

# TECHNICAL NOTE

---

UNITED STATES DEPARTMENT OF AGRICULTURE  
APRIL 2007

NATURAL RESOURCES CONSERVATION SERVICE  
ALEXANDRIA, LOUISIANA

---

## AGRONOMY TECHNICAL NOTE NO. 96

### ESTABLISHMENT OF RHIZOMA PEANUT

#### Background

Rhizoma peanut (*Arachis glabrata* Benth.), also known as perennial peanut, is a warm season perennial legume introduced into the United States from South America. It reproduces and spreads by rhizomes. Rhizoma peanut produces forage similar in quality to alfalfa and is adapted to growing conditions in the extreme southeastern US (USDA hardiness zones 8a, 8b, 9). In Louisiana, planting should be limited to the area south of I-20. Recently, several hay producers in Louisiana have become interested in rhizoma peanut as a high-value hay crop and have requested that NRCS include this new species in its list of approved forages for Pasture and Hay Planting (512) specifications.

Most rhizoma peanut research and development has been conducted in Florida. However, the Louisiana Agricultural Experiment Station began research on rhizoma peanut in 1989 and has amassed a considerable amount of information on establishment, production, and management for our growing conditions. Rhizoma peanut has performed well in both yield and forage quality trials in Louisiana. Stands have persisted for several years as far north as Winnsboro, however productivity this far north has not been documented. Rhizoma peanut is expensive (\$200-\$500/A) and slow to establish. It is not uncommon for stands to require 2-3 years to establish. However, complete coverage can be achieved the first year at high planting rates.

#### Site Selection

Rhizoma peanut is adapted to infertile coarse-textured upland soils (sandy soils) but will do well on more fertile alluvial soils. **It does not tolerate wet conditions!** Rhizoma peanut should not be planted on sites that are inundated or saturated for extended periods of time, regardless of soil texture.

#### Seedbed Preparation

A well prepared seedbed is essential for stand establishment. Seedbed preparation should commence well ahead of planting with a preplant herbicide application (burndown) to kill existing vegetation. Preplant herbicides should be followed by complete tillage to completely kill perennial plants. Surviving plants or new seedlings can be eliminated with

light tillage prior to planting. **It is imperative that existing vegetation, especially bermudagrass or bahiagrass, be completely destroyed prior to planting!** Seedbed preparation should begin in the fall prior to the spring of planting. Seedbed preparation should be complete by the end of November.

### **Harvesting and Transplanting of Rhizomes**

Rhizomes used for establishing new stands should be dug and transplanted before they break dormancy. Harvesting and transplanting rhizomes should be done between January and early March. Dormant rhizomes are not depleted of stored energy and provide maximum establishment performance. If rhizomes are obtained from other than local sources (Florida) or winter temperatures have been unusually mild, planting may need to be moved up to January. Rhizomes should be planted immediately after digging in order to prevent them from drying out. If they cannot be planted immediately, they should be kept cool and moist until they can be planted.

Rhizomes can be dug with the same equipment used to dig hybrid bermudagrass stolons. Regardless of how they are harvested, rhizome damage should be kept to a minimum.

### **Planting Rate and Methods**

Rhizoma peanut planting rate ranges from 60 to 80 bushels (75 to 100 ft<sup>3</sup>) per acre. If rhizomes can be obtained at low cost and the grower can afford the added expense, planting rates of 100 to 120 bushels per acre will help ensure quicker establishment. Irrespective of planting rate, proper seedbed preparation and weed control are essential to stand establishment. Florigraze and Arbrook are the only two cultivars currently available. Arbrook rhizomes are larger (less rhizomes per bushel) than those of Florigraze. In order to get the same rate of coverage with Arbrook as Florigraze, increase planting rate 25%.

Rhizomes can be broadcast and covered with a light disc to a depth of one inch. The seedbed then should be firmed with a roller or cultipacker or similar implement to level the field, ensure good rhizome to soil contact, and to seal the soil to prevent the loss of moisture. Planting may also be accomplished using a bermudagrass sprigger followed by a roller, cultipacker or similar implement. Distance between sprigged rows of 18"-24" will give first year coverage provided rainfall is not limiting. Calibration of the sprigger may be necessary to achieve the desired number of bushels per acre.

### **Fertilization**

Fertilizer recommendations for rhizoma peanut have not been fully established in Louisiana. University of Florida recommends applying 30 lbs/ac P<sub>2</sub>O<sub>5</sub> when Mehlich-1 soil test is less than 30 ppm P., 60 lbs/ac K<sub>2</sub>O when Mehlich-1 soil test is less than 20 ppm K, and 15 lbs/ac magnesium when Mehlich-1 soil test is less than 30 ppm Mg. No fertilizer should be applied when soil test levels are above the critical levels mentioned above. Since most local soil testing labs in our area use the Mehlich-3 soil test method, producers should consult with their local lab to determine how best to address nutrient needs. Based on tissue analysis, 20-30 lbs/ac sulfate-form sulfur should be applied annually when the field is intensively hayed. Research in Louisiana failed to show a response of rhizoma peanut to

P, Mg, B, or S. A positive response to K was observed but results were inconsistent with application rates. If establishment is following a well fertilized forage or row crop, residual fertility may be adequate to sustain the young stand during the establishment years and help reduce establishment cost. This may also give young stands of rhizoma peanut a competitive advantage over more aggressive nutrient- demanding weeds.

Rhizoma peanut performs well under a wide range of soil pH. In Florida, highest yields have come from soils with a pH of 6.0. Forage yields were negatively correlated with soil pH in Louisiana, suggesting an establishment advantage on acidic soils (pH 5.3-6.0).

Regular soil and tissue analysis should help determine when a positive response to the addition of nutrients can be expected.

### **Weed Control**

Weed control is the main management consideration during the first two growing seasons. Eliminating competitive weeds is essential to rapid stand establishment.

Mowing is effective in keeping the rhizoma peanut canopy free of tall-growing weeds that compete for sunlight. Mowing weeds and peanuts as close to the soil as possible is recommended once during the establishment year, preferably during July or August. Fluazifop can be used to control grassy weeds but has a one year harvest/grazing restriction. Clethodim can be applied during establishment and up to 40 days prior to harvest.

Bentazon can be used for control of yellow nutsedge and other selected broad leaf weeds but also has a one year harvest/grazing restriction. If rhizoma peanut is grown in a mixed pasture stand with warm season grasses, most herbicides labeled for grass pastures can be used with no damage to the peanuts, if applied prior to peanut shoot emergence. 2, 4-D can be applied according to label restrictions during the growing season to mixed grass pastures and hayfields without damage to the associated rhizoma peanuts.

### **Management**

Stand establishment is slow. It may take up to 3 years before full coverage is obtained. Drought stress following planting and weed infestations can delay coverage. Irrigation should be used where available.

Complete information on managing and maintaining a stand of rhizoma peanut is available in the two publications cited as references for the preparation of this technical note.

Richard Aycock  
Agronomist

References:

1. Prine, G.M. and E. C. French. April 2002. Perennial Peanut Establishment Guide. SS-AGR-35, Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida.
2. Venuto, B. C., W. D. Pittman, D. D. Redfearn, and E. K. Twidwell. May 1999. **Rhizoma Peanut: A New Forage Option for Louisiana.** LSU Agctr. Pub. Circular 136.