REGISTRATION OF FC 702/6 SUGARBEET GERMPLASM
(Reg. No. GP 65)

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The sugarbeet (Beta vulgaris L.) breeding line FC 702/6 was developed by ARS, USDA, in cooperation with the Beet Sugar Development Foundation and the Colorado State Univ. Exp. Stn., and jointly released in 1981.

FC 702/6 (Reg. No. GP 65) was bred for resistance to root rot caused by Rhizoctonia solani Kühn. This germplasm is multigerm, diploid (2x = 18), self-sterile, moderately resistant to leaf spot caused by Ceratospora beticola Sacc., and is relatively easy bolting. FC 702/6 has resulted from four cycles of preflowering mass selection and one cycle of recurrent selection from FC 702 (Reg. No. GP 2) for resistance to root rotting strains of R. solani. Under very severe artificially created rhizoctonia root rot epiphytotic in 1980 and 1981, FC 702/6 had an average of 60% harvestable roots, 26% symptomless roots, and a disease index of 3.1 (0 = no symptoms; 7 = dead), compared to 32%, 10%, and 4.3 for FC 702 (source population), 47%, 14%, and 3.6 for FC 703 (Reg. No. GP 13), and 7%, 1%, and 6.1 for FC 901 (susceptible check). With a diverse set of male sterile testers, FC 702/6 combining ability for root yield, sucrose content, and the absence of rhizoctonia root rot, the sugar below that of commercial varieties; therefore, it is intended for grower use. FC 702/6 is recommended for parental use in the development of rhizoctonia root rot resistant genetic stocks, or as a source of resistant germplasm of parents of hybrid varieties.

Breeder seed is maintained by ARS, USDA, to sugarbeet breeders in quantities adequate for ten requests for seed should be made to Sugarbeet Research, ARS, USDA, Crops Research Laboratory, Colorado State Univ., Fort Collins, CO 80523.
