

Alabama Planting Guide for Forage Grasses

► Many factors influence successful forage production, but establishment of the crop is a key to profitability. It is essential to choose the appropriate crop species for the needed yield, quality, and persistence.

It is then critical to choose a variety that is recommended for one's area. (Find more information on which forage species is appropriate for the need and a list of recommended varieties for the selected species at www.alabamaforages.com.)

Attention to other factors that affect successful stand establishment and yield is important as well. Select a high-quality seed that meets or exceeds recommended levels of germination, purity, and weed seed contamination. Ensure that the seed is planted at the right rate, depth, and time of year. Also be sure that the seeding method and planting environment are appropriate to the species.

The planting operation is when producers most often make yield reducing mistakes, so take time to minimize these errors. This planting guide has been developed to help producers establish most forage grasses commonly grown in Alabama. Information provided about a given forage species is not necessarily a recommendation to grow that species. Some commonly grown forage grasses are not recommended by Auburn University. Also, some varieties of a given species may produce well in certain areas while others may not. This guide simply offers the information needed to have the best chance of establishing a forage grass species.

Five Steps to Higher Yields and More Profit

1. Test

- the soil to determine nutrient needs. (Send soil samples to be analyzed at a certified diagnostic lab, such as the Soil, Forage, and Water Testing Laboratory at Auburn University.)
- Apply lime and fertilizer at levels appropriate to soil test result recommendations.

2. Seed

- with good, high-quality seed and good seeding techniques.
- with certified seed for added assurance of high seed quality.
- with treated seed, when possible, to protect against insect pests and disease.

3. Plant

- with a goal of perfect stands!
- at the proper depth in a properly prepared seedbed or no-till environment.
- at the proper time, when soil temperature is adequate and moisture is appropriate.
- at the correct seeding rate per acre.

4. Manage

- for high yields!
- pests (weeds, insects, and diseases) to ensure that the plant is competitive in establishing and maintaining a good stand.
- to maintain proper soil fertility throughout the life of the stand.
- grazing to best utilize forage potential.

5. Harvest

- for high-quality yields!
- at the right time.
- with appropriate equipment that has been properly adjusted.
- Exercise good handling and storage techniques to protect forage quality.

Alabama Planting Guide for Forage Grasses

Bahiagrass

Growth Habit: Warm-season perennial

Area: N, C, S

Soils: Moist sandy soils to droughty uplands; pH 5.6–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 15–20

Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$

Planting Dates: C: March 1–July 1 S: Feb. 1–Nov. 1

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 95

Seed Quality Weed Seed % (Maximum): 0.50

Seed/Pound: 210,000

Special Notes: Best if planted in early spring after frost, before summer rains. Seed dormancy is high in some varieties. A few varieties are now options for growth in northern Alabama; check with local Extension before planting to make sure.

Barley (grazing)

Growth Habit: Cool-season annual

Area: N,C

Soils: Well drained, productive; pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: Alone: B: 100–120 Mix: B: 60–75

Seeding Depth (inches): 1–2

Planting Dates: N: Aug. 25–Oct. 1 C: Sept. 1–Oct. 25 S: Sept. 15–Nov. 1 Overseeded: 3–5 wks later

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 98

Seed Quality Weed Seed % (Maximum): 0.07

Seed/Pound: 14,000

Special Notes: Recommendation made for forage only.

For dual purpose use (grazing and grain) plantings: N,C: Sept. 15–Nov. 1.

Bermudagrass Common (seed hulled)

Growth Habit: Warm-season perennial

Area: N,C,S

Soils: Well drained, light sand to clay loam; pH 5.6–7.0

Seeding Rate (lb/A) Pure Live Seed: Hulled: B: 5–10 Unhulled: B: 10–15

Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$

Planting Dates: N: April. 1–July 15 C: March 15–July 15 S: March 1–July 15

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 95

Seed Quality Weed Seed % (Maximum): 0.50

Seed/Pound: 2,071,000

Special Notes: Well suited for conservation.

Bermudagrass Hybrid (vegetatively propagated)

Growth Habit: Warm-season perennial

Area: N,C,S

Soils: Well drained, light sand to clay loam; pH 5.6–7.0

Seeding Rate (lb/A) Pure Live Seed: R: 15 bu. sprigs B: 30–40 bu. sprigs

Seeding Depth (inches): sprigs not seed

Planting Dates: Late Feb.–Aug. 15

Seed Quality Germ. % (Minimum): Use fresh, live, certified sprigs

Seed Quality Purity % (Minimum): Use fresh, live, certified sprigs

Seed Quality Weed Seed % (Maximum): Use fresh, live, certified sprigs

Seed/Pound: 1,000 sprigs/bu

Special Notes: Plant when soil moisture is adequate for sprig survival.

Should be planted promptly after having been dug.

Alabama Planting Guide for Forage Grasses (cont.)

Big Bluestem

Growth Habit: Native warm-season perennial

Area: N,C,S

Soils: Well drained, low fertility, moist; pH 5.0–6.0

Seeding Rate (lb/A) Pure Live Seed: B: 9–12 PLS D: 7–9 PLS

Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$

Planting Dates: N: March 25–May 10 C: March 15–April 30 S: March 1–April 20

Seed Quality Germ. % (Minimum): 70

Seed Quality Purity % (Minimum): 90

Seed Quality Weed Seed % (Maximum): 0.50

Seed/Pound: 150,000

Special Notes: Special planting methods need to be used. Requires agitator in drill's seed box.

Corn (field)

Growth Habit: Warm-season annual

Area: N,C,S

Soils: Well drained, fertile; pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: R: 7–10

Seeding Depth (inches): 1–2

Planting Dates: N: March 25–May 10 C: March 15–April 30 S: March 1–April 20

Seed Quality Germ. % (Minimum): 90

Seed Quality Purity % (Minimum): 99

Seed Quality Weed Seed % (Maximum): None

Seed/Pound: Variable

Special Notes: Great for silage production, Narrow rows improve yield.

Crabgrass

Growth Habit: Warm-season annual

Area: N,C,S

Soils: Well drained; pH 5.6–7.5

Seeding Rate (lb/A) Pure Live Seed: B/D: 3–5 PLS

Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$

Planting Dates: Late Feb.–April

Seed Quality Germ. % (Minimum): N.D.

Seed Quality Purity % (Minimum): N.D.

Seed Quality Weed Seed % (Maximum): .50

Seed/Pound: 460,000

Special Notes: Often considered a weed, in some situations. Can be useful as a high-quality short-term hay and pasture forage. Seed does not flow well. Mix with a carrier for better distribution.

Dallisgrass

Growth Habit: Warm-season perennial

Area: N,C,S

Soils: Well drained, fertile, moist; pH 5.6–8.0

Seeding Rate (lb/A) Pure Live Seed: B: 10–15 PLS

Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$

Planting Dates: N: March 15–July 1 C: March 1–July 1 S: Feb. 1–July 1

Seed Quality Germ. % (Minimum): 60

Seed Quality Purity % (Minimum): 70

Weed Seed % (Maximum): 0.25

Seed/Pound: 300,000

Special Notes: Germination is typically low; adjust rate accordingly.

Alabama Planting Guide for Forage Grasses (cont.)

Eastern Gamagrass

Growth Habit: Native warm-season perennial

Area: N,C,S

Soils: Heavy soils and moist bottoms; pH 5.6-7.5

Seeding Rate (lb/A) Pure Live Seed: D: 8-14 PLS

Seeding Depth (inches): 1/2-1

Planting Dates: N: April 1-July 1 C: March 15-July 15 S: March 1-July 15

Seed Quality Germ. % (Minimum): N.D.

Seed Quality Purity % (Minimum): N.D.

Seed Quality Weed Seed % (Maximum): 0.50

Seed/Pound: 724,000

Special Notes: Special planting methods need to be used. Requires agitator in drill's seed box.

Indiangrass

Growth Habit: Native warm-season perennial

Area: N,C,S

Soils: Well drained, sandy to clay loam; pH 5.0-6.0

Seeding Rate (lb/A) Pure Live Seed: B: 10-12 PLS D:7-9 PLS

Seeding Depth (inches): 1/4-1/2

Planting Dates: N,C,S: April 1-June 15

Seed Quality Germ. % (Minimum): 45

Seed Quality Purity % (Minimum): 25

Seed Quality Weed Seed % (Maximum): 0.50

Seed/Pound: 200,000

Special Notes: Special planting methods need be applied. Requires agitator in drill's seed box.

Johnsongrass

Growth Habit: Warm-season perennial

Area: N,C

Soils: Medium-heavy soils; pH 5.6-7.5

Seeding Rate (lb/A) Pure Live Seed: B: 20-30 D: 10-15

Seeding Depth (inches): 1/2-1

Planting Dates: April-July

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 90

Seed Quality Weed Seed % (Maximum): 0.1

Seed/Pound: 119,000

Special Notes: Can be a weed in row crop plantings. Most commonly used as forage in the Black Belt region.

Kentucky Bluegrass

Growth Habit: Cool-season perennial

Area: N

Soils: Well drained, productive; pH 5.6-7.0

Seeding Rate (lb/A) Pure Live Seed: B: 8-15

Seeding Depth (inches): 0-1/4

Planting Dates: N: Sept.-Oct.

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 90

Seed Quality Weed Seed % (Maximum): 0.50

Seed/Pound: 2,177,000

Special Notes: High nutritive value pasture; not highly productive unless well fertilized or grown with legume.

Alabama Planting Guide for Forage Grasses (cont.)

Browntop Millet

Growth Habit: Warm-season annual
Area: N,C,S
Soils: Well drained, productive; pH 5.6–6.5
Seeding Rate (lb/A) Pure Live Seed: B: 25–30 D: 15–20
Seeding Depth (inches): $\frac{1}{2}$ – $\frac{3}{4}$
Planting Dates: N: May 1–Aug. 1 C: April 1–Aug. 15 S: April 1–Aug. 15
Seed Quality Germ. % (Minimum): 80
Seed Quality Purity % (Minimum): 98
Seed Quality Weed Seed % (Maximum): 0.05
Seed/Pound: 140,000
Special Notes: Avoid lime in Black Belt soils.

Foxtail Millet

Growth Habit: Warm-season annual
Area: N,C,S
Soils: Well drained, productive; pH 5.6–6.5
Seeding Rate (lb/A) Pure Live Seed: B: 25–30 D: 15–20
Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$
Planting Dates: N: May 1–Aug. 1 C: April 1–Aug. 15 S: April 1–Aug. 15
Seed Quality Germ. % (Minimum): 80
Seed Quality Purity % (Minimum): 98
Seed Quality Weed Seed % (Maximum): 0.05
Seed/Pound: 213,000
Special Notes: Seed supplies are limited. If used for hay, usually a one-cut crop.

Pearl Millet

Growth Habit: Warm-season annual
Area: N,C,S
Soils: Well drained, fertile; pH 5.6–6.5
Seeding Rate (lb/A) Pure Live Seed: B: 25–30 D: 12–15
Seeding Depth (inches): $\frac{1}{2}$ – $1\frac{1}{2}$
Planting Dates: N: April 20–July 1 C: April 15–July 1 S: April 1–July 15
Seed Quality Germ. % (Minimum): 80
Seed Quality Purity % (Minimum): 98
Seed Quality Weed Seed % (Maximum): 0.05
Seed/Pound: 82,000
Special Notes: Avoid lime in Black Belt soils.

Oats (grazing)

Growth Habit: Cool-season annual
Area: N,C,S
Soils: Clay loam to sandy loam; pH 5.8–6.5
Seeding Rate (lb/A) Pure Live Seed: Alone: B: 90–120 Mix: B: 60–90
Seeding Depth (inches): 1–2
Planting Dates: N: Aug. 25–Oct. 1 C: Sept. 1–Oct. 25 S: Sept. 15–Nov. 1
Seed Quality Germ. % (Minimum): 85
Seed Quality Purity % (Minimum): 98
Seed Quality Weed Seed % (Maximum): 0.07
Seed/Pound: 15,000
Special Notes: Recommendation made for forage only. For dual purpose use (grazing and grain) plantings: N: Sept. 1–Sept. 20 I C: Sept. 1–Oct. 1 I S: Sept. 20–Oct. 30

Alabama Planting Guide for Forage Grasses (cont.)

Orchardgrass

Growth Habit: Cool-season perennial
Area: N
Soils: Well drained, fertile, medium to heavy; pH 5.6–6.0
Seeding Rate (lb/A) Pure Live Seed: B: 15–20
Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$
Planting Dates: N: Sept.–Oct.
Seed Quality Germ. % (Minimum): 80
Seed Quality Purity % (Minimum): 90
Seed Quality Weed Seed % (Maximum): 0.50
Seed/Pound: 416,000
Special Notes: Cool-season perennial best suited to northern Alabama; less tolerant of drought and poor drainage than tall fescue.

Rye (grazing)

Growth Habit: Cool-season annual
Area: N,C,S
Soils: Well drained, sandy to clay loams; pH 5.8–6.5
Seeding Rate (lb/A) Pure Live Seed: Alone: B: 90–120 Mix: B: 60–90
Seeding Depth (inches): 1–2
Planting Dates: N: Aug. 25–Oct. 1 C: Sept. 1–Oct. 25 S: Sept. 15–Nov. 1
Seed Quality Germ. % (Minimum): 75
Seed Quality Purity % (Minimum): 98
Seed Quality Weed Seed % (Maximum): 0.07
Seed/Pound: 18,000
Special Notes: Recommendation made for forage only. For dual purpose use (grazing and grain) plantings: N: Aug. 15–Oct. 1 | C: Sept. 1–Oct. 15 | S: Sept. 15–Nov. 1

Ryegrass

Growth Habit: Cool-season perennial or annual
Area: N,C,S
Soils: Clay loam; pH 5.8–6.5
Seeding Rate (lb/A) Pure Live Seed: Alone: B: 20–30 Mix: B: 15–20
Seeding Depth (inches): 0– $\frac{1}{2}$
Planting Dates: N: Aug. 25–Oct. 1 C: Sept. 1–Oct. 25 S: Sept. 15–Nov. 1
Seed Quality Germ. % (Minimum): 85
Seed Quality Purity % (Minimum): 95
Seed Quality Weed Seed % (Maximum): 0.50
Seed/Pound: 224,000
Special Notes: Overseeded on warm season grass sods: 3–5 weeks later

Sorghum (forage)

Growth Habit: Warm-season annual
Area: N,C,S
Soils: Well drained; pH 5.6–6.5
Seeding Rate (lb/A) Pure Live Seed: B: 15–20 Silage: D: 4–10
Seeding Depth (inches): 1–2
Planting Dates: Late April–May 15 S (only): late as July 1
Seed Quality Germ. % (Minimum): 80
Seed Quality Purity % (Minimum): 98
Seed Quality Weed Seed % (Maximum): 0.01
Seed/Pound: 24,000
Special Notes: Not tolerant of highly acidic soils. Used for high-energy silage.

Alabama Planting Guide for Forage Grasses (cont.)

Sorghum-Sudan Hybrid

Growth Habit: Warm-season annual

Area: N,C,S

Soils: Well drained, productive; pH 5.6–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 30–35 D: 20–25 Wide R: D: 8–12

Seeding Depth (inches): ½–1

Planting Dates: N: May 1–Aug. 1 C: April 15–Aug. 1 S: April 1–Aug. 15

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Seed Quality Weed Seed % (Maximum): 0.01

Seed/Pound: Variable

Special Notes: Hybrid crop used for hay, pasture, silage; not tolerant of highly acid soils.

Sudangrass

Growth Habit: Warm-season annual

Area: N,C

Soils: Light sandy to heavy clay; pH 5.6–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 30–40 D: 20–25

Seeding Depth (inches): ½–1

Planting Dates: May 1–Aug. 1

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Seed Quality Weed Seed % (Maximum): 0.01

Seed/Pound: 43,000

Special Notes: Finer stems than sorghum-sudan hybrids.

Used for hay, pasture, and silage. Not tolerant of highly acidic soils.

Switchgrass

Growth Habit: Native warm-season perennial

Area: N,C,S

Soils: Poorly to moderately drained, deep soils; pH 5.0–6.0

Seeding Rate (lb/A) Pure Live Seed: B: 5–6 (PLS) D: 4–5 PLS

Seeding Depth (inches): ¼–½

Planting Dates: N: April 1–July 15 C: March 15–July 15 S: March 1–July 1

Seed Quality Germ. % (Minimum): 50

Seed Quality Purity % (Minimum): 80

Seed Quality Weed Seed % (Maximum): 0.50

Seed/Pound: 280,000

Special Notes: Develops stems earlier than other NWSG;

graze or hay early or material may become unpalatable.

Tall Fescue

Growth Habit: Cool-season perennial

Area: N,C

Soils: Moist, fertile bottoms, productive upland; pH 5.6–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 15–20 D: 10–15

Seeding Depth (inches): ¼–½

Planting Dates: N,C: Sept.–Oct. S: Sept. 15–Nov. 15

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Seed Quality Weed Seed % (Maximum): 0.30

Seed/Pound: 227,000

Special Notes: Fescue toxicosis can occur when grazing toxic/endophyte-infected

pastures. Be cautious in pure pastures, or use novel endophyte tall fescue varieties.

Alabama Planting Guide for Forage Grasses (cont.)

Timothy

Growth Habit: Cool-season perennial

Area: N

Soils: Well drained, productive; pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 6–8

Seeding Depth (inches): $\frac{1}{4}$ – $\frac{1}{2}$

Planting Dates: N: Aug. 15–Sept. 15

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 97

Seed Quality Weed Seed % (Maximum): 0.05

Seed/Pound: 1,152,000

Special Notes: While Timothy is a perennial, it often acts as an annual in Alabama.

Wheat (grazing)

Growth Habit: Cool-season annual

Area: N,C,S

Soils: Medium–heavy soils; pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: Alone: B: 90–120 Mix: B: 60–90

Seeding Depth (inches): 1–2

Planting Dates: N: Aug. 25–Oct. 1 C: Sept. 1–Oct. 25 S: Sept. 15–Nov. 1

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 98

Seed Quality Weed Seed % (Maximum): 0.07

Seed/Pound: 11,000

Special Notes: Recommendation made for forage only. For dual purpose use (grazing and grain) plantings: N,C: Sept. 15–Nov. 1 | S: Oct. 1–Nov. 15 | Early plantings of wheat can result in increased Hessian fly populations.

PLS—Pure Live Seed N.D.—No Data to Support a Recommendation B—Broadcast D—Drill R—Rows

Note: Presented pH values are a range and may not represent the ideal pH of planting.

The above information is for recommendation purposes only; planting dates, rates, etc., may be adjusted according to specific situation.

All species recommendations may not be suitable to your specific area and are for information purposes only.



Reviewed by **Leanne Dillard**, *Extension Specialist*, Associate Professor, and **Caroline Chappell**, Graduate Research Assistant, both in Animal Sciences at Auburn University. Originally written by **Donald M. Ball**, Professor Emeritus and former *Extension Agronomist*.

For more information, contact your county Extension office. Visit www.aces.edu/directory.

Trade and brand names used in this publication are given for information purposes only. No guarantee, endorsement, or discrimination among comparable products is intended or implied by the Alabama Cooperative Extension System.

In accordance with Federal law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating because of race, color, national origin, sex (including gender identity and sexual orientation), age, disability, and reprisal or retaliation for prior civil rights activity. Program information may be made available in languages other than English.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, and American Sign Language) should contact the Alabama Cooperative Extension System Human Resources Department at (334) 844-5531 or the State of Alabama Governor's Office on Disability (GOOD) at (888) 879-3582 or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. To file a program discrimination complaint, a complainant should complete a Form AD3027, USDA Program Discrimination Complaint Form, which can be obtained online at <https://www.usda.gov/oascr/how-to-file-a-program-discrimination-complaint>, from any USDA office, by calling (866) 632-9992, or by writing a letter addressed to USDA. The letter must contain the complainant's name, address, telephone number, and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to USDA by mail: U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; Fax: (833) 256-1665 or (202) 690-7442; or Email: program.intake@usda.gov. This institution is an equal opportunity provider.

Reviewed October 2024, ANR-0149 © 2024 by the Alabama Cooperative Extension System. All rights reserved.

www.aces.edu