Registration of 'CP 85-1382' Sugarcane

'CP 85-1382' sugarcane (a complex hybrid of Saccharum officinarum L., S. barbieri Jesswiet, S. spontaneum L., and S. si-nense Roxb. emend. Jesswiet) (Reg. no. CV-100, PI 583849) was selected from progeny of the polycross 'CP 74-2005' (1/82P14 made at Canal Point, FL, in November 1982. CP 85-1382 was developed through cooperative research by the USDA-ARS, the Institute of Food and Agricultural Sciences (IFAS) of the University of Florida, and the Florida Sugar Cane League, Inc., and was released in the fall of 1993.

CP 85-1382 has moderate vigor and flowers in late December to mid-January. Stalks of CP 85-1382 are light green when covered by their leaf sheaths. Exposed stalks become dark brown with some areas of light purple. It has a medium to large stalk diameter. Its stalk weight averaged across three crops (plant-cane, and first- and second-ratoon crops) was 1.62 kg, compared with 1.34 kg for 'CP 70-1133' (2) and 1.28 kg for 'CP 72-1210' (3), the commercial checks. Its stalks do not always remain erect; however, it is more erect than most commercial sugarcanes in Florida.

Averaged across 27 replicated yield trials (nine locations harvested in plant-cane, first-ratoon, and second-ratoon crops), the cane yield (Mg ha⁻¹) for CP 85-1382 at regular harvest (November through March) was 1% less than that of CP 70-1133 and 26% greater than that of CP 72-1210. Sugar concentration (kg M⁻¹) of CP 85-1382, at early harvest (last 2 wk of October) averaged 6% greater than that of CP 70-1133 and 8% greater than CP 72-1210. At regular harvest, the sugar concentration of CP 85-1382 was 11.7% more than that of CP 70-1133 and 6.6% more than that of CP 72-1210. Eight of the plant-cane tests were harvested from 1 to 5 wk after a severe freeze (−4 to −6°C) in December 1989. In these tests, CP 85-1382 had 6.5% higher sugar concentration than CP 72-1210, the cold tolerance standard in Florida. Sugar yield (Mg ha⁻¹) of CP 85-1382 at early harvest was 9% greater than that of CP 70-1133 and 38% greater than that of CP 72-1210. At regular harvest, CP 85-1382 yielded 12% more sugar than CP 70-1133 and 35% more sugar than CP 72-1210.

CP 85-1382 has shown adequate resistance for commercial production in Florida to sugarcane mosaic virus; leaf scald (caused by Xanthomonas albilineans [Ashby] Dowson); eye spot (caused by Bipolaris sacchari [E.J. Butler] Shoemaker); and smut (caused by Ustilago scitaminea Syd. & P. Syd.). Moderate levels of sporulating pustules of rust (caused by Puccinia melanocephala Syd. & P. Syd.) often develop on CP 85-1382. Growers should monitor rust development closely when planting this cultivar. CP 85-1382 has a millability rating of 1.053 and a fiber content of 9.9%, compared with 0.980 and 10.4% for CP 70-1133 and 0.965 and 10.2% for CP 72-1210.

Seed cane will be maintained by USDA-ARS at the Sugar cane Field Station, Canal Point, FL.


References and Notes

Registration of 'CP 86-1633' Sugarcane

'CP 86-1633' sugarcane (a complex hybrid of Saccharum officinarum L., S. barbieri Jesswiet, S. spontaneum L., and S. si-nense Roxb. emend. Jesswiet) (Reg. no. CV-101, PI 583850) was selected from progeny of the cross 'CP 75-1082' (1/CP 78-1140 made at Canal Point in November 1983. CP 86-1633 was developed through cooperative research by the USDA-ARS, the University of Florida, and the Florida Sugar Cane League, Inc., and was released in the fall of 1993.

Initial tests of CP 86-1633 indicated that it performed well on muck (organic) soils but poorly on sand. Subsequent testing was conducted on muck soils only, and current recommendations are that it be considered a cultivar for muck soils and tried on sand soils with caution.

Stalks of CP 86-1633 are light green to reddish under the leaf sheath and dark green in areas exposed to the sun. Stalk weight averaged over plant-cane, first-ratoon, and second-ratoon crops was 1.62 kg, compared with 1.43 kg for 'CP 70-1133' (2) and 1.34 kg for 'CP 72-1210' (3), two commercial checks.

Yield data were taken from seven muck-soil locations for plant-cane and first- and second-ratoon crops. At early harvest (last 2 wk of October), the three-crop mean for sugar concentration (kg M⁻¹) of CP 86-1633 was 1% greater than that of CP 70-1133 and 5.5% greater than that of CP 72-1210. Sugar yield at early harvest (Mg ha⁻¹) for CP 86-1633 was 1% less than that of CP 70-1133 and 24% greater than that of CP 72-1210. At regular harvest (November through March), sugar concentration for CP 86-1633 averaged 1% less than that of CP 70-1133 and CP 72-1210. Cane yield (Mg ha⁻¹) for CP 86-1633 was 1% less than that of CP 70-1133 and 24% greater than that of CP 72-1210. Sugar yield (Mg ha⁻¹) for CP 86-1633 was 2% less than that of CP 70-1133 but 23% greater than that of CP 72-1210. The decrease from plant cane to second ratoon for sugar per hectare was 44% for CP 86-1633, compared with 39% for CP 70-1133 and 32% for CP 72-1210.

CP 86-1633 has shown adequate disease resistance (for commercial production in Florida) to sugarcane mosaic virus, leaf scald (caused by Xanthomonas albilineans [Ashby] Dowson), eye spot (caused by Bipolaris sacchari [E.J. Butler] Shoemaker), and smut (caused by Ustilago scitaminea Syd. & P. Syd.). CP 86-1633 has a fiber content of 11.15%, compared with 11.10% for CP 70-1133 and 11.15% for CP 72-1210.

Seed cane of 86-1633 will be maintained by the USDA-ARS at the Sugarcane Field Station, Canal Point, FL.

C. W. Deren, B. Glaz, J. M. Shine, Jr., P. Y. P. Tai, J. D. Miller* and J. C. Comstock (4)

References and Notes