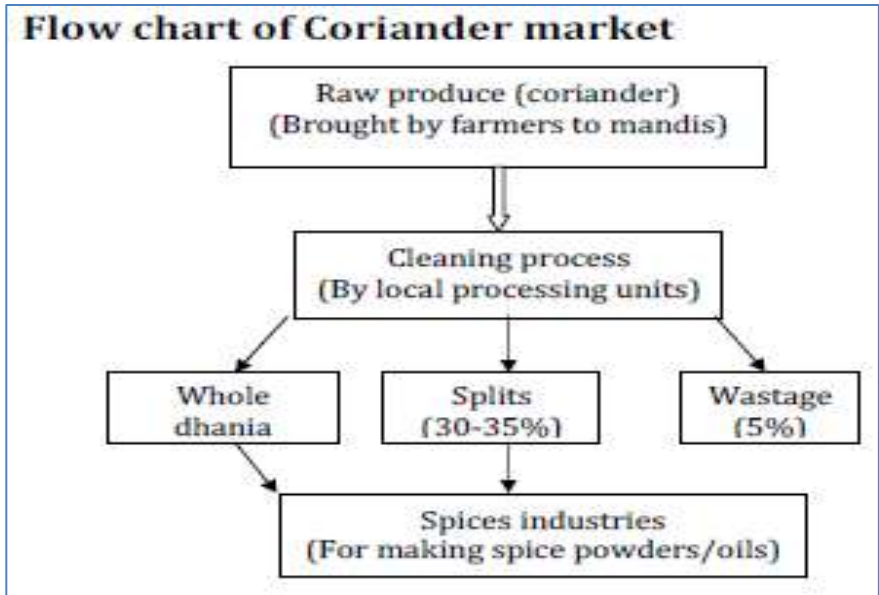


Dhaniya (Coriander)

Introduction

Coriander is an annual herb that belongs to the carrot family - Umbelliferae. Its name is derived from the Greek Koris, meaning bedbug, because of the unpleasant, fetid, bug-like odour of the green herb and unripened fruits. Coriander is a native of the Mediterranean region. It is one of the earliest spices used by mankind. Coriander is an important spice crop having a prime position in flavoring food. The plant is a thin stemmed, small, bushy herb, 25 to 50 cm in height with many branches and umbels. Leaves are alternate, compound. The whole plant has a pleasant aroma. Inflorescence is a compound umbel comprises 5 smaller umbels. Fruit is globular, 3 to 4 mm diameter, when pressed break into two locules each having one seed. Fruit has delicate fragrance; seeds are pale white to light brown in colour.



It is a native of Mediterranean and commercially produced in India, Morocco, Russia, East European countries, France, Central America, Mexico, and USA. Coriander is a tropical crop and can be successfully cultivated as a Rabi season crop in an area free from severe frost during February when the crop flowers and sets its seeds.

Crop Cycle

Coriander requires cool climate during growth stage and warm dry climate at maturity. It can be cultivated in all most all types of soils but well drained loamy soil suits well. It is observed that quality of seed is superior & essential oil content is more when the crop is grown in colder regions & at high altitudes.

15 to 20 Kg of seed is required for sowing of one hectare area. Usually coriander is cultivated during Rabi season. The best time for sowing of coriander is 15th October to 15th November. Seed should be rubbed to split into two halves before sowing. While rubbing care should be taken to save the sprouting portion. Timely sowing is beneficial as in early sowing germination is affected on account of excess sun shine and late sowing leads to paltry growth of plants and development of various diseases. Sowing time may be adjusted in frost prone areas so that the frost incidence can be avoided during flowering stage. Sowing should be done in rows at spacing of 30 cm apart.

This crop matures in about 110 to 140 days. At maturity, seeds turn to yellowish green colour. On pressing, mature seeds are medium-hard. After harvest, the crop should be dried under partial shade to retain the green colour and its aroma. When the plants are completely dried, the seeds should be separated by thrashing. Seeds should be cleaned by winnowing or with the help of sieve or by vibrator and graded. About 500 to 800 Kg / ha from rain fed crop and 1200 to 2000 Kg from irrigated crop can be obtained.

Crop Calendar

Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul

Sowing
 Growth
 Harvest

Varieties and Grades

Improved varieties like Guj.Coriander-1, Guj.Coriander-2, RCr-41, UD-20, Rajendra Swati (RD-44), CS-287, CO-1, CO-2, CO-3, Sadhana, Swati and Sindhu may be cultivated to get high yield. Coriander is classified into grades like Badami, Eagle, Scooter, single parrot, double parrot, green medium, green extra and green special. After the harvesting of coriander, it is dried in sunlight; the excess drying leads to brown color and fetch a low price. These brown color seeds are called the Badami grade. The finer quality is called green and it is traded at a premium to all other grades. However, the Badami grade has the highest market share, constituting 50% of the total produce.

Many improved varieties of coriander are now available for cultivation in Tamil Nadu, Andhra Pradesh, Gujarat and Rajasthan states.

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Variety	Parentage	Characteristics
CO ₁	A pure line selection	Released by TANU, Coimbatore. Tall plant, many umbels per plant, suitable for green and grains. Duration 110 days. Yield 500kg per ha.
CO ₂	A reselection from culture P ₂ of Gujarat	Released by TANU, Coimbatore. High yield, dual purpose variety, tolerant to drought, oil 0.3%. Duration 90-110 days. Yield 600-700kg per ha.
CO ₃	Reselection from Acc. No. 695	Released by TANU, Coimbatore. High yield, dual purpose, medium size grain, seed oil 0.38-0.41%. Duration 103 days. Yield 640kg per ha.
Gujarat Corinader-1	A selection from local	Released by GAU, Jagudan. High yield, more number of branches, seeds bolder and greenish in colour. Duration 112 days. Yield 1100kg per ha.
Gujarat Coriander-2	A selection from CO ₂	Released by GAU, Jagudan. High yield, more branches, dense, foliage, umbels large size, grain purpose variety, bold seeds, no lodging. Duration 110-115 days. Yield 1500kg per ha.
Rajendra Swati	A mass selection from germplasm type	Released by RAU, Dholi. High yield potential, suitable for intercropping, fine seeded rich in essential oil, resistant to stem gall disease. Duration 110 days. Yield 1200-1400kg per ha.
Rcr-41	Recurrent selection from UD 41	Released by RAU, Jobner. High yield, tall erect, suitable for irrigated areas, resistant to stem gall. Duration 130-140 days. Yield 1200kg per ha.
Swati	Mass selection	Released by APAU, Guntur. High yield, semi erect, suitable for delayed sowing. Duration 80-90 days. Yield 885kg per ha.
Sadhana	Mass selection	Released by APAU, Guntur. High yield, suitable for rain fed areas, semi erect, resistant to aphid and mites. Duration 95-105 days. Yield 1000kg per ha.

Source: National Horticulture Board (NHB)

Domestic Scenario

India is the largest producer of Dhaniya in the world with a market share of 70%. Madhya Pradesh and Gujarat are the other key producers of coriander in addition to Rajasthan. The production for Dhaniya across years is given in the following table along with its maximum & minimum price and the total value in Crores.

Status of Supply & Value of Dhaniya in India

Year	Production (MT)	Maximum (Rate / Q)	Minimum (Rate / Q)	Avg. (Rate / Q)	Crores
2008 – 09	471515	4847	3828	4337.5	204.52
2009 – 10	501485	4407	2665	3536	177.33
2010 – 11	394659	6790	3740	5265	196.05
2011-12	428687	6258	3440	4849	207.87
2012-13 (Est)	524000	8847	5072	6959.5	364.68
2013-14 (Est)	428000	13472	7777	10624.5	454.73

Source: Spice Board of India & Industry Sources

Indian Production Scenario

India is the largest producer of the spice, accounting for nearly 80% of global output. The coriander is used in the spice industry and plays a major role in Indian cuisine, especially in the southern states. Coriander production in the past few years has varied drastically between 4-5 lakh MT, with average output of 4.65 lakh MT during 2008-2015. In the year 2013-14 production was around 4.28 lakh MT.

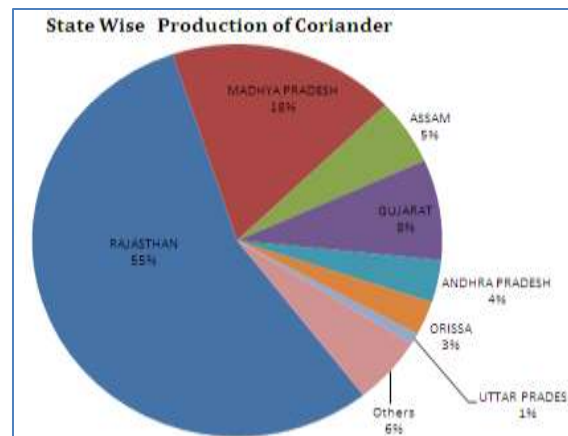
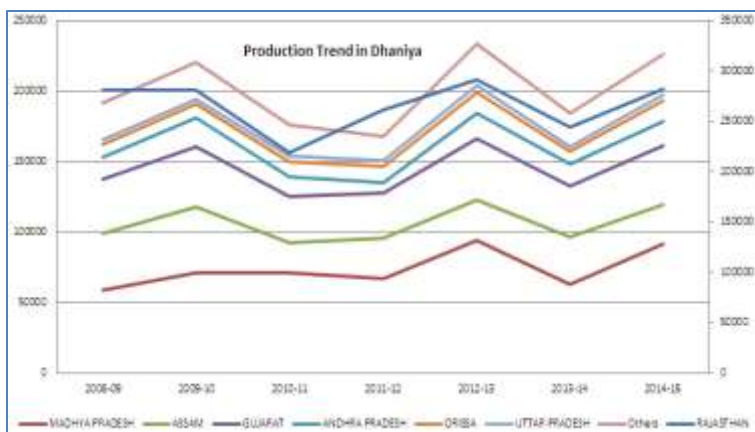
State wise Production of Dhaniya

(Metric Tonnes)

Major States	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15*
Rajasthan	280306	281076	218899	261248	290638	244184	281672
Madhya Pradesh	59075	70872	70872	66869	94099	62845	91196
Assam	39480	46865	21568	28567	28636	33771	27753
Gujarat	38420	42649	32634	32310	43329	35583	41992
Andhra Pradesh	15615	20605	13749	7427	18255	15637	17692
Orissa	9140	9440	11200	11100	14871	9319	14412
Uttar Pradesh	3417	3805	3444	4328	4573	3338	4432
Others	26062	26173	22294	16838	29600	23323	28687
Total	471515	501485	394659	428687	524000	428000	507835

Source: Spice Board of India & Industry Sources

* NBHC Estimate (Trade Source)



Grade Parameters

The quality of Coriander is primarily adjudged by the colour of the dried seeds, besides other parameters like split percentage in whole, foreign matter content, etc.

Green Colour	Medium Green	Brown
Single/Double Parrot	Eagle/Scooter	Badami



Global Trade of Dhaniya (India)

The major production of coriander is consumed by domestic buyers in India. They are spice processing agencies, which consume around 50% of the production are mostly located in the southern states of India and Delhi. The demand from this sector peaks during April to June, which also coincides with the peak arrival period. Strong export demand from other countries boosted exports from India. Middle East, South East Asia, USA, UK and Germany are the major importing countries.

India is the largest producer, consumer and exporter of coriander with greater share in world export market. Other major producers are Bulgaria, Romania, Russia, Iran, Morocco, Canada and Australia. But India is not a major importer of coriander in the world market. India imports 4000-5000 MT which is not even 1 per cent of our production. Imports in last 4-5 years have been constant with no major changes.

Country wise export of Dhaniya

Country	2009-10	2010-11	2011-12	2012-13	2013-14
Malaysia	9177.35	8449.81	8856.19	9252.17	11790.03
U.A.E	7174.51	5473.13	4451.22	5858.57	7465.57
Saudi Arabia	4187.54	2570.88	2918.47	3041.72	3876.06
South Africa	2180.63	2391.10	1536.77	2126.20	2709.41
U.K	2927.00	2635.12	1907.43	2005.95	2556.18
Nepal	1750.47	1156.49	355.16	2485.98	3167.88
U.S.A	499.86	625.59	556.88	1085.58	1383.35
Pakistan	10700.10	3455.18	1618.75	1658.92	2113.96
Egypt (A.R.E)	1139.66	1757.24	490.00	1346.79	1716.21
Singapore	1352.51	1162.70	894.72	822.42	1048.01
Others	6160.44	10822.82	4514.44	6217.80	7923.33
Total	47250.07	40500.06	28100.03	35902.10	45750.00

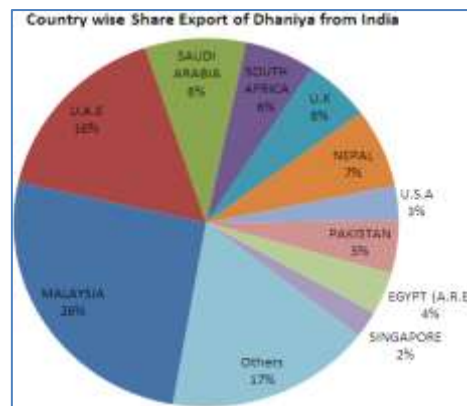
Source: Spice Board of India

Years	Quantity (MT)
2009-10	1,450
2010-11	915
2011-12	3,775
2012-13	4,470
2013-14	4,640

Source: Spice Board of India

Years	Quantity (MT)
2009-10	47,250
2010-11	40,500
2011-12	28,100
2012-13	35,902
2013-14	45,750

Source: Spice Board of India



The export of coriander seed during 2009-10 has been an all-time high both in terms of volume and value and the export has been 47,250 MT valued Rs 225.86 crores as against 30,200 MT value 203.79 crores for last year registering an increase of 56 per cent in volume and 11 per cent in value. Major markets for India are Malaysia 25.77 per cent, UAE 16.62 per cent and Saudi Arabia 8.47 per cent.

International Scenario

India is the largest-producer and exporter of coriander in the global market. The exports have increased significantly in the past few years due to strong demand from the overseas markets. The changing pattern of food consumption or consumption of more spicy foods, especially in developed countries and the large population of Indian origin in these countries has resulted in good export orders for Indian spice exporters. The major importers of coriander from India are Europe, the US, Singapore and the Gulf countries.

Global Production

Globally, production ranges from 300,000-335,000 MT annually. Major producers are Morocco, Canada, Pakistan and Romania. Major importers are Indonesia, Singapore, Srilanka, UAE and USA. Global trade is estimated to be 85,000-100,000 MT and inadequate storage period (6-8 months) effects availability and thus the prices during low availability months and may continue to influence global prices.

Dhaniya Price Seasonality

Coriander is a rabi crop where sowing starts in October post the harvest of kharif crops. Coriander arrivals begin in February and extend till Jul-Aug. However, peak arrivals are seen only during Mar-May in the spot markets. The major markets for coriander are located in Rajasthan and Madhya Pradesh. The three largest mandis, namely, Kota, Ramganj mandi and Baran are located in the south-eastern parts of Rajasthan. The seasonality analysis of coriander indicates that arrivals are very seasonal in nature. Arrivals begin to increase from February and peak arrivals last until June. These arrivals recede July onwards, and the lean season continues until the next arrival in February of the following year. However, small spikes in arrivals are seen in Nov-Dec as traders offload their old stocks before new arrivals start in February.



Price Outlook

The current year the sowing area is up by about 20 - 30% in Gujarat and Rajasthan growing regions respectively, which lead to India's acreage being increased by about 15-18 %. Currently, the standing crop is reported well because of which, in Short run the coriander prices are moving down. With the report of increased area under production for the current season (as the farmers were increasing tempted by the high prices) the current years' production is expected to be 507835 MT, an increase of 14.50 %. On the international front, positive news is that the Bulgarian new crop has been a disaster, both in terms of size and colour mainly due to heavy rains before and during the harvest period. The new crops in Russia and Ukraine have been comparatively better in terms of colour and quality, but lower in quantity in comparison to the normal output. Overall outlook on prices is stable to weak until May 2015; thereafter-bullish run is likely to begin until December 2015.

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