number 9047432 was assigned by the National Plant Materials Center, Beltsville, MD. Seco was selected after four cycles of male-sterile facilitated recurrent selection from the population that was later released as Composite Cross 39. Seco was compared with 27 barley accessions in over fifty tests from 1982 to 1987, and was the best overall performer in vigor, height, root spread, and yield in dryland plantings in Arizona and California. It has been superior to 'Signal', 'Bold', 'Arivat', and 'Briggs' under reduced-water-use conditions in the hot, arid Southwest. Seco has performed well below 915 meters elevation in Arizona and California where annual precipitation averages 20 to 25 cm. It requires a minimum of 9 cm of winter moisture to produce adequate vegetation and a seed crop. Salt tolerance seems to be equivalent to that of other high salt-tolerant barley strains.

Seco is a robust, six-rowed, rough-awned, spring barley with erect culms 75 to 120 cm in length. Spikes are lax and nonwaxy. Lemmas are slightly wrinkled to semiwinkled and have purple veins. Kernels predominantly have a white aleurone, occasionally blue, and have long hairs on the rachilla. The crown is 2.5 to 5 cm below the soil surface. Vertical root development extends beyond 2.5 m under favorable conditions, which provides excellent drought tolerance and ability to control erosion. Seco is recommended for planting as a winter cover crop, a green manure crop, or as a means of erosion control. It may also be useful as a feed source for wildlife or a means of weed control on disturbed land or abandoned cropland. Areas of possible adaptation are west Texas and southern portions of Arizona, New Mexico, and California. Limited tests indicate that Seco is adapted for use as a spring barley at elevations above 915 m. Recommended planting dates for southern Arizona and California are 25 November to 30 December. Seed maturity dates range from 15 April to 30 April. The recommended planting rate for dryland planting is 22 to 34 kg/ha. There are 22,000 to 24,000 seeds per kilogram.

Breeder seed is maintained by USDA-ARS, 2000 E. Allen Road, Tucson, AZ 85719. Foundation seed is maintained by the USDA-SCS Plant Materials Ctr. 3241 N. Romero Road, Tucson, AZ 85705.

R. T. Ramage (1)

Reference and Notes


REGISTRATION OF 'ICSV 145' SORGHUM CULTIVAR

'ICSV 145', a witchweed (Striga asiatica L. Kuntze) resistant sorghum [Sorghum bicolor (L.) Moench] cultivar was developed by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Patancheru, P.O. Andhra Pradesh 502 210, India. ICSV 145 (ICRISAT Sorghum Cultivar 145) has been selected for resistance to the white flowered strain of S. asiatica that grows in India. ICSV 145 was released as SAR 1 for cultivation in witchweed-growing areas, particularly in the states of Maharashtra, Andhra Pradesh, and Harashtra. ICSV 145 was selected from a single cross between ICSV 5, a witchweed germination stimulant producer, and ICSV 105, resistant to S. asiatica, and IS 18468 (168), a highly resistant cultivar released in India as CSV 5. Treatment of the ICSV 145 population that was later released as Composite Cross 39, for the three-stage procedure especially adapted to screen for cations and was named 'SAR 1' in 1981. It was tested through 1984 USDA rust nursery showed that it was resistant to the races of bean rust [incited by Uromyces phaseoli Wint. Var. typica Arth.] except race 54. In 1984 USDA rust nursery showed that it was resistant to the races at Saginaw, MI; susceptible at Farmington, MI; and susceptible to resistant at North Platte, NE. It is resistant to highly resistant with a slow rusting reaction at North Platte, NE; and very susceptible to resistant at North Platte, NE.

Bill Z carries recessive genes for resistance to witchweed and the New York 15 strains of bean cultivated in the United States and rust resistance in beans. PI 522247 was assigned by the National Plant Materials Center, Beltsville, MD (2).

Breeder seed is maintained by the Colorado Agricultural Experiment Station. Requests for seed should be addressed to the Foundation Seed Project, Department of Agricultural Experiment Station, Colorado State University, Fort Collins, CO 80523; and C. H. Pearson, Fruit and Vegetable Exp. Stn. Registration by CSSA. Accepted 30 Aug. 1988.


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