Florigraze was tested as Gainesville Selection no. 1 (GS-1) until named, and presented as a joint cultivar release between the University of Florida and the USDA, Soil Conservation Service in February 1978. Florigraze is thought to be a seedling from Arb which was collected by W. Archer near Campo Grande, Brazil, in 1936 (2).

Florigraze and other rhizoma peanuts are slow to establish and provide little usable forage the first season. Although a well managed peanut crop may cover the ground the first season, it is usually the third growing season before normal production of forage is obtained and after the third year of growth before adequate quantities of rhizomes can be dug for planting. Usually, rhizomes can be dug again from the same field after two growing seasons without replanting. Currently, most rhizomes are dug with a bermudagrass-sprig harvester though they also have been harvested with potato diggers. The rhizomes are dug and planted during the winter months after the peanut top growth has been killed by frost, grazed, cut or burned off. Rhizome yields have ranged from 70 to 175 M3 ha-1. The recommended planting rate is 3.46 M3 rhizomes ha-1 which currently costs about $250 ha-1 for planting materials. A higher planting rate is desirable if rhizomes are available at a reasonable cost. The rhizomes are broadcast and then harrowed in with a disc harrow and cuttipped or planted with a bermudagrass-sprig planter in 60 cm or narrower rows.

Florigraze was first distributed to commercial growers in February, 1978. The current commercial acreage of Florigraze in Florida and south Georgia is about 400 ha. The increase in Florigraze acreage has been slowed by farmer unfamiliarity with the new crop, the high cost of planting material, and the unavailability of bermudagrass-sprig harvesters to growers with small hectarages.

Florigraze has yielded 7000 to 13,000 kg dry matter ha-1 when cut as hay (1, 2, and 3). Annual forage yields were reduced when cut at intervals shorter than 6 weeks (1). The protein content varied from nearly 220 mg g-1 at 2-week cutting intervals to 147 mg g-1 at 12-week cutting intervals (1). Over a 2-yr period the organic matter digestibility (IVOMD) decreased from 743 mg g-1 at 2-week cutting intervals to 640 and 648 mg g-1 at 10- and 12-week cutting intervals respectively (1). Similarly, the average leaf composition in forage decreased from 930 to 720 mg g-1. The intake and digestibility of Florigraze hay by sheep compares favorably to that of alfalfa (Medicago sativa L.) hay (2). The IVOMD of Florigraze has ranged from 550 to 720 mg g-1 in hay cut after 6 weeks or more growth (2).

Over a 4-yr period at Gainesville, Florigraze out-yielded Arb and ‘Arblick’ rhizoma peanut for hay by 15 and 50%, respectively (3). Generally, Florigraze establishes more rapidly and yields more forage than Arb and Arblick (2).

Florigraze peanut is finer stemmed and has narrower leaflets on the quadrifoliate leaves than Arb or Arblick. The Florigraze rhizome diameter is smaller and it usually produces a greater number of rhizomes per unit area of soil. Rhizoma peanuts are adapted to humid tropical, subtropical or mild temperate climates with long wet, warm seasons and where cool season temperatures seldom reach or go below -10°C. Florigraze is adapted to soils that are moderately-to well-drained, but is not adapted to "flatwoods" soils with poor drainage or to any soil subject to high water tables or flooding. Florigraze is drought-resistant and will stay green under severe drought longer than most perennial grasses, but top growth is slow during such conditions. Over-topping weeds are the worst competitor in new Florigraze plantings. No serious nematode, disease, or insect problems have been observed with this crop to date.

Planting material for research use and breeder's stock of Florigraze will be maintained by the Agronomy Department, Institute of Food and Agriculture Science, University of Florida, Gainesville, FL 32611.

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References and Notes

REGISTRATION OF ‘NC 60’ TOBACCO

‘NC 60’ flue-cured tobacco (Nicotiana tabacum L.) (Reg. no. 94), was developed and released cooperatively by the USDA-ARS and the North Carolina Agricultural Research Service. It was tested as NC 2060 and resulted from a cross between ‘McNair 944’ and ‘Speight G-28’. NC 60 was released in 1986 and will be available as an F1 for grower planting in 1987.

The F1 hybrid that served as the progenitor of NC 60 was selected after yield and quality trials in 1979. Individual plant selection for field type and nicotine content of cured leaves was made within the F1 population in 1980. Greenhouse tests for disease resistance were conducted in 1980-81 followed by head-to-row plantings of selected F1 lines in yield and quality trials in 1981. NC 2060 was tested in yield and quality trials and disease trials in the F2, through F5 generation. Seed selection was made on separate black shank and bacterial wilt field nurseries. Seed were bulked beginning with the F5 generation.

NC 60 has high resistance (similar to Speight G-28) to black shank (caused by Phytophthora parasitica var. nico- tianeae (Breda de Haan) Tucker), and high resistance (similar to Speight G-28) to bacterial wilt (caused by Pseudomonas solanacearum, E.F. Smith). It also possesses high resistance (similar to NC 2326) to black root rot (caused by Thiela viopsis basicola (Berk. and Br.) Ferraris), and resistance to the common strain of southern root-knot nematode, races 1 and 3, Meloidogyne incognita (Kofoid and White) Chit wood.

NC 60 was tested in the North Carolina Official Variety Test in 1983 and 1985 (1,2). It was tested in the Flue-Cured Regional Small Plot Test in 1984 and 1985 and in the Flue- Cured Regional Farm Test in 1985. The cultivar flowers approximately 66 days after transplanting (about 4 days later than NC 95), is normally topped at a height of 104 cm, and produces approximately 18.5 leaves per plant. Leaves are normal size but not excessively large and cure easily to a predominately orange color with open grain or medium texture and medium body. NC 60 yielded 3519 kg/ha in the 1985 North Carolina Official Variety test (not significantly different from 'K326') with a price per pound and quality index indicating good quality that compared favorably with presently grown cultivars. Tobacco companies gave NC 60 a high usability rating (56.7%) in the 1985 Regional Small Plot Test. It met all standards for chemical content, smoke.

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Florida, Gainesville, FL 32611. In Texas, Florigraze will be maintained by the Agronomy Department, Institute of Food and Agriculture Science, University of Florida, Gainesville, FL 32611.

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