

Pusa's new soft wheat variety to help cut imports, make bakery producers self-reliant

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Indian bakery makers, who import wheat at double the price of domestic rates, will soon become *Atmanirbhar* (self-reliant) as scientists at Indian Agricultural Research Institute (IARI) have developed the country's first soft wheat variety named Pusa Soft Wheat 1 (HD 3443), which is suitable for growing in all producing States.

"While Pusa Soft Wheat 1 (HD 3443) is already registered with Protection of Plant Varieties and Farmers' Rights Authority, the



next line (upgraded version) is also ready," Anju Mahendru Singh, Principal Scientist and head of Grain Quality Laboratory in Division of Genetics at IARI told *BusinessLine*. Singh had led a team of scientists to develop this variety which took nearly a decade to be developed.

India had imported 3,108 tonnes of soft wheat at a cost of ₹4,226/quintal in 2021-22 against 2,147 tonnes at ₹3,797/quintal in 2020-21, industry sources said.

The Pusa Soft Wheat 1 has a productivity of over 5 tonnes per hectare with 11.5 per cent protein and gluten level of 8.9 per cent, Singh said. The strength of the gluten is "weak" and it may vary from location to location based on climate variance, she said.

Challenge for scientists

It was a challenge for the scientists to match the current level of productivity while developing the soft wheat as yield is normally lower in this variety. Yield of Australian soft wheat (spring) variety is about 1.5 tonnes per hectare and US soft (winter) variety is about 4.5 tonnes per hectare. But the US and Australian crop takes 8-9 months to mature whereas Indian crop takes only 125 days.

An earlier experiment of soft wheat named HS 490, developed

in 2008-09 by IARI scientists, did not succeed as the yield was lower and suitable only for growing at the foothills of the Himalayas.

Soft wheat requires less grinding force as its flour has smaller particle size and absorbs less water when kneaded into dough. Soft wheat products like cake and biscuits, even noodles, need less water to be absorbed by the flour for the best quality.

"There was an ICAR-funded project approved in 2012. Indo-Australian programme on marker assisted wheat breeding where quality was a small aspect in it. Since the bakery industry was growing at around 6 per cent at that time and they need this speciality wheat, I thought we should have a targetted research like the Australians do," Singh said.