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भारत
**INTELLECTUAL
PROPERTY INDIA**

भौगोलिक उपदर्शन पंजीकृति,
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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
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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 34 of the Geographical Indications Journal dated 31st May 2010 / Jyaistha 10, Saka 1932 has been made available to the public from 31st May 2010.

G.I. APPLICATION NUMBER - 145

Application is made by **Agricultural & Processed Food Products Export Development Authority (APEDA)**, NCUI Building 3, Siri Institutional Area, August Kranti Marg, New Delhi - 110 016, India, for Registration in Part - A of the Register of **Basmati** under Application No.145 in respect of Rice falling in Class – 30, is hereby advertised as accepted under Sub-section (1) of Section 13 of Geographical Indications of Goods (Registration and Protection) Act, 1999.

Applicant	:	Agricultural & Processed Food Products Export Development Authority (APEDA)
Address	:	NCUI Building 3, Siri Institutional Area, August Kranti Marg, New Delhi-110 016 India.
Geographical Indication	:	BASMATI
Class	:	30
Goods	:	Class – 30 – Rice

- (A) **Name of the Applicant** : Agricultural & Processed Food Products Export Development Authority (APEDA)
- (B) **Address** : NCUI Building 3, Siri Institutional Area, August Kranti Marg, New Delhi-110 0165, India.
- (C) **List of association of persons/ Producers / organization/ authority** : To be provided on request
- (D) **Type of Goods** : **Class – 30 - Rice**
- (E) **Specification** :

‘Basmati’ is described as special long grain aromatic rice grown and produced in a particular geographical region of the Indian sub-continent.

The name Basmati is derived from two Sanskrit roots ‘Vas’ meaning ‘aroma’ and ‘Mati’ meaning ‘ingrained from the origin’. In Hindi, the equivalent of ‘Vas’ is ‘Bas’ and, therefore, Basmati. Essentially, Basmati means, ‘the one containing aroma’. Basmati is Nature’s gift and farmers have been growing this scented rice variety for many centuries.

Two sets of tabulated details of the quality characteristics and ancillary characters of Basmati rice are as given below-

❖ **Primary Quality Characteristics of Basmati rice**

S. No.	Parameter **	Value
1.	Minimum average precooked milled rice length (mm)	6.61
2.	Average precooked milled rice breadth (mm)	≤2.00
3.	Minimum length/breadth ratio of precooked milled rice (L/B Ratio)	3.50
4.	Minimum average cooked rice length (mm)	12.00
5.	Minimum cooked rice length/precooked rice length ratio OR Minimum elongation ratio	1.70
6.	Average volume expansion ratio	>3.5
7.	Aroma	Present (Qualitative sensory analysis as Panel Test *)
8.	Texture of cooked grain for high integrity (without bursting the surface), non-stickiness, tenderness, good taste and good mouth feel.	Present (Qualitative sensory analysis as Panel Test *)

** The grain sample for analyses will necessarily have to be ‘aged’ for three months under protected conditions at normal room temperature as milled kernel.

* As per standardized protocol (Directorate of Rice Research, Hyderabad).

❖ *Other ancillary characters*

S. No.	Parameter **	Value
1.	Amylose content range	20-25%
2.	Alkali spreading value range (ASV)	4.0 – 7.0
3.	Minimum brown rice recovery (%)	76%
4.	Minimum milled rice recovery (%)	65%
5.	Minimum head rice recovery (%)	43%

** The grain sample for analyses will necessarily have to be ‘aged’ for three months under protected conditions at normal room temperature as milled kernel.

(F) **Name of Geographical Indication** :

BASMATI

(G) **Description of Goods** :

Basmati rice is characterized by the unique and delicately balanced combination of a number of unique characteristics such as long slender kernels with high length breadth ratio, an exquisite aroma, sweet taste, soft texture, delicate curvature, intermediate amylose content, high integrity of grain on cooking, and linear kernel elongation with least breadth wise swelling on cooking. These unique characteristics are attributable to the various natural and human factors involved in the sowing, harvesting and processing of Basmati rice.

(H) **Geographical Area of Production and Map as shown in page no. 35:**

In India, Basmati has been traditionally grown and produced in the entire states of Punjab, Haryana, Delhi, Himachal Pradesh, Uttarakhand, and parts of western Uttar Pradesh and Jammu & Kashmir.

It may be relevant to state that the States of Punjab, Haryana and Himachal Pradesh were originally part of the erstwhile Punjab and, as a result of the reorganization of the states in India for administrative reasons, these separate states have been formed. Consequently, the Basmati growing area which fell in the undivided Punjab is now shared among the various states as aforesaid.

Extremes	District	State	Geographic Coordinates
East	Pithoragarh	Uttarakhand	81° 02' 09.3" E Longitude
West	Ferozepur	Punjab	73° 52' 33.9" E Longitude
North	Chamba	Himachal Pradesh	33° 16' 14.7" N Latitude
South	Auraiya	Uttar Pradesh	26° 22' 13.5" N Latitude

❖ *Natural factors*

The agro-climatic conditions – The traditional varieties of Basmati rice are long duration varieties which come to maturity in the month of October. The photoperiod sensitivity of traditional Basmati rice varieties makes these vulnerable to erratic climate which sometimes reduces the productivity. Further, traditional Basmati rice may be vulnerable to lodging. These limitations have been overcome to a great extent in the evolved varieties using scientific, genetic and plant breeding methodologies. The evolved varieties are able to withstand changes in the climate within the defined growing area. The evolved varieties come to maturity towards the end of September to the first half of October in the defined growing areas when the temperature is conducive for accumulation and retention of aroma during grain filling process. The evolved varieties come to harvesting stage about 20-30 days earlier than traditional varieties.

Further, to overcome the problem of lodging, research programmes were initiated for the development of semi-dwarf high-yielding Basmati varieties which led to the first success in the form of ‘Pusa Basmati-1’ by the Indian Agricultural Research Institute in 1989. Since then, all the evolved varieties have used this character which also enables the Basmati plant to better respond to fertilizer.

Barring that, both traditional and evolved varieties must have the essential agro-climatic conditions such as requirement of high humidity, sufficient water supply and normal soil. In other words, only when grown in the aforesaid geographical region of the Indo-Gangetic plains do these varieties, traditional or evolved, produce the characteristics associated with Basmati rice.

The eating qualities of Basmati rice such as a soft texture, delicate curvature, high integrity of grain on cooking and linear kernel elongation with least breadth wise swelling on cooking are greatly influenced by the agro-climatic conditions such as soil, fertility, irrigation practices, cool weather during grain filling period, harvesting, storage etc. Even the cooking qualities cannot be replicated when the seed is grown outside the traditional growing areas.

Basmati rice emits a specific aroma in the field, at harvesting, in storage, during milling, cooking and eating which is due to harmonious combination of more than 200 chemical compounds among which, 2-acetyl-1-pyrroline is the most predominant.

(I) Proof Of Origin (Historical records) :

Indian farmers are known to have been growing scented rice varieties for several centuries. Scented rice varieties in ancient literature were known by various names. In fact, the name Basmati is so old that the origin of assigning the same to this famed rice is lost in antiquity. The first recorded reference to Basmati rice can be found in the epic poem *Heer Ranjha* by the great Punjabi Poet Varis Shah dated 1766. The said poet had sung in praise of Basmati rice at the wedding preparations of the beautiful heroine, Heer.

Historically, Basmati rice has been associated in the public mind as special long grain aromatic rice grown and produced in the aforesaid region in the foothills of the Himalayas. This public perception and recognition is evident from the general body of information such as the following:

- a) References to Basmati rice can be found in gazetteers published during the British rule in India. Some such gazetteers referring to the cultivation of Basmati rice.
- b) Besides, Basmati rice traders nationally and internationally have been consistently describing Basmati rice marketed by them to mean a unique rice variety originating from a region in the foothills of the Himalayas and possessing the said qualities. Certain specimen packaging of Basmati rice sold in India and abroad by traders as well as extracts taken from the websites of prominent traders and exporters of Basmati rice, all describing the sub-Himalayan origin of Basmati rice.
- c) Even among the food and restaurant industry, Basmati rice occupies a special place as a variety of premium rice both in India and internationally.

(J) Method of Production :

Water Quality and Irrigation:

Basmati rice varieties can be grown following any rice growing agronomy practices in terms of both transplanted or direct seeding technologies in the above defined geographical area for cultivation with irrigation or rain water facilities. Any canal supplied water, rain water or ground water from the defined geographical area for Basmati cultivation can be effectively used for irrigation. These practices prevent drying of the Basmati plant like any other variety of rice.

Where transplanting method is adopted, seeds of Basmati rice are sown in nurseries for further transplantation in the month of June for higher productivity and reducing incidence of blast disease. The sprouted seeds are sown in the evening on a wet seed bed with 5 cm of fresh standing water. The excess water is drained on the second day and is to be irrigated with fresh water the following day. This procedure has to be followed for about a week and after that water level is to be kept constant, but not above the seedling level.

Seedlings of 25-30 days and 5-6 leaf stage are most suitable. The nursery beds have to be irrigated the previous day before uprooting the seedlings so as to minimize root injuries to the seedlings. The uprooted seedlings are washed carefully to remove the mud and are tied in bundles of 100-150 each. The bundles are then carried carefully to the field for transplantation without causing damage to seedlings.

The productivity and quality of Basmati rice is greatly influenced by the time of transplanting. If the traditional tall varieties of Basmati rice are transplanted before 30th of June, they would attain excessive vegetative growth and get prone to lodging at flowering or grain filling stage. Also, early transplantation of seedlings impairs cooking quality as grains become extremely opaque or exhibit abdominal whiteness due to improper development under high temperature caused by loose packing of starch molecules. Hence, the optimum time for

transplanting the seedlings is during the first half of July.

Seedlings are transplanted in rows with 1-2 seedlings per hill. For timely transplanted crop, row to row and plant to plant distance of 20x15 cm and in case of late transplanted crop a spacing of 15x15 cm is maintained. Seedlings should be planted shallow (2 to 3 cm deep) as deep planted take more time for establishment and give less tillering.

Standing water is maintained in paddy fields up to 2-3 weeks after planting, which helps in good plant establishment and weed control. After this period, fields are irrigated only after absorption of water.

In the case of traditional varieties of Basmati rice which are tall, foliage pruning of excessive vegetative growth between 45-55 days after transplanting at about 10 cm from upper most leaf collar is done to reduce the plant height and prevent thereby lodging of the crop without affecting the production.

For maximum paddy yield and head rice recovery, harvesting of the crop is done between 30 to 35 days after flowering, when the moisture content in the grains ranges between 20 and 22 percent. At this stage, all the grains on the panicle turn yellow except one or two lower ones which are still green but fully filled with grain. Drying unthreshed paddy under shade is recommended and practiced by the farmers to minimize broken percentage (head rice recovery) on milling.

Use of fertilizer, herbicide, pesticide and insecticides:

The traditional tall varieties (such as Taraori Basmati and Basmati 386) and the semi-tall Basmati varieties like Pusa Basmati 1121 are prone to lodging and, therefore, need to be provided less nitrogen in the range of 40-50 kg nitrogen / ha compared to 80-100 kg nitrogen / ha in the case of evolved semi-dwarf varieties like Pusa Basmati 1. Further, 55-60 kg phosphorus and about 40 kg potash per hectare is applied. Micronutrient zinc needs to be applied at the rate of 20-25 kg/ha in the defined geographical area for Basmati cultivation for optimum growth of Basmati rice. However, need-based modifications to the above standards are recommended based on tests of the soil nutrient content in a location. Basmati rice grows best with carbon enriching of the soil through farm yard manure application of 8-10 tons/ ha or green manuring with legumes. While in the new generation Basmati varieties, genetic resistance to biotic stresses (pests and diseases) is incorporated to minimize the use of chemicals and pesticides, the traditional tall and the released evolved Basmati varieties in the past may require periodical field evaluation to assess their pest and disease load and to facilitate technical prescription for the specific chemical or pesticide required. Such specific chemical or pesticide application package of practices can be readily obtained from the State Department of Agriculture, State Agricultural Universities, Krishi Vigyan Kendras and Indian Council of Agricultural Research institutes.

Harvesting and Storage:

Harvesting of the Basmati crop takes place as soon as 90% of the grain matures so as to avoid loss by shattering, lodging and physical damage to the grains. The harvested crop is generally threshed the same day or as soon as possible and dried

to a moisture content of 12-14 % to prevent the development of grain moulds or any other fungal attack or insect damage during storage.

Upon harvest the paddy is dried to 12% grain moisture. Basmati rice is stored for aging which along with pre-soaking in water before cooking adds to grain elongation. Freshly harvested Basmati rice cooks very soft, moist and sticky with thick gruel and swells very little. During storage, grain hardness increases which allows more swelling and good elongation on cooking. Aged Basmati rice with increased volume cooks fluffy, separates better without bursting.

Processing:

The processing of Basmati rice is generally done by modern and state-of-the-art rice mills which carry out cleaning, drying, de-hulling, milling, separating, polishing, grading, sorting and packaging operations. During these operations/processes, the quality traits of Basmati rice are not altered and remain intact. These mills conform to prescribed national and international standards.

(K) Uniqueness :

There is recorded evidence that the unique characteristics of Basmati rice such as exceptionally long and slender grain and an exquisite aroma are attributable to the agro-climatic conditions prevailing in the specified region as aforesaid. Basmati rice varieties require prolonged sunshine, high humidity, cool weather during grain filling, sufficient water supply and normal soil. These conditions are available only in the aforesaid geographical region of the Indo-Gangetic plain with a relatively cooler climate with day temperature ranging between 25 to 32 degrees Celsius and night temperature ranging between 20 to 22 degrees Celsius during grain filling for maximum retention of aroma in the grains. Consequently, only one crop of Basmati can be grown in a year during the Kharif season. Basmati rice has been grown in this region for centuries and is known to possess its unique characteristics owing to the agro-climatic conditions of the said region as well as the method of harvesting and processing employed by the farmers.

(L) Inspection Body :

❖ ***Domestic***

- ***The Basmati Export Development Foundation (BEDF):*** - The BEDF was established with the objective amongst others to undertake the promotion and development of the supply chain of Basmati rice and in particular to promote, develop and co-ordinate integration of activities of diverse stake holders such as consumers, farmers, millers, traders and exporters by bringing focus and objectivity thereto. The BEDF has been promoted by APEDA with a vision for an all-round development of Basmati rice. BEDF is a society registered under the Societies Registration Act, 1860 and in pursuance of its objectives, a Basmati Research Farm and a Lab-cum-Office complex has been set up in Modipuram, Uttar Pradesh to undertake testing and research of Basmati rice. BEDF has established modern world class DNA testing and quality testing laboratory for testing authenticity and purity of Basmati rice. It is a unique integrated facility for

complete testing of Basmati rice under one roof, for exports as well as for the domestic market. This facility is located within the Basmati rice growing region.

- The Ministry of Commerce, vide a circular dated March 31, 2010 has decided to designate the BEDF laboratory, Modipuram as an authorized centre for the testing of samples of Basmati rice for variety identification. As per this circular, the Customs authority may draw rice samples for variety identification and send the same for analysis to BEDF laboratory, in addition to AGMARK testing centres. Accordingly, BEDF is inherently competent to act as body for inspection to ensure that the standards, quality, integrity and consistency/ other unique characteristics of Basmati rice are maintained by the diverse stake holders in the domestic and export markets.

❖ ***Export***

- Vide a notification dated January 23, 2003 issued under the Export (Quality Control and Inspection) Act, 1963, certain minimum characteristics and qualities for Basmati rice have been laid down towards the purposes of inspection of Basmati rice to ensure quality for exports.

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INDIA

GI Area for Basmati Rice Cultivation

0 80 160 320 Kilometers

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