Registration of Germplasms

REGISTRATION OF AZ-RON ALFALFA GERMPLASM\(^1\)
(Reg. No. GPI14)

M. H. Schonhorst, A. K. Dobrenz, R. K. Thompson, and M. A. Massengale\(^2\)

AZ-RON alfalfa (Medicago sativa L.) germplasm was developed and tested by personnel of the Arizona Agric. Exp. Stn. and released in November 1978. It was selected for tolerance to frequent herbage removal.

'Moapa' alfalfa was grown in broadcast stands on the Univ. of Arizona Campbell Avenue Farm at Tucson from 1961 to 1964. The planting was harvested 36 times at the early bud stage, when approximately 50% of the stems had prominent flower buds. At the conclusions of this 4-year period the plant population was less than 1% of the original stand density. Sixty of the most vigorous survivors were selected and propagated as parent clones of AZ-Ron.

Synthetic-2 seed of AZ-Ron was used to conduct a forage yield test with 1/15 ha size plots at the Univ. of Arizona, Mesa Exp. Stn. AZ-Ron consistently out-yielded its parent source, Moapa, each year of the test period. Its forage yield was less than the check cultivar ‘Mesa-Sirs’ during the 1st and 2nd year. However, AZ-Ron out-yielded Mesa-Sira and all other entries during the 3rd and 4th year because of its greater persistence and vigor.

During the "summer slump" period of forage production in southern Arizona (mid-June to mid-September), total available carbohydrate content in the roots of AZ-Ron averaged 16.9% compared to 12.3 and 13.5% for Mesa-Sirs and Moapa, respectively. This difference represents an average of 24% more energy available in the roots of AZ-Ron than in the two check cultivars. The maintenance of higher carbohydrate levels in alfalfa roots during this critical period of the growing season apparently is essential for stand persistence and vigorous regrowth. Alfalfa producers have maintained stands by prolonging the regrowth period of at least two harvests to the full bloom stage of growth during the summer slump period. AZ-Ron represents a germplasm source which could reduce the need for extending these regrowth periods.

Seed stocks of AZ-Ron will be maintained by the Arizona Agric. Exp. Stn., Tucson, AZ 85721. Fifty grams of seed will be made available upon written request and agreement to make appropriate recognition of its source if the germplasm contributes to the development of a new germplasm source, cultivar, or hybrid. Request seed from M. H. Schonhorst, Dep. of Plant Science, Univ. of Arizona, Tucson, AZ 85721.

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