wilt can also be a major problem in these areas. These lines are valuable parental material because they combine the kabuli type seed with wilt resistance and desirable agronomic characteristics.

Seeds of the four lines are available on request from the ICRISAT, Patancheru P.O., Andhra Pradesh, India 502 324.

J. Kumar, M.P. Haware, and J.B. Smithson

References and Notes

1. Plant breeder, pulse pathologist and former plant breeder, ICRISAT, Patancheru P.O., A.P., India. 

REGISTRATION OF STORAGE ROT RESISTANT SUGARBEET GERMPLASMS F1004, F1005, and F1006

Three sugarbeet (Beta vulgaris L.) germplasms (Reg. nos. GP 94, GP 95, and GP 96) were developed and released by USDA-ARS in cooperation with the North Dakota Agricultural Experiment Station. These germplasms have resistance to the major storage rot pathogens Phoma betae (Oud.) Frank, Penicillium claviforme Bainier, and Botrytis cinerea Pers. ex Fr. (1).

Roots from field plots were stored for 60 to 90 days at 5°C and high humidity before being evaluated for rot response. Three 1 cm³ blocks were cut from a smooth surface of each root and placed on petri dishes in contact with pure cultures of the three rot fungi. Measurement of rot progression was made after incubation at 20°C for 14 days. Each block was cut down the center and rated on a scale of 0 to 5 with 0 being an absence of rot and 5 indicating that the cube was completely rotted.

These germplasms are intended to be used as pollinators for experimental hybrids, as parents in genetic studies, and as genetic sources for the development of storage rot resistant parental lines. Genetic resistance to storage rot fungi is intended to complement other methods of reducing storage losses such as pile ventilation and the reduction of injury to roots.

F1004 (GP 94) is a multigerm line produced from six cycles of mass selection for rot resistance from VNIS F526, an introduction from the USSR. F1004 segregates for pink and green hypocotyl.

F1005 (GP 95) is a multigerm, green hypocotyl line derived by five cycles of mass selection for rot resistance from VNIS F526, Lolsprout derived from the USSR. F1005 segregates for pink and green hypocotyl.

F1006 (GP 96) is a multigerm, pink hypocotyl line derived by five cycles of mass selection for rot resistance from VNIS F526, Lolsprout derived from the USSR. F1006 segregates for pink and green hypocotyl.

Breeder seed will be maintained by USDA-ARS and provided in 10 g quantities to sugarbeet breeders upon request to Sugarbeet Research, USDA-ARS, Dep., North Dakota State Univ., Fargo, ND 58105.

L.G. Campbell and W. M. Bugbee

References and Notes


REGISTRATION OF A SPROUTING RESISTANT WHITE-SEEDED SPRING WHEAT CULTIVAR LINE

A white-seeded wheat (Triticum aestivum L.) (Reg. no. GP-267) has improved resistance to sprouting in intact spikes. It was developed at the Agriculture Research Station, Swift Current, Saskatchewan for use as a source of germplasm.

Losprout derived from a cross between a white-seeded line and 'RL4137', a line with a season mid-ripening, good sprouting resistance associated with red seed color and one gene for red seed coat color. Stringent selection for red seed coat color, seed dormancy and three genes for red seed coat color. Segregation patterns suggest that RL4137 has a genetic mechanism for sprouting resistance associated with red seed color and one gene for red seed coat color. To verify this observation, line selections were used for summer storage at Brawley, California. In 1981, 81 single F3 plants were selected in the out-of-season nursery and grown in 4-row plots 3 meters long at Swift Current. Four white-seeded cultivars and six red-seeded cultivars were used as checks for resistance to sprouting at maturity. Two sources of seed were used, one being seed propagated at ICRISAT, Patancheru P.O., Andhra Pradesh, India 502 324.

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