Suited for hotspots of rhizome rot prone areas.	
IISR Vijetha	Malabar	<i>Cardamom mosaic virus</i> resistant (Katte) selection, recommended for moderate to high shaded mosaic disease prone areas. (Potential yield 979 kg dry capsules per ha).	Suitable for Kodagu, Hassan, Chikmagalur and North Wayanad. Suitable for Katte prone areas. Adapted to moderate rainfall and moderate to high shade areas.	
Indian Cardamom Research Institute (ICRI), Myladumpara-685 553, Dist. Idukki, Kerala				
ICRI 1	Malabar	Early maturing, dark green bold capsules	South zone of Idukki, Kerala	656
ICRI 2	Mysore	Tolerant to Azhukal disease	Vandanmedu and Nelliampathy of Kerala and Anamalai, Meghamalai of Tamil Nadu	766
ICRI Regional Station (Spices Board), Donigal Post, Saklespur-573 134, Dist. Hassan, Karnataka				
ICRI 3	Malabar	Tolerant to rhizome rot	Cardamom growing tracts of Karnataka	599
Indian Cardamom Research Institute (ICRI), Myladumpara-685 553, Dist. Idukki, Kerala				
ICRI 4	Malabar	Suitable for low regions	Adapted to lower Palani hills	961
ICRI 5	Malabar	Hybrid with high oil content	Kerala and parts of Tamil Nadu	1543
ICRI 6	Malabar	Moderately tolerant to rot, thrips, borer and drought	Kerala and parts of Tamil Nadu	1900
Cardamom Research Station (Kerala Agricultural University), Pampadumpara-685 553, Dist. Idukki, Kerala				
PV 1	Malabar	Early maturing variety with elongated capsules	All cardamom growing tracts of Kerala and parts of Tamil Nadu	500
PV 2	Vazhukka	Green bold capsules	Cardamom Hill Reserves of Idukki	982
Regional Horticultural Research and Extension Centre, University of Agricultural and Horticultural Sciences, Mudigere-577132, Dist. Chikkamagaluru, Karnataka				
Mudigere 1	Malabar	Tolerant to shoot borer and thrips	Traditional cardamom growing Malanad areas of Karnataka, under rainfed conditions	275
Mudigere 2	Malabar	Suited for cultivation in valleys	Cardamom growing tracts of Karnataka	475
Mudigere 3	Malabar	Tolerant to thrips and borers	Cardamom growing tracts of Karnataka	400

National Scenario

India has been a dominant producer of cardamom. It is the second largest producer of cardamom in the world. Cardamom cultivation is concentrated on the Western Ghats in the country; and the Western Ghats are also known as “Cardamom Hills”. In 2018-19, as per provisional trade estimates, India's production is around 13.85 MT.

Following states are the major producers of cardamom in India:

1. Kerala – 70%
2. Karnataka – 20%
3. Tamil Nadu – 10%

Cardamom is traded as a bulk and graded produce. Cardamom is graded by using sieve and fetches different prices based on their size, colour and freshness, command varied prices. The 7-mm and above grade with fancy green colour commands a premium over other grades. India consumes almost 90% of the domestic production with almost 45% of the demand coming from the western part of the country followed by the northern India with 35%. As India's production is capable of satisfying the domestic consumption demand, it does not import any cardamom from outside countries. However, cheaper Guatemalan cardamom finds its way into the country and is preferred for low value uses like pan masala. The leftover cardamom produce is exported every year. India exports 5-8% of its total production, mostly the premium grade. India also exports by-products of cardamom such as cardamom oil and oleoresins to European countries.