



# Javitri (Mace)



Mace: Mace (javitri) comes from the same plant. They are leaf like covering enclosing the seed called Nutmeg (jaiphal - another spice). The bright red colored leaves are dried to give yellow colored mace and is available in the form of 'blades' or powder. It is used as a flavoring agent in rich gravies, sweets, pudding etc.

# Nutmeg & Mace

Nutmeg seeds are widely grown for obtaining two of the very important spices, namely Nutmeg and Mace. Both the spices, Nutmeg & Mace are derived from the same plant; nutmeg seed being the seed kernel derived from the fruit and mace being the lacy covering on the seed kernel. It is one of the most sought after and internationally traded spice after pepper, chillies and basil.

Indian Name: Jaiphal and Javitri Botanical Name: Myristica fragrans Family Name: Myristicaceae Parts Used: Seed Habitat: Indonesia, Grenada

# Origin of Nutmeg & Mace

Nutmeg seed is native to Moluccas in Indonesia. Even today Indonesia is a major producer of nutmeg. Apart from Indonesia, Grenada, Sri Lanka, India, China, Malaysia, Zanzibar, Mauritius and Solomon Island are also the major producers of Nutmeg and Mace.

# Nutmeg and Mace Description

The nutmeg & mace seeds are enclosed in yellowish fruit. When the fruit split, bright red covering over the seed is exposed. This bright covering also called aril, is dried and sold as mace. The nut is under the aril inside which is the oval shaped seed nutmeg. Nutmeg is Dark brown on the outside, lighter brown on the inside. To protect nutmeg from insects and fungus, it is coated with lime.

# Chemical Composition of Nutmeg and Mace

Nutmeg consist of 10% of essential oil. The chemical constituent of the nutmeg are terpene hydrocarbons that includes sabinene and pinenes, camphene, p-cymene etc. The fruit also consist of terpene derivatives. Hullicinogenic effect of the spice is caused by the presence of myristicin. Oil component of the mace is same as that of nutmeg but terpenoid is increased.

Note :- Rate of the products Mention in the Website will be verified by day to day fluctuation in the Indian Agro Market Actual Rate of the Products will be provide at the time of final Confirmation of Order



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#### Trade in Nutmeg and Mace Global Scenario

Indonesia and Grenada are the world's largest producers of high quality Nutmeg and Mace. Indonesia has close to 75% of the world market share with Granada having nearly 20% of the market share. The remaining 5% production is done by other countries including India, Malaysia, Sri Lanka etc. EU, USA, Japan are the major nutmeg and mace consuming countries. Singapore and Netherlands are one of the largest exporting countries of the spice.

# Cultivation of Nutmeg & Mace

The nutmeg and mace tree grows well in loamy sandy soil. The required temperature is around 20-30°C whereas the annual rainfall should be between 1500-2500mm. The propagation should be from mother trees for good yields.

Propagation is done by seed. Those nutmeg seeds are taken from the fruits that have split open. Rattled seeds are not used as they do not germinate. Seeds are planted with the shell. The soil should be well manured. The seed is planted in such a way that shell is exposed. Germination takes place between four to eight weeks.

Temporary shade is created before planting the seed. The seeds are planting just before the rainy season. Seedlings can be planted closely so that the male tree can be removed. Shading can also be removed after two or three years. Pruning should be done from time to time. The tree will start to yield fruit after seven years . The yield depend on the size and the age of the tree.

# Harvesting of Nutmeg & Mace

After five years trees start to bear fruits. Fruits when ripe turns yellow whereas the outer husk breaks into half thereby exposing a purplish-brown shinny seed surrounded by a red aril. Fruits are allowed to fall on the ground from where they are collected. Mechanical plucking can also be done using pole but care should be taken as it might harm the flower and the younger fruits.

# Processing of Nutmeg & Mace

The fruits are opened by following methods - Opening by hand, shelling by tipping on a cement floor or soaking the nuts in water for few hours and then squeezing between the thumb and forefinger until the nut pops out.

The mace so separated is dried in the sun. Grenadian mace is stored in the dark for four months. This method produces superior quality brittle, pale yellow mace which highly prized. Maces are then collected and then graded according to their size and quality.

The nutmegs are dried in their shells in the sun. Sometimes they are dried using artificial dryer. Nuts are cracked oftenly using machines. After the cracking the nuts are sorted out.

# Uses of Nutmeg and Mace

# Food Industry

Nutmeg and Mace are used in food processing industry and also used to flavor a number of products including sauces, cakes, cookies, confectionery, candies etc. They are also used in various mughlai cuisines in India.

# **Essential Oils**

Nutmeg is also popularly used for manufacturing essential oil, used heavily in pharmaceutical and perfumery industry. It is used as a major ingredient in cough syprups and in toothpaste.

#### **Beverage Industry**

Nutmeg oil is also used for flavoring aerated drinks and syrups used to make other soft drinks.

# Medicinal Uses

Nutmeg & mace are used for preparing medical dosage that is useful in following health problems:



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- \* Reduces flatulence
- \* Aids digestion
- \* Improves the appetite
- \* Treats diarrhea
- \* Useful in Vomiting and nausea
- \* Insomnia
- \* Common Cold
- \* Dehydration

Composition Of Mace The composition of mace is given below:

Beverage Industry

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Medicinal Uses

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- \* Common Cold
- \* Dehydration

Composition Of Mace The composition of mace is given below:

Moisture Protein
Ether extract
Carbohydrates
Fiber
Ash
Calcium
Phosphorus
Iron
Vitamin B1
Vitamin B2
Niacin
Vitamin C
Vitamin A

5.9%
6.5%
24.4%
47.8%
0.8%
1.6%
0.18%
0.13%
12.6 mg/100 gram
0.37g/100 gram
/0.56 mg/100 gram
1.2 mg/100 gram
12 mg/100 gram
175 I.U/100 gram









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Nutmegs Known In Different Languages		
Arabic	Jouza at-Teeb, Jouza al-Teeb, Josat at-Tib,	
French	Noix de muscade, Muscade	
German	Muskatnuß	
Indonesian	Pala	
Italian	Noce moscata	
Japanese	Natumegu	
Korean	Neotumek, Notumek, Yuktugu	
Spanish	Moscada, Nuez moscada	
Swedish	Muskotnöt	
Tamil	Atipalam, Jatikkai, Jatippu	
Telugu	Jajikaya	
Urdu	Jaiphal	

Maces Known In Different Languages		
Arabic	Basbasa	
French	Fleur de muscade, Macis	
German	Muskatblüte, Macis	
Hindi	Javitri, Javinthri	
Indonesia	Sekar pala, Fuli	
Italian	Mace	
Japanese	Nikuzuku, Mesu	
Kannada	Jajipatra, Jakayi patri, Japatre	
Korean	Meisu	
Spanish	Macia, Macis	
Telugu	Japatri	
Javitri	Basbas	







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