yr of this selection pressure, 70% of the population was lost. Three hundred vigorous plants were selected from the survivors in April 1987. These 300 plants were moved to isolation and mated using honeybees in the summer of 1987. Seeds from these plants were collected, bulked, and designated AU CYCLE 2 alfalfa. AU CYCLE 2 alfalfa is quite variable in morphological characters including flower color, leaf size and shape, stem diam., and stem rigidity. It is expected to be superior in persistence in the Southeastern U.S. environment. Seed will be maintained in cold storage and will be distributed in limited quantities (5 g) upon request from the Agronomy and Soils Department, Auburn University, Auburn, AL 36849.

J.F. PEDERSON* AND R.L. HAALAND (1)

References and Notes


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REGISTRATION OF K81-7Ve2 ALFALFA GERmplasm WITH RESISTANCE TO FIVE DISEASES AND FOUR INSECTS

K81-7Ve2 alfalfa (Medicago sativa L.) germplasm, Reg. no. GP-210 (PI 522239) was released by the USDA-ARS and the Kansas and Washington Agricultural Experiment Stations in May 1988. This germplasm provides resistance to anthracnose (caused by Colletotrichum trifolii Bain), bacterial wilt (caused by Clavibacter michiganense subsp. insidiosum Davis et al. 1984), downy mildew (caused by Peronospora trifoliorum d By.), Fusarium wilt (caused by Fusarium oxysporum Schlecht. f. sp. medicaginis [Weimer] Snyd. & Hans.) Verticillium wilt (caused by Verticillium albo-atrum Reinke & Berth.), blue alfalfa aphid (Acyrthosiphon kondoi Shinji), pea aphid (Acyrthosiphon pisum [Harris]), spotted alfalfa aphid [Theroaophis maculata (Buckton)], and potato leafhopper (Empoasca fabae [Harris]).

K81-7Ve2 was derived from a double strain cross (K81-7). Resistance to diseases and insects was developed in each of four alfalfa strains: K79-8 ('Liberty'), K73-19 ('Buffalo', 'Cherokee', 'Kanza', 'Kansas Common', and MSA W4), KSI1 ('Buffalo', 'Cody', 'Kansas Common', 'Culver', and 'Sirsa no. 9'), and KS74 ('Cherokee', 'Kanza'). The estimated germplasm constitution (1) of K81-7Ve2 is: 68% Chilean, 17% M. varia, 7% Turkistan, 4% Ladak, 3% Flemish, and 1% Indian. The strain crosses (K79-8 × KSI1) and (K73-19 × KS74) and the double strain cross were made in the greenhouse by hand pollination. Over 75 plants of the Syn 2 generation of each strain were used in the crosses.

At St. Paul, MN, the percentages of plants resistant to bacterial wilt were K81-7Ve2 = 82, 'Vernal' (R) = 42, and 'Narragansett' (S) = 9. Percentages of plants resistant to Fusarium wilt were: K81-7Ve2 = 63, 'Agate' (R) = 54, and MnGN-1 (S) = 11. Percentages of plants resistant to Vorticillium wilt, in a seedling test at Prosser, WA were: K81-7Ve2 = 35, 'Vertus' (R) = 17, and 'Saranac' (S) = 0. K81-7Ve2 is susceptible to Phytophthora root rot (caused by Phytophthora megasperma Drechs. f. sp. medicaginis Kuan and Erwin).

Seedlings tested to evaluate resistance to Anthracnose, downy mildew, blue alfalfa aphid, pea aphid, and spotted alfalfa aphid were conducted at Manhattan, KS. The percentages of plants resistant to Anthracnose (race 1) were: K81-7Ve2 = 70, 'Arc' (R) 76, and Saranac (S) = 7. K81-7Ve2 and the resistant and susceptible controls showed the following percentages of symptomless plants in tests with three downy mildew fungus isolates: 15 - K81-7Ve2 = 78, Saranac (R) = 32, Kanza (S) = 1; 17 - K81-7Ve2 = 71, Saranac (R) = 16, Kanza (S) = 2; 18 - K81-7Ve2 = 69, Saranac (R) = 50, Kanza (S) = 1.

Percentages of seedlings surviving after infestation with aphid biotypes in Kansas were: blue alfalfa aphid - K81-7Ve2 = 18, 'CUF 101' (R) = 34, 'Ranger' (S) = 2; pea aphid - K81-7Ve2 = 84, Kanza (R) = 74, Ranger (S) = 4; spotted alfalfa aphid - K81-7Ve2 = 71, Kanza (R) = 64, Ranger (S) = 0. In a field test, tolerance of K81-7Ve2 to the potato leafhopper yellowing was similar to that of 'Riley'. K81-7Ve2 was similar to Saranac in fall growth at St. Paul, MN. At Manhattan, KS; spring growth, recovery after cutting, and forage yield of K81-7Ve2 and Riley were similar.

Five grams of K81-7Ve2 seed are available upon written request. It is requested that appropriate recognition of source be given when K81-7Ve2 germplasm contributes to the development of a new cultivar or hybrid. Seed stocks of K81-7Ve2 are maintained by the Department of Agronomy, Kansas State University, Manhattan, KS 66506.

E.L. SORENSEN,* D.L. STUDEVILLE, E.K. HORBER, AND R.N. PEADEN (3)

References and Notes

2. (R) = resistant control; (S) = susceptible control.

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REGISTRATION OF KS207 ALFALFA GERMPLASM WITH RESISTANCE TO FIVE DISEASES AND THREE INSECTS

KS207 alfalfa (Medicago sativa L.) germplasm, Reg. no. GP-211 (PI 522240) was released by the USDA-ARS and the Kansas Agricultural Experiment Station in June 1988. This germplasm provides resistance to anthracnose, race 1 (caused by Colletotrichum trifolii Bain), bacterial wilt (caused by Clavibacter michiganense subsp. insidiosum [Davis et al. 1984]), downy mildew (caused by Peronospora trifoliorum d By.), Fusarium wilt (caused by Fusarium oxysporum Schlecht. f. sp. medicaginis [Weimer] Snyd. & Hans.), and the spotted alfalfa aphid [Thoroaphis maculata (Buckton)].

KS207 was derived from a 90-clone synthetic comprised of 19 clones from 'Buffalo', 22 from 'Cody', 21 from 'Kansas