Notification of crop varieties and registration of germplasm

Basmati rice

Variety Pusa Basmati 1637

Pusa Basmati 1637 (IET 24570) is a MAS derived near isogenic line of Pusa Basmati 1 possessing P/9 gene for blast resistance developed by ICAR-Indian Agricultural Research Institute, New Delhi through marker assisted backcross breeding. Foreground selection was done using the gene linked molecular marker AP5659-5, which was supplemented with the stringent phenotypic selection for agro-morphological, grain and cooking qualities to accelerate the recovery of recurrent parent phenome. Further, background analysis using 104 polymorphic SSR markers revealed the recurrent parent genome recovery of 96.6% in the NIL Pusa Basmati 1637 (PB 1637). It was identified at the 51st Annual Rice Research Group Meetings - All India Coordinated Rice Improvement Programme held at Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh from April 2-6, 2016.

PB 1637 has been released for commercial cultivation in the Basmati growing regions of the Western Uttar Pradesh, National Capital Region of Delhi, Uttarakhand, Haryana and Punjab vide Gazette notification no. S.O.3540(E) dated 22.11.2016. It produces an average yield of 4.2 t/ha in 130 days and has a potential yield of upto 7.0 t/ha. PB 1637 has exhibited resistant reaction against blast disease with an SI of 2.7 (2014) and 2.9 (2015) as compared with its recurrent, Pusa Basmati 1 which showed highly susceptible reaction with SI of 6.1 (2014) and 6.5 (2015). It possesses long slender grains (7.3 mm) with very occasional grain chalkiness, kernel length after cooking of 13.8 mm and strong aroma. In the panel test, it was ranked excellent based on its appearance, tenderness on touching and chewing, taste, aroma, elongation and overall acceptability, which is at par
with the recurrent parent Pusa Basmati 1. This variety being resistant to blast disease will help in reducing the use of fungicides significantly, thus economizing cost of cultivation and also minimizing the risk of pesticide residue, which is a major concern in both domestic and global Basmati trade.

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