Registration of FC201, a Heterogeneous, Disease-Resistant, Monogerm, O-type Sugarbeet Population

Sugarbeet (Beta vulgaris L.) germplasm FC201 (Reg. no. GP-246, PI 634018) was developed by the USDA-ARS at Fort Collins, CO, and Salinas, CA, in cooperation with the Beet Sugar Development Foundation (BSDF), Denver, CO. FC201 is a segregating population with a high frequency of the Rc1 allele conferring resistance to rhizomania caused by Beét necrotic yellow vein virus. It is segregating for resistance to root-rotting strains (AG-2-2) of Rhizoctonia solani Kühn and to the sugarbeet root aphid (Pemphigus betae Doane), has moderate resistance to Cercospora leaf spot (caused by Cercospora beticola Sacc.), Aphanomyces root rot (caused by Aphanomyces cochlioides Drechs.), and Beét curly top virus. FC201 is a heterogeneous population from which to select disease-resistant, monogerm, O-type parents to infuse multiple disease resistance on the female side of hybrids. There is no CMS equivalent. FC201 is released from Salinas seed production 01-FC1014 and has been tested as 00-FC1014 and 01-FC1014. FC201 is an O-type germplasm segregating for self-sterility (S'), hypocotyl color (50% r) and monogermity (90% mm in seed harvested from monogerm plants). It is the F1 of the cross ‘C890 aa’ (Lewellen, 1998) × ‘FC708’ (Hecker and Ruppel, 1981) (23 F1 plants) bulked with the cross ‘C859 aa’ (Lewellen, 1995) × ‘FC708’ (Hecker and Ruppel, 1981) (18 F1 plants). Seed from both F1 populations was combined for bulk increase that appropriate recognition be made of the source when this germplasm contributes to a new cultivar. U.S. Plant Variety Protection will not be requested for FC201.

Breeder seed of FC201 is maintained by USDA-ARS and will be provided in quantities sufficient for reproduction for written request to Sugarbeet Research, USDA-ARS, Crops Research Laboratory, 1701 Center Ave., Fort Collins, CO 80526-2083. Genetic material of this release will be deposited in the National Plant Germplasm System where it will be available for research purposes, including development and commercialization of new varieties and cultivars. We request that appropriate recognition be made of the source when this germplasm contributes to a new cultivar. U.S. Plant Variety Protection will not be requested for FC201.

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Tests at Shakopee and Rosemount, MN, were conducted at Betaseed, Inc. by M. Rekoske and J. Miller, and reaction to BCTV was tested in the BSDF nursery at Kimberly, ID.

References


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