

Cardamom

Cardamom (*Elettaria cardamom Maton*) the “queen of spices” is a perennial plant. The origin of cardamom is believed to be in the rain forests of the Western Ghats in South India. Reference about cardamom is found in the ancient Vedic texts such as *taiteraya Upanishad*, which is believed to be written 3000 BC and also in *Charaka Samhita* and *Susrutha Samhita* dated to 1000 B.C., also mentioned this spice as of a great medicinal value. The organized cultivation of cardamom started by the British by 1800. The Greek and Roman civilization give place of pride to cardamom in their ceremonial, medicinal and culinary habits.

Two varieties of cardamom plants are identified, and they are *Elettaria cardamomum maton*, variety major comprised of wild indigenous types of Srilanka and “*Elettaria*” *cardamomum Maton*, minor comprising of cultivators like Mysore, Malabar and Vazhukka. These types are grown in different tracts and are mostly identified on the nature of panicles, size of the plants and other morphological characters.

Harvesting

Cardamom plants normally start bearing two years after planting. Throughout the cropping season of cardamom, i.e. from August to March approximately 6 picking is done in each 45 days interval. In most of the areas the peak period of harvest is during September-November. Ripe capsules are harvested in order to get maximum green colour during curing. The output of cardamom is greatly influenced by climatic conditions. The cardamom plant requires a continuous spell of rain interspersed with periods of good sunshine. The plant is very susceptible to attack by pests and diseases. Cardamom requires tropical forest conditions for growth and a lack of such areas makes very few states in the country suitable for its plantation.

The following definitions refer to common Indian Grades:

Bold: It is popular export grade; 90% and above capsules will be having 6.5mm and above diameter, matured and Greenish color. Lt. Wt. will be 415 gm.

Super Bold: It is a very special variety. All capsules will be matured greenish and having above 8 mm diameter size. Lt. Wt. will be more than 450 gm.

Extra Bold: Best in the Export market. All capsules will be matured, greenish and having 7 mm and above diameter. Lt. Wt. will be 435 gm.

Bulk: This is the grade of cardamom produced as it is. This grade will contain all size, matured and immature capsules, black, yellow and split cardamom. This is to be graded. Small: Small size cardamom having size between 5.5 mm and 6.5 mm. Cleaned and removed dust, husk and black capsules. Light Weight will be around 385 gm.

Open / Splits: More than 60% capsules will be in open condition and the color may be partly greenish /pale yellow. All capsules will be matured and the size are 6.5 mm and above.

Seeds: Black / Brown colour seeds are the original content in every cardamom capsule. The husks were fully removed. Light Weight may be around 550 gm to 600 gm.

Fruit: Fruits are generally over matured capsules with slight yellowish in color and Lt. Wt. over 425 gm.

The following definitions refer to common Guatemalan Grades:

- **Jumbo Green** are extra-large green small cardamom pods.
- **Imperial Best Green** are large green pods.
- **Fancy Green Extra** are extra green pods.
- **Fancy Green** are medium sized green pods.
- **Imperial Mixed Green** are large pale green pods.
- **Mixed Green** are pods of assorted colors.
- **Mixed Green Split** are medium sized open green pods.
- **Yellow Mixed** are medium/large closed yellow pods
- **MYQ or Mixed Yellow Quality** is medium sized light-brown cardamom for grinding.
- **Seeds** is cardamom with the husk removed.

Domestic Scenario:

Earlier India was the single largest producer and supplier of Cardamom to the world. But from 2002 onwards, Guatemala replaced India by taking first position in production. Even though, India pushed to second place, it plays vital role in international trade because of the aroma and flavor of Indian cardamom.

In India the production of cardamom during the current season (2011-2012) is said to be around 10,242 MT and 90 per cent of the production is expected to be absorbed by the domestic market. Comparing to the last five years, the average annual crop for cardamom was between 11000 -12000 range, and the only exception was in 2007-2008 where the production was reduced to 9450 MT. India has the largest area under cardamom cultivation but the productivity is lower compared to the other cardamom producing countries.

Production of Cardamom in India

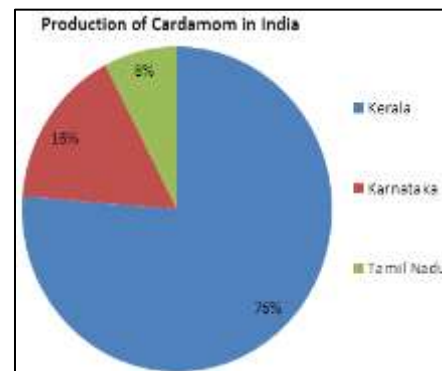
(MT)

State	2007-08	2008-09	2009-10	2010-11(P)	2011-12(P)
Small cardamom					
Kerala	7030	8550	7800	7935	11440
Karnataka	1585	1700	1550	1710	2415
Tamil Nadu	835	750	725	735	1145
Total	9450	11000	10075	10380	15000
Large cardamom					
Sikkim	4305	3675	3540	3310	3234
West Bengal	615	625	640	608	626
Total	4920	4300	4180	3918	3860

Source: Spice Board of India & Traders Estimates

In India, two types of cardamoms are grown viz., Small and Large. Production of small cardamom confined to southern states whereas large one is grown mainly in North Eastern states. Among the major small cardamom growing states, Kerala has taken the largest pie of 76.27 per cent to the total production followed by Karnataka (16.10 per cent) and Tamil Nadu (7.63 per cent). Moreover, weather condition in Kerala is very much congenial for cardamom crop which makes it the largest growing state in India.

At present, India is the second largest consumer of small cardamom in the world after Saudi Arabia. Global consumption of Cardamom is estimated as 15000 MT to 24000 MT. Current domestic demand for small cardamom has been estimated at 11000 MT. The retail market size in South India is estimated at around 30 per



cent for small cardamom. The share is the highest in West India (45 per cent) followed by the North India (35 per cent) and lowest in East. Industrial consumption of cardamom particularly by the pharmaceutical/Ayurveda and cosmetics is the highest and accounts for over 45 per cent of the total consumption. A clear regional disparity is visualized in cardamom consumption pattern. Though the urban areas contribute large share of its consumption, in recent years rural market is also gaining importance and growing at a very high rate than the urban market. Household uses of this spice are very limited mainly due to the high price, but seasonal buying has been increased.

Major trading Centers in India

The major trading centers in India in which cardamom is traded are:

- Vandanmedu (Kerala)
- Bodinayakanur (Tamil Nadu)
- Kumily (Kerala)
- Thekkady (Kerala)
- Cumbum (Andhra Pradesh)
- Pattiveeranpatti (TamilNadu)
- Cochin (Kerala)
- Thodupuzha (Kerala)
- Saklashpur (Karnataka)
- Mercara (Karnataka)
- Medikeri (Karnataka)
- Mangalore (Karnataka)
- Mumbai (Maharashtra)
- Virudhunagar (Tamil Nadu)
- Thevaram (Tamil Nadu)

Global Scenario

World production of cardamom is estimated at 30000-32000 tonnes. Presently major producer is Guatemala recording an average annual production of 18000 to 23000 MT. Guatemala's producers harvest year round due to favorable weather conditions, with the main crop being harvested between September and March. The cardamom cultivated in Guatemala is *Elettaria cardamomum*, a native of India's Malabar Coast. It is typically grown at an altitude of 250 to 1,500 meters with an annual rainfall of 1,000 mm to 3,500 mm and temperature of 10°C to 35°C (50°F to 86°F). Unlike in India, where cardamom is cultivated under forest canopy, Guatemalan cultivation is in the open without shade and at higher altitudes where low temperatures are present. Regionally, the Department of Alta Verapaz accounts for approximately 70 percent of Guatemala's production. This provides the country with substantial advantages during the off-season. India is the second largest producer with an average production of 9000 to 12000 MT.

Other major producing countries are Sri Lanka and Tanzania. Indian cardamom is considered as superior quality but in the international markets, India has always been out priced by Guatemala which has negligible domestic consumption responsible for low pricing. Despite its numerous applications in the cooking styles of Sri Lanka, India and Iran, 60 per cent of the world production is exported to Arab (South West Asia, North Africa) countries, where the larger part is used to prepare coffee. Cardamom-flavored coffee is almost a symbol for Arab hospitality.

Indian Exports

Middle East region of the world continues to be the major importing destination for both India and Guatemala because it is used mainly in the GAHWA, which is a popular cardamom-coffee combination. Coffee consumption appears to be a strong driver of demand for cardamom. Ready – ground cardamom coffee in a retail store in Arabia typically has 5-10 grams of cardamom per 250 grams of coffee. However, for special occasions, or to so extra honour to guest with a particular display of generosity, larger amount of cardamom are used. During the months of Ramadan, extra 1-2 million pilgrims enter the country which hikes the demand for cardamom enormously. Saudi Arabia accounts for import of 74.94 per cent Indian small cardamom. Observing the last seven years trend in export of small cardamom has improved significantly by over 262 per cent, whereas export

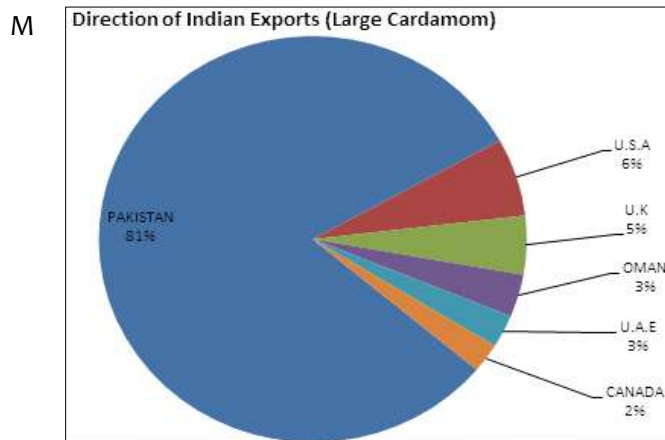
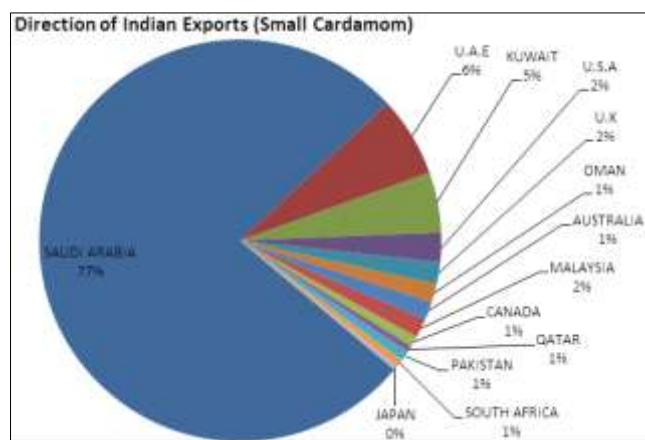
of large cardamom has remained almost stable around 1200 MT and shown a marginal decline of 19.07 per cent. In regards to the demand for the Indian small cardamom significant improvement in demand has been noticed in case of UAE, Kuwait and USA whereas a decline in demand has been noticed in case of Japan, Pakistan and Qatar. The prices prevailing in Guatemala is in par with the Indian prices, this makes the import route less attractive. The current details of the export of cardamom are given in the below table. The export of large cardamom is largely dome to Pakistan (74.36 per cent), followed by USA (74.36 per cent), UK (5.71 per cent) and Oman (4.30 per cent).

Export of Cardamom from India

(Quantity in MT)

Country	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
CARDAMOM (SMALL)							
Saudi Arabia	478.00	331.00	519.00	1117.69	723.50	3097.51	1777.36
UAE	6.00	3.00	18.00	296.03	61.61	555.49	148.44
Kuwait	14.00	18.00	4.00	92.18	101.96	116.62	112.44
USA	6.00	6.00	7.00	50.07	40.40	39.14	54.51
UK	21.00	17.00	7.00	55.00	18.30	142.96	40.17
Oman				23.43	3.08	84.75	34.51
Australia	1.00	0.00	11.00	32.25	15.85	35.95	33.94
Malaysia	18.00	29.00	28.00	45.55	20.79	78.16	35.59
Canada	1.00	1.00	3.00	13.16	10.96	16.55	18.99
Qatar				11.23	3.02	39.53	13.23
Pakistan	4.00	0.00	0.00	29.64	32.82	136.65	17.90
South Africa	4.00	6.00	10.00	10.13	9.08	25.34	14.00
Japan	38.00	16.00	25.00	34.44	26.26	46.24	8.22
Total (Incl. Others)	655.00	500.00	750.00	1974.96	1175.09	4649.71	2371.59
CARDAMOM (LARGE)							
Pakistan	1199	1082	1482	758.05	581.18	719.52	905.11
USA	18	13	22	18.46	32.97	30.84	69.51
UK	81	67	92	79.12	39.15	35.12	52.34
Oman				0.13	1.92	5.54	37.82
UAE	146	97	159	58.14	46.22	87.3	29.27
Canada	17	10	7	15.85	6.88	10.52	25.84
Total (Incl. Others)	1504	1325	1875	1000.1	775.04	934.91	1217.22

Source: Spice Board of India



Imports

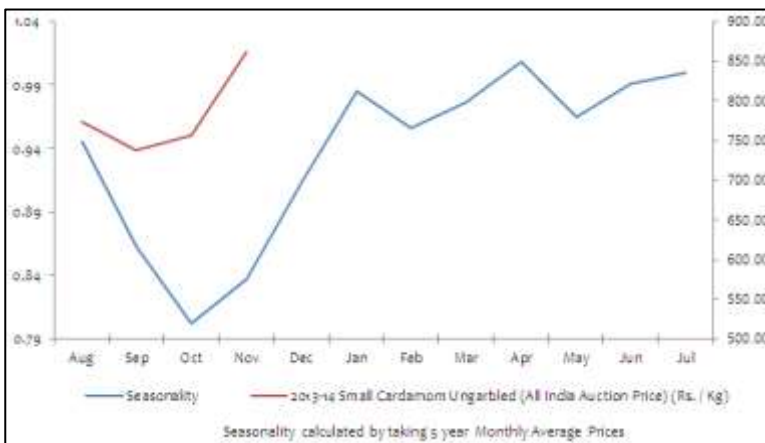
As per the current Foreign Trade Policy, there is no quantitative restriction on import of cardamom in India. Duty free imports are also allowed under the Advance Authorization Scheme for value addition and re-export. The adjacent figures suggest that there has been a gradual decline in the import of cardamom over the years except for the year 2012-13 when the Indian cardamom production had declined by over 15 per cent owing to unseasonal heavy rains and hail storms.

Status of Import of Cardamom in India (MT)				
Particulars	Small Cardamom		Large Cardamom	
	Quantity	Value	Quantity	Value
2008-09	180	308.90	5,950	4996.25
2009-10	95	335.75	6,000	6719.00
2010-11	75	656.53	4,050	10217.50
2011-12	51	361.71	2,330	10390.00
2012-13	495	1612.44	3,895	14558.80

Source: Spice Board of India

Price trend Analysis

Cardamom prices seasonal index is prepared by considering data for the last 5 years spot prices. Clearly, as the figure indicates, Mid-January onwards prices took small corrections till February-March. However, from April onwards when fresh supply ends completely prices start moving higher due to off season for arrivals and reach their peak in July. After that prices start falling from August onwards as first picking for fresh crop season get started. But, fall remains limited as crop quality during first picking is usually not up to the level. During September- October peak arrivals hit the market and prices touch the yearly lows. However, in November prices bounce back on winter season demand from US and EU countries which supports the prices but arrivals pressure keep the sentiments bearish.



soon in February 2013 as fresh crop from Guatemala hit the market. Though their production was lower this year however, lower prices quotations against Indian cardamom prices which pulled down prices here. Recent

reports of crop weather being affected in Guatemala by El Nino are providing good support to the global as well as Indian cardamom market.

Price forecast: Technical Outlook (MCX)



Explanation:

The technical picture is still looking bullish on a whole with indicators looking slightly biased towards higher price action. RSI has corrected lower from overbought conditions but the overall slant of the indicator looks supportive of bullish price action. MACD is in bullish territory trading above base line suggesting bullish strength in the markets. Prices are also above long term moving averages indicating that the long term bullishness is still intact In the case of Cardamom; the parabolic SAR has been in the red region but with diminishing slope, supporting the underlying strength. in the prices but the lower range of the Bollinger band is indicating a reversal signal which is positive for the prices.

Technical Recommendation:

The market is expected to find strong support at the levels of 700 / Kg and has good potential of testing 1475 and 1600 on the higher side by April 2015. Thus, as per my analysis of cardamom fundamentals, the prices would experience a bull run from levels of 700-750 / Kg.

Price Expectation

Commodity	Units	Current Market (13.01.2015)	Market View	Technical Projections		
				Support	T1	T2
Cardamom	Rs. / Kg	1080	↑	700	1470	1600

Disclaimer:

This report has been prepared by National Bulk Handling Corporation (NBHC) for the sole benefit of the addressee. Neither the report nor any part of the report shall be provided to third parties without the written consent of NBHC. Any third party in possession of the report may not rely on its conclusions without the written consent of NBHC.

NBHC has exercised reasonable care and skill in preparation of this advisory report but has not independently verified information provided by various primary & secondary sources. No other warranty, express or implied, is made in relation to this report. Therefore NBHC assumes no liability for any loss resulting from errors, omissions or misrepresentations made by others.

Any recommendations, opinions and findings stated in this report are based on circumstances and facts as they existed at the time of preparation of this report. Any change in circumstances and facts on which this report is based may adversely affect any recommendations, opinions or findings contained in this report.

© National Bulk Handling Corporation (NBHC) 2014