REGISTRATION OF ‘SAMSON’ BARLEY

‘SAMSON’ barley (Hordeum vulgare L.), PI 49476 (Reg. no. 201), was developed by Alberta Agriculture Crop Research, Lacombe, Alberta, Canada. It was selected from a cross of ‘Olli’/M64-69//R72-181. The crosses were made by Dr. K.G. Briggs at the University of Alberta, Plant Science Department, Edmonton, Alberta, in 1969 and 1971. M64-69 was obtained from the Minnesota winter nursery in Mexico in 1969 with the pedigree of ‘Jotun’/‘Kindred’//‘Vantage’/3/‘Trophy’/4/‘Disksoon’/5/M59-38. M59-38 is from Minnesota, resulting from a cross of Wisconsin X691 to ‘Swan’. R72-181 was selected in Mexico in 1972. The pedigree of this line is incomplete; however, we know the Minnesota line Jotun//Kindred//‘Vantage’ is part of its parentage. Both M64-69 and R72-181 carry the Jotun semi-dwarf gene.

Olli is an early maturing six-rowed cultivar, which was grown extensively in the northern areas of barley production in Alberta. In 1969, F1 seed of the cross Olli/M64-69 was grown in the growth room of the University of Alberta. The F2 seed was grown in the field in the summer of 1970. The F2 seed was grown in 1971-1972 in a winter increase nursery at the Centro de Investigaciones Agricolas del Noroeste (CINAO) Research Station, Cd. Obregon, Sonora, Mexico. An F2 selection was then crossed to R72-181 in the field at Edmonton, Alberta, in the summer of 1972. The F1 seed was increased in the growth room at the University of Alberta in 1972-1973 with the F2 population grown in the field during the summer of 1973. The F3 population was grown at the CINAO Research Station during the winter, 1973-1974. Single plant selections were made from the F3 nursery and grown in head rows in Alberta during the summer of 1974 and again in the winter nursery in Mexico. A single head selection from the F3 row fixed the type. Two hundred F4 heads were grown out for evaluation of deviant or off-type material and 117 head rows were bulked in 1983 to form breeders seed.

Samson is a six-rowed, rough-awned, semi-nodding, semi-dense headed, medium maturing, spring feed barley cultivar. The juvenile plants have an intermediate growth habit. Leaves and leaf sheaths are glabrous and the auricles are whitish.

Spikes are strap shaped, medium long, and semi-nodding. The covered kernels have a yellow aleurone and basal markings of an incomplete horseshoe depression. The rachilla is of medium length, mostly with long hairs but occasionally with short. Glumes are completely covered with short hairs. Samson has a stiff, semi-dwarf straw with an erect tillering potential (4). In comparison to glabrous Tamcot SP21S (1) and glabrous Samson, Tamcot CAB-CS has about the same level of resistance to several races of stem and leaf rust, [caused by Puccinia graminis f. sp. tritici Eriks & E. Henn and P. hordei Oth, respectively]. Samson is susceptible to septoria leaf blotch (caused by Septoria passerinii Sacc.), loose smut [caused by Ustilago nuda (Jens.) Rostrt.], and surface borne smuts [caused by Ustilago niga Tapke and Ustilago hordei (Pers.) Lagerh.].

Samson was released by Alberta Agriculture Crop Research in 1985. Breeder seed will be maintained by Alberta Agriculture Crop Research, Lacombe, Alberta, and distributed through the SeCan Association, 512 - 885 Meadowlands Drive, Ottawa, Ontario, Canada K2C 3N2.

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References and Notes


REGISTRATION OF (TAMCOT CAB-CS) UPLAND COTTON

TAMCOT CAB-CS cotton (Gossypium hirsutum L.) (Reg. no. 87) was developed in the Texas Agricultural Experiment Station multi-adversity resistance (MAR) genetic program. This program uses MAR techniques to pyramid genes in cotton that condition broad spectrum resistance to diseases, insects, and environmental stresses. Tamcot CAB-CS originated from the cross CAMD-21-S-78 X BCUS-8-76 and individual plants were selected using the MAR procedure (3). An F1 progeny was given the strain designation TX-CABCS-1-81 and Tamcot CAB-CS was evaluated under this designation and the name TX-CABCS-X. Information on the pedigree is given elsewhere (4).

The categories used to describe levels of resistance (partial resistance, intermediate resistance, resistance and high resistance) in MAR cottons and performance data for CAB-CS have been presented (4). Tamcot CAB-CS has the B1B2B3 minor-modifier and MAR genes and testing procedures show these give high resistance to the 19 designated races of the bacterial blight pathogen, Xanthomonas campestris pv malvacearum (Sm.) Dye.

Tamcot CAB-CS has about the same level of resistance to diseases and insects as reported for Tamcot CAMD-E (2).

All plant parts of Tamcot CAB-CS are glabrous, but it matures as early as hairy CAMD-E and has the same yield potential (4). In comparison to glabrous Tamcot SP21S (1) it is less leafy and its leaves and bracts are smaller in size. The glabrous character reduces damage caused by Heliothis spp. and trash content of fiber and seed. Glabrousness combined with a reduction of leaf and bract particles should make a greater contribution to reducing the trash content of fiber. The bolls of Tamcot CAB-CS are storm resistant, and...