Registration of Varieties

REGISTRATION OF GULF ANNUAL RYEGRASS1
(Other Grasses, Reg. No. 8)
Ralph M. Weihing2
Gulf annual ryegrass (Lolium multiflorum Lam.) is a direct increase of La Estanzuela 284, an improved variety from Uruguay. The seed was introduced in 1950 under accession No. P.I. 193145 by the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture. In 1958, P.I. 193145 was named Gulf at the Rice-Pasture Experiment Station, Beaumont, Texas, and released cooperatively by the Crops Research Division, ARS, and the Texas Agricultural Experiment Station. A number of reports on Gulf annual ryegrass have been published.3, 4, 5, 6, 7, 8

Gulf is an early-maturing variety resistant to crown rust (Puccinia coronata Cda.) and well adapted for use in the coastal areas of Texas and Louisiana. It is superior to domestic annual ryegrass in crown rust resistance and total forage yield in the southern portions of the southeastern United States, from east Texas to Florida. In much of this region, Gulf is rated highly for early fall and winter growth and for good seed yields. It matures about 10 days earlier than domestic. The earlier maturity (forage quality of annual rye grass drops rapidly with maturity) may be regarded as a disadvantage where environmental conditions (good moisture, relatively low temperature, and low incidence of crown rust) favor continued growth. Seed of Gulf can be produced successfully in the southeastern United States and in the Pacific Northwest.

In the Gulf Coast regions crown rust reaches epiphytic proportions by April or May and heavily infects annual rye grass. Leaf rust reduces forage quality and yield and a substantial proportion of diseased rye grass plants die before seed maturity. Lack of seed production in heavily infected stands eliminates the possibility of utilizing the reseed ing characteristic of annual rye grass to establish new stands. The level of rust resistance of Gulf was sufficient for normal yields at Beaumont, Texas, over the past 12 years. Seed yields as high as 900 pounds per acre were obtained from fields which had been grazed or clipped from December to early March. The superior forage yield of Gulf as compared with that of domestic annual rye grass and certified perennial ryegrass is illustrated by data obtained at Beaumont (Table 1).

Forage quality is excellent. Live-weight beef gains of 400 pounds or more per acre using yearling steers from December to June were not uncommon on rye grass-clover pasture at the Rice-Pasture Experiment Station.

Gulf is being increased on a limited-generation basis with four recognized classes of seed: breeder, foundation, registered, and certified. The breeder seed is grown at the Rice-Pasture Experiment Station. Periodically it is replenished by growing head rows to discover and discard off types. Foundation seed must be produced by or under direct supervision of the Texas Agricultural Experiment Station. Registered seed is produced by planting foundation seed, and the certified seed from registered seed. Seed produced from certified seed is not eligible for certification. Use of the variety is increasing and supplies of certified seed have been ample.

REGISTRATION OF PENNLATE ORCHARDGRASS1
(Reg. No. 3)
R. W. Cleveland2

PENNLATE is a synthetic variety of orchardgrass (Dactylis glomerata L.) developed from four parent clones which were originally selected and used in experimental sanitics by the U.S. Regional Pasture Research Laboratory. The best clones were selected from three late-maturing Pasture Laboratory sanitics and a new synthetic was reconstituted by H. R. Fortmann and H. L. Carnahan of The Pennsylvania State University. Polymeric progeny performance in trials in Pennsylvania and New York was the basis for the final selection.

The four parent clones of Pennlate originated from introduced varieties and strains of orchard grass. Two parents were derived from Tarnsvisio and Tardus II, varieties bred in Finland and Sweden respectively. The other parents were selected from open-pollinated progenies of introductions grown at the U.S. Soil Conservation Service Nursery, Big Flats, N.Y. The geographical origins of the latter clones cannot be traced.

Pennlate is a high yielding, late maturing variety which is compatible in alfalfa mixtures. It competes well with the associated legume maintaining stands with desirable compositions of grass. It produces higher total seasonal forage yields and particularly higher first-cutting yields than S-37 orchard grass, a variety which has wide use in the northeastern United States. The average head-

1 Registered under a memorandum of understanding between the Crops Research Division, ARS, USDA, and the American Society of Agronomy. Cooperative investigations of the Crops Research Division, ARS, USDA, the Texas Agricultural Experiment Station, the Texas Rice Improvement Association, and the Rice-Pasture Experiment Station, Beaumont, Texas. Received Feb. 21, 1963.

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