Registration of Crop Cultivars

REGISTRATION OF LEW ALFALFA

(Reg. No. 96)


`Lew` alfalfa (Medicago sativa L.) was developed and tested cooperatively by the Plant Sciences and Plant Pathology Dep. of the Univ. of Arizona. It was tested experimentally as AZ SNR.

Lew alfalfa was developed by two cycles of phenotypic selection and testing of non-winter-dormant alfalfa (Medicago sativa L.) plants whose background trace to the `African' and `Indian' sources used extensively in the Arizona alfalfa improvement program. Criteria used for selection included: (a) freedom of symptoms of infestation by the stem nematode[Ditylenchus dipsaci] (Kuhn Filipjev) when grown under high field populations of this pest and (b) desirable agronomic traits, such as erect stems, leafiness, and dark green foliage. Approximately 100 plants which were completely free of visible symptoms of nematode infection in the second cycle of selection were used as parents of Lew.

Lew is non-winter-dormant and adapted to the environment of the low desert valley areas of southern Arizona. A distinctive feature of Lew is its high level of resistance to the Arizona strain of the stem nematode. When grown in areas free of the stem nematode on the Univ. of Arizona Mesa Research Station, Lew yielded only slightly more forage than either `Hayden' or `Sonora-70'; however, when grown in soils heavily infested with stem nematode on this station, Lew out-yielded these cultivars by 30 and 85%, respectively. Lew is also superior to Hayden and Sonora-70 in level of resistance to the Ent-H biotype of the spotted alfalfa aphid, Theroaphis maculata (Buckton), and amount of nodulation induced by commercial cultures and indigenous strains of nitrifying bacteria, Rhizobium meliloti, and in seed production.

Breeder's seed of Lew will be maintained by the Plant Sciences Dep. of the Univ. of Arizona and the Arizona Agric. Exp. Stn. Increases beyond Breeder's seed will be limited to Foundation and Certified seed. Eligibility of a stand to produce a given certified class of seed will be limited to 4 years. Only certified seed of this cultivar may be called Lew. The area of seed production will be limited to the western part of the Southern Alfalfa Region; south of 37°N Lat at elevations below 2,500 feet.

Lew received favorable review by the National Certified Alfalfa Variety Review Board in 1974.

REGISTRATION OF PERRY ALFALFA

(Reg. No. 97)

Perry is a winterhardy cultivar. It has resistance caused by [Corynebacterium insidiosum (McCull.)] to that of Vernal. It has resistance to pea aphid [Acyrthosiphon pisum (McCuil.)], similar to that of `Baker.' Perry has moderate downy mildew, (caused by Peronospora trifoliorum), and anthracnose, (caused by Colletotrichum trifolii Bain), similar to that of Dawson; and to biocontrol of alfalfa aphid [Theroaphis maculata (Buckton)] similar to that of Dawson. Perry has shown a low level of resistance to bacterial wilt [caused by Corynebacterium insidiosum (McCull.)], similar to that of `Arc' in field tests.

Phytophthora root rot, (caused by Phytophthora megasperma (Knn) Filipjiv), is its high level of resistance to the Arizona strain of the stem nematode [Ditylenchus dipsaci (Kuhn Filipjev) unknown. Reaction to stem nematode [Ditylenchus dipsaci (Kuhn Filipjev)] is unknown.

The area of adaptation for forage production is the states. Forage yields of Perry were equal to or superior to `Kanza,' or Vernal in 19 tests at 14 north central locations. Perry was similar to those of Ranger and higher than those of Dawson and California, and equal to those of both Ranger and Buckton.

Seed increase is limited to one generation each of breeder, foundation, and certified seed classes. Certified (Syn-3 or Syn-4) seed may be certified seed only from breeder (Syn-2) or foundation. The number of harvest years, including the year of establishment, should not exceed the following: a) breeder seed, 2 years; b) foundation seed, 4 years, with a 4th year optional depending on breeder's approval; c) certified seed, 6 years, both inside and outside the area of adaptation. Breeder and foundation seed is produced under the direction of the Nebraska Agric. Exp. Stn. Foundation seed is available from the Nebraska Foundation Seed Division, Univ. of Nebraska, Lincoln, NE 68583.

Perry was favorably reviewed by the National Certified Alfalfa Variety Review Board in December 1979. Application will be made for variety protection under the certification provision.

1 Registered by the Crop Sci. Soc. of Am. through cooperative investigations by the Nebraska Agric. Exp. Stn., AR-SEA-USDA. Published with the approval of the Nebraska Agric. Exp. Stn. Project No. 5983. Journal Series, Nebraska Agric. Exp. Stn. Research reported was conducted under Project Numbers 12-005, 17-009, and 16-016, accepted 12 Jan. 1981.

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