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Agricultural Experiment Station
Manhattan, Kansas

and

United States Department of Agriculture
Soil Conservation Service
Plant Sciences Division
Washington, D. C.

Notice of the germ-plasm release of a strain of eastern gamagrass

Name. PM-K-24 eastern gamagrass, Tripsacum dactyloides (L.) L.

Origin and Development. PM-K-24 traces to seed collections from natural stands of eastern gamagrass, in Kansas and Oklahoma, in 1958. In 1960, 70 original seed lots were bulked and used to establish an increase field; open-pollination seed from this field is considered the first generation of PM-K-24. The strain has now been carried to the third generation through harvesting and replanting of open-pollination seed. Inasmuch as original accessions varied considerably in maturity, some selection for uniformity of maturity is presumed to have occurred under combine harvesting of the seed.

Description. PM-K-24 closely resembles wild strains of eastern gamagrass in Kansas and Oklahoma. It is a large, leafy, perennial grass which spreads by means of thick rhizomes. Its inflorescence consists of 1-5 spikes in a generally digitate arrangement. Eastern gamagrass is monoecious, having staminate and pistillate spikelets on the upper and lower portion, respectively, of each spike. Though ordinarily considered a warm-season species, eastern gamagrass is somewhat earlier in maturity than such warm-season grasses as the bluestems and switchgrass. At the SCS Plant Materials Center, Manhattan, Kansas, PM-K-24 has exhibited promising forage characteristics, producing an abundance of dry matter, making rapid regrowth following harvest, and comparing favorably with other native, perennial grasses in crude protein content. Like wild strains of eastern gamagrass, however, it features seed production and seed quality deficiencies which would seriously limit its value as a commercial forage crop.

Use and Potential. Use of eastern gamagrass as a commercial forage crop requires solution of the problem of propagating the grass. Evaluation and improvement of the species has been hindered by scarcity of seed and by the fact that the grass is relatively unknown. PM-K-24 is intended to serve as a readily available experimental strain for breeders and other researchers interested in the species.

Availability of Seed. A breeders seed field is maintained on the SCS Plant Materials Center, Manhattan, Kansas. Limited quantities of breeder seed are currently available.

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Director

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August 6, 1974

Date

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**Plant Sciences Division, SCS
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August 20, 1974

Date