REGISTRATION OF 'H78-0292' SUGARCANE

SUGARCANE (Saccharum spp. hybrid) clone 'H78-0292' (Reg. no. CV-88, PI 553071) was selected by the staff of the Experiment Station, Hawaiian Sugar Planters' Association (HSPA), from progeny derived from random pollination of 'H70-0144' (1) in a polycross made in 1977 involving a wide array of commercial-type clones. H70-0144 was the most important clone for unirrigated areas from 1984 through 1986. H78-0292 contains germplasm from S. officinarum L., S. spontaneum L., S. sinense Roxb., and possibly S. robustum Brandes & Jeswiet ex Grassl.

H78-0292 should be harvested at 24 to 30 mo of age; the clone is adapted to a wide range of unirrigated environments. It is particularly competitive on the Hilo Coast of the island of Hawaii, with its cane tonnage and sucrose content superior to that of the current major unirrigated commercial clone grown in this environment, namely 'H74-1715' (2). It has excellent germination ability and a rapid early growth habit. It is average in tillering, has an average diameter stalk, and is light flowering in most unirrigated environments. H78-0292 appears to be more responsive to fertilizer inuts than most other clones and has exhibited particular sensitivity to P levels in the soil, as measured by the effect P has on tillering. The clone is tolerant to s-triazine herbicides. Although H78-0292 is currently recommended only for unirrigated environments, initial harvest data suggest that its range of adaptation may include some irrigated environments as well.

After seven advanced yield trials, H78-0292 produced an average of 15% more cane and 20% greater total sugar yield than H74-1715 on the Hilo Coast; its record against its parent, H70-0144, is even more impressive. Remarks at harvest suggest that this clone is distinctively less prone to root (Rattus spp.) and borer (New Guinea weevil, Rhodoscelus obscurus) damage at harvest than either H70-0144 or H74-1715.

H78-0292 is resistant to common rust (caused by Puccinia melanocephala Syd. & P. Syd.), eye spot [caused by Bipolaris sacchari (E.J. Butler) Shoemaker], and leaf scald [caused by Xanthomonas albilineans (Ashby) Dowson]. In addition, it is moderately resistant to culmicolous smut (caused by Ustilago scitaminea Syd. & P. Syd.). It is moderately susceptible to brown spot (caused by Cercospora longipes E.J. Butler).

Vegetative cuttings will be maintained by the Experiment Station, Hawaiian Sugar Planters' Association, Aiea, HI 96701.

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References and Notes


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REGISTRATION OF 'SHARP' WHEAT

'SHARP', SD 2980 (Reg. no. CV-770, PI 540401), is a hard red spring wheat (Triticum aestivum L.) developed by the South Dakota Agricultural Experiment Station, South Dakota State University, Brookings, SD, in cooperation with the USDA-ARS and released in 1990. It is an F1-derived selection from the backcross 'Butte'*2/MN7125 made in 1980. MN7125 is a line from the University of Minnesota, St. Paul, whose parentage is "Fletcher/CI 13990. The F1 was grown in a winter nursery in Mexico and bulk harvested. Head selections from the F2 population grown at Brookings were grown as single rows at Brookings. From the single F1 rows, head selections were advanced to the winter nursery in Mexico. An individual F2 row was bulk harvested and grown in replicated yield trials at Brookings and Redfield, SD, in 1982. The F2 seed from this bulk was used as the seed source for replicated trials at the same two locations. Head selections were advanced to the winter nursery grown at Weslaco, TX. Five F2 head selections were harvested, bulked, and designated SD 2980. Sharp was tested in South Dakota yield trials from 1983 through 1989 and in the Uniform Regional Spring Wheat Nursery from 1986 through 1989. In 1986 and 1987, it was entered in the Spring Wheat Crop Quality Test.

Sharp is early heading and mid-tall, with a white, hollow stem at maturity. Spikes are awned, fusiform, middense, and erect. Awns are white and 6 to 130 mm long. Glumes are white, short, and midwide with narrow, square shoulders. The beaks are narrow, acuminate, and 2 to 5 mm long. Kernels are red, hard, midsize, ovate with rounded cheeks, and having a narrow and mid/deep crease. A tall and very tall variant has been identified in the breeder seed comprising 0.18% (10 cm taller) and 0.003% (22 cm taller) of the plants, respectively. In addition, an awnless variant of similar height occurred at 0.03% frequency.

In 66 field performance trials in South Dakota from 1985 through 1989, Sharp has yielded 101, 101, 102, and 104% of 'Butte 86', 'Stoa', 'Prospect', and 'Guard', respectively. Remarks at harvest suggest that this clone is distinctively less prone to damage at harvest than either H74-1715 or H70-0144 on the Hilo Coast; its record against its parent, H70-0144, is even more impressive. Remarks at harvest suggest that this clone is distinctively less prone to root (Rattus spp.) and borer (New Guinea weevil, Rhodoscelus obscurus) damage at harvest than either H70-0144 or H74-1715.

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