UNIVERSITY OF FLORIDA
Cooperative Extension Service
Institute of Food and Agricultural Sciences

Fact Sheet RF-AC006

Alternative Opportunities for Small Farms: Bermudagrass Production Review[1]

Compiled from information obtained from David L. Wright, R. L. Stanley, Jr. and T. D. Hewitt by Kathleen C. Ruppert[2]

Production of bermudagrass hay may be of interest to some producers. The profitability depends on the yield and the sale price. The potential for a profit exists, but the high labor requirement, high costs of equipment and wet summer weather prevent many people from getting into hay production. Several bermudagrass varieties are adapted to the north Florida climate and soil types. They can produce over 6 tons/acre/year of hay. Coastal (a variety of bermudagrass) cut for hay every 4 weeks will produce about the same amount of forage over the season as the new Tifton 9 bahiagrass cut every 8 weeks. Yields are usually 4 to 5 tons per acre. A relatively high level of fertility is required for high yield of high quality hay of either bahia or bermudagrass.

Marketing Situation

There is a demand for hay to feed horses, dairy cattle and beef cattle. Some types of hay are used by mushroom farms and construction companies. Bermuda-grasses resistance to root-knot nematodes allows many legumes that are susceptible to this nematode to be overseeded into it during October and November, thus extending the grazing season through the winter months. Overseeding with legumes during the winter months results in nitrogen being fixed for bermudagrass production the next spring, and may be equal to applying 200 lb/acre of commercial nitrogen.

Hay can be harvested as square bales, which are usually more marketable than large rolls to small ranchettes with horses and other livestock, but this requires more labor for harvest and storage facilities. In 1997, small square bales sold for $3.00 to $4.00 depending on quality and availability. The large round bales require less labor at harvest, but usually are sold at a lower price per ton. Large round bales sell for $20 to $35 depending on quality, availability and size of bale. Weather greatly influences the quality of hay produced and therefore the revenue which may be gained.

A system that would allow harvesting 2 or 3 cuttings as round bale silage when the weather does not permit curing of hay is desirable. This has been followed by a few producers, but requires special equipment and storage which is expensive. Roundbale silage rolls can be moved just as roundbale hay.

Labor and Capital

The costs of establishment may exceed $150/acre and the annual costs of production exceeds $225/acre. Approximately half of the costs of production are the equipment and labor required for harvesting. A minimum of 80 to 100 acres would be required for efficient utilization of equipment unless it was shared with other

1. This document is Fact Sheet RF-AC006, one of a series of the Extension Administration Office, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. First published: June 1987. Reprinted: May 1994. Revised: August 1997. Please visit the FAIRS Web site at **http://hammock.ifas.ufl.edu**.

2. David L. Wright, professor; R. L. Stanley, Jr, associate professor; . and T. D. Hewitt, associate professor, North Florida Research and Education Center (NFREC), Quincy; Kathleen C. Ruppert, assistant professor, Florida Energy Extension Service, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611.

producers. In certain parts of Florida custom harvesting is available.

The bermudagrasses need to be harvested every 4 to 6 weeks during the warm season to produce high quality hay. However, the rainy weather from June to August often causes considerable delay in harvest resulting in poor quality hay or losses while attempting to field dry the grass prior to baling.

Suitability

Bermudagrasses will perform well on a wide range of flatwoods and upland soils; however, bermudagrass does not perform well on poorly drained flatwood soils. The production of hay on new ground requires all sticks, roots, etc., be removed so the mower can operate most efficiently. The soil pH should be adjusted to 5.8 or higher before planting. Once the bermudagrasses are established, they can be utilized for hay for several years with application of lime and fertilizer.

Bermudagrasses will not make little root growth before soil temperatures reach 60°F. However, leaf growth of bermudagrass will start at temperatures around 55°F. Bermudagrasses, unlike the bahia and digitgrasses, will continue producing forage into the fall at a moderate rate until frost. They also start growth earlier in the spring, if moisture and fertility are available.

Planting Situation

Bermudagrass varieties include Alicia, Coastal, Coastcross-1, Callie, Grazer, Tifton 44, Tifton 78 and Tifton 85. Plantings from sprigs may be made from mid-February through July. Plantings made from vegetative cuttings are usually made from early May through July. Alicia, Coastal and Tifton 85 bermudagrasses can be established from sprigs or top cuttings, but Tifton 44 and Tifton 78 should be established from sprigs. Callie and Coastcross-1 produce few rhizomes and must be established from green cuttings.

Cultural Program

Armyworms may be a problem during periods of drought. Little damage will be noted if frequent cuttings are made. Spittlebugs may also cause damage; however, the best control is frequent cutting to a short stubble height to eliminate a buildup of a mat of forage. Burning bermudagrass fields in February also helps control spittlebugs if a dense mat of forage has been allowed to accumulate. Insecticides are available for armyworm (in the young stages) if necessary.

Fertility and age of forage are the two most important factors affecting the quality of hay. Fertilizer should be applied according to soil test recommendations. Two or 3 yearly applications of nitrogen and potash are required. Phosphorus and micronutrients may be applied in a single application in the spring.

Herbicides are available to control most broadleaf and grass weeds for 6 to 12 weeks when applied immediately after sprigging or planting. Lack of weed control during establishment may result in failure to obtain a stand. Also, a potential bermudagrass hay producer should be sure to determine what and when herbicides have been used on the acreage previously to see if the same herbicides are compatible with bermudagrass.

Bermudagrasses will perform best when a 4-6 week growth period is allowed between cuttings. However, this growth period may be shortened by 1 week during July and August. This treatment provides high yields of good quality hay, in addition to increased persistence. Animal intake is higher and gain per animal is greater with frequent cuttings. Hybrid bermudagrasses are quite competitive with common bermudagrass and may be planted on land contaminated with common bermuda-grass if thorough site preparation is used.