Registration of Crop Cultivars

REGISTRATION OF KELLER SWEET SORGHUM

D. M. Broadhead

Keller is a sucrose-type sweet sorghum, Sorghum bicolor (L.) Moench, developed at the U. S. Sugar Crops Field Station, Meridian, Miss., in the cooperative research program of USDA-ARS and the agricultural experiment stations of Louisiana, Mississippi, and Texas. The cultivar was selected in 1964 from the F2 progeny of the cross Collier X PI 152959. Keller was evaluated under the breeding number Mer 68-2.

The panicle of Keller is effuse and inclined. The drooping racemes arise within a distance of 2.5 cm on the short rachis and usually hang to one side of the plant. The glumes cover the kernels completely, are brown in the central area, have hyaline edges and are covered by uniformly distributed hyaline pubescence. Glumes do not clasp the seed at maturity and are strongly nerved, persistently pedicled, spikelets are greenish-to-hyaline, strong, with considerable pubescence, and are covered by uniformly distributed hyaline pubescence. Glumes do not clasp the seed at maturity and are strongly nerved, persistently pedicled, spikelets are greenish-to-hyaline, strong, with considerable pubescence, and are covered by uniformly distributed hyaline pubescence.

Keller kernels are medium size, have a brown pigmented pericarp and testa, and are ovate-elliptic shaped. The endosperm is starchy, with a medium-thick corneous layer. The coleopyle is green.

Keller-resistant to leaf anthracnose and stalk red rot caused by Colletotrichum graminicola (Ces.) G. W. Wibs., moderately resistant to downy mildew incited by Peronosclerospora sorgi (Weston and Uppal) C. G. Shaw, susceptible to rust caused by Puccinia purpurea Cke. and maize dwarf mosaic virus, and moderately susceptible to injury by methyl parathion.

Keller matures in 105 to 130 days. It is similar in height to Rio, but its stalks are larger in diameter at the base and have fewer leaves and sidebranches than Rio. The cultivar has smaller seedheads and is more resistant to stalk lodging than Rio.

Keller is superior to Rio in juice Brix and sucrose; the cultivar shows potential as a crop for expanding sucrose production, biomass, and fermentable sugars for alcohol production. Information on sugar production of Keller has been published.3 Breeder seed will be maintained at the U. S. Sugar Crops Field Station, Meridian, MS 39301.

REGISTRATION OF JUPITER-R SOYBEANS

K. Hinson, E. E. Hartwig, and A. Scott

Jupiter-R1 soybeans [Glycine max (L.) Merr.] originated as a composite of 7 F2 lines representing the major type of Jupiter cross-breeding, producing seedlings whose vigor is intermediate between weeping lovegrass (Eragrostis curvula (Schrad.) Nees) and switchgrass (Panicum virgatum L.). Its stem lodging resistance, quantity of vegetative cover, and seed production enhance its wildlife value. Jupiter has been successfully established on surface mined areas, sanitary landfills, dredged spoil fills, sand and gravel mines, roadside embankments, and similar drastically disturbed sites.

Field tests show Atlantic to be well adapted in the coastal plain and Piedmont regions from Massachusetts to Texas. It has been grown inland in Pennsylvania and Ohio. It does not produce seedstalks as abundantly in northern areas of its adaptation as in southern sites. Lack of cold tolerance below —18 C limits its northern geographic adaptation.

Breeder seed of Atlantic will be maintained by the SCS at the Cape May Plant Materials Ctr., Cape May Court House, NJ 08210.

REFERENCES

The principal use of Atlantic is for stabilizing disturbed sites. It can be direct seeded on sand dunes except active frontal types (2,3). Atlantic coastal panicgrass can be readily established by drill-seeding, producing seedlings whose vigor is intermediate between weeping lovegrass (Eragrostis curvula (Schrad.) Nees) and switchgrass (Panicum virgatum L.). Its stem lodging resistance, quantity of vegetative cover, and seed production enhance its wildlife value. Atlantic has been successfully established on surface mined areas, sanitary landfills, dredged spoil fills, sand and gravel mines, roadside embankments, and similar drastically disturbed sites.

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