

Brief on Basmati rice seed GI area and list of Basmati varieties notified under Seeds Act, 1966.

Basmati rice is a kind of rice which has special aroma and flavor and elongated more than twice in original size when cooked. These characteristics are attributed to specific harvesting, processing and geographical locations. Basmati Rice is cultivated at the Himalayan foot hills of Indian sub-continent falls under Geographical Indications (GI). We all are aware that there are seven states in our country which covers covered under its GI. These states are Western Uttar Pradesh, Punjab, Haryana, Uttarakhand, Jammu Division of J&K, Himachal Pradesh and Delhi. Seed production of Basmati Rice has also been restricted in the GI area of the seven states only.

The Department of Agriculture and Cooperation has accepted the recommendations of the Sub-committee and approved the following standards to determine the eligibility of any rice variety as basmati:

1. The variety should be either traditional known basmati or evolved through rigorous breeding process. It has to be tested and evaluated through National Basmati Trials (NBT) of All India Coordinated Rice Improvement Project, Hyderabad, ICAR and released/notified under the Seed Act, 1966 of India (54 of 1966) and amendment made therein.
2. The variety should be suitable to be grown in the Indo-Gangetic Plains of India of Geographical Indication (GI) of Basmati growing areas, recommended for cultivation, for its denomination as a basmati variety.
3. The variety should possess all primary basmati quality characteristics as stated below:

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	>3.50
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 at under protected conditions at normal room temperature as milled kernel.

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

- 4 The variety should be evaluated under NBT for quality parameters with minimum aging of three months after milling by the Identified laboratory/ies as an Integral data component involved in decision making. The sample for the testing would be direct harvest from the current seed batch being used for the corresponding trial from the location specified by the Directorate of Rice Research within the Geographical Indication area. During evaluation and decision making for promotion and identification/release, the quality standards with have to be met and supported by desirable range of expression of other ancillary characters as given below:

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 (%)	45%

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

- 5 It should fulfill the quality parameters of primary and ancillary characters as a prerequisite as mentioned above that has to be verified by one or more laboratories identified by the Directorate of Rice Research, Hyderabad ICAR for the purpose.
- 6 The variety should be proposed for release/notification with the term "Basmati" in the body of denomination, along with its initial evaluation trial (IET) number in parenthesis.

Further, in order to ensure quality seeds production of basmati rice following points need to be taken into consideration:

- i) Seed Certification Agencies in respective states should properly monitor the Seed Production and Supply of Basmati seeds.
- ii) Adoption of best Package of Practices by the agencies in all seven states.
- iii) Understand requirements for a mechanism to be put in place for enrolment of seed producers and other stake holders in seed supply.
- iv) Sensitization Seed Certification Agencies for importance of quality of seed since this forms the basis for quality in Basmati supply chain.

List of Basmati varieties notified under Seeds Act, 1966 is at annexure I.

NOTIFIED BASMATI VARIETIES

Sl. No.	Variety	Name of Institution	Notification No. & Date
1	Basmati 217	Punjab Agricultural University, Ludhiana	4045 - 24.09.1969 361 (E) - 30.06.1973
2	Basmati 370	Rice Farm, Kalashah Kaku(now in Pakistan)	361 (E) - 30.06.1973 786 - 02.02.1976
3	Type 3 (Dehraduni Basmati)	Rice Research Station, Nagina, U.P.	13 - 19.12.1978
4	Punjab Basmati 1 (Bauni Basmati)	Punjab Agricultural University, Ludhiana	596 (E) - 13.08.1984
5	Pusa Basmati 1	The Indian Agricultural Research Institute, New Delhi	615 (E) - 06.11.1989
6	Kasturi	Directorate of Rice Research, Rajendra Nagar, Hyderabad, A.P	615 (E) - 06.11.1989
7	Haryana Basmati 1	CCSHAU, Rice Research Station, Kaul, Dst. Kaithal, Haryana	793 (E) - 22.11.1991
8	Mahi Sugandha	Rice Research Station, Banswara, Rajasthan	408 (E) - 04.05.1995
9	Taraori Basmati (HBC 19 / Karnal Local)	CCSHAU, Rice Research Station, Kaul, Dst. Kaithal, Haryana	1(E) - 01.01.1996
10	Ranbir Basmati	Rice Research Station, R. S Pura, Jammu	1 (E) - 01.01.1996
11	Basmati 386	Punjab Agricultural University, Ludhiana	647 (E) - 09.09.1997
12	Improved Pusa Basmati 1 (Pusa 1460)	The Indian Agricultural Research Institute, New Delhi	1178 (E) - 20.07.2007
13	Pusa Basmati 1121 After amendment	The Indian Agricultural Research Institute, New Delhi	1566 (E) - 05.11.2005 2547 (E) - 29.10.2008
14	Vallabh Basmati 22	Sardar Vallabh Bhai University of Agriculture and Technology, Modipuram	2187 (E) - 27.08.2009
15	Pusa Basmati 6 (Pusa 1401)	The Indian Agricultural Research Institute, New Delhi	733 (E) - 01.04.2010
16	Punjab Basmati 2	Punjab Agricultural University, Ludhiana	1708 (E) - 26.07.2012

17	Basmati CSR 30 After amendment	The Central soil Salinity Research Institute, Karnal, Haryana	1134(E) – 25.11.2007 2126 (E) – 10.09.2012
18	Malviya Basmati Dhan 10- 9 (IET 21669)	Banaras Hindu University, Varanasi, UP	2817 (E) – 19.09.2013
19	Vallabh Basmati 21 (IET 19493)	Sardar Vallabh Bhai University of Agriculture and Technology, Modipuram	2817 (E) – 19.09.2013
20	Pusa Basmati 1509 (IET 21960)	Indian Agricultural Research Institute, New Delhi	2817 (E) – 19.09.2013
21	Basmati 564	Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, Chatha, Jammu	268 (E) – 28.01.2015
22	Vallabh Basmati 23	Sardar Vallabh Bhai University of Agriculture and Technology, Modipuram, UP	268 (E) – 28.01.2015
23	Vallabh Basmati 24	Sardar Vallabh Bhai University of Agriculture and Technology, Modipuram UP	268 (E) – 28.01.2015
24	Pusa Basmati 1609	Indian Agricultural Research Institute, New Delhi	2680 (E) dt. 1.10.2015
25	Punjab Basmati -3	Punjab Agricultural University, Ludhiana	3540 (E) – 22.11.2016
26	Pusa Basmati -1637	IARI, New Delhi	3540 (E) – 22.11.2016
27	Pusa Basmati – 1728	IARI, New Delhi	3540 (E) – 22.11.2016
28	Pusa Basmati -1 (IET- 21665)	IARI, New Delhi	112 (E) – 13.01.2016
29	Pusa Basmati – 2 (IET- 21953)	IARI, New Delhi	112 (E) – 13.01.2016