REGISTRATION OF 'HEARTLAND' BARLEY

'Heartland' barley (Reg. no. 200) (Hordeum vulgare L.) (Canadian Reg. no. 2454) was developed by the Agriculture Canada Research Station, Brandon, Manitoba, Canada, and released 25 July 1984. It was tested as BT 346 and originated as a single F4 plant derived from the cross 'Klon-dike'/BT 416, made by R.I. Wolfe.

Heartland is a six-rowed spring barley with smooth awns. The covered kernels have white (yellow) aleurone; long glume awns with short, sparse glume hairs; and short, long-haired rachillas. The spike is mid-long, semi-erect, and semi-lax. Heartland is mid-maturing with short, strong straw. It is resistant to Pyrenophora teres (Died) Dresch., Puccinia graminis f. sp. tritici Erics. and E. Henn., and moderately resistant to Ustilago nigra and U. hordei pers. Heartland is susceptible to U. nuda (Jens.) Rostr. It does not meet quality standards for Canada Western (CW) malting grades, but is eligible for all other Western Canadian barley grades, including no. one feed.

Heartland has yielded 11 and 17% more than 'Bonanza' and 'Diamond', respectively, and equal to 'Bedford'. Test weight is equal to Bedford and higher than Diamond. Heartland has kernel plumpness between that of Bonanza and Bedford. Straw strength of Heartland is equal to that of Bedford, while straw length is less than Bedford, Bonanza, or Diamond by a minimum of 10 cm. On the average, Heartland matures 1 day later than Bonanza.

This cultivar is named for its area of best adaptation, that being eastern Saskatchewan and western Manitoba, the Canadian "heartland". Breeder seed will be maintained by the Seed Section, Agriculture Canada Research Sub-station, Indian Head, Saskatchewan, and Foundation seed will be distributed by Secan (Canada) Association, Ottawa, Ontario.

M. C. Therrien, R. B. Irvine, K. W. Campbell, and R. I. Wolfe (1)

References and Notes

1. Research scientist, barley breeding and genetics; research scientist, barley physiology and agronomy; Agric. Canada Res. Stn., Box 610, Brandon, Manitoba, Canada R7A 5E7; formerly barley breeder, Agric. Canada. Brandon; currently director of Research, Seeds Division, Ciba-Geigy (Canada), London, Ontario, Canada; formerly barley breeder, Agric. Canada, Brandon; currently cereal breeder, Agric. Canada Res. Stn., Beaverlodge, Alberta, Canada. Registration by the Crop Sci. Soc. of Am. Accepted 9 May 1985.

REGISTRATION OF 'SABINE' ILLINOIS BUNDFLOWER

'Sabine' Illinois bungeflower (Desmanthus illinoensis, (Michx.) Macmil. B. Rob. & Fernald) (Reg. no. 51), PI 434011, a perennial, warm-season legume, was developed by the USDA Soil Conservation Service, Plant Materials Center (PMC) at Knox City, TX. The cultivar Sabine was released in 1983 as a wildlife and range improvement plant for Texas, Oklahoma and eastward. Seed was collected originally from a native stand near Crystal Beach, Galveston County, TX in 1971. Sabine is an upright, vigorous legume that spreads from seed. It is the only released cultivar of Illinois bungeflower for Oklahoma and Texas. Sabine maintains green foliage until frost, shows good drought tolerance, and has good regrowth abilities. Testing of Sabine began in the early 1970s and continued for 11 yrs until its release in 1983. It was compared to native collections. In initial evaluation rows, Sabine showed excellent leafiness and seed production. In advanced testing, Sabine proved superior to all other native collections. Sabine has been tested in over 30 field plantings in Texas and several in Oklahoma with good to excellent results. It is best adapted to areas receiving 381-mm or greater precipitation in Texas, Oklahoma, Arkansas, Louisiana, and Mississippi. Its full range of adaptability is not known. Sabine has proved excellent for range and pasture mixtures as well as mined land revegetation mixtures and wildlife plantings. Breeder seed of Sabine was produced under isolation at the Knox City PMC. Breeder seed will be maintained by the Knox City Plant Materials Center, Knox City, TX.

J. B. Muncrief and R. B. Heizer (1)

References and Notes

1. Manager, USDA-SCS Plant Materials Center, Knox City, TX 79592; plant materials specialist, USDA-SCS, Temple, TX 76501. Registration by the Crop Sci. Soc. of Am. Accepted 10 June 1985.

REGISTRATION OF 'SANTA CRUZ' GUAR

'Santa Cruz' Guar (Cyamopsis tetragonoloba (L.) Taub.) (Reg. no. 7) was developed and released cooperatively by the Arizona Agricultural Experiment Station and the USDA-ARS in 1984.

Santa Cruz is a result of testing and development of breeding line TX78-3695 (Reg. no. GP-2) (1), released by the USDA-ARS, and the Texas and Arizona Agricultural Experiment Stations in 1983. The TX78-3695 cultivar was an F4 selection from a controlled natural crossing block of T64001-16-5-1-1-2-1 × PI 338780-B, made at Chillocothe, TX, in 1971. The glabrous female parent is resistant to bacterial blight (caused by Xanthomonas cyarnopsidis Patel, Dhande, and Kulkami), branching, late maturing, tall (109 cm), high-yielding selection from the cross, 'Brooks' × 'Mills', made at College Station, TX, in 1964. The male pubescent parent is a non-branching, late maturing, tall (122 cm), bacterial blight-resistant plant introduction from India.

Santa Cruz is a full season, sparse-branching, indeterminate, glabrous selection. Seeds are dull-white to light-gray and averaged 3.03 g/100 seeds at Marana, AZ, and slightly more than 'Kinman', the leading guar cultivar planted on an estimated 95% of the total guar acreage in Arizona. Gum content is acceptable to industry and equal to that of the commercial cultivars.

Santa Cruz yielded well at all the locations tested in Arizona. Over 3 yrs (1980 to 1982), Santa Cruz yielded 75.7% more per ha than Kinman at the Marana Experiment Station. However, Kinman yielded 15.6 and 9.2% more than Santa Cruz at the Mesa and Yuma Experiment Stations, respectively. Marana is at the high elevation limit (610 m), with an average lower temperature and greater rainfall than is found throughout the present guar production areas in Arizona. The unique features of Santa Cruz are its full season growth potential and high-yielding ability at ele-