REGISTRATION OF SONORA BLACK GRAMAGRASS

(Reg. No. 4)
L. Neal Wright

'Sonora' black gramagrass (Bouteloua eriopoda Torr.) was released jointly in 1965 by the Arizona Agricultural Experiment Station, the Agricultural Research Service, and the Soil Conservation Service of the U. S. Department of Agriculture.

Sonora, which carried the experimental designation A-4567-2 during the period of evaluation, is the first improved variety of black gramagrass for commercial seed production and range seeding. The variety was named after the Sonoran desert, a semi-arid to arid grassland area of the southwestern United States and adjacent parts of Mexico where black gramagrass occurs abundantly over a wide altitudinal range.

Sonora has the many desirable characteristics of black gramagrass and in addition is superior in seed and forage production (1). The variety traces to 11 vegetative and 47 seed accessions collected in Arizona and New Mexico in 1957. From the space planted source nursery, 79 superior plants were selected and reevaluated in a replicated polycross nursery. Based on polycross progeny performance, 12 superior plants were selected and recombined for production of Syn 1 seed. All 12 clones are diploid (2n = 20) and reproduce sexually (2).

Agronomic evaluation of Sonora shows outstanding performance in regard to leafiness, vigor, forage production, vegetative spread, components of seed set, and seed production when compared with the Flagstaff collection (3).

Sonora is limited to one generation each of breeder, foundation, and certified seed. Breeder seed, formed by blending equal amounts of seed from each of the 12 parent clones, is maintained by the Arizona Agricultural Experiment Station.

REGISTRATION OF CAYUSE OATS

(Reg. No. 221)
C. F. Konzak, G. W. Bruchel, H. M. Austenson
P. C. Crandall, and K. J. Morrison

'Cayuse,' (Avena sativa L.) C. I. 8283, is a spring oat with light yellow grain from the 1952 cross of 'Craig' x 'Alamo,' formerly C.I. 5271A-B-2B-51, made by N. F. Jensen, Cornell University, Ithaca, N. Y.

The main weakness of Cayuse is its relatively low volume weight; the test weight averaged about 35 pounds per bushel in all Washington and Idaho locations, compared with 37 for 'Park.' Cayuse has yielded 10 to 20% more than Park, the previously recommended variety.

The particular source used from which Cayuse was derived was a 3-grain sample of Craig x Alamo, Sel. 5271A-B-2B-51 received from N. F. Jensen in 1959. It was included among nearly 4,000 varieties evaluated for disease tolerance by G. W. Bruchel, H. M. Austenson, and F. C. Crandall under field plots at Pullman, Washington, in 1959.

Craig x Alamo, Sel. 5271A-B-2B-51 was among 480 more tolerant strains selected from the 1959 tests and among 100 considered worthy of further evaluation in 1960. Yield tests were first begun in 1962 when Cayuse yielded 192 bushels per acre compared with 'Shasta' at 135 bushels per acre at Puyallup, Wash. Washington State Regional tests were begun in 1963. Under moderately severe yellow dwarf conditions at Vancouver in 1963, Cayuse yielded 95 bushels per acre compared with 'Shasta at 47 bushels per acre. Cayuse was entered in the Northwestern Regional Nurseries in 1965. Results of the 1965 and 1966 tests showed Cayuse to have outstanding yield potential and good adaptability. In both years it was top yielder at both irrigated and non-irrigated locations.

Breeder's seed stock of Cayuse was derived from panicles taken in 1963 from vigorous plants of the Craig x Alamo line grown under severe yellow dwarf conditions at Vancouver, Wash. In 1964 parts of each panicle were planted in Puyallup and at Pullman. The lines were rogued and populations containing off-type plants were discarded. The Puyallup harvest was used in the Northwest Regional Nursery, while the 264 lines grown at Pullman were harvested individually for the production of Foundation seed.

Washington State University and the University of Idaho, Moscow, Idaho, jointly processed and released Cayuse in December 1966 with the approval of Cornell University. Breeders' seed stocks are maintained at Washington State University and are available through the Washington State Crop Improvement Association.

Cayuse will be recommended in Washington and Northern Idaho. Foundation, registered, and certified seed will be available for planting in 1968.

REGISTRATION OF NOVA 66 RICE

(Reg. No. 30)

'Nova 66' rice (Oryza sativa L.), C. I. 9481, Stg 582114, originated as a single plant selection from 'Nova' (C.I. 9480) made at Stuttgart, Arkansas, in 1957. In preliminary tests it showed shorter and stiffer straw than Nova.

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The assistance of Mr. L. C. Bacon in the conduct of the regional trials is gratefully acknowledged.