REGISTRATION OF CROP CULTIVARS

Seed production of Caliente is on a four generation basis: breeder, foundation, registered, and certified. Breeder seed was produced in 1963 from 12 vegetative cuttings of each parent clone planted in an isolation block at Bakersfield, Calif. A reserve of breeder seed from the 1963 production is maintained by the Farm Seed Res. Corp. Breeder seed is released only to Ferry-Morse Seed Co. for production of foundation seed. Certified seed fields will be established only with foundation or registered seed. All classes of seed are produced in California.

Certified seed of Caliente was first offered for sale in 1970. Noncertified seed had been available prior to that time.

All five cultivars were favorably reviewed by the National Certified Alfalfa Variety Review Board.

REGISTRATION OF ARC ALFALFA
(Reg. No. 76)


'Arc' alfalfa (Medicago sativa L.) was developed cooperatively by the ARS, USDA and the North Carolina, Maryland, Virginia, and Pennsylvania Agr. Exp. Stns. and released in 1974. Arc was tested under the experimental designation MSHp6F-An4W4 and Beltsville 71 before its release.

Arc was developed with eight cycles of phenotypic recurrent selection. The population was initiated by intercrossing 66 plants selected for low alfalfa weevil (Hypera postica (Gyllenhall)) damage at Raleigh, N.C. More than half of the 66 selected plants were from polycrosses of clones selected in North Carolina and trace to breeding programs in Nebraska and Kansas. The other plants belonged to Narragansett, Atlantic, Rhizoma, and DuPuits. The first four cycles of selection were those of 'Team' (two cycles of field selection for vigor and alfalfa weevil resistance each in North Carolina and Maryland). In the fifth cycle, 120 plants were selected for vigor and alfalfa weevil resistance from a field nursery of 3,000 plants at Beltsville. In the sixth, seventh, and eighth cycles, 22,000, 6,750, and 6,750 plants, respectively, were screened for resistance to anthracnose (Colletotrichum trifolii Bain) and bacterial wilt. Selected plants of ≥ 200 were intercrossed in each of these cycles.

Arc is highly resistant to anthracnose and pea aphid (Acyrthosiphon pisum (Harris)). It is moderately resistant to bacterial wilt and slightly more tolerant to alfalfa weevil larval feeding than Team. Arc was developed for the mid-Atlantic, southern Appalachian, and other areas where anthracnose is a problem. Forage yields of Arc have been similar or superior to those of Team, Saranac, Cherokee, Williamsburg, and Vernal. Even in the first season of growth, under severe anthracnose epiphytotics, Arc has been superior to susceptible varieties in stand persistence and resistance to late summer and fall weed encroachment.

Breeder seed was produced at Prosser, Wash., from an isolated planting of 3,500 MSHp6F-An4W4 (Syn 1) plants. Breeder seed will be maintained by the field crops lab., ARS, USDA, Agr. Res. Cen., Beltsville, MD 20705. The area of foundation seed is defined as the central plus Idaho, Oregon, and Washington. Seed of foundation are limited to two generations of multiplication from breeder seed; one each of foundation and certified. Certified seed is produced on fields established with breeder or foundation.

Arc was favorably reviewed by the National Certified Alfalfa Variety Review Board at its Dec 1973 meeting.

REGISTRATION OF DEAWN BARLEY
(Reg. No. 140)

R. S. Albrechtsten and W. G. Devlin

'Deawn' barley (Hordeum vulgare (L.)) em 15515, was developed cooperatively by the ARS, USDA, and ARS, USDA.

Deawn was derived from the cross 'Bonneville Dwarf' X 'Bonneville Dwarf' made at Logan, Utah, in 1960. This population was re-selected in 1963 and a number of the resulting strains were further evaluated from a single F1 plant and identified as advanced and regional yield tests. It has been grown in irrigated nurseries since 1965 and was tested in 1973.

Deawn is a six-rowed, white aleurone, semi-dwarf spring feed barley adapted to irrigated production of a compact head, short rachilla hairs, and some awns; hence the name Deawn. It is equal or superior to that of Steveland, 'Gem,' Bonneville, and Holman in height, lodging resistance, and test weight.

Deawn is similar to that of Woodvale and matures 4 to 8 days earlier than these cultivars. Its maturity period makes it comparable to 'Stevendale' in yield. Yield of Deawn is slightly lower than that of Steveland, but is equal or superior to that of Steveland, Holman, and other widely grown varieties. It has resistance to loose smut (Ustilago nuda (Jens.) Rostr.), the disease of barley in Utah. It is excellent in adaptation character for which a number of common awns may show serious deficiencies. Many of the awns fall off prior to harvest time.

Deawn is recommended for growing on the lands of Utah and possibly other western states. It is recommended on dryland or under poor irrigated conditions.

Breeder seed will be maintained by the Utah Agr. Exp. Stn., Logan, UT 84322.


2 Research geneticist, plant nutrition lab., and research entomologist, CSRS, USDA, ARS, U.S. Food Res. Center, Beltsville, MD 20705.

REGISTRATION OF KANBY BARLEY
(Reg. No. 141)

E. G. Heyne and John Lawless

'Kanby' barley (Hordeum vulgare (L.)), CI 15516, was developed in Kansas from a composite cross received from ARS, USDA. The composite cross resulted from intercrossing among 18 strains of barley and a bulk population of Fl's and F2's was grown for six cycles. The composite cross resulted from intercrossing among 18 strains of barley and a bulk population of Fl's and F2's was grown for six cycles. The composite cross resulted from intercrossing among 18 strains of barley and a bulk population of Fl's and F2's was grown for six cycles.

The composite cross resulted from intercrossing among 18 strains of barley and a bulk population of Fl's and F2's was grown for six cycles.