



सत्यमेव जयते

भारत सरकार
Government of India

भौगोलिक उपदर्शन पत्रिका

GEOGRAPHICAL INDICATIONS JOURNAL



बौद्धिक सम्पदा
भारत
**INTELLECTUAL
PROPERTY INDIA**

भौगोलिक उपदर्शन पंजीकृति,
बौद्धिक सम्पदा अधिकार भवन,
जी.एस.टी. रोड, गिण्डी,
चेन्नै - ६०० ०३२.

**Geographical Indications Registry,
Intellectual Property Rights Building,
G.S.T. Road, Guindy, Chennai - 600 032.**



**GOVERNMENT OF INDIA
GEOGRAPHICAL INDICATIONS
JOURNAL NO.98**

JUNE 23, 2017 / ASHADHA 02, SAKA 1939

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OFFICIAL NOTICES

Sub: Notice is given under Rule 41(1) of Geographical Indications of Goods (Registration & Protection) Rules, 2002.

1. As per the requirement of Rule 41(1) it is informed that the issue of Journal 98 of the Geographical Indications Journal dated 23rd June, 2017 / Ashadha 2nd, Saka 1939 has been made available to the public from 23rd June, 2017.

NEW G.I APPLICATION DETAILS

App.No.	Geographical Indications	Class	Goods
566	Wooden Mask of Kushmani	20	Handi Crafts
567	Madurkathi	20,27	Handi Crafts
568	Darjeeling White	30	Agricultural
569	Darjeeling Green	30	Agricultural
570	Otho Dongo	19	Manufactured
571	Jaipuri Razai	24	Textiles
572	Komal Chaul of Assam	30	Agricultural
573	Lucknow Bone Carving	20	Handi Crafts
574	Thaikkal Rattan Furniture	20	Handi Crafts
575	Kalpetta Bamboo Craft	20	Handi Crafts
576	Kannur Baby Wraps	24	Textiles
577	Grana Padano	29	Manufactured
578	Lucknow Chikan Craft (Logo)	24	Handi Crafts
579	Krishnagar Sarpuria	30	Food Stuff
580	Krishnagar Sarbhaja	30	Food Stuff
581	Punjab Seed Potato	31	Agricultural

PUBLIC NOTICE

No.GIR/CG/JNL/2010

Dated 26th February, 2010

WHEREAS Rule 38(2) of Geographical Indications of Goods (Registration and Protection) Rules, 2002 provides as follows:

“The Registrar may after notification in the Journal put the published Geographical Indications Journal on the internet, website or any other electronic media.”

Now therefore, with effect from 1st April, 2010, The Geographical Indications Journal will be Published and hosted in the IPO official website www.ipindia.nic.in free of charge. Accordingly, sale of Hard Copy and CD-ROM of GI Journal will be discontinued with effect from 1st April, 2010.

Registrar of Geographical Indications

Advertised under Rule 41 (1) of Geographical Indications of Goods (Registration & Protection) Rules, 2002 in the Geographical Indications Journal 98th dated 23rd June, 2017

G.I. APPLICATION NUMBER – 379

Application Date: 12-03-2012

Application is made by Devgad Taluka Amba Utpadak Sahakari Sanstha Maryadit, Jamsande, Taluka: Devgad, District: Sindhudurg, Maharashtra, India for the registration in Part - A of the register of **Devgad Alphonso Mango** under Application No. 379 in respect of - Mango falling in Class 31 is hereby advertised as accepted under Sub-section (1) of Section 13 of Geographical Indications of Goods (Registration and Protection) Act, 1999.

- A) **Name of the Applicant** : Devgad Taluka Amba Utpadak Sahakari Sanstha Maryadit
- B) **Address** : Devgad Taluka Amba Utpadak Sahakari Sanstha Maryadit, Jamsande, Taluka: Devgad, District: Sindhudurg, Maharashtra, India
- C) **Types of Goods** : **Class 31 - Mango**
- D) **Specification:**

The geographical area of Devgad Taluka, situated in the Western Ghats in Maharashtra is famous for production of the best quality of Alphonso mango known as Devgad Alphonso, in Maharashtra. Popularly known all over India and elsewhere as Devgad Alphonso, this mango variety is very well known for its typical flavour, pleasant and fruity aroma, pulp thickness, very low fiber content and thin skin/peel. Some of the typical characteristics of the Devgad Alphonso Mango are as follows:

- Devgad Alphonso mango has a conventional mango shape
- Average weight of the fruit is 200-350gm
- The nose of the mango is small and upon maturation is pushed inside
- The pulp of the Devgad Alphonso is thick and sticks to the stone
- The keeping quality of the fruit is 5-6 days after ripening
- The fruit starts to mature from February end till May-June
- Biochemical Parameters: TSS (Brix):
~18-20 Titration Acidity (%):~0.43
Ascorbic Acid (mg/100gm of fruit): 62.22 Reducing sugar (%) : ~4-5
Total Sugars (%): ~ 14-15

E) Name of the Geographical Indication:

DEVGAD ALPHONSO MANGO



F) Description of the Goods:

Devgad Alphonso has gained distinctiveness due to its thick pulp, sweet taste and pleasant fruity flavour. Although the Alphonso mango is genetically identical because of their propagation by grafting the difference observed in the varieties of Alphonso is due to the external environmental factors. The external environmental factors that lead to the distinctive taste, flavour and other characteristics of Devgad Alphonso are due to

- The lateritic rocks and slopes in the area
- The wind blowing from over the Arabian sea towards the region
- Windspeed
- Temperature
- Humidity

The Devgad Alphonso bears fruit at alternative years. The graft prepared for Devgad Alphonso needs intensive care for the first 3-4 years. These grafts need to be watered regularly. In case flowering takes place during this time, it is removed /plucked to maintain good growth and health of the tree. After 3-4 years the graft is planted in the laterite rocks by blasting. After 5-6 years the graft bears fruits. An average tree bears 50-60 kg of fruits a year. Because the pulp of the Devgad mango is so sweet and has a distinctive flavour 1/3 of the mango production goes into canning industry. The pulp is sold and distributed to various markets and ice-creams parlors throughout Maharashtra especially Mumbai - Pune.

The parameters described herein in the table below are in relative terms in comparison with other known mango varieties. The quantitative details follow in the specification appropriately. Description of Devgad Alphonso

Sr. No	Parameters	Description
1	Fruit shape	Conventional mango shape with small nose
2	Average weight	200-350 gm
3	Skin thickness	Thin
4	Skin colour	Saffron-yellow colour
5	Beak	Little, not much visible when fruit ripens and the beak moves inside

6	Pulp weight (%)	Approximately 70% of the entire weight of the fruit
7	Pulp colour/ flavor	Orange
8	Pulp consistency	Very thick
9	Fiber content	Very low (Details given hereinafter)
10	Taste	Very Sweet
11	Flavour	Strong but Pleasant fruity flavour
12	Fruit Maturity	End of February (~ 4 months after maturity)
13	Ripening	10-15 days after plucking the fruits from the tree
14	Keeping Quality	5-6 days
15	Storage Conditions	At Room temperature, away from Sunlight/ heat

G) Geographical area of Production and Mapas shown in page no: 19

Devgad Alphonso is cultivated in Taluka Devgad, a coastal town in Sindhudurg District of Maharashtra, in Western India. It is located on the shores of the Arabian Sea in the coastal Konkan region of Maharashtra, about 516 km south of Mumbai.

Latitude in degrees, minutes, and seconds: 16° 23' 00" N Longitude in degrees, minutes, and seconds: 73° 23' 00" E

Geographical characteristics of Devgad

Sr. No.	Particulars	Characteristics
1	Area, Taluka and District	The authentic Devgad Alphonso (Hapus) characteristics are exhibited by mangoes produced along the coastal region of Kunkeshwar, Mithbav, Katvneshwar, Vijayadurga, Girye, Iliye, Devgad and other coastal villages. This area has ahilly terrain. The taste of the Alphonso is attributed to sloping hills, orchard climate, and quality of soil. Taluka: Devgad District: Singhudurga
2	Temperature (°C)	16.2-34.5
3	Rainfall (mm)	~839.4
4	Humidity (%)	60-90
5	Wind Speed (kmph)	6 – 8
6	Type of terrain	Hilly
7	Predominant rock	Laterite
8	Surface colour	Red

9	Predominant Texture	Rocky
10	Soil Slope	Hilly (gentle)
11	General fertility	Very high in Manganese, Iron and Potassium contents
12	Electrical conductivity	Below 1 (Good)
13	Exchangeable sodium	Less than 120 (Low)
14	Other Crops	Cashew, Beetle Nut, Coconut, Rice, Banana, <i>Kokam</i>

H) **Proof of Origin (Historical records):**

Sindhudurg district was earlier a part of the Ratnagiri district. For administrative convenience and industrial and agricultural development Ratnagiri district was divided into Ratnagiri and Sindhudurg with effect from 1st May, 1981. Sindhudurg district now comprises of eight tahsils viz. Sawantwadi, Kudal, Vengurla, Malvan, Devgad, Kankavli, Vaibhavwadi and Dodamarg.

The Alphonso mango, named after Alfonso De Albuquerque, a Portuguese explorer and military strategist who led many Portuguese invasions in the 1600s is grown in south western parts of India and is considered to be one of the best mangoes in the world. De Albuquerque carried Alphonso mango with him on his many travels to Goa, India and it was eventually transplanted in Goa. In Goa, the people called this mango "Aphoos" and in Maharashtra it was pronounced as "Hapus". The Alphonso mango has travelled to different places like Ratnagiri, other Konkan region and southern side of India as well. The Devgad alphonso has gained distinctiveness due to its characteristic qualities to the delight of consumers and therefore has become so popular amongst buyers. This distinctiveness and favorable characteristics like the peculiar fruity smell, low fiber content, unique taste and texture of the Devgad mango is attributable to the geographical conditions of the Devgad regions as the same are not observed in other varieties grown elsewhere.

When grafts from Ratnagiri were brought to Devgad by growers for experimentation, they realized it was difficult to plant the grafts on the hard laterite rocks (termed as *jambha dagad* locality). The growers uprooted some existing trees of other species that had grown on the laterite rock and planted the Alphonso grafts in its place. The planted grafts survived and produced Alphonso mangoes that were very different from mangoes of Ratnagiri region. This was probably attributable to the typical weather conditions and soil characteristics in the geographical region of Devgad.

The period between 1920-1930, **-999 witnessed marketing efforts by Devgad Mango Growers, wherein some of them sent their Alphonso mangoes via passenger boats to Mumbai. It was a matter of prestige for the Devgad mango growers to send Alphonso mangoes to Mumbai. This resulted in Mumbaikars recognizing the distinct characteristics and taste of Devgad Alphonso such as sweet taste, thick pulp and extremely pleasantfruityflavour. These Alphonso varieties grown in Devgad and sent to Mumbai by the Devgad mango Growers came to popularly known as Devgad Alphonso

(Devgad Hapus) and fetched premium price due to its growing demand and popularity. It was at this time that Devgad Alphonso was looked at as a Cash crop and the term Devgad Alphonso (Devgad Hapus) started gaining consumer goodwill to become a brand name thereby acquiring commercial importance.

The method of uprooting trees repeatedly and planting grafts in their place was not feasible for increased cultivation of Devgad Alphonso and therefore the growers came up with a novel way of planting Alphonso grafts in the laterite region (*Katal Jameen*). The Devgad Mango growers started following new method for cultivation of mangoes comprising blasting of the hard *jambha* rocks to obtain craters and planting the Alphonso grafts therein. It was apparent from the growing demand and popularity of Devgad Alphonso that the distinctiveness of Devgad Alphonso were a result of the typical climatic conditions and soil characteristics of Devgad region which are different than even nearby regions like Ratnagiri.

By 1950-1960 many growers had adapted this technique and were sending Devgad Alphonso to Mumbai. The most revolutionary and helpful change came when Babu Gogate, eminent mango grower from Devgad Region, who established a new marketing/logistics strategy required for Devgad Region. To avoid perishability, the Devgad Mango growers were ripening the harvested mangoes in their houses contrary the method adopted by other mango growers in Ratnagiri Region. This required collection of matured mangoes from individual houses in conducive conditions and a common transport system for transportation system to the market such as Mumbai. This collection from individual houses avoided the exposing of mangoes to direct sunlight which is detrimental to the quality of mangoes. This ensured that the fruits were in good condition and received premium price in the market. This encouraged small and big cultivators to undertake cultivation of Alphonso mango in Devgad Region.

I) Method of Production:

Soil characteristics and Climatic Condition

Laterite soil is primarily found in the tropical regions such as Devgad which receive heavy seasonal rainfall. High rainfall encourages leaching of soil where lime and silica are leached away and the resulting soil is predominantly rich in oxides of aluminium.. Due to the presence of iron oxides the colour of laterite soil appears red. This soil is poor in lime content and hence it is acidic. Laterite soils are found on the high level plateau and hilly areas that receive heavy rainfall like Devgad.

The Devgad Taluka receives an average rainfall of 840 mm. The temperature ranges from 16 to 35 °C. Typical soil parameters are described herein below

Soil parameters of Devgad region and comparison with common soil

Sr. No.	Parameters & Test	Values	Rating	Typical optimum range of common soil
1	Soil Texture (Feel method)	Sandy Clay	-	-
2	Water Holding Capacity (%)	40.6	Good	-
3	pH (By pH meter)	5.80	Acidic	6.5-7.5

4	Electrical Conductivity(By conductometer)	0.49	Good	Below 1
5	Organic Carbon/ (%) (Wet Oxidation Method)	2.92	Good	Above 1
6	Organic Matter/ (%) (Wet Oxidation Method)	5.04	Good	-
7	Calcium Carbonate/ (%) Rapid Titration Method	2.37	Non calcareous	Below 5%
8	Available Nitrogen/ (Kg/ha)	327.0	Good	281-560
9	Available Phosphorus/ (Kg/ha) (Olsens's Method)	6.69	Very low	14-28
10	Available Potassium / (Kg/ha) (NH4OAC Method)	327.0	High	151-250
11	Available Sulphur/ (Kg/ha) / (Palaskar eta Method)	5.42	Very Low	50-100
12	Exchangeable Calcium/ (ppm) (NH4OAC Method)	95.6	Low	125-200
13	Exchangeable Magnesium / (ppm) (NH4OAC Method)	27.2	Very low	60-120
14	Exchangeable/Available Sodium / (ppm) (NH4OAC Method)	113.8	Low	100-200
15	Exchangeable/Available Chloride / (ppm) (Titration Method)	78.4	Very Low	130-200
16	Bicarbonates/ (ppm) (Water extract Method)	10.6	Very Low	75-150
17	Lime requirements	10.52	-	-

Available Micro Nutrients in Devgad region and comparison with common soil

Sr. No.	Parameter & Tests	Value	Rating	Typical optimum range of common soil
1	Iron (Fe)/(ppm) (DTPA Method)	40.5	Very high	4.50
2	Manganese (Mn)/(ppm) (DTPA Method)	15.1	Very high	2.0
3	Zinc (Zn)/(ppm) (DTPA Method)	0.30	Low	2.0
4	Copper (Cu)/(ppm) (DTPA Method)	0.76	Low	2.0
5	Boron (B)/(ppm) (DTPA Method)	0.41	Low	Above 0.5

Physical Characteristics of Devgad Alphonso

Fruit dimension	Weight of the Fruit (gm)	200-350
	Length of the fruit (cm)	8-13
	Diameter (cm)	7-8
Stone dimension	Weight of stone (gm)	~40

	Thickness of stone (cm)	2- 2.5
Peel	Weight of peel (gm)	~35
Pulp Characters of fruits	Weight of pulp (gm)	~175
	Percentage of fruit pulp (%)	~70
	Pulp to stone ratio	~4.5
	Pulp to peel ratio	~5

Manure (per tree) and Method of applying manure

Present Method of Cultivation Orchards

Orchards of mango trees are called *aamraiby* the local growers. The orchards area covers flat as well as slopes of Devgad Taluka region. Devgad Mango growers maintain a distance of about 35-45 feet between two mango trees as compared to earlier distance of 50 feet. The following Table 6 describes the manure requirement pertree

Manure requirement

Urea	Super phosphate	Potash	Organic Manure
3kg	3kg	1-1.5kg	50-60kg of manure and cow dung, compost mix

The manure along with the above mentioned compounds listed in Table7 are applied in a very peculiar way. The area under the tree and surrounding the bark of the tree is cleaned first. The ring of dried leaves is made around the bark of the tree which is approximately of radius of 1 foot. This ring is within the canopy of the tree. Inside this ring soil from the depth of 6 inch is removed. After the soil is removed urea, phosphate, potash and manure is mixed thoroughly and applied in this 6 inch deep area surrounding the bark. After this mixture is applied the pit is filled back with the removed soil. During rains the mature does not flow away along with the rain water and remains in the pit and around the tree. This method of applying manure is performed so that the roots receive the necessary nutrition.

Micro-nutrients

Micro nutrients are added based on deficiencies observed in the tree. Micro-nutrients such as Boron, Zinc and Copper applied to the tree. These micro-nutrients are applied by foliar method.

Yield

On an average, a tree produces 50-60 kg of Alphonso. This is approximately 4 boxes of mangoes (Approximately 20-25 dozen). On an average Devgad Taluka produces 35,000 to 40,000 Tonnes of Devgad Alphonso in a season.

Grafting

Method of making grafts (*kalam*) for plantation:

There are different methods to preparing grafts for plantation and for propagation

1) Saddle graft (*Koy-kalam*)

For saddle graft a very young sapling/stock of mango tree is used. In saddle graft, a deep cleft is made in the end of the alphonso scion by two sloping cuts, and the end of the stock is made wedge-shaped to fit the cleft in the alphonso scion, which is placed upon it saddlewise.

2) Side graft (*Bhet-kalam*)

The side graft is suitable for plants that are too large for a whip graft but not large enough for cleft or bark grafts. The plant or branch that will serve as the stock should be between 1 and 2 inches in diameter. The scion should be about 1/4 inch in diameter. The scion is inserted into the side of the stock, which is generally larger in diameter than the scion.

3) Cleft-graft (*Khunti-kalam*)

Cleft grafting is a grafting technique which allows the union of a rootstock limb that is much larger in size than the scion piece. Cleft grafting is conducted in late winter when both the rootstock and the scion are in a dormant condition.

Plantation method

Grafts that have been prepared by saddle graft method are not planted immediately. The grafts are watered often and nurtured for 3-4 years. Many growers prefer keeping these grafts at home as they need to be watered regularly. After 3-4 years the graft grows upto 12 foot and is ready to be planted.

The specific aroma, texture and taste of Devgad Alphonso are due to its weather and soil conditions. The laterite deposits are very extensive in Devgad. The plantation is done on *lateritic* surface termed as *Katal* in local language. As these grafts need to be planted in the hard rock, the selected area for plantation is blasted to make a crate in the rock. After the crate is made, fill it with soil, *murum*, stones, 3-4 *ghameli* of compost-manure and 2 kg super phosphate or bone powder. The crate should be dug and filled in the month of May (before monsoon sets in). The plantation should be done only in the month of June – August after rains. During plantation 10 gm of Chlorden/BHC powder is added to avoid termite infestation.

Inflorescence

Flowering usually begins towards the end of October. Terminal inflorescence is observed in Alphonso. The inflorescence, which is called *mohar* by the local growers, is of panicle type. The length of the inflorescence is between 30-40 cm and width is approximately 15 cm. The growers can tell the quality of fruits based on the length of the inflorescence. Successful cross pollination of the flowers on inflorescence leads to fruit formation.

Pesticide/fungicides are sprayed after flowering during the months of October to December. Even if one tree is attacked by pests/fungus, the entire orchard needs to be sprayed with insecticide/fungicide to protect the orchards from the infestation.

Pruning

An alphonso mango tree can grow up to 35–40 feet, with a crown radius of 10 feet. If the alphonso tree is allowed to grow up till such heights, it becomes extremely difficult to remove the fruits from the tree. It has also been observed that sunlight does not reach the leaves on the inner side when the trees grown to such heights. Therefore the leaves on the inner side are not able to prepare the necessary nutrition via photosynthesis. In such conditions the available nutrition is used up by these leaves. Therefore, the nutrition does not reach the fruits and the tree is unable to produce fruits of the desired quality. Growers have therefore adopted pruning technique to avoid such problems. Growers prune the tree to induce horizontal growth of the tree. They cut the apical meristem to stop vertical growth.

Horticulture method

The trees are shaken in the month of December for cleaning. Shaking keeps the tree clean and also removes the dead flowers from the inflorescence. The “shaking method” is preferably done between 10am to 4pm as the humidity in the air reduces after 10 am. If the flowers are sticky and do not fall after shaking, a stick that has a small brush attached to it is used. This brush is very small and has very soft bristles to ensure that the fruits are not damaged in the cleaning process. Cleaning is important to keep the surface of the Alphonso clean.

Harvesting Process

Devgad Alphonso mangoes are harvested at a particular stage of maturity before ripening. Maturity and ripening of Devgad Alphonso fruits has a different connotation. Maturity is the capability to ripen, while ripening is its suitability to be eaten in full relish and flavour. The level of maturity is locally defined in India's traditional 'anna' system of currency, where 16 annas make up a rupee. A '16 anna Devgad Alphonso' is a 100% mature mango. Devgad Alphonso fruits are harvested at 14 anna level of maturity, by expert harvesters, who have acquired, by experience, the skill of identifying mature fruits from distances as long as 15-25 feet.

At 14-anna maturity, the shoulders of the Devgad Alphonso fruit slightly rise, while its stem/node pushes inside to form a slight trough around the part where its stem starts. The beak/nose of the fruit, which is prominently raised and distinctly visible during the early stages of the fruit, is pushed inside and levels out along the skin of the fruit.

Method of Harvesting

Harvesting of the fruit is done using a tool called as '*zela*' in the local language. It is a loose nylon-net basket held by metal ring, which is attached to a bamboo pole. A sharp V-shaped cutting tool is attached to the front of the metal ring. The stem of the Devgad Alphonso while harvesting is kept intact. The reason for the practice is the belief that the intact stem during the process of ripening imparts added flavor/taste to the fruit; this

belief is well represented in the logo of Devgad Alphonso as well. The harvester, after identifying a mature fruit, holds the *zela* from one end and carefully raises its basket-end, till the fruit is lowered into the basket and its stem rests against the V-shaped cutting tool, at a point over 6-9 inches from the fruit. Then the harvester tugs at the *zela* in a specific and careful manner, which does not disturb other fruits held from the same branch, does not result in any pull for the branch and yet cuts the stem from which the fruit is held, ensuring that a significant part of the fruit stem is still intact with the fruit. The *zela* is then lowered; the fruits are carefully taken out, and laid into a basket, or crate having a bed of hay laid at the base. The Alphonso mangoes are immediately moved into a cool, shady place so as to shield the fruits from sunlight and heat.

Time of Harvesting

Harvesting takes place during the end of February. The harvest is amongst the first to reach the market. After this harvesting continues and also takes place during the months of May and June.

Inspection and Grading Process

The inspection is done by a team of graders. Graders are experts who have gained the skill of grading through experience. The Inspection and Grading process starts after the 'crates or baskets of harvested fruits are brought into the shade or at the grading section of the Society. In the inspection process, the team inspects each and every fruit for under-maturity (less than 14 anna), over-maturity (more than 14 anna) and for defects, like bruises, scratches, points where the fruit would have been hit. A fruit-fly pest lays eggs inside fruits through a small hole it makes in the fruit skin. This hole, as minute as a needle prick, is detected only by an experienced eye. Such fruits are also taken out. The selected fruits are then dipped into water and the fruits that float are rejected.

The selected fruits are given an antifungal treatment and then taken for grading. Grading is done according to weight. After grading, the fruit are laid out for ripening, on beds made from hay and covered with hay. A specially calibrated weighing machine shows the grade of each mango. After weighing the Alphonso mangoes, they are placed into their dedicated baskets. From there, it is sent for packing. An important point to note is that the weights mentioned are the weights of the fruit while packing. The fruits are packed while they are still green or semi-ripe. The weight does reduce by the time the fruits ripen and also due to moisture loss if the weather is dry.

Grading by weight

Grade	Weight
A2	326- 350 gm
A1	301- 325 gm
1	276- 300 gm
2	251- 275 gm
3	226- 250 gm

Packing: While packing, the fruit are laid out for ripening, on beds made from hay and covered with the same. Special care is taken to ensure that the stem of Devgad Mango remains attached to the fruit. The packing of Devgad Alphonso mangoes (any grade) is done in one of the following ways –

1. In metal trunks
2. In wooden boxes
3. In corrugated boxes

J) Uniqueness:

Devgad Alphonso is popular due to the following unique characteristics

- Very Sweet taste / flavour
- Very thick pulp
- Thin skin/peel
- Extremely low fiber content
- Pleasant fruity aroma.
- Conventional mango shape and appealing yellow orange colour on ripening
- Nose of the mango: Small and upon maturation is pushed inside

Research article titled ‘Geographical variation in the flavour volatiles of Alphonso mango’, published in the Food Chemistry Journal, (Volume 130, Issue 1, 1 January 2012, Pages 58-66) measures the volatile compounds that develop after harvesting Alphonso mangoes from the Devgad, Vengurle and Dapoli region. Compounds, mesifuran, (Z)-ocimene and γ -octalactone have the highest odour units and thus they are the major contributors to the Alphonso flavour. Out of these, mesifuran has coumarin-like fruity odour, (Z)-ocimene has citrus-like terpenic odour, whereas γ -octalactone has coconut-like creamy odour. From the studies conducted in the research article mentioned above, it was observed that Devgad Alphonso has high ratio of mesifuran/(Z)-ocimene and γ -octalactone/(Z)-ocimene, Devgad Alphonso can be described as relatively “pleasant” and “fruity” in terms of the flavour as compared to others. The above mentioned study published in the scientific journal gives scientific backing as to what are the volatile compounds in the fruit that give the Devgad Alphonso its typical flavour / aroma. All these characteristics are the result of the plantation in laterite rocks, winds blowing over the region from the Arabian Sea towards the region, wind speed, humidity, temperature and other typical climatic conditions of Devgad region.

Comparison with Similar products:

Alphonso Mango grows across Konkan but as various studies have shown that geographical factors heavily impact the production and growth of Alphonso mango. In the market, Alphonso gets sold in the name of the area it grows in. Following are the broad differences in the two varieties i.e., Devgad and Ratnagiri.

Parameter	Devgad	Ratnagiri
Shape	Roundish	Elongated
Pulp Colour	Saffron Orange	Yellow
Fruits Weight Range (gms)	200-225	250-300

Ripe Pulp Taste	Fruity Sweet	Sweet with Mild Tangy
Skin	Thin, breaks during peeling	Thick, can be pulled easily
Maturity	Starts Maturing in February	Starts Maturing in March
Pulp While Peeling	Pulp Does not Stick to Skin while Peeling	Pulp Sticks to Skin While Peeling
Aroma	Has the highest Aromatic Compounds, Smell felt from a distance	Has lesser aromatic Compounds, has to be put to nose to feel smell

K) Inspection Body:

Devgad Taluka Amba Utpadak Sahakari Sanstha Maryadit has already established an internal inspection nbody comprising graders, packers, farmers and lawyers from Devgad area along with advisory support of government agencies.

Advertised under Rule 41 (1) of Geographical Indications of Goods (Registration & Protection) Rules, 2002 in the Geographical Indications Journal 98 dated 23rd June, 2017

G.I. APPLICATION NUMBER – 497

Application Date: 26-08-2014

Application is made by Kelshi Parisar Amba Utpadak Sahakari Sangha Maryadit, a/p Kelshi, Taluka: Dapoli, District: Ratnagiri – 415717, Maharashtra, India for the registration in Part - A of the register of **Ratnagiri Alphonso Mango** under Application No. 497 in respect of Mango falling in Class 31 is hereby advertised as accepted under Sub-section (1) of Section 13 of Geographical Indications of Goods (Registration and Protection) Act, 1999.

- A) **Name of the Applicant** : Kelshi Parisar Amba Utpadak Sahakari Sangha Maryadit,
- B) **Address** : Kelshi Parisar Amba Utpadak Sahakari Sangha Maryadit, a/p Kelshi, Taluka: Dapoli, District: Ratnagiri – 415717, Maharashtra, India
- C) **Types of Goods** : **Class 31** – Mango
- D) **Specification:**

Ratnagiri Alphonso Mango is a traditional variety of Alphonso Mango grown in Ratnagiri district and is popularly known as King of Fruits. It is very delicious in taste and also full of nutritional values. It is a rich source of Ascorbic Acid (Vit. C) besides containing low sugar and hence preferred even by Diabetic patients. As compared to other Mango varieties in India, Ratnagiri Alphonso Mango has lowest stone weight and hence contains good quantity of pulp. Excellent aroma, fibreless pulp, tasty juice with characteristic flavor adds to the characteristics of this Mango.

- E) **Name of the Geographical Indication:**

RATNAGIRI ALPHONSO MANGO

- F) **Description of the Goods:**

From ancient explorers to the noble rulers of the land, Ratnagiri has come a long way from being a little-known region to becoming an important part of Indian history. Alphonso derived its name from Alfonso de Albuquerque, the Portuguese explorer. He led the Portuguese invasion into India in the 1600s, and the Portuguese introduced the Mango variety through grafts on Mango trees. Starting its journey in Goa, the Alphonso Mango travelled across the Western India and settled in Ratnagiri region to be recognized as King of Mangoes.

Ratnagiri Alphonso Mango is the dark yellow, golden color fruit with the best flavour grown on the red soil of Ratnagiri and the salty Sea breeze. Ratnagiri Alphonso Mango has fibreless flesh, low sugar and high acidity contents which yield great taste and excellent aroma to the fruit.

Appearance: Ovate oblique. Base obliquely flattened and ventral shoulder broader and higher than dorsal.

Size: Medium.

Color: Orange yellow.

Pulp: Thick and yellow in color.

Stone: Lowest weight than other mango varieties and fibreless.

Taste: Sweet and slight sour.

Overall acceptability: Worldwide acceptance.

G) Geographical area of Production and Map as shown in page no: 30

Ratnagiri is located 17⁰45'North latitude and 73⁰11'East longitude. Ratnagiri district is like bliss for Maharashtra due to its scenery. Ratnagiri is southwestern part of Maharashtra and a part of Konkan region. The Sahyadri Mountains border Ratnagiri to the east. Heavy rainfall results in highly eroded landscape in the coastal region. Maximum cultivation of Alphonso is taken in Dapoli tehsil of Ratnagiri district. Followed by Phansop, Kolambe villages and Mandangad, Guhagar and Chiplun tehsil cultivate Alphonso.

Area, Production and Yield of Mango in Major Districts of Maharashtra during 2008-09

(Area in thousand hectare, Production in thousand MT and yield in kg per hectare)

District	Area	Share (%)	Production	Share (%)	Yield
Ratnagiri	43.61	10.24	117.35	18.63	3400
Raigad	41.58	9.77	81.82	12.99	3390
Thane	37.28	8.76	70.25	11.16	3400
Sindhudurg	23.26	5.46	53.87	8.55	3390
Pune	16.53	3.88	47.41	7.53	3399
Ahmednagar	20.79	4.88	24.38	3.87	3399
Nanded	17.73	4.16	34.76	5.52	3399
Aurangabad	15.10	3.55	14.74	2.34	3399
Other District	209.87	49.30	185.19	29.40	883
Total of Maharashtra	425.80	100.00	629.80	100.00	3400

H) **Proof of Origin (Historical records):**

Mango is *Mangifera indica* where 'indica' means India. The name only suggests that the origin of mango is India. **Alphonso, the King of Mangoes**, was named after Alfonso De Albuquerque, a Portuguese nobleman who helped establish the Portuguese empire in India. India is known as the country of origin of mango and blessed with thousands of cultivars of this national fruit.

From ancient explorers to the noble rulers of the land, Ratnagiri has come a long way from being a little-known region to becoming an important part of Indian history.

Alphonso derived its name from Afonso de Albuquerque, the Portuguese explorer. He led the Portuguese invasion into India in the 1600s, and the Portuguese introduced the Mango variety through grafts on Mango trees. Starting its journey in Goa, the Alphonso Mango travelled across the Western India and settled in Ratnagiri region to be recognized as King of Mangoes.

The District Gazetteer of Ratnagiri published in the year of 1955-56 describes cultivation method of Ratnagiri Alphonso Mango while endorsing the unique qualities of Alphonso such as delicious taste, inviting fragrance, best keeping quality and fibreless.

The Marathi *Krishi Dnyankosh* [Vol.2, p.101(1953)] published in Wealth of India describes the chemical characteristics of Ratnagiri Alphonso Mango with a specific prefix '*Ratnagiri*' ahead of Alphonso Mango.

THE GUARDIAN reported that the Ratnagiri Alphonso Mango was shipped to London for the Queen's coronation in 1953 from Mumbai's legendary Crawford market.

From the girth of the existing trees, the history of Alphonso can be physically traced back hundred years at least. The Ratnagiri Alphonso Mango is like a treasure fiercely guarded by locals.

Alphonso is a seasonal mango cultivar. In the beginning of nineteenth century, the native of Kokan gifted pulpy, tasty mango to Queen Victoria. She was very much pleased and she liked it. Right from that time, King of mangoes i.e. Ratnagiri Alphonso acquired status in Europe. Today, 150-200 years old trees are present in Ratnagiri region which gives the proof of origin of Alphonso.

Despite of having so many virtues, cultivation of Alphonso in different localities in India does not result in same quality of fruits. Because of this fact, Alphonso cultivation is concentrated in a 700km long, narrow coastal belt of western India, the Kokan region. Even within this region, the fruits show conspicuous variation in their taste and flavor. Throughout Kokan, the growing practice and post-harvest treatment of these mangoes is the same. In spite of such consistent cultivation and harvesting practices, the flavor of the ripe mangoes differs between the localities of cultivation. Alphonso mangoes are available only in India. Most of the cultivation takes place in Maharashtra State and half of the state's harvest is from Ratnagiri district. The Alphonso Mangoes that come from Ratnagiri region are known to be the best ones. India stands first in the list of mango

producing (39.1% of the world export of 1.2MMT) countries. Alphonso is the most popular mango cultivar, which is favored mainly because of its highly attractive flavor. Apart from this, Alphonso possesses many significant attributes such as attractive color, ample sweetness, low fiber containing pulp and long shelf life.

I) Method of Production:

Planting of Ratnagiri Alphonso:

The journey of Ratnagiri Alphonso begins as a small twig cut out from the mother plant. It is then grafted on to a stem that has grown out of a mango seed of a sturdy variety. Sometimes one twig is planted into a combination of two stems from two seeds. It is famous as 'Kalambhet' in Ratnagiri. It is planted into a plastic bag and put under intensive care for the next four years. It is kept in the bag for some months and then planted into a tin/can until it grows to a height of about 5 feet till about the fourth year. Only three out of five survive till the fourth year. In the fourth year, the bags are cut out and the little tree is planted in the orchard. Only four out of five survive till the sixth year. It starts bearing good fruit since the ninth year. Since it is a grafted tree and well maintained, you have fruits hanging between 0 to 25 feet from the ground.

The number of trees per acre varies from 50 to 70, depending upon the spacing provided for. On *katal* where the growth is bushy, the spacing is about 20 to 25 feet while in low-lying soils it varies from 30 to 40 feet between the trees either way. Spacing, say up to 30 to 40 feet, depending on the nature of soil, is supposed to be beneficial as the entire crown of the tree is fully exposed to the sun from all sides. This makes available ample sunshine to the maturing fruit, facilitates tillage, helps insecticide operations and reduces the possibility of attack by pests and diseases.

Manure and Fertilizing:

Fertilizer is made up of goat droppings, dung and mulch. Goat Rui or lucked is used as natural fertilizer. Paste of 1% sea water + ash from cornflakes mill is applied to the tree to protect it from canker worm. It is applied using brush at ground level and using gunny.

Flowering:

At the time of flowering season in the middle of winter, the direction of wind is from sea shore towards hilly area. Mango flowering takes place generally in three flushes at an interval of one month. At the time of tides, wind blowing from sea, carry with them micronutrients which get deposited on mango trees. This deposition of micronutrient particles is helpful for inflorescence of mango tree in the month of January- February. This carrying of micronutrients with blowing winds from sea shore towards land is unique phenomenon occurring in Kokan region. The area under this is about 50-80km.

The Alphonso mango plant does not necessarily bear fruit every year; alternate bearing is more usual. Therefore, with a view to ensuring steady yield year after year periodical planting is done in the gardens, though this is not the surest way of overcoming the periodicity in the yield of mangoes. As the exact causes of the periodicity are not known, sure and standard remedies have not been found so far.

Maturing of the Fruit:

At Ratnagiri and in the northern area, as fruit bearing is a little late, picking is done during April and May. On maturity, the oil glands in the skin of the fruit become conspicuous; the fruit becomes turgid and shows depression near the hold of the stalk. The maturity of this mango is defined in India's traditional 'anna' system of currency, where 16 annas make up a rupee. A '16 anna Alphonso' is a 100% mature mango. Alphonso fruits are harvested at 14 anna level of maturity, by expert harvesters, who have acquired, by experience, the skill of identifying mature fruits from distances that can go as much as 25 feet.

Harvesting:

The fruit is harvested using a tool called 'Zhela' in the local language. It is a loose nylon-net basket held by metal ring, and attached to a bamboo pole which has a sharp V-shaped cutting tool at the front of the ring. The harvester tugs at the Zhela in a specific and careful manner, which does not disturb other fruits held from the same branch, does not result in any pull for the branch and yet cuts the stem from which the fruit is held, ensuring that a significant part of the fruit stem is still intact with the fruit. The fruits are taken out, and laid into a crate and immediately moved into a cool, shady place so as to shield the fruits from sunlight and heat.

Grading:

Most farmers get the crates of harvested fruits directly to the co-operative society, where they are graded, sorted and the farmer is paid accordingly. During the sorting process, each fruit is manually checked for hit marks, bird fly stings, pest scrape marks, sap burns, and other anomalies. After sorting, the Alphonso are graded according to their weights. The fruit is then finally dispatched to the end consumer through wholesale fruit markets.

Packing:

The yield of Alphonso mangoes varies from 400 to 500 fruit per tree. *Some* trees yield fruit even up to 2,000. An average fruit of Alphonso weighs six to eight ounces. After picking is over, the fruit is exposed to air for a day and then packed in wooden boxes (20" X 12" X 12") having slits in between the planks for aeration. They are then transported to Bombay and other upghat markets. For local consumption the fruit is ripened by covering it in layers of paddy straw. When the fruit begins to change color, it is taken out and brought to the market for sale.

J) Uniqueness:**Geographical Significance:****Soil:**

The predominant soil in the district is laterite soil which vary in colour from bright red to brownish red due to higher concentration of Iron in the soil. Soils are acidic in nature and the pH value ranging from 4.5-6.5 which leads to higher acidic content in the Ratnagiri Alphonso.

Air

Like the soil, the Air also plays a pertinent role in the quality of Ratnagiri Alphonso Mango. Since Mangoes do well in humid environment, major part of Ratnagiri district's coastline is covered with Mango orchards. The wind coming from sea carries micronutrients along with it which aids in inflorescence of the Mango tree during the flowering season. High Moisture content in the atmosphere adds to the juiciness of Mango.

Rivers:

All the rivers in the district originate from the Sahayadri ranges and flow from east to west and merge in the Arabian Sea. The river Savitri flows on the northern periphery forming a natural boundary between Ratnagiri and Raigad districts and is navigable for about 35 km in the district. The other important rivers in the district are Vashishti, Jagbudi, Caster, Bad, Muchkundi and Jaitapur. Most of the rivers are non-perennial although they get over flooded during the monsoon.

Climate and Rainfall

The climate in Ratnagiri district is humid. The district experiences three seasons viz. Summer (March-May), Monsoon (June-Oct) and Winter (Nov-Feb). Due to its proximity to the sea coast, there is not much variation in the day and night temperatures throughout the district hence the cultivation of Ratnagiri Alphonso is unproblematic.

The district receives rain from the South-West monsoon during the months of June to October. The average rainfall in the district is 3787 mm which is heavy and hence good for cultivation of Alphonso trees.

The world famous Ratnagiri Alphonso Mango enjoys virtual dominance both in domestic as well as international market due to its typical sugar-acid blend, attractive color and shape, pleasant aroma, highly appreciable flavor, taste and distinctly having long keeping quality. The Mango family is very big, however each has its own unique traits. The Ratnagiri Alphonso is the dark yellow, golden color fruit with the best flavour grown on the red soil of Ratnagiri and the salty Sea breeze.

Ratnagiri Alphonso Mango is a Cultivar (Cultivated Variety: selected and cultivated by humans). It has a narrow and slightly elongated bottom. This feature distinguishes it from other Alphonso Mangoes. Although visually similar to Ratnagiri and Devgad Alphonso Mangoes, other Alphonso varieties are grown on flat terrain and far away from sea shore and therefore differ characteristically (thick skin with less pulp) from the cultivars grown in Ratnagiri and Devgad on the red soil of the Konkan, surrounded by the salty sea breeze.

Many have tried planting cultivars of this farmed variety in other parts of the world, but have not been able to match the original flavour of the Alphonso variety grown in the Ratnagiri District in the volcanic soil of this coastal zone. The best and most expensive Mangoes are grown on the plantation in Ratnagiri and are hand-harvested. It is this variety that's most widely exported.

The *new Tropicana Slice variant is made from the pure pulp of the famous Alphonso mangoes exclusively from Ratnagiri* while endorsing that the finest quality Alphonso is being produced in Ratnagiri. The worldwide demand for Ratnagiri Alphonso Mango in itself explains the genetic purity attributed to the geographical origin.

The comparative chart of physico-chemical characteristics of Mango Genotypes is as shown below: **Physico-Chemical Characters of Mango Genotypes in Field GeneBank.**

S. No.	Varieties	Ripe Fruit wt. (g)	Stone wt. (g)	TSS (°Brix)	Fruit length (cm)	Fruit Perimeter (cm)	Acidity (%)	Ascorbic Acid (mg 100g ⁻¹)	Pulp wt (g)
1	'Alphonso'	197.0	33.0	21.8	8.5	22.0	0.45	106.0	152.2
2	'Banganapalli'	375.0	41.0	22.0	12.6	28.8	0.36	45.2	315.0
3	'Bangalora'	498.2	52.5	17.8	16.9	26.5	1.42	33.9	422.7
4	'Bennet Alphonso'	172.0	34.5	20.1	9.0	19.4	0.67	31.5	114.9
5	'Cherimanga'	245.0	52.5	17.6	11.0	17.6	0.36	57.5	174.5
6	'Chittor'	298.0	45.0	14.5	9.5	24.5	0.73	23.1	229.5
7	'Gomanga'	134.0	21.5	15.5	7.7	19.2	0.65	136.9	114.5
8	'Gudad'	546.5	48.0	19.0	11.2	27.3	0.72	52.0	460.0
9	'Himayuddin'	258.5	37.0	18.5	12.1	22.3	0.28	34.1	200.5
10	'Himayuddin'x 'Kalapady'	215.6	36.3	23.2	12.2	23.0	0.50	41.8	165.7
11	'Himayuddin'x 'Neelam'	353.0	41.5	23.2	12.4	22.6	1.65	108.0	282.5
12	'Kalapady'	170.0	26.9	24.7	8.5	20.8	0.94	115.6	161.0
13	'Karpooram'	438.5	30.5	15.8	9.2	29.2	0.27	139.1	387.3
14	Lord	234.0	35.5	19.0	10.3	22.0	0.59	67.4	179.0
15	'Malgoa'	438.5	52.5	25.2	9.6	29.5	0.52	66.5	341.0
16	Mercury	212.0	26.5	23.1	8.2	22.7	0.31	51.5	170.5
17	'Mundappa'	247.5	27.0	18.5	7.9	24.8	0.37	28.5	202.0
18	'Neelam'	226.0	40.0	20.9	9.0	20.3	0.57	116.1	172.5
19	'Panakkalu'	325.0	59.0	17.5	7.6	25.3	0.71	52.5	233.0
20	'Panchadhara- kalasam'	262.0	36.0	18.5	9.5	23.9	0.25	33.8	192.5
21	'Phirangiladuva'	413.5	55.0	22.0	13.1	27.6	0.33	45.4	330.0
22	'Prior'	262.0	39.5	17.7	9.8	23.0	0.32	33.6	203.0
23	'Ratnagiri Alphonso'	166.0	19.9	17.2	11.0	20.8	0.92	70.5	134.1
24	'Suvarnarekha'	260.9	44.3	16.7	11.4	22.4	0.60	46.0	197.6

Comparison of Mango Varieties Registered/Applied for GI in India

Appl. No.	Name of GI	Region	TSS (°Brix)	Ascorbic Acid (mg/100gm)	Acidity (%)	Total Sugars (%)
111	Laksman Bhog Mango	West Bengal	14.4	25.62	0.36	10
112	Himsagar Mango	West Bengal	16	25.20	0.24	-
113	Malda Fazli Mango	West Bengal	13.52	17.52	0.24	-
125	Mango Malihabadi Dussehri	Uttar Pradesh	20.2	42.30	0.25	-
185	Gir Kesar Mango	Gujarat	18.1	28.59	0.26	13.96
	Ratnagiri Alphonso Mango	Maharashtra	17.2	70.2	0.92	13.23

The table below describes the comparison of two Mango varieties Ratnagiri and Devgad Alphonso Mango:

Characteristics	Devgad	Ratnagiri
Region	Maharashtra	Maharashtra
TSS (⁰ Brix)	18.20	17.2
Acidity (%)	0.43	0.92
Total sugars (%)	14-15	13.23
Stone Weight (gm)	40	19.9
Peel weight (gm)	35	11.9
Pulp Weight (gm)	175	134.1
Ascorbic acid mg/100gm	62.15	70.2

It was observed that significant variation exists, among trees of the same clone in an orchard with respect to fruit shape, size, color and quality, which is ascribed to bud mutation. Genetic divergence is the process in which two or more populations of an ancestral species accumulate independent genetic changes (mutations) through time, often after the populations have become reproductively isolated for some period of time. Mango is the genus of tree & bushy tree in the family *Mangnoliaceae*. Most of the Mango varieties are dioceous and cross-pollinate to produce fertile hybrids suggesting a closer genetic relationship which is not expected at species level.

The genetic divergence could be attributed to the differences among the clones of Alphonso Mango which in turn might be due to environmental conditions of the locations associated and interacted with the clone of Alphonso. The results obtained from evaluation of nine location specific clones of Alphonso were used for testing divergence among the clones by employing Mahalanobis D² analysis. For the clones of Alphonso, divergence (D₂) values of intra and inter cluster distance are presented in Table 1 and the nearest and farthest clusters based on D₂ values are presented in Table 2.

The higher difference of the clones within the same cluster (Intracluster) was shown by cluster-II to cluster-I from 0.000 to 2.739 and Intercluster distance shown in cluster-I is 5.362.

Table 1: Average Intra and Inter cluster D₂ value of Nine Alphonso Mango Clones

Cluster	I	II
I	2.739	5.362
II	5.632	0.000

Table 2: Distribution of Nine Alphonso Mango Clones in Two Clusters

Cluster	No. of Clones	II
I	8	DPL-I, RTN-I, DVG-I, VEN-I, DWR-I, DWR-II, BGM-I, BGM-II.
II	1	BGM-II

(The clones are named as: DPL-I (Dapoli), RTN-1 (Ratnagiri), DVG-I (Devgad), VEN-I (Vengurla), DWR-I (Dharwad), DWR-II (Dharwad), DWR-III (Dharwad), BGM-I (Belgaum) and BGM-II (Belgaum))

Ratnagiri Alphonso Mango is characterized by following characteristics:

Maximum amount of Ascorbic acid (Vitamin C)

Ratnagiri Alphonso contains 70.2mg/100gm Ascorbic acid i.e. Vitamin C which is highest among all the other mango varieties in India. The benefits of vitamin C may include protection against immune system deficiencies, cardiovascular disease, prenatal health problems, eye disease, and even skin wrinkling.

Lower amount of Total Sugars

Ratnagiri Alphonso contains 13.23% total sugars which is lower as compared to other mangoes. Hence sweetness is lower but this helps to the diabetic patients for Alphonso consumption.

Lowest stone weight

Stone weight of other mangoes in India ranges from 30-55gm where in Ratnagiri Alphonso stone weight is very less i.e. 19.9gm. This leads to the maximum pulp amount in the fruit.

High acidity

There is highest acidity in Ratnagiri Alphonso and specifically higher Ascorbic acid content than other mango varieties in India due to low soil pH. Acidity in Alphonso is 0.92% which is extremely higher than other mango varieties where acidity ranges 0.25-0.50%.

High nutritional value

Due to presence of good amount of vitamin C and also lowest sugar amount, Ratnagiri Alphonso Mango possesses high nutritional value.

Fibreless flesh with tasty juice and excellent aroma

Flesh of Ratnagiri Alphonso mango is fibreless. And due to low sugar, high acid and low fibre contents in Ratnagiri Alphonso, it gives tasty juice and excellent aroma to the fruit.

K) Inspection Body:

Inspection Structure and Internal Watchdog Mechanism:

Kelshi Parisar Amba Utpadak Sahakari Sangha Maryadit has constituted an Inspection structure to oversee the standards and quality assurance system for inspection of every step of production of Ratnagiri Alphonso Mango and statutory compliances thereof.

This Inspection Body consists of President / Vice-President / Secretary / Treasurer of the Applicant Organization, Farmer Members, GI Experts, and Agriculture Experts.

The quality of Ratnagiri Alphonso Mango will be monitored by an Internal Watchdog Mechanism in order to maintain the original physical and chemical characteristics as per GI registration.

The system of internal watchdog mechanism will consist of following committee members:

Representative of Producer group of Ratnagiri Alphonso Mango

Three (3) farmers from the area under cultivation

GI Experts

Agriculture Expert.

This committee will also help to regulate the use of Geographical Indications for the welfare of local farming community. The committee will frame the terms and conditions to use brand name of Ratnagiri Alphonso Mango by any of the marketing agency. The logo of Ratnagiri Alphonso Mango GI will be used to create brand image.

L) Others:

USES OF RATNAGIRI ALPHONSO

Maximum demand is for the Alphonso fruit hence the direct consumption of fruit is preferred. A summer drink called *Aam panha* comes from mangoes which is special drink in Maharashtra. **Mango Lassi** is popular throughout South Asia prepared by mixing ripe mangoes or mango pulp with buttermilk and sugar. Ripe mangoes are also used to make **curries**. *Aamras* is a popular thick juice made of mangoes with sugar or milk, and is consumed with Chapatis or *Pooris*. Mangoes are used in preserves such as *Moramba*, *Amchur* (dried and powdered unripe mango), and pickles, including a spicy mustard-oil pickle and alcohol. Mango is used to make juices, smoothies, ice cream, fruit bars, *Pies*. Pieces of mango can be mashed and used as a topping on ice cream or blended with milk and ice as milkshakes. The juice of ripe mangoes is either consumed as it is or is made into *Ambapoli* which is most famous cuisine in Maharashtra. It is a type of Roti made from Alphonso by drying Alphonso pulp or boiled into *Mava*. **Mango Barfi** is an Indian subcontinent dessert. Alphonso Mango pulp is used in *Barfi* and *Barfi* is a type of Indian sweet, usually in the form of lozenge.

RATNAGIRI (Maharashtra)



General Information

What is a Geographical Indication?

- It is an indication,
- It is used to identify agricultural, natural, or manufactured goods originating in the said area,
- It originates from a definite territory in India,
- It should have a special quality or characteristics unique to the geographical indication.

Examples of possible Geographical Indications in India:

Some of the examples of Geographical Indications in India include Basmati Rice, Darjeeling Tea, Kancheepuram silk saree, Alphonso Mango, Nagpur Orange, Kolhapuri Chappal, Bikaneri Bhujia etc.

What are the benefits of registration of Geographical Indications?

- It confers legal protection to Geographical Indications in India,
- It prevents unauthorized use of a registered Geographical Indication by others.
- It boosts exports of Indian Geographical indications by providing legal Protection.
- It promotes economic Prosperity of Producers.
- It enables seeking legal protection in other WTO member countries.

Who can apply for the registration of a Geographical Indication?

Any association of persons, producers, organization or authority established by or under the law can apply.

The applicant must represent the interest of the producers.

The application should be in writing in the prescribed form.

The application should be addressed to the Registrar of Geographical Indications along with prescribed fee.

Who is the Registered Proprietor of a Geographical Indication?

Any association of persons, producers, organisation or authority established by or under the law can be a registered proprietor. Their name should be entered in the Register of Geographical Indications as registered proprietor for the Geographical Indication applied for.

Who is an authorized user?

A producer of goods can apply for registration as an authorized user, with respect to a registered Geographical Indication. He should apply in writing in the prescribed form along with prescribed fee.

Who is a producer in relation to a Geographical Indication?

A producer is a person dealing with three categories of goods

- Agricultural Goods including the production, processing, trading or dealing.
- Natural Goods including exploiting, trading or dealing.
- Handicrafts or industrial goods including making, manufacturing, trading or dealing.

Is registration of a Geographical Indication compulsory?

While registration of Geographical indication is not compulsory, it offers better legal protection for action for infringement.

What are the advantages of registering?

- Registration affords better legal protection to facilitate an action for infringement.
- The registered proprietor and authorized users can initiate infringement actions.
- The authorized users can exercise right to use the Geographical indication.

Who can use the registered Geographical Indication?

Only an authorized user has the exclusive rights to use the Geographical indication in relation to goods in respect of which it is registered.

How long is the registration of Geographical Indication valid? Can it be renewed?

The registration of a Geographical Indication is for a period of ten years.

Yes, renewal is possible for further periods of 10 years each.

If a registered Geographical Indication is not renewed, it is liable to be removed from the register.

When a Registered Geographical Indication is said to be infringed?

- When unauthorized use indicates or suggests that such goods originate in a geographical area other than the true place of origin of such goods in a manner which misleads the public as to their geographical origins.
- When use of Geographical Indication results in unfair competition including passing off in respect of registered Geographical indication.
- When the use of another Geographical Indication results in a false representation to the public that goods originate in a territory in respect of which a Geographical Indication relates.

Who can initiate an infringement action?

The registered proprietor or authorized users of a registered Geographical indication can initiate an infringement action.

Can a registered Geographical Indication be assigned, transmitted etc?

No, A Geographical Indication is a public property belonging to the producers of the concerned goods. It shall not be the subject matter of assignment, transmission, licensing, pledge, mortgage or such other agreement. However, when an authorized user dies, his right devolves on his successor in title.

Can a registered Geographical Indication or authorized user be removed from the register?

Yes, The Appellate Board or the Registrar of Geographical Indication has the power to remove the Geographical Indication or authorized user from the register. The aggrieved person can file an appeal within three months from the date of communication of the order.

How a Geographical Indication differs from a trade mark?

A trade mark is a sign which is used in the course of trade and it distinguishes goods or services of one enterprise from those of other enterprises. Whereas a Geographical Indication is used to identify goods having special characteristics originating from a definite geographical territory.

THE REGISTRATION PROCESS

In December 1999, Parliament passed the Geographical Indications of Goods (Registration and Protection) Act 1999. This Act seeks to provide for the registration and protection of Geographical Indications relating to goods in India. This Act is administered by the Controller General of Patents, Designs and Trade Marks, who is the Registrar of Geographical Indications. The Geographical Indications Registry is located at Chennai.

The Registrar of Geographical Indication is divided into two parts. Part 'A' consists of particulars relating to registered Geographical indications and Part 'B' consists of particulars of the registered authorized users.

The registration process is similar to both for registration of geographical indication and an authorized user which is illustrated below:

