

Alabama Planting Guide for Forage Legumes

► 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 also important. Select 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 the year. Additionally, ensure that seeding method and planting environment are appropriate to the species too. Also ensure that the seed is either pre-inoculated or that it is inoculated with the correct inoculant group.

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 in establishing most forage legumes commonly grown in Alabama. Information provided about a given forage species is not necessarily a recommendation to grow that species but rather is for information only. Some commonly grown forage legumes are not recommended by Auburn University. Some varieties of given species may also 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 legume species, if a producer so chooses.

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.
- with inoculants specific to the legume being planted.

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 Legumes

Alfalfa

Growth Habit: Warm-season perennial

Area: N, C, S

Soils: Well drained, fertile, deep; pH 6.5–7.0

Seeding Rate (lb/A) Pure Live Seed: D: 18–25 B: 20–25

Seeding Depth (inches): 0– $\frac{1}{4}$

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

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 227,000

Inoculant Group: Alfalfa

Special Notes: Avoid soils where subsoil pH is greater than 5.5, for greater chance of stand success and longevity.

Alyceclover

Growth Habit: Warm-season annual

Area: S

Soils: Well drained, fertile; pH 6.5–7.0

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

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

Planting Dates: S: May 15–July 15

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.25

Seed/Pound: 300,000

Inoculant Group: Cowpea

Special Notes: Grows best in the Gulf Coast area with high summer rains.

Annual Lespedeza (Striate and Korean)

Growth Habit: Warm-season annual

Area: N, C

Soils: Avoid lime soils of the Black Belt; pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 25–35

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

Planting Dates: Feb. 15–Apr. 11

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 230,000 to 240,000

Inoculant Group: Cowpea

Special Notes: High nutritive quality, low yield.

Arrowleaf Clover

Growth Habit: Cool-season annual

Area: N, C, S

Soils: Well drained, medium to high fertility; pH 5.8–7.0

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

Seeding Depth (inches): 0 – $\frac{1}{2}$

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

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 400,000

Inoculant Group: Clover

Special Notes: Overseeded 3–5 weeks later.

Alabama Planting Guide for Forage Legumes (cont.)

Ball Clover

Growth Habit: Cool-season annual

Area: N,C,S

Soils: Sandy loam to clay pH 5.8–7.0

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

Seeding Depth (inches): 0– $\frac{1}{4}$

Planting Dates: Sept.–Oct.

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 95

Weed Seed % (Maximum): 0.30

Seed/Pound: 1,000,000

Inoculant Group: Clover

Special Notes: Tolerates wet soils. Will germinate at lower temperatures than most annual clovers.

Berseem Clover

Growth Habit: Cool-season annual

Area: S

Soils: Poorly drained, loam to clay loam; pH 5.8–8.0

Seeding Rate (lb/A) Pure Live Seed: B: 20–25 D: 15–18

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

Planting Dates: S: Oct. 1–Nov. 15

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.50

Seed/Pound: 207,000

Inoculant Group: Clover

Special Notes: Well suited for non-acid Black Belt soils and in high rainfall areas near the Gulf Coast.

Birdsfoot Trefoil

Growth Habit: Warm-season perennial

Area: N,C

Soils: Well drained, productive; pH 6.5–7.0

Seeding Rate (lb/A) Pure Live Seed: Alone: B: 8–10 Mix: B: 4–5

Seeding Depth (inches): 0– $\frac{1}{4}$

Planting Dates: Sept.–Oct.

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 370,000

Inoculant Group: Trefoil

Special Notes: Will not compete with bahiagrass or bermudagrass.

Reseeds under proper management.

Black Medic

Growth Habit: Cool-season annual

Area: Black Belt

Soils: Lime soils; pH of 6.5–7.5

Seeding Rate (lb/A) Pure Live Seed: B: 10–12

Seeding Depth (inches): 0– $\frac{1}{4}$

Planting Dates: Sept.–Oct.

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 95

Weed Seed % (Maximum): 0.30

Seed/Pound: 266,000

Inoculant Group: Alfalfa

Special Notes: Can be grazed in pastures in the Black Belt Region.

Not recommended for hay production.

Alabama Planting Guide for Forage Legumes (cont.)

Blue Lupine

Growth Habit: Cool-season annual

Area: S

Soils: Well drained; pH 5.8–67.5

Seeding Rate (lb/A) Pure Live Seed: B: 100–120 D: 50–75

Seeding Depth (inches): 1½

Planting Dates: S: Sept. 15–Nov. 1

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.30

Seed/Pound: 3,500

Inoculant Group: Lupine

Special Notes: If fertilized, does well on sandy soils. Sweet varieties utilized for grazing.

Brassicas (rape, kale, turnip, canola)

Growth Habit: Cool-season annual Brassica

Area: N,C,S

Soils: Well drained, productive; pH 5.8–7.0

Seeding Rate (lb/A) Pure Live Seed: B: 8–10 D: 5–8

Seeding Depth (inches): 0–½

Planting Dates: Feb.–Mar. Sept.–Oct.

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.20

Seed/Pound: 156,000

Inoculant Group: -----

Special Notes: Not a legume. Primarily used for soil improvement and spring hog grazing.

Caley Peas

Growth Habit: Cool-season annual

Area: Black Belt

Soils: All Black Belt soil; pH 5.8–7.0

Seeding Rate (lb/A) Pure Live Seed: B: 50–55

Seeding Depth (inches): ½–1

Planting Dates: Sept. 1–Oct. 15

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 95

Weed Seed % (Maximum): 0.20

Seed/Pound: 18,000

Inoculant Group: Pea and Vetch

Special Notes: Good at reseeding. Grows on soils too wet for most clovers on both acid and calcerous soils.

Chicory, Forage

Growth Habit: Perennial Forb

Area: N,C

Soils: Moderately well drained; pH 5.8–8.0

Seeding Rate (lb/A) Pure Live Seed: Alone: D:4–5 Mix: D: 2–3

Seeding Depth (inches): ¼–½

Planting Dates: Aug.–Oct. 15

Seed Quality Germ. % (Minimum): 65

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

Weed Seed % (Maximum): 0.50

Seed/Pound: 426,000

Inoculant Group: -----

Special Notes: Not a legume. High nutritive quality and very palatable.

Alabama Planting Guide for Forage Legumes (cont.)

Common Vetch

Growth Habit: Cool-season annual

Area: N,C,S

Soils: Well drained, sand, loam, clay; pH 5.8–8.0

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

Seeding Depth (inches): 1–2

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

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.10

Seed/Pound: 8,000

Inoculant Group: Pea and vetch

Special Notes: Vetch/small grain mix: B: 20–30 lb of vetch, with 60–90 lbs of small grain per acre.

Cowpeas

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: 30–40 B: 100–120

Seeding Depth (inches): 1–3

Planting Dates: May 1–Jun. 15

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.25

Seed/Pound: 4,000

Inoculant Group: Cowpea

Special Notes: Most commonly used for soil improvement and wildlife plantings.

Crimson Clover

Growth Habit: Cool-season annual

Area: N, C, S

Soils: Well drained; pH 5.8–7.0

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

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

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

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 150,000

Inoculant Group: Clover

Special Notes: Overseeded: 3–5 weeks later. Avoid lime soils.

Crownvetch

Growth Habit: Cool-season perennial

Area: N

Soils: Well drained; pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 8–10

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

Planting Dates: N: Sept.–Oct.

Seed Quality Germ. % (Minimum): 65

Seed Quality Purity % (Minimum): 95

Weed Seed % (Maximum): 0.50

Seed/Pound: 242,500

Inoculant Group: Crownvetch

Special Notes: Conservation is the primary usage.

Slow to establish, but provides good cover.

Alabama Planting Guide for Forage Legumes (cont.)

Hairy Vetch

Growth Habit: Cool-season annual

Area: N, C, S

Soils: Well drained, sand, loam, clay; pH 5.8–8.0

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

Seeding Depth (inches): 1–2

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

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.10

Seed/Pound: 16,000

Inoculant Group: Pea and vetch

Special Notes: Vetch/small grain mix: B: 18–20 lb of vetch, with 60–90 lbs of small grain per acre.

Perennial Peanut

Growth Habit: Warm-season perennial

Area: S

Soils: Well drained, sandy; pH 5.8–7.5

Seeding Rate (lb/A) Pure Live Seed: Rhizomes: 80 to 120 bu/A

Seeding Depth (inches): 1–2

Planting Dates: S: Dec. 1 - Mar. 1

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

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

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

Seed/Pound: Rhizomes

Inoculant Group: -----

Special Notes: Will not tolerate poor drainage.

Best adapted to the southern one third of Alabama.

Red Clover

Growth Habit: Cool-season biennial

Area: N, C, S

Soils: Well drained, fertile; pH 6.0–8.0

Seeding Rate (lb/A) Pure Live Seed: B: 12–15 D: 8–10

Seeding Depth (inches): ¼–½

Planting Dates: N,C: Sept. 15–Nov. 15 --OR-- Feb. 1–Apr. 1 S: Sept. 15–Nov. 15

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.50

Seed/Pound: 272,000

Inoculant Group: Clover

Special Notes: Persistence is typically 2–3 years, excellent for use in mixed pastures for grazing.

Sericea Lespedeza

Growth Habit: Warm-season perennial

Area: N,C,S

Soils: Well drained, moist (avoid lime soils); pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: B: 15–20 B: 20–30 (if no herbicide)

Seeding Depth (inches): ¼–½

Planting Dates: N: Mar. 15–May 15 --OR-- Jun. 15–July 15 C: Mar. 1–May 1 S: Feb. 1–May 1

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 372,000

Inoculant Group: Cowpea

Special Notes: Use certified, hulled seed.

Alabama Planting Guide for Forage Legumes (cont.)

Soybeans

Growth Habit: Warm-season annual

Area: N,C,S

Soils: Deep loam, bottoms; pH 5.8–6.5

Seeding Rate (lb/A) Pure Live Seed: D: 60–100

Seeding Depth (inches): 1–3

Planting Dates: N: May 1–May 30 C: May 1–May 30 S: Before June 15

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 98

Weed Seed % (Maximum): 0.10

Seed/Pound: Variable

Inoculant Group: Soybean

Special Notes: Tolerates drought when grown for forage. Short grazing season with no substantial regrowth.

Subterranean Clover

Growth Habit: Cool-season annual

Area: C, S

Soils: Well drained, productive; pH 5.8–7.3

Seeding Rate (lb/A) Pure Live Seed: B: 8–10

Seeding Depth (inches): ¼–½

Planting Dates: C,S: Sept.–Oct.

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.05

Seed/Pound: 54,000

Inoculant Group: Clover

Special Notes: Good reseeding potential.

Lower yielding than crimson or arrowleaf clover.

Sweetclover

Growth Habit: Cool-season annual or biennial

Area: Black Belt

Soils: Lime soils of the Black Belt; pH 6.5–7.0

Seeding Rate (lb/A) Pure Live Seed: B: 12–15

Seeding Depth (inches): ¼–½

Planting Dates: Sept.–Oct.

Seed Quality Germ. % (Minimum): 80

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 259,000

Inoculant Group: Alfalfa

Special Notes: Drought tolerant, winter hardy. Will not tolerate soil acidity.

White/Ladino Clover

Growth Habit: Cool-season perennial

Area: N,C,S

Soils: Moist bottoms and productive uplands; pH 6.0–7.5

Seeding Rate (lb/A) Pure Live Seed: B: 2–3

Seeding Depth (inches): 0–¼

Planting Dates: N, C: Sept.–Oct. --OR-- Feb. 1–Apr. 1 S: Sept. 15–Nov. 15

Seed Quality Germ. % (Minimum): 85

Seed Quality Purity % (Minimum): 99

Weed Seed % (Maximum): 0.50

Seed/Pound: 768,000

Inoculant Group: Clover

Special Notes: Commonly used seeded into established cool-season grass pastures.

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

When buying inoculants, be sure that the legume species you want to plant is listed on the package. All inoculants are not created equal and are species specific.

Apply fungicide/fertilizer or other seed treatments at least 48 hours before planting; inoculate at planting. Remember (1) not to inoculate and treat legumes with fungicides at the same time, and (2) not to inoculate legume seed with fertilizer. Note: Presented pH values are a range and may not represent the ideal pH of planting.



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