

A leaf rust resistant wheat germplasm HS 492

Wheat germplasm HS492 developed at IARI Regional Station Tutikandi, Shimla, has been registered by Plant Registration Committee of ICAR as leaf rust resistant genetic stock, vide registration No. INGR09005. This genetic stock was developed from a cross (HPW42/CPAN2032//UNNATH KALYANSONA) following pedigree method of breeding. The stock HS492 has displayed a high degree of resistance under field and artificial inoculated conditions at adult plant stage. It has also shown consistent seedling resistance against all the prevailing and virulent pathotypes of leaf rust during 2005-06, 2006-07, 2007-08. The high degree of leaf resistance in HS492 is incorporated from Unnath Kalyansona, which carries *Thinopyrum ponticum* derived leaf rust resistance gene *Lr24*. It has semi-spreading growth habit, pale green foliage at boot stage, waxy leaf sheath and peduncle, non-pubescent glume, average plant height 92 cm, tapering ear shape, white ear colour. The crop matures in 199 days under northern hills condition. The grains are amber in colour, semi-hard with oblong shape having 40g thousand grain weight. Since the gene *Lr24* is linked with stem rust resistance gene *Sr24*, the genetic stock HS492 will provide additional resistance. Diversification of germplasm with this genetic stock of rust resistance and involving it in hybridization would prove useful in wheat improvement programme of India.

Dharam Pal, Sanjay Kumar¹, D. K. Bhatnagar and R. Bhatnagar

Indian Agricultural Research Institute, Regional Station [CHC], Tutikandi Centre, Shimla 4

¹Division of Genetics, Indian Agricultural Research Institute, New Delhi 110 012

VL 852, an excellent chapatti quality wheat

Wheat, the most important winter cereal crop, has different end product uses and the chapatti being most predominant in our country. VL 852, an elite wheat genetic stock has been registered as unique germplasm, for diverse source of chapatti quality, by the Plant Germplasm Registration Committee of the Indian Council of Agricultural Research vide registration number INGR 09056 (IC 565011). VL 852 has been developed through pedigree method of selection from a winter X spring wheat cross AI Frog # 4/HD30//CPAN3031 at Vivekananda Parvatiya Krishi Anusandhan Sansthan (ICAR), Almora 263601, Uttarakhand.

VL 852 has excellent (score 8.17 on 0 to 10 scale) *chapatti* quality under late sown with pre-sown irrigation conditions of Northern hills zone. The *chapatti* quality has been tested at Quality laboratory, Directorate of Wheat Research, Karnal. For evaluation of chapatti quality various parameters like water absorption, nature and colour of dough (before and after maturation), chapatti appearance, colour, aroma, taste, puffing height, pliability and loss of water (just after and after 4 hours of baking) were considered and the score was given out of 10.0. The score more than 8 is considered as excellent.

In addition to excellent chapatti quality, VL 852 possesses high hectoliter weight (79.67 kg/hl), and protein content (11.96%) under late sown with pre-sown irrigation conditions. It is a spring wheat, having semi erect growth habit and green coleoptile colour. Its average plant height is 75-85 cm. It takes on an average 135-144 days to mature. The ear colour is white producing amber grain of ovoid shape with thousand grain weight of 39 g. This genotype was tested in All India Coordinated yield evaluation trials of Northern Hills Zone from 2001-02 to 2003-04 and recorded mean grain yield of 28 q/ha under late sown with pre-sown irrigation conditions.

VL 852 possesses high degree of field resistance to yellow and brown rust diseases and can be called as true slow ruster line (AUDPC=101-200) against both the rusts (DWR, Progress report, 2002-03), which is likely to last long under field conditions. VL 852 is a novel source of germplasm and may be used as donor for development of new varieties with better chapatti making characteristics.

Lakshmi Kant, V. Mahajan, H.S. Gupta¹, B.D. Pandey, Daya Shanker, S.K. Pant and R.K.Gupta²

Vivekananda Parvatiya Krishi Anusandhan Sansthan

(ICAR) Almora 263 601 Uttarakhand India

¹Indian Agricultural Research Institute, New Delhi

²Directorate of Wheat Research, Karnal

VL 876, a wheat stock with high loaf volume and good quality for making bread

VL 876, an elite wheat genetic stock has been registered as unique germplasm, for high bread loaf volume and very good bread quality, by the Plant Germplasm Registration Committee of the Indian

Council of Agricultural Research vide registration number INGR 09055 (IC 565010). VL 852 has been developed through pedigree method of selection from a winter X spring wheat cross SPINEBILL 'S'/CPAN 2045 at Vivekananda Parvatiya Krishi Anusandhan Sansthan (ICAR), Almora, 263601, Uttarakhand.

VL 876 has high bread loaf volume (score, 581 ml), good quality ratio of bread loaf volume (ml)/dough weight (g) (3.47) and very good bread quality (7.65 out of 10 scale) under early sown rainfed conditions. The bread quality has been tested at quality laboratory, Directorate of Wheat Research, Karnal. For evaluation of bread quality the loaf volume is considered as most important and is given maximum weightage. Bread loaf volume >575 ml is highly desirable for good quality bread making. The ratio of bread loaf volume (ml)/dough weight (g) is considered important, while evaluating bread quality and a ratio of > 3.5 is considered appropriate for good quality bread. For bread quality evaluation various parameters like loaf volume, stickiness, appearance, crust colour, crumb colour, texture, aroma and taste were considered and the score was given out of 10.0. The score of 7.1 to 8.0 out of 10 is considered as very good.

VL 876 is a facultative wheat with spreading growth habit and green coleoptile colour. Its average plant height is 90-105 cm and matures in about 186-

198 days. The ear colour of VL876 is white. It produces amber grain with ovoid shape and has 38g of thousand grain weight. This genotype has been tested in All India Coordinated yield evaluation trials of Northern Hills Zone from 2003-04 to 2005-06 and recorded grain yield of 33.6 q/ha under early sown rainfed conditions.

In addition to high bread loaf volume and very good bread quality, VL 876 possesses high hectoliter weight (79.5 kg/hl), protein content (12.44%), Iron (35.95 ppm), Zinc (45.2 ppm) and Copper (4.28 ppm). VL 876 possesses HMWGS 5+10 at Glu-D1 with Glu score 9, therefore, highly suitable for very good quality bread. Besides, VL 876 also carries a high degree of field resistance to yellow and brown rust diseases. To develop a suitable end product, a variety with high loaf volume and good bread making characteristics, novel germplasm like VL 876 can serve as a useful donor.

**Lakshmi Kant, V. Mahajan, H.S. Gupta¹,
B.D. Pandey, Daya Shanker, S.K. Pant
and R.K.Gupta²**

Vivekananda Parvatiya Krishi Anusandhan
Sansthan (ICAR), Almora 263 601

¹Indian Agricultural Research Institute, New
Delhi

²Directorate of Wheat Research, Karnal

Corrigendum

It has been communicated by the lead author that he inadvertently missed to include the name of a co-author Rajendra Singh, in the article "Protogyny and self-incompatibility in Indian mustard [*Brassica juncea* (L.) Czern & Coss] – a new tool for hybrid development" published in the Vol. 71(2): 170-173. Now, the names of the authors of the article should be read as: S.K.Chakrabarty, U.S. Chandrashekar, Manjunath Prasad, J.B. Yadav, Rajendra Singh¹, J.N. Singh and M. Dadlani.

¹Division of Genetics, Indian Agricultural Research Institute, New Delhi 110 012