REGISTRATION OF CROP CULTIVARS

Test weights of Madison were about 0.45 kg (1 lb.) higher than those of Brooks and about 0.45 kg (1 lb.) lower than those of Coker 716. Lodging percentages were 37.5, 26.7, and 3.4 for Coker 716, Brooks, and Madison, respectively. Madison was also about 13 cm shorter than Brooks or Coker 716. It exceeded Carolee by 10% in winter survival but was 8% and 16% lower than Brooks and Coker 716, respectively. Madison exceeded the protein production of Brooks by 11% and Coker 716 by 15%. This cultivar should be widely adapted in the Southeastern states and valuable for double cropping with soybeans.

Madison has semi-prostrate juvenile plant growth and mid-sized yellow stems with pubescent internodes. Leaf blades are mid-wide and the leaf margins are glabrous. Leaf sheaths are mostly glabrous and ligules are present. Panicles are equalateral, mid-sized, mid-long, mid-broad, and ovate. The branch attitude is erect, with ascending branches. The rachis is nearly straight, spikelet separation is by semiabscission, and floret separation is by disarticulation. The lemma is very short, yellow, and glabrous. The grain is mid-plump and the second floret rachilla segment is mid-long and glabrous. There are few to several long basal hairs and non-twisted, long awns are common. The seed does not fluoresce.

The name Madison was selected to draw attention to the cooperative state-federal relationship, which is so important to agricultural research, by recognizing the value of the USDA Oat Laboratory located at Madison, Wis.

Breeder seed of Madison will be maintained by the North Carolina Agricultural Research Service, North Carolina State Univ., Raleigh, NC 27650.

REGISTRATION OF PENNANT PENNELL PERENNIAL
RYEGRASS

(C. R. Funk, C. J. Petersen, S. Ahmad, and J. P. Rutkai)

'PENNANT' perennial ryegrass (Lolium perenne L.) was developed and released by Agriculture Service Corporation of Salem, Ore. It originated from germplasm developed at the New Jersey Agricultural Experiment Station. Pennant perennial ryegrass is an advanced generation synthetic cultivar selected from the progeny of 65 related clones. Each parental clone of Pennant descended on its maternal side from one or the other of two plants selected from an old lawn in College Park, Md. These two plants were placed in polycross nurseries with plants selected primarily from N.J.E. R-35 (an experimental synthetic closely related to 'Citation'), L4H (a clone selected from a school playground in Baltimore, Maryland), 'Birdie', and 'Pennfine'. Polycross progenies of the two clones were seeded in closely mowed turf trials. After 11 months of interplant competition under conditions of severe heat, drought, and disease stress, tillers were selected from each progeny and transferred to a spaced-plant nursery. The 65 parental clones of Pennant were selected from this nursery based on attractive appearance, disease resistance, and progeny performance in closely mowed turf trials. The progeny of these clones were subsequently planted in an isolated, spaced-plant nursery in western Oregon. Selection within this nursery was based on freedom from disease, dark green color, high seed yield potential, and uniform early seedling emergence. Bulked breeder seed was harvested from the remaining plants. UM composite was the experimental designation of Pennant. The first commercial seed was produced in western Oregon in 1980.

Pennant is a moderately low-growing, turf-type ryegrass capable of producing an attractive, persistent, dark green turf having medium height density, medium fine texture and relatively good mowing qualities. It has performed well in nonirrigated tests receiving low to moderate fertility applications. It appears to require somewhat less N fertilizer for good performance than many other perennial ryegrasses. Pennant has shown good heat tolerance and moderately good cold hardiness. When compared to most other ryegrasses, Pennant has shown improved resistance to the large brown patch disease incited by Rhizoctonia solani Kuhn. It has demonstrated moderate resistance to the red thread disease incited by Laetisaria fuciformis (McAlpine) Burdall, the winter brown blight disease incited by Drechslera spp., dollar spot caused by Sclerotinia homoeocarpa F. T. Bennett, and some races of crown rust caused by Puccinia coronata Corda. Pennant showed substantially less damage from sod webworms, Crambus spp., and billbugs, Sphenophorus parvulus Gyllenhaal, in field trials at Adelphia, New Jersey, compared with most other named ryegrasses.

Pennant has the rapid germination, ease of establishment, wear tolerance, and wide soil adaptation which are characteristic of other improved ryegrasses. It is recommended for use in full sun or in light to moderate shade on lawns, parks, or sports fields in regions where perennial ryegrass is well adapted. Pennant is frequently mixed with a blend of improved Kentucky bluegrass cultivars. Pennant also performs well for the winter overseeding of dormant bermudagrass on golf greens, tees, fairways and lawns.

Breeder seed is produced by Agriculture Service Corporation with the cooperation of the New Jersey Agricultural Experiment Station. Three generations of increase beyond breeder seed are permitted, one each of foundation, registered, and certified.

Acknowledgments

Some of this work was performed as part of NJAES Project No. 15166, supported by New Jersey Agric. Exp. Stn. funds, other grants and gifts. Additional support was received from the United States Golf Assoc. Green Section Res. and Educ. Fund, Inc.

REGISTRATION OF NC 8C PEANUT

(J. C. Wynne and M. K. Beute)

'NC 8C' peanut (Arachis hypogaea L. subsp. hypogaea var. hypogaea) is a virginia market-type cultivar developed by the North Carolina Agriculture Research Service. It originated as an F3 plant selection from the cross of NC Ac 3139 and the cultivar 'Florigiant'. The cross was made in reciprocal in 1966. F2 seed from the reciprocal crosses were bulked and served as the population from which NC 8C was selected. NC 8C retains some heterogeneity since selection occurred in the F3 generation. NC 8C was evaluated in tests in North Carolina in 1978-1981, in the Virginia-North Carolina Peanut Variety and Quality Evaluation Program in 1980-1981, and in the National Uniform Peanut Performance Test in 1981 under the designation NC 17941.

NC 8C was developed for production areas in North Carolina and Virginia where Cylindrocladium black rot (CBR) caused by Cylindrocladium crotalariae (Loos) Bell and Sobers is a problem.