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Publication of an application for registration of a name pursuant to Article 50(2)(a) of Regulation (EU) No 1151/2012 of the European Parliament and of the Council on quality schemes for agricultural products and foodstuffs

(C/2024/1713)

This publication confers the right to oppose the application pursuant to Article 51 of Regulation (EU) No 1151/2012 of the European Parliament and of the Council ⁽¹⁾ within three months from the date of this publication.

SINGLE DOCUMENT

'BASMATI'

EU No: PGI-PK-02990 — 24.8.2023

PDO () PGI (X)

1. Name(s) [of PDO or PGI]

'Basmati'

2. Member State or Third Country

Islamic Republic of Pakistan

3. Description of the agricultural product or foodstuff

3.1. Type of product

Class 1.6: Fruit, vegetables and cereals, fresh or processed.

3.2. Description of the product to which the name in (1) applies

'Basmati' rice is a special long grain aromatic rice grown and produced in specific areas of the Indo-Gangetic Plains (IGP) defined in section 4.

The distinctive characteristics of 'Basmati' rice are its long slender kernels with a high length to breadth ratio, an exquisite aroma, sweet taste, soft and fluffy texture, delicate curvature, intermediate amylose content, high integrity of grain on cooking, and linear kernel elongation with least breadth-wise swelling on cooking.

The principal characteristics of 'Basmati' rice are the following:

Sr. No	Parameters	Value
1.	Minimum pre-cooked grain length (after milling)	6,50mm
2.	Average pre-cooked grain breadth	≤1,9mm
3.	Minimum length/breadth ratio of pre-cooked milled rice	≥3,50
4.	Aroma	'Basmati' rice has a typical basmati aroma which predominantly results from a volatile compound, i.e. 2-acetyl-1-pyrroline (2AP). The smell of 2AP and that of <i>Pandanus amaryllifolius</i> (Pandan) are very much alike.
5.	Gel consistency	Soft

⁽¹⁾ OJ L 343, 14.12.2012, p. 1.

Sr. No	Parameters	Value
6.	Texture of cooked grain	No stickiness
7.	Amylose content	19-26 %
8.	Alkali Spreading Value (ASV) range	4-7
9.	Photoperiod sensitivity	Photoperiod sensitive
10.	Minimum average cooked rice length	12,00mm
11.	Minimum cooked rice length/pre-cooked rice length ratio OR minimum elongation ratio on cooking	1,70
12.	Average volume expansion ratio	3,50
13.	Taste and mouth feel	The sweet taste and distinct mouth feel of cooked 'Basmati' rice: soft and fluffy texture with high integrity of the cooked grain

3.3. *Feed (for products of animal origin only) and raw materials (for processed products only)*

'Basmati' rice is characterized by having at least one 'Basmati' rice variety/land race in the lineage tree of breeding history. The traditional varieties of 'Basmati' rice are long duration varieties. The 'photoperiod sensitivity' of traditional 'Basmati' rice varieties makes them vulnerable to an erratic climate, which sometimes reduces the productivity. Further, traditional 'Basmati' rice varieties 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 can withstand variations in the climate within the Geographical Areas defined in section 4. 'Basmati' comes to maturity during the months of October or November in the Geographical Areas defined in section 4 when the temperature is conducive for accumulation and retention of aroma during the grain filling process.

'Basmati' refers to varieties derived from Basmati 370 or a related land race and authorised under the Pakistan Seeds Act 1976.

The notified varieties of 'Basmati' under the Pakistan Seeds Act 1976 currently include Basmati 370, Basmati C622, Basmati Pak, Basmati 198, Basmati 385, Super Basmati, Basmati 2000 Shaheen, Basmati, Basmati 515, PK 1121 aromatic, Punjab Basmati, Kashmir Basmati (Kashmir Nafees), Kissan Basmati, NIAB Basmati 2016, NOOR Basmati, Super Gold, Super Basmati 2019, NIBGE-Basmati 2020, PK 2021 aromatic, KSK 111 H, Sona Super Basmati, Vital Super Basmati, NIAB HT 39 and NIAB HT 18.

3.4. *Specific steps in production that must take place in the identified geographical area*

The following steps of production of 'Basmati' take place in the Geographical Area defined in section 4:

- Land preparation and propagation (sowing)
- Transplantation of seeds
- Cultivation
- Plantation management
- Harvesting

3.5. *Specific rules concerning slicing, grating, packaging, etc. of the product the registered name refers to*

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3.6. *Specific rules concerning labelling of the product the registered name refers to*

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4. Concise definition of the geographical area

In Pakistan, 'Basmati' is grown and produced in specific districts of Azad Jammu and Kashmir, and the Punjab, Sindh, Khyber Pakhtunkhwa (KPK) and Baluchistan provinces ('Geographical Area'):

- In Punjab province: Sialkot, Gujranwala, Hafizabad, Sheikhupura, Lahore, Kasur, Gujrat, Mandi Bahauddin, Narowal, Faisalabad, Nankana Sahib, Chinnot, Jhang, Toba Tek Singh, Sargodha, Okara, Sahiwal, Pakpattan, Khushab, Mianwali, Bhakkar, Multan, Lodhran, Khanewal, Vehari, Bahawalpur, Rahim Yar Khan, Bahawalnagar, Muzaffargarh, Layyah, D G Khan, Rajanpur;
- In Sindh province: Shikarpur, Jacobabad, Kashmore, Larkana, Kambar, Shadadkot and Dadu;
- In KPK province: Malakand Division (Districts of Malakand, Dir, Swat);
- In Baluchistan province: Naseerabad, Jaffarabad and Sohbatpur.
- In Azad Jammu and Kashmir: Mirpur, Bhimber, Poonch, Bagh.

'Basmati' is also being grown in specific areas of India.

5. Link with the geographical area

5.1. Specificity of the Geographical Area

The reputation, given quality and specific characteristics of 'Basmati' rice are the basis of the application for registration as a protected geographical indication.

The name 'Basmati' is derived from two Punjabi words, 'Bas' meaning 'aroma' and 'Mati' meaning 'soil'. 'Basmati' is a non-geographical name which, by virtue of its centuries-old reputation, identifies rice coming from the IGP. Farmers have been growing 'Basmati' rice for many centuries.

Historical origin and reputation

The first recorded reference to 'Basmati' rice can be found in the epic Punjabi poem Heer Ranjha by the great Punjabi Poet Waris Shah dated 1766.

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

1. The Cambridge Dictionary defines 'Basmati' as '*A type of South Asian Rice with Long Grain*'.
2. The Merriam-Webster Dictionary defines 'Basmati' as '*A cultivated aromatic Long Grain Rice originating from South Asia*'.
3. The Food Encyclopedia states: '*basmati rice – a narrow long-grain rice grown in the foothills of the Himalayas*' (Jacques L. Rolland and Carol Sherman, 2006).
4. The ultimate Indian cookbook states: '*Basmati is a slender: long grain, milled rice grown in northern India, the Punjab, parts of Pakistan and in the foothills of the Himalayas*' (Mindula Baljekar, 2007).
5. The English World Dictionary defines 'Basmati rice' as '*a type of long-grained rice, grown mainly in India and Pakistan, that has a distinctive fragrance and a delicate flavor*'.
6. Glosbe defines 'Basmati' as a '*variety of long grain grown in India and Pakistan, notable for its fragrance*'.
7. The Hindu, 'Basmati Developed at Least 250 Years Ago', 21 August 1998: "Historic evidence shows that Basmati is a distinctive cultivar developed by the farmers of India and Pakistan at least 250 years ago, and grown in many parts in these two countries ever since," says Dr. Y. L. Nene, Chairman, Asian Agri-History Foundation, Secunderabad, Andhra Pradesh'.
8. The Kitchen Dictionary, which defines 'Basmati' as "*a long-grain rice with nutty flavor and firm texture, possibly due to the fact that it is aged. Basmati (...) has been used in India and Pakistan for thousands of years and is excellent with curries*".

9. Food News, 'How To Cook PERFECT Basmati Rice Recipe': 'Tips for perfect Basmati Rice. Buying the right kind of rice – Royal Basmati Rice is something we have been using for years and have always appreciated the consistent quality. There are plenty of other brands available but make sure to buy the Indian or Pakistani ones to get the authentic Basmati rice'.

Owing to its special flavour, aroma and cooking properties that are best suited for Asian dishes such as *biryani* and *pulao*, 'Basmati' rice has become very popular in numerous foreign countries. The demand for 'Basmati' rice has been increasing over the last few decades. 'Basmati' rice has been and continues to be exported to major countries all over the world including Saudi Arabia, Kuwait, United Arab Emirates, the United Kingdom, the United States of America, Canada and Europe.

Environmental factors

High humidity: During the grain filling period, which is the most crucial for the best expression of 'Basmati' quality traits, average relative humidity in the 'Basmati' growing region ranges from 60 to 65 %. However, humidity is not a standalone factor to decide quality parameters. The interplay of environment, water and edaphic factors are important in deciding quality traits of 'Basmati' rice.

Solar radiation and day length: The climatic requirements for cultivating 'Basmati' rice include prolonged sunshine and a temperature between 20-35 degrees Celsius throughout crop duration, low night temperatures and reduced maintenance respiration. In the 'Basmati' rice growing regions, the day length at a given period in a calendar month are longer than in areas where 'Basmati' rice is not grown. Further, since rice is a 'short day' plant, the process of maturity of paddy is further delayed in areas where there are longer days. In areas that experience longer light hours, the maturation of the grain is further delayed. It is the interplay of the photoperiod which exposes the growing grains to optimal solar radiation, with other factors such as temperature and humidity in the IGP that enable 'Basmati' rice to accumulate and retain its aromatic compounds and other characteristics. Temperature and solar radiation from July to November are ideal for rice growing in the Geographical Area. From late September onward the temperature drops, days become clearer (increased sunshine hours duration) and milder (25-32 °C) and the nights become cooler (20-22 °C). Such climatic conditions are ideal for the development of the unique fragrance and other specific characteristics of 'Basmati' rice.

Sufficient water supply: By and large, irrigation water is canal water coming from rains/snow-melt water of the Himalayas. The availability of abundant water is essential for the cultivation and aroma of 'Basmati' rice (described in more detail below in this section).

Normal soil: The Geographical Area consists of the fertile alluvial plains of the Indus river and the Chenab, the Ravi, the Jhelum and the Sutlej. The different parts of the Geographical Area are therefore characterized by an alluvial soil full of minerals carried by the waters of the Himalayas. The soils of the Geographical Area are developed from Indo-Gangetic alluvium. These are slightly alkaline in reaction (pH 7,3 to 8,5), deep (>1m), well-drained and generally sandy loam to loam in texture. These soils are generally low (<0,5 %) to medium (0,5 to 0,75 %) in organic carbon content. The clay fraction of soil is dominated with illite, a mineral rich in potassium. Hence, these soils are well-supplied with potassium (K) as revealed by medium (120 to 280 kg K/ha) to high (>280 Kg K/ha) K fertility status.

Temperature: In the Geographical Area, the temperature during the grain-filling period remains mild (between 32 degrees Celsius during the day and 20 degrees Celsius at night) giving a strong aroma to the grains. The principal chemical constituent of the aroma of 'Basmati' rice is 2-acetyl-1-pyrroline, which is volatile in nature. The maximum retention of the aroma happens when the grain-filling period coincides with mild temperature.

Human factors

The quality of 'Basmati' rice is greatly influenced by the timing of transplanting. In normal conditions, if the traditional tall varieties of 'Basmati' rice are transplanted before 30th of June, they would attain excessive vegetative growth and are prone to lodging at the flowering or the grain filling stage. Hence, the optimum time for transplanting the seedlings is during the first half of July.

Seedlings are transplanted in rows with 2 seedlings per hill, row-to-row and plant-to-plant at 22,5 x 22,5 cm. Seedlings should be planted shallow (2 to 3 cm deep) as deep planting takes more time for establishment and gives less tillering.

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

'Basmati' rice is grown with carbon enriched soil through farmyard manure application of 8-10 tons/ha or green manuring with legumes.

Harvesting of 'Basmati' rice 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 molds or any other fungal attack or insect damage during storage.

5.2. Specificity of the product

The special characteristics of 'Basmati' rice are its long slender kernels with high length-breadth ratio, an exquisite aroma, sweet taste, soft and fluffy texture, delicate curvature (the minimum length/breadth ratio of precooked milled rice is 3.50 mm), intermediate amylose content (from 19 to 26 %), high integrity of grain on cooking, and linear kernel elongation with least breadth-wise swelling on cooking.

'Basmati' rice has a length/breadth ratio of at least 3:5 whereas other types of rice usually have a length/breadth ratio of <3:5. For example, the length/breadth ratio of Thai Jasmine Rice is 3:4 and Ponni rice is 3:2.

'Basmati' rice emits a specific aroma in the field, at harvesting, in storage, during milling, cooking and eating. This aroma is due to a harmonious combination of various chemical compounds, among which 2-acetyl-1-pyrroline (2AP) is the most predominant and gives 'Basmati' rice its distinctive fragrance and flavour.

Cooked 'Basmati' grains retain high integrity due to the low glycemic index, which is typical of 'Basmati' rice. The sweet taste and distinct mouth feel of cooked 'Basmati' rice is due to various factors including intermediate amylose content leading to soft and fluffy texture with high integrity of the cooked grain.

Causal link between the Geographical Area and the specific quality, the reputation or other characteristics of the product

These special characteristics are attributable to the various natural and human factors involved in the sowing, harvesting and processing of 'Basmati' rice.

'Basmati' rice acquires its aroma, among other characteristics, as a result of the interplay of the longer light hours prevalent in the Geographical Area where it is grown, with other factors such as mild temperature during grain filling, humidity and solar radiation in the Geographical Area.

Taste and mouth feel characteristics are due to the prolonged sunshine in the longer days in the flowering months of 'Basmati' rice in the Geographical Area. Ageing and pre-soaking of 'Basmati' rice is known to enhance these characteristics.

Timing and spacing of the seeds as well as ensuring there is carbon-enriched soil and the maintenance of standing water and irrigation techniques significantly influence the physiology of the 'Basmati' crop.

Historical, traditional, cultural and social elements associated with 'Basmati' rice give it the global reputation as a geographical indication. Any member of the trade or public in Pakistan or abroad ordering 'Basmati' cultivated, grown and produced in Pakistan or seeing rice advertised or offered for sale as 'Basmati' rice from Pakistan will expect the rice so ordered, advertised or offered for sale to be the rice cultivated, grown and produced in the Geographical Area with the special characteristics as set out in Sections 3.2 and 5 of this Single Document.

Reference to publication of the specification

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