Notification of crop varieties and registration of germplasm

Rice

**Variety Pusa Basmati 1718**

Pusa Basmati 1718 (IET 24565) is a MAS derived near isogenic line of the popular Basmati rice variety, “Pusa Basmati 1121” possessing two genes for BB resistance namely, *xa13* and *Xa21*. It has been developed through marker assisted backcross breeding at the Division of Genetics, ICAR-Indian Agricultural Research Institute, New Delhi. An improved Basmati genotypes SPS 97 was used as the donor for two bacterial blight resistance genes, *xa13* and *Xa21*. Foreground selection was done using gene based markers, *xa13Prom* and pTA248, respectively, and phenotypic selection was carried out for agro-morphological, grain and cooking qualities, which was followed by background selection to accelerate the recovery of recurrent parent genome as well as genome. A total of 38 polymorphic markers were used for background selection which revealed that the recurrent parent genome recovery in Pusa Basmati 1718 was 92.11%. It was identified by the Variety Identification Committee at the 52nd Annual Rice Research Group Meetings - All India Coordinated Rice Improvement Programme held at Assam Agricultural University, Jorhat from April 8-11, 2017.

Pusa Basmati 1718 (PB 1718) has been released for the Basmati growing states of Punjab, Haryana and Delhi of the vide Gazette notification no. S.O.2805(E) dated 25.08.2017. It has a seed to seed maturity of 136-138 days and produces an average yield of 4.64 t/ha with a maximum yield potential of 6.04 t/ha. It is highly resistant to bacterial blight disease [Susceptibility Index: 2.0 (2014) and 2.3 (2015) as compared to the recurrent parent, Pusa Basmati 1121, which is highly susceptible [Susceptibility Index: 7.0 (2014) and 7.7 (2015)]. PB 1718 has extra-long slender grains (8.10 mm) with very occasional grain chalkiness, very good kernel length after cooking (17.00 mm), intermediate amylose (22.2%) and strong aroma. In the panel tests, PB 1718 topped the ranking among the Basmati varieties and other cultures tested for two consecutive years (2014 and 2015) for its cooked rice appearance, cohesiveness, tenderness, taste, aroma, elongation with an overall acceptability score of 4.2 and 4.1.


1 Division of Genetics, 2 Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi 110 012; 1 Rice Breeding and Genetics Research Centre, ICAR-IARI, Aduthurai, 612 101; 3ICAR-Indian Agricultural Research Institute Regional Station, Karnal

*Corresponding author’s e-mail: aks_gene@yahoo.com