 REGISTRATION OF CROP GERMPLASMS

REGISTRATION OF B31, B32, AND B36 ALFALFA GERMPLASM LINES

B31 (Reg. no. GP-199) (PI 511814), B32 (Reg. no. GP-200) (PI 511815), and B36 (Reg. no. GP-201) (PI 511816) alfalfa (Medicago sativa L.) germplasm lines were developed at the Beltsville Agricultural Research Center, and released by the USDA-ARS in January 1987. These germplasms originated from a 1981 germplasm collection expedition in central and eastern Turkey (1).

B31 was derived from an intercross of 25 randomly selected plants each from 14 site collections of the moderately dormant, coarse stemmed, vigorous, upright, three to five cut 'Kayseri' type alfalfa grown by village farmers in central and eastern Turkey (Pls 464730, 464731, 464733, 464734, 464735, 464736, 464737, 464738, 464739, 464749, 464781, 464787, 464791, 464796). B32 was derived from an intercross of 25 randomly selected plants each from 14 site collections of the very dormant, fine stemmed, moderately vigorous, spreading, one to two cut 'Iranian' type alfalfa grown by village farmers in eastern Turkey (Pls 464751, 464752, 464753, 464754, 464755, 464756, 464757, 464758, 464759, 464760, 464761, 464762, 464763, 464764, 464766, 464785, 464794, 464795). B36 was derived from an intercross of approximately 10 plants each from 44 site collections of the very dormant, fine stemmed, moderately vigorous, spreading, wild growing, alfalfa from hillsides and rangelands in eastern Turkey.

B31 and B32 have survived three winters in 1 x 5 m field plots at Beltsville, MD, where forage yields have averaged 81 and 61% of 'Arc', respectively. However, the two germplasms exhibited severe leaf damage attributable to foliar disease and air pollution during humid summer periods. B36 has not been tested in the field.

In growth chambers at Beltsville, MD, the percentage of plants resistant to race 1 anthracnose (caused by Colletotrichum trifolii Bain) for B31, B32, B36, Arc, 'Saranac AR', and 'Saranac' was 0, 2, 4, 82, 74, and 2, respectively. In tests at St. Paul, MN, the percentage of plants resistant to bacterial wilt [caused by Corynebacterium insidiosum (McCull.) H. L. Jens.] for B31, B32, B36, 'Vernal', 'Ranger', and 'Narragansett' was 20, 10, 28, 42, 18, and 2, respectively; percentage of plants resistant to Phytophthora root rot (caused by Phytophthora megasperma Drechs. f. sp. medicaginis Kuan and Erwin) for B31, B32, B36, Saranac, and 'Agate', was 1, 1, 0, 5, and 27, respectively; and percentage of plants resistant to Fusarium wilt [caused by Fusarium oxysporum Schlcht f. sp. medicaginis (Weimer) Snyd. and Hans.] for B31, B32, B36, Narragansett, Agate, 'Moapa 69', and 'MNGN-1' was 41, 35, 37, 12, 49, 70, and 2, respectively.

Seed stocks are maintained by the Germplasm Quality and Enhancement Laboratory, USDA-ARS, Building 001, Room 335, Beltsville Agricultural Research Center, Beltsville, MD 20705. While supplies last, 20 g each of B31 and B32, and 5 g of B36 will be supplied upon written request and agreement to recognize appropriately the source of germplasm when it contributes to the development of either a new cultivar, hybrid, or breeding line.

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References and Notes


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