

Intellectual Property a Geographical Indication A Study Of Jalna Sweet Orange - Gi Application

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Date of Submission: 15-12-2020

Date of Acceptance: 30-12-2020

ABSTRACT: -A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originating in a given place. Lemon was originally grown in India and sweet oranges and mandarins are indigenous to China. Brazil is largest producer of sweet orange. India has 3rd rank in the production of sweet orange with annual production of 4266.9 million tones. Citrus is grown practically all over India. However the states of Andhra Pradesh and Maharashtra have the largest share. The most significant part of the Jalna district is that about 85% of the geographical area is under agricultural use. Out of the total 7, 61,200 Hectares of the geographical area, 6, 51,553 Hectare of land is under agricultural use.

Keywords: Geographical indication, sweet orange, Intellectual property, Climate.

I. INTRODUCTION:

A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originating in a given place.

OBJECTIVE:-

1. To high light a geographical indication (GI) is a sign used on products that have a specific geographical.
2. To study the in order to function as a GI, a sign must identify a product as originating in a given place

II. METHODOLOGY:-

The present study is based on investigation Information, Data will be collected from secondary sources. It was decided to collect maximum information through secondary sources. Secondary data from socio economic review, reference book, research articles etc. and numerical

data information has been analyzed. Internet information is also another popular source of information for data collection.

III. DISCUSSION: -

Description of the Goods: In Jalna, due to fantastic atmosphere, soil and climate for sweet orange crop, Sweet orange Research Station was established in Badnapur tehsil of Jalna district. Following points are describing the Jalna sweet orange in particular. Appearance: Truncated shape of apex. Shape: Oblate to spherical. Skin: Rough surface with prominent streaks on the rind. Number of segments: 9 to 12 Color: Greenish yellow. Taste: Sweet Overall acceptability: Very good.

Geographical area of Production and Map: Jalna district is approximately situated at the center part of the Maharashtra state of Republic of India and in the northern direction of Marathwada region.



Specifically district lies between 1901 North to 2103 North Latitudes and 7504 East to 7604 East Longitude. The boundaries of Jalna district are adjacent to Parbhani and Buldhana on east, Aurangabad on west Jalgaon on North and Beed on South. Jalna district covers an area 7,612 Sq.Kms, which is 2.47% of the total state area. The city is situated on the banks of Kundalika river. Jalna district comprises of 8 tehsils. The majority

of its population engaged in agricultural occupations. Jalna district is leading in Sweet Orange orchards.

Maximum Sweet Orange orchards are in Ghansawangi and Ambad tehsil.

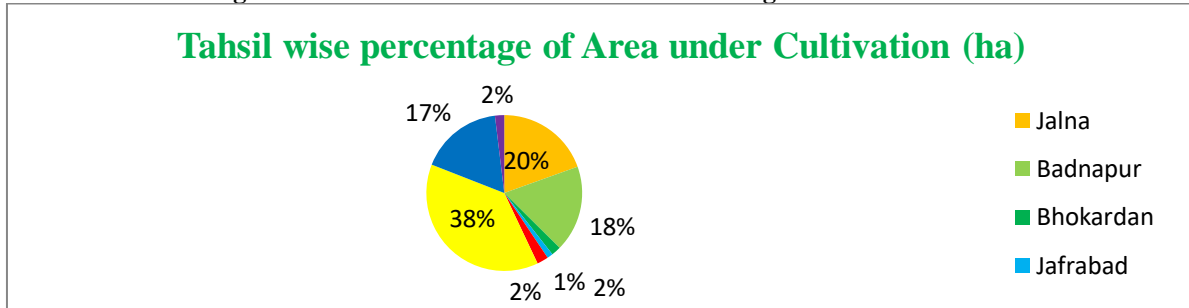
District has the largest area (7,169 Ha) in the State under sweet lime cultivation. Ghansawangi Ghansawangi is a Tahsil place in Jalna District. Ghansawangi covers an area of 1 ,

11,071 hectares. From the broken tanks and numerous dilapidated tombs which surround it, Ghansawangi appears to have been a place of much importance in the olden days. Weekly market is held on Saturday. Ambad Ambad situated between a ridge of hills in 19035'15" North Latitude and 75050'7" East Longitude is the headquarters of the tahsil of the same name. It is located along Jalna-Gevai road the former place being the principal commercial centre in the Marathvada region.

Area under cultivation of Jalna Sweet Orange for the district is indicated in the following table:

Sr. No.	Taluka	Area under Cultivation (ha)
1	Jalna	4111
2	Badnapur	3771
3	Bhokardan	419
4	Jafrabad	250
5	Partur	498
6	Ambad	7999
7	Ghansavang	3612
8	Mantha	403
	Total	21063

Tahsil wise Percentage Area under cultivation of Jalna Sweet Orange



Proof of Origin (Historical records): Sweet orange (*Citrus sinensis* Osbeek) is considered as second important citrus species after mandarin orange in India and it shares 23% of production among all the citrus cultivars. Sweet orange contributes 71% of the total citrus production in the world. The origin of citrus fruit is identified with a history full of controversy and interesting legends. Some researchers believe that citrus is native to the subtropical and tropical areas of Asia, originating in certain parts of Southeast Asia including China, India, and the Malay Archipelago. Lemon was originally grown in India and sweet oranges and mandarins are indigenous to China. Brazil is largest producer of sweet orange. India has 3rd rank in the production of sweet orange with annual production of 4266.9 million tones.

In Jalna district, Nucellar mosambi, Kagdi Mosambi and Rajapimpari are the major cultivars of sweet orange. Kagdi Mosambi is a

traditional variety cultivated in Jalna. Kagdi Mosambi variety has small fruit size, thin peel, less fruit yield per tree and tree growth is also not so good hence trees become prone to many diseases. Therefore, to overcome with these problems, cultivation of new variety i.e. Nucellar variety started in last few decades. Nucellar variety produced in Jalna by grafting method. Rangpur lime stock from Rangpur, Bangladesh found to be the best suitable for sweet orange in Jalna. Nucellar variety possesses large fruit size, thick peel and also gives highest fruit yield per tree.

Sweet Orange Planting: Sweet orange planting in Jalna is generally done during monsoon in north-western and western parts of the country, i.e. Punjab, Haryana, Rajasthan and Maharashtra, while in southern India; it is done at the onset of rainy season. Land should be ploughed in a cross manner to soften the upper surface. The pits of 60

cm x 60 cm x 60 cm size should be dug. They are filled up first with clay soil, murrum, soil, farmyard manure mixture and micronutrients. A planting distance of 6m from plant to plant and 6m from row to row is generally followed in square system of planting. GI Journal No. 79 25 January 28, 2016 however, planting distance as well as planting density depends upon the cultivar, rootstock used and agro climatic conditions.

In Jalna sweet orange plants budded on Rangpur lime planted at a distance of 6m x 6m, accommodating 270 plants/ha. Training and pruning: The trees are trained to a single system and any shoot emerging from the portion below the bud union should be nipped off regularly. Only 4-6 branches having wide angle with the main trunk, should be allowed to grow up to 3-4 m. thereafter no training is required. Training of plants should be completed in first 3 years so that plants attain a mechanically strong canopy. Pruning of bearing trees differs with variety. It consists of removal of dead, diseased, criss-cross and weak branches. Removal of water sprouts and suckers from each rootstock below the bud union is also essential and should be attended to regularly along with thinning of the shoots for better penetration of sunlight and aeration. The best time for pruning in bearing trees is after harvesting during late winter or early spring. Manure and fertilization: Fertilizer requirement of the plants is influenced by various factors like age of the plants, rootstock used, soil and climate along with the crop load in bearing trees. No uniform fertilizer recommendation can be made for all sweet orange cultivars in different agro climatic regions. The fertilizers should be applied in a ring from below the canopy of the trees depending on age. For a mature tree, fertilizers is applied in a 30-40 cm wide ring made at a radial distance of 100-200 cm from the trunk as maximum feeder roots are located below the tree canopy. Though the requirement of major elements is met and large met by supplementing N,P,K fertilizers, farmers usually forget to apply micronutrients, the most essential part of citrus nutrition. Aftercare: Most of the sweet orange cultivars are planted 6-8 m apart, leaving much area unutilized.

The frequency of irrigation is influenced by soil, climate, variety and age of plants. Water is applied at every 6-8 days interval from March to June and at every 10-12 days interval during November-February. In young plants up to the age of 8 years, the irrigation should be given through basin system of irrigation. In grownup and old orchards, flood system of irrigation may be adopted avoiding water content with tree trunks. GI Journal

No. 79 26 January 28, 2016 Harvesting and Postharvest Management: Sweet oranges mature in 9-12 months. Being a non-climacteric fruit, there is no improvement in colour, taste and flavour after harvesting. Therefore, fruits should be harvested when they are fully ripe and attain proper size, attractive colour and acceptable sugar: acid ratio. Sweet oranges can be allowed to remain on their trees on reaching maturity for several weeks without deterioration. November-January for 'Ambe bahar' and March and March-May for 'Mrig bahar' are time for harvesting. Fruits should preferably be harvested by clipping with secateurs. Sweet oranges are tight-skinned fruits possessing comparatively better shelf life than loose-skinned mandarins. Washing, drying, sorting, grading and wrapping in tissue paper is usually adopted for postharvest handling and packaging. Sweet oranges can be stored at temperature of 5°C and 85-90% relative humidity for 3 months.

Uniqueness: - Geographical Significance Topography Jalna district is situated in the upper Godavari Basin. The central hill range known as Jalna Hill is an upland, plateau and is drained by Purna river and its tributaries. Southern portion is comparatively low land, flat area terminating at Bank of Godavari River in the South. Jalna covers maximum flat land area which is ideal requirement for cultivation of sweet orange. District slopes towards south and average elevation above sea level is 534 meters.

Climate The climate of the district can be divided into three seasons as: Moderately warm wet season during June to Sept. Cool dry season from Oct. to Feb. Hot dry season from March to May. Temperature requirement for plantation of sweet orange trees ranges from 12°C to 35°C and overall dry climate conditions. The average temperature of the district is ranging from 20°C during winter to 41°C during summer with dry conditions perfectly suitable for sweet orange. During greater part of the year, the climate is quite pleasant. It receives rainfall mostly from South-West monsoon. Rainfall is not uniform in all parts of the district as the sweet orange trees require very less rainfall.

The average rainfall ranges between 600mm to 700mm. Soil The soils of the district are black with considerable variation in texture and depth and are consists of light, medium and heavy soils. The soils along the river banks especially in Ambad and Partur blocks are deep black and quite fertile hence the cultivation of sweet orange is higher in Ambad. The soils in northern parts of the district i.e. in Jalna, Bhokardan and Jaffrabad blocks are coarser. Rivers Rainfall of the district is

not uniform hence the important source of water for sweet orange crop is river. The most important river in Jalna district is Godavari, which flows for about 60 km along the Southern boundary of the district. Its principle tributaries are Dudhana, which flow from Central part of the district and Galhati, which passes through Ambad tehsil. The river Purna, which is one of the tributaries of GI Journal No. 79 27 January 28, 2016 Godavari flows through the Northern part of the district. The other tributaries of Purna and Khelna are Girija and Dudhana respectively.

Uniqueness of Jalna Sweet Orange: High TSS/acid ratio Sweet orange are considered mature when their juice content and total soluble solids: acidity ratio have attained certain minimum limits for palatability. Total soluble solids constitute about 80 % sugars, 10% acids and 10 % nitrogenous compounds. An increase in sugars is accompanied by an increase in TSS; there is a very strong correlation between TSS and acidity. Maturity is determined mainly on the basis of the ratio of TSS to titratable acidity. Hence the maturity time is earlier (November) in sweet orange Jalna variety than other varieties in India. Maturity time, TSS: acid ratio for harvesting different sweet oranges Variety TSS: acid ratio Maturity time Mosambi 30:1 November Pineapple 14:1 December Jaffa 14:1 December Blood Red 14: 1 December-January Valencia 10:1 February-March Superior in TSS conten. Total soluble solids constitute about 80 % sugars, 10% acids and 10 % nitrogenous compounds. An increase in sugars is accompanied by an increase in TSS. Rangpur lime stock used in Nucellar variety of Jalna sweet orange gives highest TSS to the fruit. Hence the maximum content of sugar gives Sweet taste to this variety. High Nitrogen content Nitrogen, phosphorus and Potassium are the very important nutrients present in all fruits.

The logo of Jalna Sweet Orange GI will be used to create brand image. Others Analysis of Jalna Sweet Orange (Mosambi) Properties Sweet Orange (Jalna) pH 3.7 Moisture 88.4% Protein 0.6% Fat 0.05% Carbohydrates 10.5% Fibre 0.12% Ash 0.3% Water 86-92% Sugar 5-8% pectin 1-2% Glycosides 0.1-1.5% Pentosans 0.8-1.2% Citric

acid 0.4-1.5% Fibre 0.6-0.9% Minerals 0.5-0.9% Essential Oils 0.2-0.5% GI Journal No. 79 29 January 28, 2016

IV. CONCLUSION

he sweet orange fruit is processed commercially in to various forms mainly juice, frozen concentrates, squash, RTS drinks, nectar, dry mixes, canned segments, juice blends, marmalades and other value added products like pectin and essential oil from peel, natural colors, candied peel, feed yeast etc. Fresh juice of sweet orange is an important nutritious product providing 45 kcal, moderate quantity of vitamin C, potassium, bioflavonoid and folic acid and essential items of breakfast. It is refreshing, thirst quenching and energizing drink that improves health and nutritional requirements. The sweet orange peel contain sugars, edible fiber and many other components that offer excellent opportunities as value-added products, particularly those components that have biological activities (antioxidant, anti-cancer, cardio protective, and food/drug-interactions) or other attributes that are useful in the development of high-value food products from citrus peel. Expressed sweet orange oil is primarily used for flavoring beverages, soft drinks, ice cream, sweets, pharmaceutical preparations, and also perfumes.

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