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 ‘BILL Z’ PINTO BEAN

‘BILL Z’ (Reg. no. 78) (PI 522246) pinto bean (Phaseolus vulgaris L.) was developed by the Colorado Agricultural Experiment Station and released in 1987. The cultivar descended from a cross made in 1976 between ‘Gloria’, (a pink cultivar) and 3526, a pinto selection derived from A56-244 endemic from a cross made in 1976 between ‘Gloria’, (a pink cultivar) and 3526, a pinto selection derived from A56-244 and ‘UI 111’. The crossing protocol was as follows: A56-244-39/UI 111///A56-244-8 (3526)//Gloria. The two A56-244 selections were from a F1 population (5958-B-1) provided by Dr. W.J. Zaumeyer, former Principal Pathologist, USDA-ARS. During testing the new cultivar was designated CO 81-13197.

Bill Z is characterized by a semivine growth habit (Type 3). Days to maturity during four years tested at Ft. Collins, CO averaged 96 d. In the same tests ‘Olathe’ and ‘UI 114’ required 97 d. Grams per 100 seeds were 36.4, 37.3, and 38.9 for Bill Z, Olathe, and UI 114 respectively. Bill Z was approximately 11% higher in yield than Olathe and UI 114 in the same trials. The new cultivar was resistant to Colorado races of bean rust [incited by Uromyces phaseoli (Reben.) Wint. Var. typica Arth.] except race 54 (1). Reaction in the 1984 USDA rust nursery showed that it was resistant to local races at Saginaw, MI; susceptible at Fargo, ND; moderately susceptible to resistant at North Platte, NE; and very susceptible to highly resistant with a slow rusting reaction at Beltsville, MD (2).

Bill Z carries recessive genes for resistance to the Type and the New York 15 strains of bean common mosaic virus.

Breeder seed is maintained by the Colorado Agricultural Experiment Station. Requests for seed should be addressed to the Foundation Seed Project, Department of Agronomy, Colorado State University, Fort Collins, CO 80523. Application for protection under Title 5 of the Plant Variety Protection Act has been made.

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References and Notes

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REGISTRATION OF ‘ICSV 145’ STRIGA ASIATICA RESISTANT SORGHUM CULTIVAR

‘ICSV 145’, a witchweed (Striga asiatica L. Kuntze) resistant sorghum [Sorghum bicolor (L.) Moench] (Reg. no 128) (PI 522247) cultivar was developed by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru P.O. Andhra Pradesh 502 324, India. ICSV 145 (ICRISAT Sorghum Cultivar 145) has been specifically bred for resistance to the white flowered strain of S. asiatica that grows in India. ICSV 145 was released by the Central Seed Committee of Ministry of Agriculture, Government of India, as SAR 1 for cultivation in witchweed-endemic sorghum-growing areas, particularly in the states of Karnataka, Maharashtra, and Andhra Pradesh. ICSV 145 is a pure line selected from a single cross between IS 18475 (555), a low salt-tolerant sorghum variety, and IS 18468 (168), a high-yielding adapted cultivar released in India as CSV 5. The succeeding segregating (F2:F3) generations of this cross were grown in witchweed-infested fields at Patancheru, Akola, Bijapur, and Bhavanisagar, India; and selected for single plant resistance to S. asiatica with desirable agronomic traits. The selection No. 1-1 expressed uniform witchweed resistance across locations and was named ‘SAR 1’ in 1981. It was tested through the three-stage procedure especially adapted to screen for resistance to S. asiatica (1).

Resistance of ICSV 145 to S. asiatica has been tested in witchweed-infested fields for over 5 yr (1982-1986) in multilocational trials (Table 1); as well as in farmer’s fields to confirm the stability of its resistance to witchweed and to assess its grain yield potential in witchweed-endemic areas.