

## Bermudagrass: Cultivars and Establishment<sup>1</sup>

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Bermudagrass, thought to have originated in Eurasia, is now found throughout the world. In the southern United States, bermudagrass is one of the most important warm-season perennial grasses. In Florida, an escalating demand for bermudagrass hay, primarily for the horse industry, is increasing the interest of producers in planting bermudagrass varieties.

The first written record of bermudagrass in the United States was its introduction at Savannah, Ga., by Governor Henry Ellis in 1751. Subsequently, common bermudagrass was planted throughout the southeastern United States as a forage crop, but rapidly became a major weed in cotton and other row crops.

### Bermudagrass Varieties

The improvement of bermudagrass varieties in the United States began in 1943 with the release of Coastal by Dr. Glenn Burton of the U.S. Department of Agriculture-Agricultural Research Service (USDA-ARS) Tifton, Ga. Extensive planting of Coastal bermudagrass resulted in the development of new technology and equipment to dig and plant bermudagrass sprigs. Today, an estimated 10 million acres of Coastal bermudagrass is grown across the

southern United States. After the release of Coastal, a large number of new bermudagrass varieties were released by state agricultural experiment stations and by private companies.

**Table 1.** Bermudagrass varieties propagated by vegetative material

Variety	Year	Origin
Coastal	1943	Tifton, GA
Coastcross-1	1967	Tifton, GA
Tifton 44	1978	Tifton, GA
Midland	1999	Oklahoma, Kansas, Missouri, Arkansas and Noble Foundation
Jiggs	Unknown	J.C.Riggs, TX
Tifton 85	1992	Tifton, GA
Florakirk	1994	University of Florida

**Coastcross-1** has improved nutritive value when compared with other bermudagrass varieties. However, Coastcross-1 has low cold tolerance. Coastcross-1 is used for hay production in tropical countries in Central and South America where freeze occurrences are rare.

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**Midland and Tifton 44**, selected primarily for cold tolerance, are the bermudagrass varieties widely used in Oklahoma, Northeast Texas, and Arkansas. The expected production and nutritive value of Midland and Tifton 44 is similar to Coastal, and both Midland and Tifton 44 are suitable for grazing and hay production.

**Jiggs** was released by a private company in Texas, unlike most bermudagrass hybrid varieties, which are developed by universities or the USDA-ARS. Jiggs is one of the few bermudagrasses that tolerates poorly drained soils, a characteristic that makes Jiggs bermudagrass an attractive option for South Florida. The thin stems of Jiggs also make it a desirable variety for hay production. However, recent research has shown that Jiggs has lower production and nutritive value than other improved bermudagrass hybrids.

**Tifton 85** is a relatively new bermudagrass variety. It was released in 1992 by the USDA-ARS in Tifton, Ga. Tifton 85 is a hybrid between South African bermudagrass and Tifton 68 stargrass. Tifton 85 has larger culms, broader leaves, and darker color than other bermudagrass hybrids. Additionally, compared with Coastal, Tifton 85 generally yields 26 percent more herbal mass with greater nutritive value. The thicker stems of Tifton 85 can require longer drying periods when cut for hay. However, consumer perception is that thicker stems are related to low nutritive value. This perception, although false, sometimes limits the market for Tifton 85 hay. Tifton 85 is not adapted to poorly drained soils. As a result, in South Florida many stands of Tifton 85 have been lost 2 to 3 years after establishment, mainly because of poor soil-drainage conditions there.

**Florakirk** is a bermudagrass variety used strictly for hay production. Florakirk has thin stems, and the hay produced from Florakirk has good appearance and marketability. However, Florakirk is not recommended for grazing because of low persistence under grazing.

**Seeded bermudagrass** varieties are considered to be less productive than the vegetatively propagated hybrids.

**Common bermudagrass** is the most-used seeded bermudagrass variety. Common bermudagrass has less production and nutritive value compared to most vegetatively propagated hybrids. However, common bermudagrass excels in persistence under grazing conditions.

**Giant** bermudagrass, also a seeded bermudagrass, has excellent seedling vigor and first-year growth, but the stand deteriorates with time. For this reason, Giant is sold in mixture with common bermudagrass or other seeded bermudagrass varieties. Most of the seeded bermudagrass varieties came from turf-breeding programs.

**Table 2.** Selected seeded bermudagrass varieties

Variety	Year	Origin
Common	--	---
Giant	1957	Northrup King and Co.
Cheyenne	1989	Jacklin Seed Co.
Wrangler	1999	Oklahoma AES
Texas Tough	--	---

## Bermudagrass Establishment

In Florida, the establishment of bermudagrass varieties in areas previously planted with bahiagrass may be a challenge. Bahiagrass is very persistent and competes with bermudagrass during the early stages of establishment. Below is a short list of procedures that must be followed to increase the success of bermudagrass establishment in areas formerly planted with bahiagrass.

- In late summer the year prior to planting, apply limestone according to soil-testing recommendation.
- Four weeks after liming, destroy existing bahiagrass vegetation with 4 quarts/acre of glyphosate.
- Four weeks after herbicide application, prepare seedbed and plant a small grain or ryegrass on the site.
- Disk the small grains or ryegrass under and prepare seedbed in early May.

- Plant 30-40 bushels of sprigs/acre or 1,500 lbs of vegetative material/acre into a moist seedbed. Sprigs or tops should not be planted deeper than 3 inches.
- Roll the seedbed to ensure good plant material/sprig contact. Apply 2 pints/acre of Weedmaster 7-10 days after planting.
- When tops or sprigs are actively growing, fertilize with N, P, and K.
- Pay close attention to bahiagrass and broadleaf appearance. If necessary, spot spray with a Roundup 1 1/2-percent solution
- Fertilize with N after first graze or harvest.
- Do not overseed with winter annuals the first year.

### Summary

Several varieties of bermudagrass are available with specific characteristics and adaptability. Matching the bermudagrass variety with desired use, appropriate management practices and environmental conditions increases the chances of success on establishment and subsequent forage production.

### References

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