

# Marine



WITH YOU ALWAYS

# Newslink

January 2020



**FEATURE ARTICLE**  
Cumin Seeds (Jeera)

**PHOTO(S) OF THE MONTH**  
Rain Damaged Cumin Truck

**BACK TO BASICS**  
Question Of The Month



## CUMIN SEED

Indian spices are well known for their taste and strong aromatic flavour. There are around 80 types of spices grown throughout the world, but India alone produces about 50 types of them. The history of spice is almost as old as human civilization. Among all, Cumin is the second most popular spice in the world after black pepper. It has been grown and used as a spice since ancient times. Seeds, excavated at the Syrian site Tell ed-Der, have been dated to the second millennium BC.

There are two main types of cumin:

- White cumin seeds which are the most common type.
- Black cumin seeds that are popular in Iran. The seeds of black cumin are smaller and have a sweeter aroma than the white seeds. They are sometimes confused with nigella, another seed that is used in Indian cookery.

Cumin seed is commonly known as “jeera” in India. Cumin seeds are used as a spice for their distinctive bitter flavour and strong, warm aroma due to their essential oil content. The fruit is similar to fennel and anise seeds in appearance but are smaller and darker in colour. The seeds are harvested about 4 months after planting when the plant begins to wither, and the seeds change from

dark green to a brown-yellow colour. The seed is small, and boat shaped with nine ridges along the length. They are oblong in shape, thicker in the middle, resembling caraway seeds, but lighter in colour and bristly instead of smooth, almost straight, instead of being curved. The seeds are harvested by removing the whole plant from the ground. The plants are dried in the sun or in the partial sun.



The cumin seeds are beaten out by threshing the dried plants with sticks. The seeds are then further dried to 10% moisture content, either by placing on mats or trays in the sun or by using a drier if the conditions are too humid. The dried seeds are then winnowed using machines which can regulate its moisture level as well as grading. Machines are also used to remove metal particles, dirt, dust, stones & leaves. Cumin also has varied uses in traditional medicines. It is used to treat hoarseness, jaundice, dyspepsia and diarrhoea. Its seeds have stomachic, diuretic, carminative, stimulant, astringent and abortifacient properties. It has various



physiological effects on gastrointestinal, reproductive, nervous and immune systems. It also has hypoglycaemic and hypolipidemic properties. It is a very good source of iron and essential oil shows antimicrobial-antioxidant properties.

India is the largest producer, exporter and consumer of cumin seeds in the world, with Syria, Turkey and Iran being its main competitors in the world market. Data for 2015-2019 shows that India's share is 79% to global production. Within India, it is extensively cultivated in Gujarat, Rajasthan and in some parts of Madhya Pradesh as rabi crop. The flavour of cumin seeds is due to the presence of a volatile oil. In indigenous varieties of cumin, this volatile oil is present up to 2.5%-3.5%. Cumin is generally grown as a mono crop. The increasing population load and globalization has created high demand of cumin both in domestic and international markets. The major consumer of cumin are China, Indonesia, UAE, UK, US, Singapore, Malaysia, Bangladesh and Nepal besides India.

## PACKAGING

Farmers usually bring fresh cumin seeds in gunny bags to agencies who assist them in selling their produce to Traders and Exporters. The cumin content in gunny bags will also contain dust, stalks, foreign materials, stones & sometime metal contents too. Traders & Exporters after batch buying, shift cumin seeds in jute bags to their units. Here machines & sun drying is used to grade, clean & moisture control the seeds as per requirements. Grading is usually size-wise. Moisture level is kept between 08%-10%.

### The Indian standard for dried cumin is as follows:

	Special	Standard	General
Moisture (%) (wet basis)	<10	<10	<10
Damaged seeds (% by weight)	2	4	6
Extraneous matter (% by weight)	2	5	7
Shrivelled, immature (% by weight)	1.5	3.0	4.0

Once the seeds are processed, they are immediately packed in woven LDPE/HDPE bags with or without liners. Use of liner is as per requirement of the buyer, whether in domestic or export market. The bags are stitch sealed, sometimes with single but usually with double stitch. Some buyers also insist for their brand packaging hence cumin seeds are also packed in laminated or polythene bags of various shapes & sizes according to the buyer's demand. The bags are then hermetically sealed to prevent moisture ingress. These bags contain all the relevant product and legal information – the name of the product, brand name (if appropriate), details of the manufacturer (name and address), date of manufacture, expiry date, weight of the contents, added ingredients (if relevant) plus any other information that the country of origin and of import may require (a barcode, producer code and packer code are all extra information that is required in some countries to help trace the product back to its origin).



Valve bags

If the moisture level is anywhere above 10% or not regulated properly, such packing will result in wet damages to seeds within the bags. Cumin seeds can also be packed in cloth or paper bags, with or without inner liners. It is recommended that exporters explore the use of valve bags which have been very successful in cargoes requiring strict moisture control & infestation control. Valve bags have laminated interiors & are immediately sealed by gum. Where in stitching can allow moisture to still be absorbed by cargo content, valve bags sealing method completely removes this risk.

## STORAGE

Storage of cumin is very crucial as its quality preservation is important. For storage, Cumin seeds are packed in gunny bags and each bag ideally contains about 55 kilograms of cumin seeds. Before packing the cumin in the jute bags, it is cleaned by machines to remove the stalks, other foreign material, stones, dust etc. Generally, cumin is harvested manually and hence it is important that before packaging it is properly cleaned and graded by machines. During storage Cumin seeds will absorb moisture, therefore it is advisable to store it in LDPE/HDPE bags with plastic liners. The storage should not be against the wall but preserved at least one to two feet away from the walls, in order to save it from moisture & infestation. If stored in gunny bags, the bags should be stowed over wooden or plastic pallets and not in direct contact with floor. It is advisable to spread a plastic or tarpaulin over the pallets before placing the bags. This avoids infestation from wooden pallets or buildup of mold & Mildew in bottom bags. It also makes



collecting spillage easily. Storing bags on plastic or tarpaulin spreads directly on floor is also not recommended.

Dried cumin seeds must be stored in moisture-proof containers away from direct sunlight. The stored seeds should be inspected regularly for signs of spoilage or moisture. If they have absorbed moisture, they should be re-dried to a moisture content of 10% & less. Wherever possible, export bound cargo should be stored in moisture-controlled warehouse/storerooms. The floor should be Epoxy coated & the walls should be either tiled or painted in moisture inhibiting paint. The storage room should be clean, dry, cool and free from pests. Mosquito netting should be fitted on the windows to prevent pests and insects from entering the room. Strong smelling foods, detergents and paints should not be stored in the same room as they will spoil the delicate aroma and flavour of the cumin.

## TRANSPORTATION

From farm to Traders/Exporters, shipments move in open-body trucks, which are usually covered with tarpaulins. Processed Cumin seeds, depending on their packaging method, are transported either in closed body trucks or in shipping container when bound for exports. Both closed-body trucks & Containers should be selected after strict inspections for physical condition, cleanliness, foreign odours, infestation, door locks & rubber seals. In such shipments, condensation is a major cause. Hence it is recommended that floors of such trucks & containers are plastic lined and taped at edges. This assists in controlling water or



moisture build-up from wooden floor or container or trucks. The walls of container should be lined with ideal thickness Kraft paper & adequate number of desiccants should be placed in the containers. Vents should be taped.

Fumigation should be carried out as per respective buyer & import countries requirement. Ideally Aluminium Phosphide is used as fumigation agent. As an added protection, exporters can explore the use of bitumen tapes over the door edges and joints of containers. This becomes more important in monsoons & when inclement weather is expected during transportation. Closed body trucks may not require wall lining or desiccants.

## MAJOR RISKS:

### • Infestation

Various insects and pests can be devastating. Aphids, a major pest of cumin crop which sucks the sap of tender parts and leaf eating caterpillar, causes damage to the foliage of plants, both leading to the reduction in crop yield. But the major crop damage is caused by fungal diseases and the major fungal pathogens cause wilt and blight respectively. The other disease found in cumin is powdery mildew caused by Erysiphe polygoni, but Indian cumin is not affected much by it. However, it can be easily controlled by pest controlling agents immediately. But wilt and blight diseases of cumin are devastating.

Fumigation processes at various stages can take care of Infestation. Containers should be duly fumigated but not before through inspection of containers. For Pharma & Agro exporters, it is recommended to make use of

industrial vacuum to suck out any hidden insects in crevices & joints of containers. This can be extended to reefer trucks too.

### • Mold & Mildew:

If the cargo is not packed at ideal transportable moisture level - usually regarded as <10% for Agro products. Mold & Mildew will occur within the bags and the external stains will show when bags are not lined with inner poly liners. Cargo in stitched HDPE/LDPE bags it is also at increased risk as dried cargo will absorb moisture near seams & cause mold & mildew, which will be visible when bags are opened. Such risk increase multi folds in monsoons. It is recommended that cargo is quickly packed in bags & wherever possible, include Valve bags for shipments.

### • Condensation:

Is a nightmare for exporters when cargo is being shipped from tropical regions to non-tropical regions. Due process should be followed for Container selection, preparation, stuffing and sealing. Use of wood or any moisture absorbing material along with cargo should be kept minimalistic or completely avoided.

### • Contamination:

Though due process is taken by traders & exporters, but contamination can occur at any stage during transportation. Due process for storage and medium of transportation selection should take care of the risk.

Agro shipments are best, when shipped in insulated containers, which are the best option when dealing with temperate weathers, Container condensation issues, rain-flooding of container during transshipment and/or transportation, better infestation control & security.



# PHOTOS OF THE MONTH

## RAIN DAMAGED CUMIN TRUCK



## BACK TO BASICS

**QUESTION OF THE MONTH:** (Please submit your replies by 25<sup>th</sup> of each month)

Consignment of seeds packed in sealed plastic pouches/packets were being transported by truck which met with over-turning. The cargo fell onto the road side. There was rain a few hours before the over-turning and the ground was muddy. Full cargo was recovered. But Insured was apprehensive that water from ground may have entered the pouches/packets, and it could affect the germination percentage. As per regulation the seed company was required to sell seeds with minimum 70% germination percentage but the seed company was charging premium pricing and was guaranteeing much higher germination percentages. Policy was on All Risks basis. There was no brand clause.

Is the claim tenable?

### LAST MONTH'S QUESTION:

A consignment was shipped by Assured to their Egypt consignee. The consignment was shipped in one x 40' reefer container from Nhava Shev port to Alexandria Port. The consignment arrived at Alexandria port in safe condition & was moved to Free Zone Area. While the consignment was awaiting clearance, there was gun firing exchange between ruling government troops and the insurgents. Two ordinary containers caught fire due to gun fire and the consequent fire spread to other containers in the vicinity, including the container of Assured. Assured's container, which at the time of incident was loaded on a truck, was completely burnt. The cover under the Assured's policy was subject to Institute Cargo Clauses-A 2009, Institute Strikes Clauses 2009, Institute War Clauses 2009. The cover was up to Discharge Port.

Is the claim payable? Support your answer with applicable section of clauses?

### LAST MONTH'S ANSWER:

No, the claim is not be payable. As per Institute War Duration clause (5.1 & 5.3) marine cover terminates upon discharge of cargo from an overseas vessel.

**CORRECT ANSWERS SENT BY: (In order of replies received)**

**Manu Tandon** - GramCover Insurance Brokers Pvt. Ltd., Noida

**PLEASE SEND YOUR REPLIES/ANSWERS TO ADDRESSES  
GIVEN ON LAST PAGE OF THE MARINE NEWSLINK.**

**IF YOU HAVE ANY COMMENTS / FEEDBACK PLEASE SEND IT TO**

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