REGISTRATION OF GERMLASMS

REGISTRATION OF EPA-4 ALFALFA GERMLASM

EPA-4 alfalfa (Medicago sativa L.) germplasm (Reg. no. GP-197) (PI 508085) was released by the New Mexico Agricultural Experiment Station in November 1986. EPA-4 is recommended as a genetic source to incorporate anthracnose resistance (caused by Colletotrichum trifolii Bain.) and Phytophthora root rot (caused by Phytophthora megasperma Drechs. f. sp. medicaginis Kuan and Erwin) resistance into nondormant alfalfa cultivars. EPA-4 was developed by strain crossing EUAN-5 (1) and EUPH-5 (2), followed by four cycles of recurrent phenotypic selection for combined resistance to Phytophthora root rot and anthracnose race 1 and race 2. EPA-4 was released as the Syn. 1 of the fourth cycle of selection.

Percentages of resistant plants to Phytophthora root rot were 32, 0, 0, and 28 in tests conducted in New Mexico, and 49, 0, 1, and 11 in tests conducted in Minnesota, for EPA-4, ‘El Unico’, ‘Saranac’, and ‘Agate’, respectively. Percentages of plants resistant to anthracnose race 1 were 78, 1, 50, and 64, and for race 2 the percentages of resistant plants were 57, 0, 49, and 15 for EPA-4, Saranac, ‘Saranac AR’, and ‘Arc’, respectively, at Beltsville, MD. Percentages of seedlings surviving after infestation with pea aphid types are midwide, midlong, and elliptical to ovate; cheeks are rounded to angular; brush hairs are medium long; crease is midwide and middeep; and germ is midsize and round.

Lancer is resistant to many of the prevalent races of leaf rust (caused by Puccinia recondita Rob. ex. Desm. f. sp. tritici) and stem rust (caused by P. graminis Pers. f. sp. tritici Eriks. and E. Henn.), moderately resistant to loose smut [caused by Ustilago tritici (Pers.) Rostr.] and common bunt [caused by Tilletia foetida (Wallr.) Liro and T. caries (DC) Tul].

The Canadian Expert Committee on Grain Quality has rated Lancer equal in breadmaking quality to ‘Marquis’ and noted that it had high flour yield, very good loaf volume, low (desirable) alpha-amylase activity, but marginal fari-

References and Notes


BILL MELTON, CLIFF CURRIER, DON MILLER, AND JEFF KIMMELL

References and Notes

3. Professor, assistant professor, former graduate student, respectively, Agronomy and Horticulture Dep., New Mexico State University, Las Cruces, NM 88003. Journal article submitted to the Crop Sci. Soc. of Am. Accepted 30 Mar. 1987. The authors gratefully acknowledge the assistance of R. M. De Pauw, T. F. Townley-Smith, J. M. Clark, and T. N. McCaig.


REGISTRATION OF ZIA-81 ALFALFA GERMLASM

Zia-81 alfalfa (Medicago sativa L.) germplasm (Reg. no. GP-196) (PI 508086) was released by the New Mexico Agricultural Experiment Station in November 1986. EPA-4 was released as the Syn. 1 of the fourth cycle of selection.

The percentages of resistant plants to Phytophthora root rot were 32, 0, 0, and 28 in tests conducted in New Mexico, and 49, 0, 1, and 11 in tests conducted in Minnesota, for EPA-4, ‘El Unico’, ‘Saranac’, and ‘Agate’, respectively. Percentages of plants resistant to anthracnose race 1 were 78, 1, 50, and 64, and for race 2 the percentages of resistant plants were 57, 0, 49, and 15 for EPA-4, Saranac, ‘Saranac AR’, and ‘Arc’, respectively, at Beltsville, MD. Percentages of seedlings surviving after infestation with pea aphid types are midwide, midlong, and elliptical to ovate; cheeks are rounded to angular; brush hairs are medium long; crease is midwide and middeep; and germ is midsize and round.

Lancer is resistant to many of the prevalent races of leaf rust (caused by Puccinia recondita Rob. ex. Desm. f. sp. tritici) and stem rust (caused by P. graminis Pers. f. sp. tritici Eriks. and E. Henn.), moderately resistant to loose smut [caused by Ustilago tritici (Pers.) Rostr.] and common bunt [caused by Tilletia foetida (Wallr.) Liro and T. caries (DC) Tul].

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