



## **COMMODITY PROFILE – CUMIN (JEERA)**

### **Origin**

Cumin (botanically known as *Jeeraum cuminum L*) is a seed spice of an annual herb. It is a native of the Levant and Upper Egypt and known to Egyptian even in 5000 BC era. Jeera is a widely used flavor in India and Middle East countries. It enjoyed a major role as a flavoring spice and of medicinal value throughout history. Jeera is used mainly where highly spiced foods are preferred. It features in Indian, Eastern, Middle Eastern, Mexican, Portuguese and Spanish cookery. Cumin seed is commonly known as “jeera” in India. The country is the largest producer and consumer of Jeera in the world.

### **Cultivation practice and production in India**

Jeera is grown as a rabi crop in India and it is also grown well in sub-tropical climate too, best suited for sandy soil. It requires less water and more cold for its better growth with ideal temperature of 25 to 30 degree. Jeera crop is highly sensitive to rain, if rain occurs during harvesting time (February to March) quality of the Jeera will be badly affected besides quantity damage (due to fungal diseases). It will turn black and will fetch the lowest price in the market.

### **Jeera varieties**

Improved varieties like S-404, MC-43. Gujarat Jeera-1 (GC-1), GC-2, GC-3, RS-1, UC-198, RZ-19, etc., evolved by Agricultural Universities of Gujarat and Rajasthan having higher yield potential are useful for cultivation. The maturity varies between 110 and 115 days depending on the variety.

### **Sowing and seed rate**

Sowing is done from 1<sup>st</sup> week of November to 1<sup>st</sup> week of December by broadcasting or in rows drilled at 30 cm. Seed rate vary from 12 to 15 kg / ha, depending upon method of sowing and type of soil. Soaking of seeds for 8 hours before sowing is helpful in getting good germination. Soaked seeds should be dried in shade to facilitate broadcasting.

Sowing at higher depths affect the germination of seeds, adversely. Crop rotation should be followed to avoid incidence of pest and diseases.

### **Packaging and storage**

Jeera is packed in gunny bags and each bag contains 55 kg weight of jeera seed. Before packing in the jute bags, it is cleaned by machines in order to remove the stalks, other foreign material, stones, dust etc. Generally jeera is harvested manually, and that is why before packaging it is required to be cleaned properly and cut by machine.

During storage, jeera absorbs moisture immediately. Therefore, it is advisable to store it in one-layer plastic coated bags. Jeera is also packed sometimes in cloth, paper or polythene bags depending on the requirements of the buyer. It is preserved at least one to two feet away from the walls in order to save it from moisture. The jute bags are staked over wooden carton or plastic sheet for more security.



## Domestic scenario

India is the largest producer, consumer and exporter of jeera. Gujarat and Rajasthan are the major jeera producing states in India. Uttar Pradesh and Madhya Pradesh produce small quantity of jeera. In the country, about 15 to 20% of the total output is exported and rest is consumed internally.

### Crop calendar

Duration of Jeera crop is about four to five months. Sowing season starts during October continues till November. Generally jeera crop takes about 120-125 days to reach maturity. Crop becomes ready to harvest, when plants turn yellowish brown. Harvesting should be done early in the morning by cutting/uprooting the whole plants. Harvested crop should be dried in the threshing yard, thrashed to separate the seeds. Seeds should be cleaned by winnowing.

**Table-1: Jeera crop calendar in India**

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

Harvest	
Sowing	

### Crop seasonality

Harvesting starts from February and extends till March. March will be the peak arrival season.

### Cropping season across regions

Jeera seed is grown in several districts of Gujarat and Rajasthan. The prominent ones are Banaskantha, Mehsana, Barmer, Jalore, Jodhpur and Nagaur in Rajasthan. Major Jeera growing areas in Gujarat are Saurashtra, Kutch and Unjha.

**Table-2: Jeera crop calander in Gujarat and Rajasthan**

Region	Cultivation period	Harvesting period
Saurashtra	20 Oct. to 20 Nov.	15 Jan. to 15 Feb.
North Gujarat	01 Nov. to 25 Nov.	01 Feb. to 15 March
Rajasthan	10 Nov. to 10 Dec.	01 March to 31 March

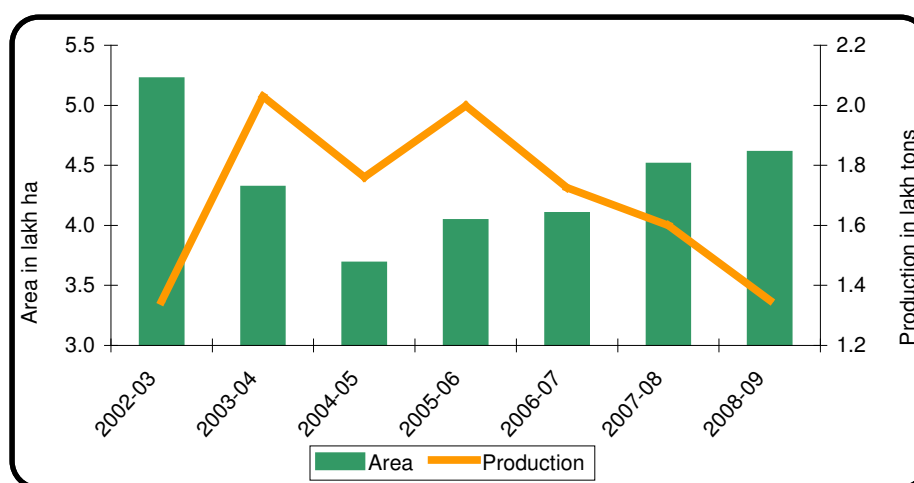
The period of jeera harvest varies from place to place, in major producing states such as Rajasthan and Gujarat. Generally, the peak harvest season is between February and March in both these major producing states.

### Area, production and yield

The area under jeera is about 4.3 lakh ha. per annum. The output is about 1.5 lakh tons of jeera seed annually. The output is not consistence and subject to area under the crop (which is subject to prices) and yield (which is vulnerable for weather conditions). Rain, dew or rise in temperature can play spoilsport for the crops. In addition to this, pests and diseases have an influence on the production. The crop normally arrives into the market in February and March.

### Area and production in Gujarat and Rajasthan

**Fig-1: Jeera area and production Jeera**

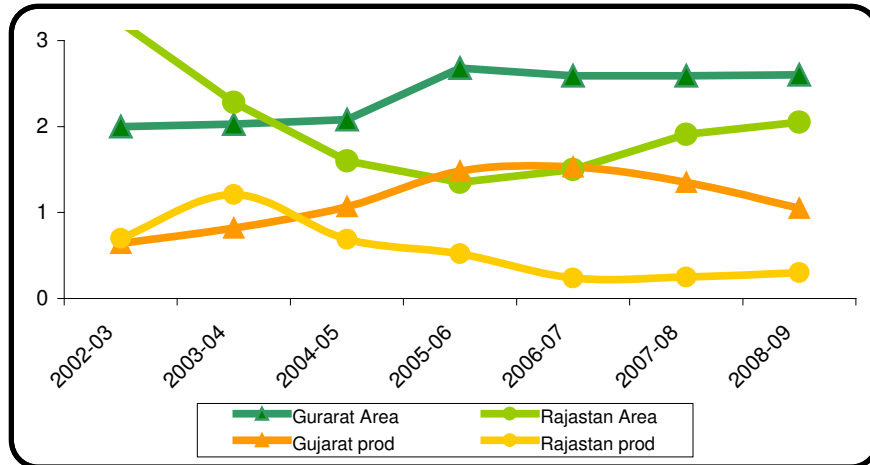


**Source:** Spices Board of India

Area under jeera is persistently declining in Rajasthan since 2002-03 onwards, as the crop is highly vulnerable to weather condition in the state and the yield is less. With this, the output has also taken a hit and ruled at 0.3 tons in 2008-09 compared to higher output in 2003-04 of about 1.2 tons. On the other hand, Gujarat state has witnessed continuous

increase in acreage and output. The state has average area and output of about 2.36 lakh ha. and 1.13 tons respectively during the period between 2002-03 and 2008-09.

**Fig-2: Jeera area (lakh ha.) and production (lakh ton) in Gujarat and Rajasthan**



**Source:** Spices Board of India

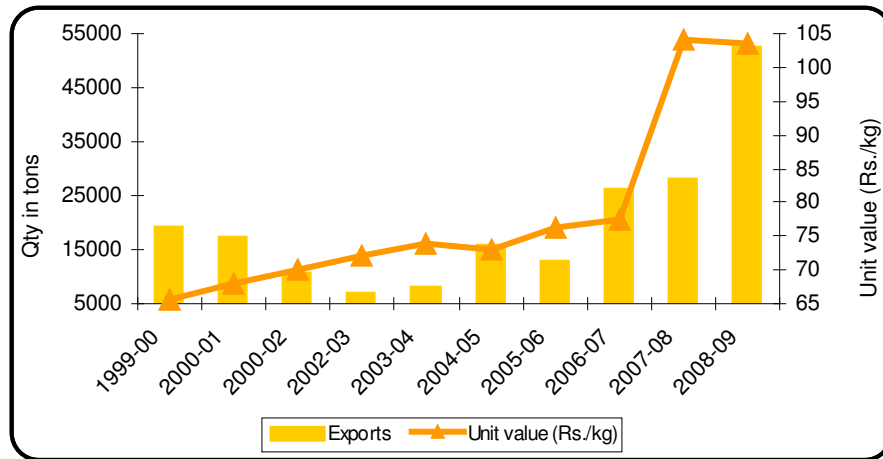
Based on the prices levels, crop shifting will take place for jeera with other crops such as cotton, fennel, isagbul. This happens in both the state of Gujarat and Rajasthan.

The quality of jeera from Rajasthan is better than that of Gujarat, but due to high stalk its price is usually lower than that of Gujarat. The variation in prices due to color and visibility of ridgelines also makes difference. The produce from the North Gujarat fetches higher prices due to strength and longevity of the seed. The produce from the Saurashtra region generally fetches lower prices as the short duration crop (hybrid variety) is grown here in two and half month (while it takes generally three and half months for other varieties) and the seeds remain thin with dull color.

### Major trading centers

Unjha is the major trading center for jeera. Farmers bring their produce from neighboring state, Rajasthan also. Delhi, Juniper and Rajkot are the major terminal markets for jeera, from where it moves to other consumption centers of the country. Prices in Jaipur will be higher compared with Unjha market. This could be linked to the quality of Jaipur jeera, which is recognized as the best.

**Fig-3: Exports from India**



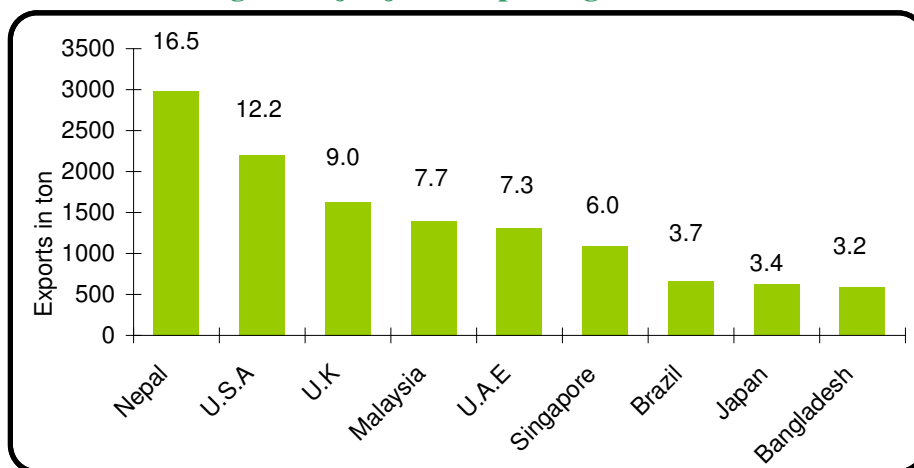
**Source:** Spices Board of India

Indian jeera exports stood at a record level of 52,550 tons during 2008-09 compared with about 28,000 tons a year ago, which is higher by 88%. In terms of value, jeera export were up by 87% to Rs.54, 400 lakh during 2008-09 compared with a year ago.

India exports about 19,600 tons of jeera per annum (average for last 10 years from 1999-00 to 2008-09). In India, out of the total output about 90% is consumed within the domestic market, while only 10% is left for exports. Jeera is harvested in the month of February, where as other major producing countries harvest in August–September. This provides an opportunity window for Indian jeera.

A CUTTING EDGE PLATFORM

**Fig-4: Major jeera importing countries**



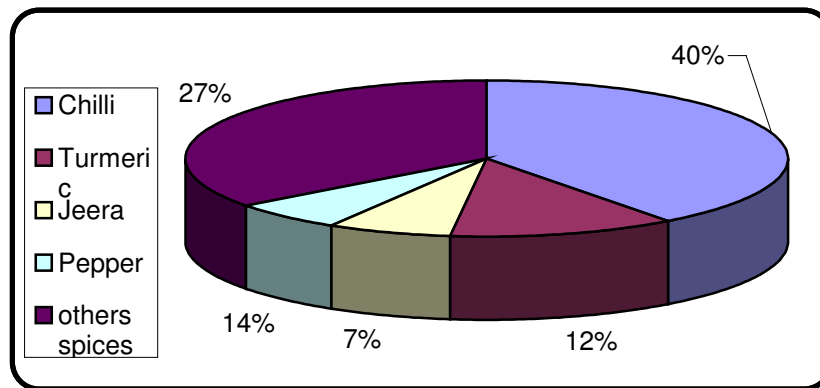
**Source:** Spices Board of India

Indian jeera seeds find a good market overseas till the new crop from other producing countries enters the global market. Jeera is mainly exported to Nepal, USA, UK, UAE, Malaysia, Nepal etc.

### Different forms of jeera exports

- **Jeera seeds** – Major destinations: US, Singapore, UAE, Bangladesh, Brazil, Japan, Malaysia, Nepal and UK
- **Jeera seed powder** – Major destinations: UK and US.
- **Jeera oleoresins**– Major destinations: USA, UK and UAE.

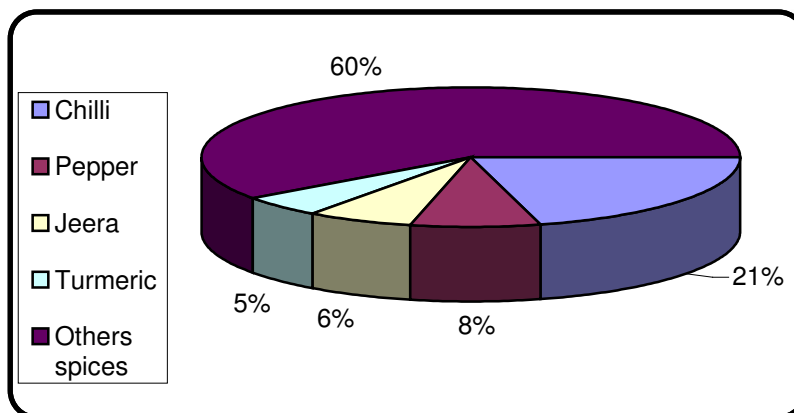
**Fig-5: Share of jeera in total spices exports- Quantity (From 2004-05 to 2008-09)**



**Source:** Spices Board of India

**Note:** An average India is exporting 373,632 tons of spices

**Fig-6: Share of jeera in total spices exports- Value (From 2004-05 to 2008-09)**



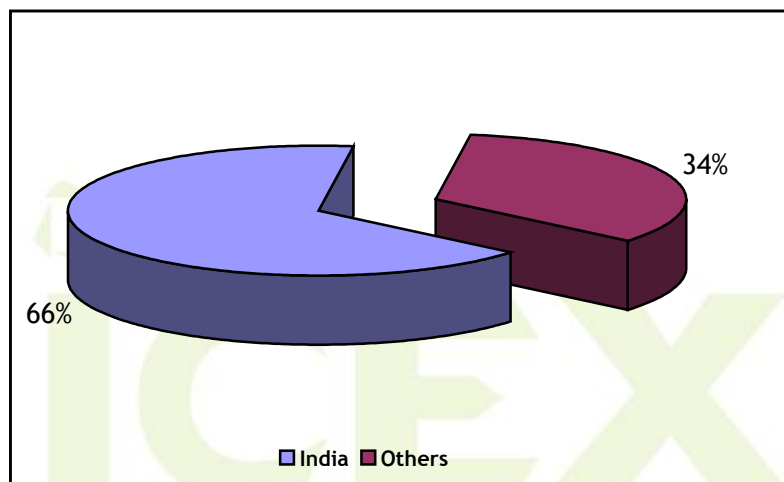
**Source:** Spices Board of India

Jeera is the fourth largest spice exported from India after chilli, Pepper and Turmeric. In terms of quality and value, it accounts about 7% and 6% respectively. It has been exported in the form of Jeera seed, powder and oleoresin.

### Domestic and overseas demand for jeera

The global consumption of jeera seeds is quite low, except in India and Middle East. Consumption in the rest of the world (excluding India) is low at below 60,000 tons. Jeera essential oil is becoming popular in the western hemisphere.

**Fig-7: India's jeera share in global consumption**



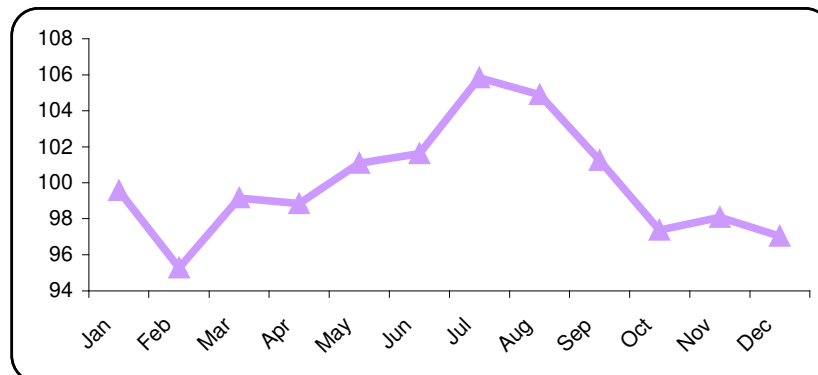
**Source:** Spices Board of India

A CUTTING EDGE PLATFORM

India is the largest consumer of jeera seed in the world. Prices influence consumption pattern in the country. Consumption pattern for the commodity comprises the households segments and industry segments besides oleoresin demand. Supply fluctuations are huge as the output is linked to the weather conditions.

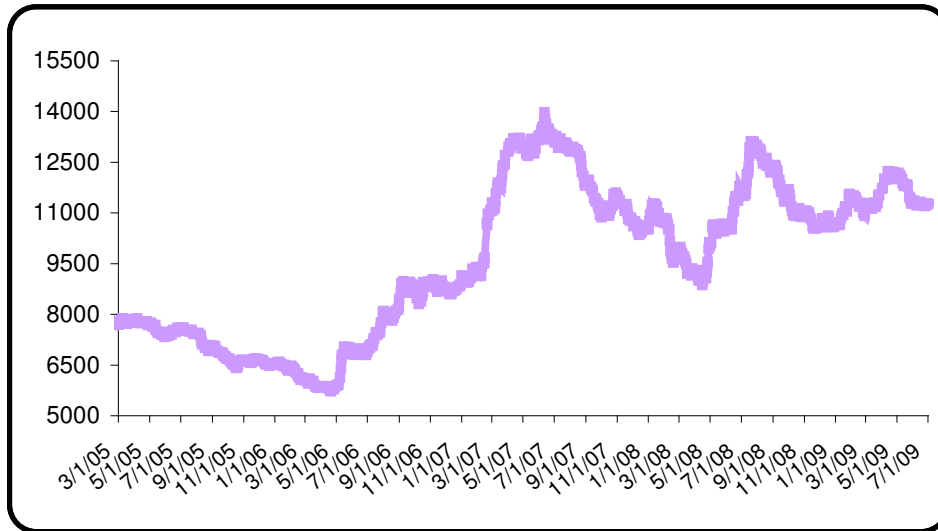
### Seasonality

**Fig-8: Jeera price seasonality index from 2003 to 2009 (April '09)**



Jeera price seasonality indicates that prices start moving up from March and it will peak during July month of every year. Unlike other agricultural commodities, good export demand will be seen for Jeera during peak arrivals season and at the same time quality will also be good during this time.

**Fig-9: Jeera prices at Unjha market from 2005 to 2009 (Rs. Per quintal)**



Jeera spot prices have peaked during June 2007. This is on account of poor production due to crop damage.

#### Price driving factors:

- Weather factor
- Area and production
- Carry forward stocks
- Stock with farmers, traders and stockiest
- Domestic and export demand

## Global scenario

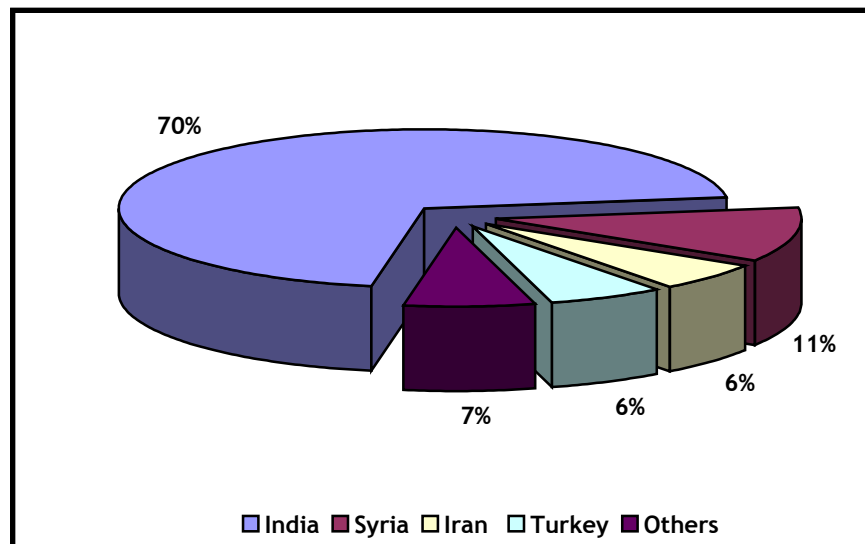
Jeera is cultivated in countries such as Syria, Iran, Turkey, China and Latin America besides India. India is the largest producer and consumer of jeera. Jeera output in Syria, Turkey, Iran and China is around 10000-20000, 7000-15000, 5000-10000 and 8000 tons per annum respectively. Jeera harvest at other origins will be carried out by June and July month, where as in February and March in India. This gap in supply has kept the Indian jeera at advantage position in the international market.

**Table-3: Jeera crop calendar**

Country	Sown	Harvest
India	Oct-Dec	Feb-Apr
Syria	Mar-May	June-Sep
Turkey	Mar-May	July-Sep
Iran	Mar-May	July-Sep

India is the largest producer and consumer of jeera. India contributes about 70% of world production followed by Syria 11%, Iran and Turkey 6% respectively. The major consumers of jeera are China, Indonesia, UAE, UK, US, Singapore, Malaysia, Bangladesh and Nepal besides India.

**Fig-10: Major producers and their share**



## Reference

- Spices Board of India
- Department of Agriculture, Gujarat
- Indian Institute of Spices Research

