

## National Second – Plant Variety

### *Surjeet Basmati 1- High yielding and salt tolerant paddy variety*

Surjeet Singh  
Karnal, Haryana

Scout: Ranjay K Singh

Surjeet Singh (62) is an innovative farmer who has developed a salt tolerant, high yielding paddy variety having long grain size through selection method.

#### Background

Surjeet Singh's district is well known for producing high quality aromatic basmati rice. Owing about eighteen acre of land with good irrigation facilities, he has been practicing agriculture for over four decades now. He is a farmer well-known in his region for his agricultural pursuits. Surjeet wanted to complete his graduation in arts but got attracted to agriculture and dropped out. His wife and their two sons have been supporting him in agriculture. The family owns modern agricultural tools and machineries and also have a cattle herd. Behind his home, he has leased a pond for pisciculture. With the help of the government subsidy, he has also installed a bio gas plant, which produces enough gas for their daily cooking requirements.

#### Genesis

Surjeet Singh has been growing wheat, rice, pea, mustard, potato, gram, chilli and tomato in his agricultural land. In 2008, he sowed the paddy variety Pusa 1460 in his field but due to sheath blight disease all plants got severely affected except one. He harvested the plant separately and prepared a nursery in 2009, which was then transplanted in the main field. During harvesting he selected 225 plants based on the number of tillers, lengthy spikes and resistance to foot-rot disease (*Bakanae rog*), a major disease of basmati rice. The selection continued for another two years and the desirable characteristics slowly got stabled. The variety was named as *Surjeet Basmati-1*. He distributed the variety to ten farmers in Karnal district who appreciated it and mentioned that it performed well under saline and less fertile soil conditions.

#### The Paddy Variety

*Surjeet Basmati 1* is a salt tolerant, high yielding paddy variety developed from the variety Pusa 1460 through selection.

This variety, which takes 125-135 days to mature, is high yielding (55-60q/ha) with recovery percentage of 67 %. At 11.16mm length, its grain size is also long. It is foot-rot and sheath blight resistant as well. This variety does not require any particular soil type for growth. The seeds of the variety are soaked in water for 24 hours, spread over a cemented platform and then covered with the jute bags. Water is sprinkled at regular intervals of time. As soon as the seeds sprout, they can be taken for growing in nursery beds. The optimum temperature range is between 35 – 40 degrees for sowing and the harvesting period is October - November. The variety fetches high market price as well due to its quality.

The characteristics of the variety were confirmed by the experiments conducted in sodic and saline stresses condition at Central Soil Salinity Research Institute (CSSRI), Karnal. Surjeet Singh has received certificate of honour from Haryana Agricultural University, Hisar and KVK, Bhiwani, Haryana. The application for registration of the variety has been filed at the PPV&FR Authority, Delhi.