

Pusa Sheetal (BHS 400) – a new barley variety for Northern hills of India

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A new barley variety 'PUSA SHEETAL' (BHS 400) is released by the Central Sub-Committee on Crop Standards in 2014, for commercial cultivation under timely sown rainfed condition of Northern Hill Zone.

BHS 400 was selected from 34th IBON and evaluated for its suitability to Northern hills zone under Preliminary Yield Trials (PYT) of the Station. BHS 400 was evaluated under All India Coordinated Trials consisting of 18 entries and 3 checks at 12 locations during 2010-11; with 17 entries and 3 checks at 8 locations during 2011-12 and with 17 entries and 4 checks at 6 locations during 2012-13 of Northern Hills Zone (NHZ). The trials were conducted under rainfed conditions of Northern hills. The variety BHS 400 recorded average grain yield of 32.7 qtls/ha (on the basis of weighted mean of 26 trials over 03 years). BHS 400 showed significant grain yield superiority on weighted mean basis over checks, viz., BHS 352 (41.72%), UPB 1008 (12.98%), HBL 113 (9.58%) and VLB 118 (5.96%). BHS 400 occupied top ranking position in non – significant group (15/26) on zonal basis of three years of testing under rainfed condition of NHZ.

Stripe rust is an important disease of barley in the hills. The newly released variety BHS 400 has shown tolerance against stripe rust with maximum ACI (5.6) as compared to checks HBL 113 (40S, 8.6ACI), BHS 352 (30S, 7.8ACI)

and comparable to VLB 118 (15S, 5.0ACI), UPB 1008 (20S, 4.03ACI). Leaf blight score was lowest (78) among the checks, BHS 352 (99), HBL 113(99), UPB 1008 (89) and comparable to check variety VLB 118 (67).

Salient features: BHS 400 exhibited non-pigmented coleoptiles, leaf sheath and auricle at flag leaf stage. It has semi-prostrate growth habit. Flag leaf attitude was drooping. It has mean height of 83cm and takes on an average 124 days to flower and 168 days to mature. It is 6-rowed and hulled with medium bold grains. Ear shape of this variety was parallel and slightly drooping at maturity. It has light yellow hulled grains with 35g thousand grain weight. Protein contents (9.2) of this variety was comparable to the latest check VLB 118 (9.6).

The newly released barley variety Pusa Sheetal (BHS 400) could be an appropriate choice for replacing BHS 352, UPB 1008, HBL113 and an alternative to VLB 118. Its cultivation would prove boon for meeting the requirements of the hilly people for sustaining their livelihood and stabilizing productivity of barley in the Himalayan region.

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