

Perennial Peanuts as a Forage Crop

Most perennial warm-season grasses are not capable of supporting acceptable weight gains by young, growing animals in the lower portion of the southern United States. The perennial peanut (or rhizoma perennial peanut) is a productive warm-season legume that has great forage quality attributes and no bloating potential, but limited winter hardiness. The leaves of perennial peanuts are similar to those of annual peanuts, but unlike annual peanuts, perennial peanuts produce almost no seeds. Perennial peanuts can grow 6–18 inches tall and produce an extensive root system.

Establishment

Perennial peanuts are usually established by using rhizomes (underground stems) that are dug from a nursery field. One acre of well-established perennial peanut nursery should yield enough rhizomes to plant 20–30 acres at a planting rate of 80 bushels per acre. Perennial peanuts are well adapted to dry, sandy to sandy loam soils with pHs ranging from 5.8 to 7.0 in the southern portion of the Gulf States (**Figure 1**).

Perennial peanuts have reportedly survived low temperatures ranging from 5 to 16 °F. They are recommended for locations below 31° to 32° latitude. In Mississippi, the Coastal Plain will be the best zone of

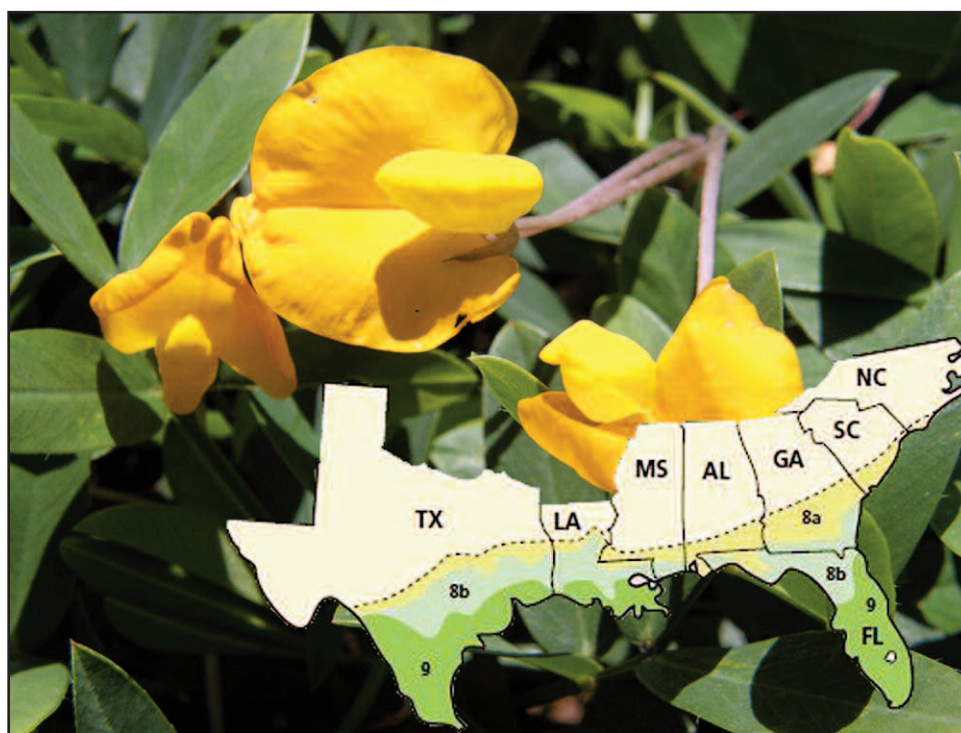


Figure 1. Potential perennial peanut growing zone for the southern United States. Northern production limit is defined by the dashed line. Commercial production areas include zones 8a, 8b, and 9. Source: U.S. Government Printing Office, USDA Misc. Publication 1475.



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adaptation, and the best planting time is March to June when rainy conditions are more favorable. The disadvantage of a mid-summer planting in Mississippi is that the chances of complete stand failure are higher because of drought conditions.

On heavy sod or compacted soils, bottom-plowing followed by disk-harrowing is recommended. A firm seedbed will increase the chances of establishment. Rhizomes should be planted as soon as possible after digging. Plant 80–100 bushels per acre (900–1,200 pounds per acre). Place rhizomes at a depth of 1½–2 inches for sandy soils and 1 inch for clay soils.

Rhizomes with a diameter of one-eighth of an inch or greater and a minimum length of 9 inches will result in good emergence and survival. Rhizome inoculation is not required. Rhizomes cannot be stored for more than 5 days without deterioration. Store them under shady, cool conditions and cover them with black plastic or a tarp to prevent drying while still allowing sufficient aeration.

Weed control constitutes the major management practice during the first and possibly the second growing seasons. It is an important part of establishing perennial peanuts, especially in unmanaged, weedy areas or old pastures. These areas might require preparation at least 6 months before planting to achieve proper weed control and optimum fertility levels.

Contact your county Extension office or Extension weed specialist for herbicide recommendation and restrictions, and always follow the label directions.

Keep in mind that products labeled for use in annual peanut production are not labeled for forage use and cannot legally be applied to perennial peanuts.

Fertility requirements are usually similar to those recommended for common or annual peanuts, but you should follow the recommendations from your soil test. Perennial peanuts require no pesticides to control insects or diseases. In spite of the nutritional value of perennial peanuts, most producers are not willing to plant them for traditional livestock operations because the high cost and slow rate of vegetative establishment. Complete coverage might take 2–3 years. Also, defoliation during the year after establishment greatly reduces rhizome production, so allow enough time for stands to become completely established.

Cultivars

The perennial peanut is a forage crop that could be grown as a monoculture mixed with warm-season grasses. Several cultivars (Florigraze, Arbrook, and Latitude 34) have been selected for forage production for their high yield, quality, persistence, disease resistance, and drought tolerance. Ecoturf is a more recently available variety being considered for landscape use because of its lower growth habit.

Arbrook has early spring growth and is usually favored over Florigraze on excessively drained soils and under drought conditions. On the other hand, Florigraze has less upright growth and has faster ground cover after establishment, and it is more cold- and grazing-tolerant.

Latitude 34 is a variety with good persistence and early spring forage production under cold, dry environmental conditions, but it is susceptible to cotton root. The fungal pathogen *Sclerotinia* (*Sclerotinia* minor Jagger) can attack Latitude 34 without negative effects to the stand. The different cultivars have differences in nutritive value, with Florigraze having higher crude protein and digestibility.

Cost of Establishment

The cost of establishing perennial peanuts can vary from \$200 to \$500 per acre. The cost is usually affected by the number of acres planted, rhizome source, equipment, labor, and fertility requirements. Compared to other forage crops, the cost of establishing perennial peanuts can be high. The cost is approximately \$3.00 per bushel. Custom sprigging is approximately \$275 per acre plus the delivery cost (\$2.50 per loaded mile).

Forage Utilization

Production patterns of perennial peanuts suggest that two cuttings per year might be feasible with an 8-week growth, or three cuttings with 5- to 6-week growth. No cutting is recommended at least 5–6 weeks before a killing frost. Yield potential ranges from 3 to 5 tons per acre in a well-established stand and with favorable climatic conditions (**Figure 2**).

Perennial peanuts can be grazed or fed to a wide range of livestock animals (horses, dairy and beef cows, goats, and sheep), but use caution when feeding it to horses. Because of the high nutritive value, mature horses tend to gain excessive weight when fed a full diet based on perennial peanuts.

It can be fed as hay, silage, or green chop and could be an ideal substitute for alfalfa. When used as silage, perennial peanuts can be substituted for up to 70 percent of corn silage while maintaining milk production. Peanuts could be more profitable than corn diets when substituted for up to 50 percent of the diet. The protein and digestibility values are comparable to alfalfa. Crude protein ranges from 13 percent to 20 percent, and *in vitro* digestibility ranges from 60 percent to 70 percent depending on the stage of maturity.

Average daily gains of 1.7 pounds on steers grazing perennial peanuts have been reported, compared to 1.0-pound daily gains on bahiagrass. In grazing dairies with minimal supplementation, Holstein cows grazing perennial peanuts produced approximately 10



Figure 2. Established field of perennial peanuts in the Florida Panhandle.

percent more milk than cows grazing Tifton 85 bermudagrass, which is considered a high-quality warm-season perennial grass.

Rotational grazing with grazing periods fewer than 10 days and with at least 3 weeks of rest is recommended. If continuous grazing is used, stubble height should be maintained at 4–5 inches. No bloating issues have been reported with perennial peanuts.

For more information on obtaining rhizomes, please visit the Perennial Peanut Producers Association (PPPA) website at <http://www.perennial-peanuthay.org/about.php>

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