REGISTRATION OF GERMPLASM

Registration of Evenia Aeschynomene
IRFL 6945 Germplasm

IRFL 6945 evenia aeschynomene (Aeschynomene evenia C. Wright) (2) germplasm (Reg. no. GP-176, PI 572567) is a selection made in 1991 from invading plants in a Callide rhodesgrass (Chloris gayana Kunth) plot. This selection arose from 10 accessions first introduced in the late 1970s by the Indian River Research and Education Center, Fort Pierce, FL. This is a new tropical forage species not previously used for grazing.

IRFL 6945 is an erect, branching (from the soil level crown) tropical legume that can reach a height of about 2 m. Bipinnate leaves to 8 cm long have 19 to 28 leaflets, each about 5 mm long and 1 to 2 mm wide. Flowers are 5 to 6 mm long and have a pinkish-red appearance prior to opening, because of reddish striations occurring on the petals. When open, flower color is mostly mauve, with a pinkish center (4). One to two flowers are produced from each peduncle, from which 1 to 3 fruits are produced. Fruit color changes from green to brown upon maturity, and pods generally are comprised of 5 to 8 segments that sequentially dehisce from the terminal segment. Pod length ranges from 5 to 7.5 cm, with a width of about 3 mm. A slightly curved stipe, 1 to 2 mm long, extends from the flower end of the pod. Preliminary evaluation results indicated that this new potential tropical forage species (2) has several positive attributes compared with common A. americana, which has been used commercially in Florida for more than 20 yr. IRFL 6945 is more tolerant of waterlogging and is more persistent in southern Florida than A. americana (3). In southern Florida, the flowering of IRFL 6945 is indeterminate, (barring frost, it flowers year round), while common aeschynomene has a concentrated seed set in the fall, after which plants senesce and die. IRFL 6945 commercial seed production may reach about 300 kg ha⁻¹. Hardseededness of IRFL 6945 is about 50%.

IRFL 6945 crude protein concentration in the top 30 cm, second 30 cm, third 30 cm, and stem base sections from widely spaced plants was 235, 150, 76, and 68 g kg⁻¹, respectively. Closely spaced (and less branched) plants contained 296, 167, and 83 g kg⁻¹ for the top 30 cm, second 30 cm, and bottom >30 cm, respectively. In vitro organic matter digestibility for the respective segments of widely spaced plants was 665, 541, 321, and 277 g kg⁻¹, for closely spaced plants, it was 672, 486, and 285 g kg⁻¹.

Results from grazing IRFL 6945 in association with bahiagrass (Paspalum notatum Flügge) indicate that cattle (Bos taurus) at first prefer common aeschynomene to evenia aeschynomene IRFL 6945, until they become accustomed. Initial grazing should begin when plants are about 30 to 50 cm high, to increase early utilization and branching. In spring, stems up to about 6 mm were readily grazed, while in the fall smaller-diameter stems from more mature plants were consumed. Although IRFL 6945 is a perennial in southern Florida, a sparse stand subjected to periodic grazing in Louisiana has persisted 3 yr through reseeding. Heavily grazed plants of IRFL 6945 continue to flower and maintain vegetative growth. The fork-tailed caterpillar [Ceylonese ceratose (Guénet)], which feeds primarily on flower buds, may seriously reduce seed yields (1).

Small quantities of seed can be obtained from the Haile-Dean Seed Co., P.O. Box 1458, Winter Garden, FL 32787.

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References and Notes

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