

## HS 507 (Pusa Suketi): High yielding wheat variety for Northern hills of India

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A high yielding wheat variety HS507 (Pusa Suketi) was released by Central Sub-Committee on Crop Standards, Notification and Release of Variety for commercial cultivation under timely sown irrigated and rain fed production conditions of Northern Hills Zone (NHZ). Large scale deployment of this variety in North-Western Himalayas through various Government and non-Government organizations is anticipated to minimize the rust inoculum load to avoid rust pandemic or epidemic type of situation in the country.

HS507 has average grain yield of 4.6 t/ha with 9.3 to 23.5 per cent mean yield advantage over checks under timely sown irrigated condition of NHZ. Similarly, it has average grain yield of 2.6 t/ha with 5.9 to 17.7 per cent mean yield advantage over check varieties under rain fed conditions of NHZ. It has > 9 and 7 per cent grain yield advantage over the best check under irrigated and rainfed situations, respectively. The quality parameters viz., chapatti score (7.53), bread loaf volume (563) and bread quality score (6.84) indicating to good chapatti and bread making qualities of the wheat variety HS507.

HS507 has mean height of 95cm (IR), 77 cm (RF) and takes 165 days under irrigated and 179 days under rainfed condition to mature in Northern hills. It has semi-spreading growth habit, purple auricle colour, tapering ear shape with intermediate ear density, amber grains with 41g thousand grain weight.

The wheat variety HS507 was recorded with highest score of 10S whereas incidence for checks, was recorded as high

as 80S in HS240, 100S in VL738 and 20S in VL804 under natural condition. The variety has also shown resistance against a wide array of all the three rust pathotypes.

Two front line demonstrations on HS507 were conducted in Himachal Pradesh during 2011-12. Average grain yield of 2.75 t/ha was recorded with yield advantage of 14.5 per cent over local check. Breeder seed of HS507 has been made available to the State Departments of Agriculture of Himachal Pradesh, Uttarakhand, Jammu & Kashmir. In this direction 17.24 tons breeder seed of HS 507 has been supplied to different agencies during 2012-13 to 2014-15 for large scale multiplication and distribution to the farmers of hill states.

The viable, cost effective and environmentally safe method of managing stripe rust is the deployment of genetic resistance. The high yielding wheat variety HS507 deployed at large scale in North-Western Himalayas would not only increase the wheat productivity in Northern hills zone but would also protect the wheat crop grown in North-Western plains from the menace of stripe rust which is known to spread from hills to the plains. The stripe rust resistance gene pool present in this variety can also be exploited by creating new usable variability for developing new breeding materials resistant against stripe rust.

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