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. Although farmers may choose to plant seeds however desired to meet their management objectives, the Alabama Cooperative Extension System recommends, as part of a normal agricultural planting to ensure the greatest success of crop establishment, that farmers plant seeds into a prepared seedbed by drilling or broadcasting followed by culti-packing, disking, raking, etc. to cover the seed and ensure good seed-to-soil contact.

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):** ¼–½  
**Planting Dates:** C = March 1–July 1; S = Feb. 1–Aug. 15, Oct. 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 = Oct. 1–15; C = Oct. 1–25; S = Oct. 1–Nov. 1  
**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):** ¼–½  
**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

**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):** ¼–½  
**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):** ¼–½  
**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):** ¼–½  
**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.
### 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):** ½–1  
**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):** ¼–½  
**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):** ½–1  
**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):** 0–⅛  
**Planting Dates:** N = Oct. 1–30  
**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

### 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):** $\frac{3}{4}$–$\frac{7}{4}$  
**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):** $\frac{1}{2}$–1½  
**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 = Oct. 1–15; C and S = Oct. 1–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; C = Sept. 1–Oct. 1; S = Sept. 20–Oct. 30.
Alabama Planting Guide for Forage Grasses (cont.)

Orchardgrass

<table>
<thead>
<tr>
<th>Growth Habit:</th>
<th>Cool-season perennial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area: N</td>
<td></td>
</tr>
<tr>
<td>Soils:</td>
<td>Well drained, fertile, medium to heavy; pH 5.6–6.0</td>
</tr>
<tr>
<td>Seeding Rate (lb/A) Pure Live Seed:</td>
<td>B: 15–20</td>
</tr>
<tr>
<td>Seeding Depth (inches):</td>
<td>$\frac{1}{4}$–$\frac{1}{2}$</td>
</tr>
<tr>
<td>Planting Dates:</td>
<td>N = Oct. 1–30</td>
</tr>
<tr>
<td>Seed Quality Germ. % (Minimum):</td>
<td>80</td>
</tr>
<tr>
<td>Seed Quality Purity % (Minimum):</td>
<td>90</td>
</tr>
<tr>
<td>Seed Quality Weed Seed % (Maximum):</td>
<td>0.50</td>
</tr>
<tr>
<td>Seed/Pound:</td>
<td>416,000</td>
</tr>
</tbody>
</table>

Special Notes: Cool-season perennial best suited to northern Alabama; less tolerant of drought and poor drainage than tall fescue.

Rye (grazing)

<table>
<thead>
<tr>
<th>Growth Habit:</th>
<th>Cool-season annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area: N,C,S</td>
<td></td>
</tr>
<tr>
<td>Soils:</td>
<td>Well drained, sandy to clay loams; pH 5.8–6.5</td>
</tr>
<tr>
<td>Seeding Rate (lb/A) Pure Live Seed:</td>
<td>Alone: B: 90–120 Mix: B: 60–90</td>
</tr>
<tr>
<td>Seeding Depth (inches):</td>
<td>1–2</td>
</tr>
<tr>
<td>Planting Dates:</td>
<td>N = Oct. 1–15; C and S = Oct. 1–Nov. 1</td>
</tr>
<tr>
<td>Seed Quality Germ. % (Minimum):</td>
<td>75</td>
</tr>
<tr>
<td>Seed Quality Purity % (Minimum):</td>
<td>98</td>
</tr>
<tr>
<td>Seed Quality Weed Seed % (Maximum):</td>
<td>0.07</td>
</tr>
<tr>
<td>Seed/Pound:</td>
<td>18,000</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Growth Habit:</th>
<th>Cool-season perennial or annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area: N,C,S</td>
<td></td>
</tr>
<tr>
<td>Soils:</td>
<td>Clay loam; pH 5.8–6.5</td>
</tr>
<tr>
<td>Seeding Rate (lb/A) Pure Live Seed:</td>
<td>Alone: B: 20–30 Mix: B:15–20</td>
</tr>
<tr>
<td>Seeding Depth (inches):</td>
<td>0–$\frac{1}{2}$</td>
</tr>
<tr>
<td>Seed Quality Germ. % (Minimum):</td>
<td>85</td>
</tr>
<tr>
<td>Seed Quality Purity % (Minimum):</td>
<td>95</td>
</tr>
<tr>
<td>Seed Quality Weed Seed % (Maximum):</td>
<td>0.50</td>
</tr>
<tr>
<td>Seed/Pound:</td>
<td>224,000</td>
</tr>
</tbody>
</table>

Special Notes: Overseeded on warm season grass sods: 3–5 weeks later

Sorghum (forage)

<table>
<thead>
<tr>
<th>Growth Habit:</th>
<th>Warm-season annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area: N,C,S</td>
<td></td>
</tr>
<tr>
<td>Soils:</td>
<td>Well drained; pH 5.6–6.5</td>
</tr>
<tr>
<td>Seeding Rate (lb/A) Pure Live Seed:</td>
<td>B: 15–20; Silage: D: 4–10</td>
</tr>
<tr>
<td>Seeding Depth (inches):</td>
<td>1–2</td>
</tr>
<tr>
<td>Planting Dates:</td>
<td>Late April–May 15 S (only); late as July 1</td>
</tr>
<tr>
<td>Seed Quality Germ. % (Minimum):</td>
<td>80</td>
</tr>
<tr>
<td>Seed Quality Purity % (Minimum):</td>
<td>98</td>
</tr>
<tr>
<td>Seed Quality Weed Seed % (Maximum):</td>
<td>0.01</td>
</tr>
<tr>
<td>Seed/Pound:</td>
<td>24,000</td>
</tr>
</tbody>
</table>

Special Notes: Not tolerant of highly acidic soils. Used for high-energy silage.
## Alabama Planting Guide for Forage Grasses

### Sorgum-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 = Oct. 1–30; S = Oct 1–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):** ¼–½  
**Planting Dates:** N = before Aug. 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 C and S: Aug. 1–Nov. 30  
**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.

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Revised by Mark Smith, Extension Specialist, W. Kelly Mosley Environmental Professor, Forestry, Wildlife and Natural Resources, Auburn University, from a previous revision by Leanne Dillard, Extension Specialist, Assistant Professor, and Caroline Chappell, Graduate Research Assistant, both in Animal Sciences, Auburn University. Originally written by Donald M. Ball, Professor Emeritus and former Extension Agronomist, Auburn University. For more information, contact your county Extension office. Visit www.aces.edu/directory.