Rice

Variety Pusa Basmati 1509

Pusa Basmati 1509 (IET 21960) is a Basmati rice variety developed by the Division of Genetics, Indian Agricultural Research Institute, New Delhi. This variety have been released by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops, Government of India vide notification number S.O 2817(E) dated 19th September 2013 for commercial cultivation in the Basmati growing regions of Uttar Pradesh and Delhi.

Pusa Basmati 1509 is the first early maturing Basmati rice variety with seed to seed maturity of only 120 days and average yield of 4.25 t/ha. It recorded an average yield advantage of 50.46% over Taraori Basmati and 5.6% over Pusa Basmati 1121 in the AICRIP trials during three consecutive years in Uttar Pradesh and Delhi. In Basmati growing regions of the north western India, there is a growing concern of reducing water table due to pumping of underground water for puddling operation before transplanting and frequent irrigation of rice crop. There is a sizeable area of 2.0 million ha under Basmati rice which provides steady income earner for farmers and there is no obvious alternative crop with similar economic returns. In addition, there is another concern of burning of paddy straw after harvest by farmers to dispose the residue which is considered as a major pollutant leading to wide-spread smog and fog during winters.

Therefore, there was a necessity to develop Basmati rice variety that would facilitate less use of water, make best use of rain water during the crop growth.

Pusa Basmati 1509 is a semi-dwarf (95-100 cm) Basmati rice variety with sturdy stem and plant height ranging from 95 - 100 cm. Therefore, it does not lodge. It takes 115-120 days for seed to seed maturity, the shortest duration for any Basmati rice variety released so far. This variety has given yield in the range of 4.2 to 6.5 tons/ha in large scale demonstrations conducted in the Basmati growing regions of Punjab, Haryana, Delhi and Uttar Pradesh. Quality wise, this genotype posses aromatic extra long slender grains (8.41mm) with very occasional grain chalkiness, very good kernel length after cooking (19.1 mm), desirable ASV (7.0) and intermediate amylose content (21.24%).

Pusa Basmati 1509 offers several advantages over other Basmati rice varieties in the country such as 25-30 days earliness compared to popular Basmati rice variety Pusa Basmati 1121, which takes 145 days for seed to seed maturity; non-shattering at maturity; non-lodging habit due to short stature and sturdy stem; owing to its early maturity, cultivation of Pusa Basmati 1509 can help saving up to 5-6 irrigations (about 33% saving of irrigation water) compared to Pusa Basmati 1121; when transplanting is carried out in the last week of July, large quantity of ground water would get saved as by then monsoon rains would have ensued and timely puddling and transplanting can be taken up; because of shorter duration, it also economizes the cost of agri-inputs and result in higher cropping intensity leading to better economic gains to the farmers; as a result of reduced plant height, this variety produces almost half biomass as compared to Pusa Basmati 1121 and thus will reduce environmental pollution due to burning of paddy straw.


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