REGISTRATION OF M MISSOURI-96 TALL FESCUE
(Reg. No. 15)

K. H. Asay and D. A. Sleper

'Missouri-96' tall fescue (Festuca arundinacea Schreb.) was developed by the Univ. of Missouri Agric. Exp. Stn. and released in 1978. During the development and testing stages, this forage grass was tested as experimental I-96.

The original seed from which Missouri-96 was derived came to the Univ. of Missouri from the Station d’Amerlioration des Plantes Fourragères, Lusignan, France in 1966. This germplasm was established in a space-planted source nursery at the Agronomy Research Center, Columbia, Mo. Thirty-six clones were selected in 1968 for vegetative vigor, seed yield potential, leaf texture, and resistance to foliar diseases. The selected clones were vegetatively propagated in replicated single-plot trials at Columbia and evaluated for forage yield, in vitro digestibility, and characters previously studied in the source nursery. Thirteen clones were selected in 1971 and isolated in a crossing block to produce the synthetic-I generation of the experimental cultivar.

Missouri-96 consistently produced over 50% more average daily gain than 'Kentucky-31' tall fescue in grazing trials with cattle at the Southwest Research Center, Univ. of Missouri, Mount Vernon, Mo. Herbage dry matter yield, in vitro digestibility and maturity are similar to Kentucky-31. However, in feeding trials, voluntary intake of Missouri-96 was significantly greater than that of Kentucky 31. This was apparently responsible for the improved animal performance.

In trials at Columbia and the Southwest Missouri Research Center, Missouri-96 was more resistant to crown rust caused by Puccinia coronata than other cultivars, especially Kentucky 31, 'Kenhy', 'Fawn', and 'Goar'.

Breeder and foundation seed classes will be maintained by the Agronomy Dep., Univ. of Missouri, Columbia, MO 65211.

 REGISTRATION OF GALENA HOP
(Reg. No. 7)

R. R. Romanko, Joy Jaeger, Gail B. Nickerson, and C. E. Zimmermann

'Galena' is a new hop cultivar (Humulus lupulus L.) released for commercial production in Idaho in 1978. It was obtained from a seed set by open pollination of 'Brewer's Gold' in 1968. The seeds were germinated in 1969, and the resultant seedlings exposed to heavy inoculations of Pseudoperonospora humuli (Miy. and Tak.) G. Wils. in order to eliminate individuals susceptible to Hop Downy Mildew. Agronomic and quality observations began in 1971 and trial production blocks were planted in 1976 (0.405 ha) and 1977 (0.810 ha). Within this group, during this period Galena was identified as Idaho experimental hop variety "ID 92-202" and was submitted for registration. In 1978, the crop was designated NC 17209 during development and testing.

Galena has a columnar growth habit with open symmetry. The plant's lateral and terminal branching and medium foliation. The small, lanceolate leaves are erect, dark green, moderately pubescent, and slightly glossy. Cones are plump, fairly closed, and green bracts. They are medium to medium large, typically averaging 150 to 200 mg each. Bracteoles are long, sticky and abundant. Galena seems likely to produce 1.75 to 2.25 metric tons/ha of hops or 200 to 275 kg/m². The crop is grown under a 5.5 m trellis at a 2.1 by 2.1 m spacing. Because of its rather light vine growth, three strings will be utilized in order to maximize cone production.

In the Boise Valley, Galena is an early maturing cultivar. The crop matures before commercial harvesting and seed is ready for harvest by 2 August. Galena has a characteristically high content of lupulic acids. Analyses of 10 different lots of Galena have determined the alpha and beta acid content to be 47.6 and 14.0% alpha and 19.4% beta acids. In 1978, the content of alpha acid on a dry weight basis for three mature plants was 14.2, 11.4, and 15.0%. Tests of storage stability of alpha acid from the same plants for storage for 5 years indicated an alpha stability comparable to the parent varieties. This alpha content combined with good storage stability create a ready demand for Galena as an extract.

A proportion analysis by NMR indicated the following composition of the acids: humulone, 55%; cohumulone, 33%; adhumulone, 12%; lupulone, 36%; colupulone, 54%; and adhumulone, 12%.

Galena has exhibited an ability to withstand attack by soil residues of heptachlor, and a tolerance to Verticillium dahliae Kleb. Galena is susceptible to Downy Mildew. Galena is susceptible to the two-spotted mite (Tetranychus urticae Koch), but its moderately sparse foliation facilitates uniform coverage with acaricides.

This cultivar will be maintained by the Idaho Hop Growers Association, Idaho Hop Growers Commission and the U.S. Brewers Association. Galena will be registered for commercial production in the United States by the Oregon State University, OR 97331.

REGISTRATION OF NC 7 PEANUT
(Reg. No. 22)

J. C. Wynne, R. W. Mozingo, and D. C. Lofgran

'NC 7' is a large-seeded Virginia-type peanut (Arachis hypogaea L.) cultivar developed by the North Carolina Agric. Res. Serv. and released in 1978. It was selected in the breeding program following a cross of 'Fla 393' and 'NC 5' made in 1966 and the first three generations were grown in the greenhouse using a single-seed-descent breeding method. The selection was designated NC 17209 during development and testing.

NC 7 has a decumbent or intermediate growth habit similar to that of NC 5. It matures up to 10 days earlier than the predominant cultivar in North Carolina and average weight of 200 g seed per pod.

For the first digging date in the Virginia Peanut Variety and Quality Evaluation Program 1976 and 1977, NC 7 yielded slightly less than Florigiant with a higher value per hectare. The higher value is due to a higher percentage of extra large kernels and a higher percentage of trimmings. NC 7 also has a higher percentage of fancy sized pods than Florigiant. The mill output from farmer's stock peanuts was higher for NC 7 with a higher percentage of trimmings.

Flavor scores for in-the-shell and shelled product of NC 7 were superior to Florigiant in most evaluation areas.