



PLANTING GUIDE TO GRASSES AND LEGUMES

for Forage and Wildlife in Georgia

Reviewed by Dennis W. Hancock, PhD.

Prepared by R. Dewey Lee, PhD.

This planting guide will help producers establish grasses and legumes commonly grown in Georgia. Although information is given for particular species, it should not be taken as a recommendation to grow that species. Not all of the plant species grown in Georgia are recommended by the University of Georgia.

Abbreviations in this chart are footnoted. This chart does not replace the need to obtain additional information for good management practices. Consult current reports, bulletins and information for specific recommendations. Specific bulletins or reports are mentioned in the remarks section.

Start with high quality seed. Certified seed is available for most recommended crops. Get the most from your soil by testing your soil to determine nutrient need. Contact the county Extension office for information on soil sampling. Fertilize and lime according to soil test results. Plant seed at the proper depth in a good seed bed when soil temperatures and moisture are best. Use the correct seeding rate per acre. For high yields maintain soil fertility and control weeds, insects and diseases. Harvest the appropriate time with properly adjusted equipment. Protect seed quality by proper handling and storage.



UNIVERSITY OF GEORGIA
EXTENSION



CROP	Lbs. Seed/ Bu.	Approx. Seeds/ Oz.	Seeding Rate (B) Broadcast (D) Drill (R) Rows	Approx. Planting Date ⁸	Growth Type	Certified Seed Quality			Remarks
						Min. Germ %	Min. Purity %	Max. weed seed	
GRASSES									
Bahia	42	10,300-17,000	D/B: 10-15 lbs/A	C: First frost free day	Warm season perennial: grazing	85	95	0.5%	See UGA Ext. Bulletin 1362 for more info. Bahiagrass may become a pest in hybrid bermudagrass fields
Barley	48	850	D/B: 90-120 lbs/A	LV: Sept. 1-Oct. 15 P: Sept. 1-Oct. 15	Cool season annual: silage	85	98	10/lb.	Not well adapted to C. Very sensitive to acid soils.
Bermudagrass <i>common (bulled)</i> <i>hybrid</i>	40 —	99,000-120,000 1,000 sprigs/bu. ¹	D/B: 5-10 lbs/A 40-70 bu/A	S: May 15-July 15 S: Feb. 20-Aug. 15	Warm season perennial: hay grazing	— ⁴ 90 (living sprigs)	— ⁴ —	— ⁴ Can contain 2% other living plants.	Well suited for conservation. See UGA Ext. Bulletin 911 for more info. Use certified varieties.
Corn	56	80-140	18,000-32,000 seed/A in rows	LV: Apr. 1-May 10 P: Apr. 1-Apr. 20 C: Mar. 1-Apr. 15	Warm season annual: silage, feed	90	99	None	Produces top quality silage. Narrow rows (30") improve yields.
Tall Fescue	20	11,000-14,500	D: 10-15 lbs/A B: 15-20 lbs/A	LV: Sept. 1-Oct. 15 P: Sept. 1-Oct. 15	Cool season perennial: hay, grazing	80	98	0.5%	Use low endophyte varieties only.
Dallisgrass	—	17,500-21,250	D: 12-15 lbs/A B: 15-20 lbs/A	S: Feb. 15-Mar. 30	Warm season perennial: grazing	50	40	1.0%	Produces 65-75% as much dry matter as bahiagrass. Difficult to establish.
Johnsongrass	40	8,250	15-20 lbs/A	S: Apr.-July	Warm season perennial: grazing, hay, silage	80	90	0.1%	Is a serious weed pest in GA. Should not be planted for use as a noxious-weed.
Millet browntop	56	5,000-8,900	D: 10-20 lbs/A B: 20-25 lbs/A	LV: May 1-Aug. 1 P: Apr. 1-Aug. 1 C: Apr. 1-Aug. 15	Warm season annual: hay, wildlife	60	90	10% ³	Matures in 60-80 days.
Millet foxtail <i>German common</i> <i>Hungarian</i>	50	11,500-15,500	D: 15-20 lbs/A B: 20-25 lbs/A	LV: May 1-Aug. 1 P: Apr. 1-Aug. 1 C: Apr. 1-Aug. 15	wildlife, hay	80	90	0.25%	Matures in 75-90 days.
Millet Japanese	35	9,000-9,500	D: 15-20 lbs/A B: 20-25 lbs/A	LV: May 1-Aug. 1 P: Apr. 1-Aug. 1 C: Apr. 1-Aug. 15	wildlife	80	98	0.25%	Very similar to barnyard grass. Seed matures in approx. 60 days. Good feed for ducks.

¹ Bu = 4/5 cu. ft.

² Soil temps should be 65°F

³ No certified standards apply. Minimum requirements are State Seed Laws only.

⁴ No minimum requirements. For sale, must have germ, purity and weed seed % on tag.

⁵ Legumes require rhizobium bacteria for nitrogen fixation. Use the appropriate inoculant.

⁶ Reduce rate by 1/3-2/3 if mixing with a grass or other legume.

⁷ Plant small seeded legumes and grasses 0-1/4" deep. Other legumes 1/4-1/2" deep. Small grains and large seeded legumes such as lupine should be planted 3/4 -1" deep.

⁸ LV = Limestone Valley & Mountains P = Piedmont C = Coastal Plains S = Statewide

CROP	Lbs. Seed/ Bu.	Approx. Seeds/ Oz.	Seeding Rate (B) Broadcast (D) Drill (R) Rows	Approx. Planting Date ⁸	Growth Type	Certified Seed Quality			Remarks
						Min. Germ %	Min. Purity %	Max. weed seed	
Millet pearl	50	5,100-5,400	D: 12-15 lbs/A B: 25-30 lbs/A	C: April 1-July 15	grazing, hay, human consumption, wildlife, feed	80	98	0.25%	Planted in April should be ready to graze in 40 days. Production for 80 to 100 days.
Millet proso	56	3,750-5,000	R: 10-20 lbs/A B: 20-25 lbs/A	LV: May 1-Aug. 1 P: April 1-Aug. 1 C: April 1-Aug. 15	wildlife	80	98	0.25%	Matures in 60-75 days.
Oats	32	1,000-1,425	D/B: 90-120 lbs/A	S: Sept. 1-Oct. 15	Cool season annual: grazing, silage, hay	85	98	10/lb	Used primarily as a companion crop with clover and other grass.
Orchardgrass	14	23,500-29,800	D: 10-15 lbs/A B: 15-20 lbs/A	LV: Sept. 1-Oct. 15	Cool season perennial: grazing	80	85	0.5%	Best suited to the mountain regions of GA.
Rye	56	1,135	D: 2-2.5 bu/A B: 2-5 bu/A	S: Sept. 1-Oct. 15	Cool season annual: hay, grazing	80	98	10/lb	Used mainly for grazing or green mature. Cut for silage in heading stage.
Ryegrass	20	11,225-12,500	B: 20-30 lbs/A	S: Sept. 1-Oct. 15	Cool season annual: hay, grazing	70	90	10% ³	Reduce seeding rate if used in conjunction with small grain and clover.
Sorghum grain	56	800-1,500	D: 6-8 lbs/A B: 10-12 lbs/A	LV: May 15-July 1 ² P: May 1-July 1 C: April 15-July 15	Warm season annual: silage, feed	80	98	0.1%	Plant when soil temp. is above 65°F
Sorghum forage	56	1,000-2,250	D: 6-8 lbs/A 4-5 seed/ft.	LV: May 1-July 1 ² P: May 1-July 1 C: April 15-July 1	green chop, silage	80	98	0.1%	Thick spacing increases lodging. Use wide rows.
Sorghum sweet	50	1,000-2,250	R: 2-3 seed/ft. (3-5 lbs/A)	LV: Late April-May 15 ²	human consumption	80	98	0.1%	Often called "cane."
Sudangrass	40	2,350-3,475	R: 10-15 lbs/A B: 20-25 lbs/A	LV/P: May 1-Aug. 1 ²	Warm season annual: silage, hay, grazing	80	98	0.1%	Performs best on medium to heavy textured soils. High quality forage.
Sorghum/Sudan Hybrids	40	3,500-3,700	R: 15-20 lbs/A B: 25-30 lbs/A	LV: May 1-Aug. 1 P: April 15-Aug. 1 C: April 1-Aug. 15	silage, hay grazing	80	98	0.1%	A cross between forage sorghum & sudangrass. Generally outyields pearl millet.
Triticale	48	700-950	D/B: 90-120 lbs/A	C: Oct. 1-Nov. 15	Cool season annual: grazing, feed	85	98	10/lb	See current small grain performance test bulletin for var. yield results.

¹ Bu = 4/5 cu. ft.

² Soil temps should be 65°F

³ No certified standards apply. Minimum requirements are State Seed Laws only.

⁴ No minimum requirements. For sale, must have germ, purity and weed seed % on tag.

⁵ Legumes require rhizobium bacteria for nitrogen fixation. Use the appropriate inoculant.

⁶ Reduce rate by 1/3-2/3 if mixing with a grass or other legume.

⁷ Plant small seeded legumes and grasses 0-1/4" deep. Other legumes 1/4-1/2" deep. Small grains and large seeded legumes such as lupine should be planted 3/4 -1" deep.

⁸ LV = Limestone Valley & Mountains P = Piedmont C = Coastal Plains S = Statewide

CROP	Lbs. Seed/ Bu.	Approx. Seeds/ Oz.	Seeding Rate (B) Broadcast (D) Drill (R) Rows	Approx. Planting Date ⁸	Growth Type	Certified Seed Quality			Remarks
						Min. Germ %	Min. Purity %	Max. weed seed	
Wheat	60	750-1,200	D/B: 90-120 lbs/A	LV: Sept. 1-Oct. 15 P: Sept. 15-Oct. 15 C: Oct. 1-Nov. 1	Cool season annual: hay, grazing, feed	85	98	10/lb	Excellent quality silage. See small grain performance test bulletin for var. yield results. Use Hessian fly resistant cultivars.
LEGUMES^{5,7} See UGA Ext. Bulletin 1347 for more information.									
Alfalfa	60	13,500-14,500	D: 18-22 lbs/A B: 22-25 lbs/A	LV: Aug. 25-Sept. 10 P: Sept. 1-Oct. 10 C: Sept. 20-Oct. 20	Cool season perennial: grazing, hay	80	99	0.5%	See UGA Ext. Bulletin 1350. Correct soil acidity prior to seeding. Harvest at early bloom stage.
Beggarweed (Florida)	60	12,500-14,000	D/B: 10-12 lbs/A	C: April 15-June 15	Warm season perennial: grazing, hay wildlife	—	—	— ⁴	Usually lives as an annual in GA. Considered to be a serious weed pest.
Birdsfoot trefoil	60	23,000-24,000	D/B: 6-12 lbs/A ⁶	LV/P: Sept. 1-Oct. 10	Cool season perennial: grazing, hay	80	98	0.5%	Offers good grazing when mixed with tall fescue or orchardgrass. Natural reseeding.
Caley pea (rough/winter)	53	950-1,135	D: 20-25 lbs/A B: 25-30 lbs/A	S: Sept. 1-Oct. 30	Cool season annual: wildlife, soil improvement	—	—	— ⁴	Seed are poisonous to cattle. Grows well on heavy textured soils of moderate acidity.
Clover alyce	60	17,000-18,875	D/B: 15-20 lbs/A ⁶	C: May 1-June 15	Warm season annual: grazing, hay, soil improvement	80	99	0.5%	Best suited to extreme South Georgia.
Clover arrowleaf	60	45,500-55,000	D: 5-8 lbs/A B: 8-10 lbs/A (scarified)	LV: Aug. 25-Sept. 10 P: Sept. 1-Sept. 20 C: Sept. 10-Oct. 10	Cool season annual: grazing, hay	85	98	0.5%	Provides grazing till late May or early June.
Clover berseem	60	12,000-13,000	D: 15-18 lbs/A B: 18-20 lbs/A	C: Oct. 1-Nov. 1	Cool season annual: grazing	85	98	0.5%	Best suited to South GA.
Clover crimson	60	8,750-9,500	D: 15-20 lbs/A B: 20-30 lbs/A	LV: Aug. 25-Sept. 10 P: Sept. 1-Sept. 20 C: Sept. 10-Oct. 10	Cool season annual: grazing, hay, soil improvement	85	98	0.5%	Most productive from late Feb. to mid-April.
¹ Bu = 4/5 cu. ft. ² Soil temps should be 65°F ³ No certified standards apply. Minimum requirements are State Seed Laws only. ⁴ No minimum requirements. For sale, must have germ, purity and weed seed % on tag. ⁵ Legumes require rhizobium bacteria for nitrogen fixation. Use the appropriate inoculant. ⁶ Reduce rate by 1/3-2/3 if mixing with a grass or other legume. ⁷ Plant small seeded legumes and grasses 0-1/4" deep. Other legumes 1/4-1/2" deep. Small grains and large seeded legumes such as lupine should be planted 3/4 -1" deep. ⁸ LV = Limestone Valley & Mountains P = Piedmont C = Coastal Plains S = Statewide									

CROP	Lbs. Seed/ Bu.	Approx. Seeds/ Oz.	Seeding Rate (B) Broadcast (D) Drill (R) Rows	Approx. Planting Date ⁸	Growth Type	Certified Seed Quality			Remarks
						Min. Germ %	Min. Purity %	Max. weed seed	
Clover red	60	16,000-17,000	D: 8-10 lbs/A B: 12-15 lbs/A ⁶	LV/P: Sept. 1-Oct. 15	Cool season perennial: grazing, hay	85	99	0.25%	Usually does not persist more than 2-3 years. Excellent grazing when mixed with tall fescue & orchardgrass.
Clover subterranean	60	3,375-4,125	D: 6-8 lbs/A B: 8-10 lbs/A	S: Sept. 1-Oct. 10	Cool season annual: grazing, hay	85	98	0.5%	A good reseeding plant. Can be maintained in permanent grass sods where properly managed.
Clover white (ladino)	60	42,000-55,000	D/B: 2-3 lbs/A ⁶	S: Sept. 1-Oct. 15	Cool season perennial: grazing, hay	85	98	0.5%	Does best on moist, upland land soils. Widely used in overseeding fescue pastures.
Cowpea	60	125-375	D: 60 lbs/A B: 60-90 lbs/A	S: May 1 -June 15	Warm season annual: grazing, hay, wildlife, soil improvement	80	98	0.1%	Does best on well drained fertile soil. Many cultivars reseed. Used mostly for wildlife, soil improvement.
Lespedeza (kobe) common	25-30	11,000-21,000	D: 15-20 lbs/A B: 20-30 lbs/A (scarified)	LV/P: Feb. 15-Mar. 15	Warm season annual: hay, grazing, wildlife	80	98	1%	Also known as striate. Not suited for sandy soils. Seed yields higher when no hay is harvested.
Lespedeza korean	42-45	14,885	D: 15-20 lbs/A B: 20-30 lbs/A (scarified)	LV/P: Feb. 15-Mar. 15	Warm season annual: hay, grazing, wildlife, soil improvement	80	98	1%	Not suited for sandy soils. Seed yield higher when no hay is harvested.
Lespedeza sericea <i>unbulled</i> <i>bulled</i>	35 60	21,875-23,250	D: 15-20 lbs/A ⁶ B: 20-30 lbs/A (scarified)	S: Mar. 15-Apr. 15	Warm season perennial: hay, grazing, wildlife, soil improvement	80	98	1%	Use a herbicide to control competitive weeds. For hay, harvest in mature growth. May be used for conservation purposes.
Lespedeza bicolor	60	4,875-5,300	D: 8-10 lbs/A (30-36"R) (scarified) Live plants: 10,000/36" R	P/C: Mar. 1-May 1	Warm season perennial: wildlife	80	98	1%	Use wide rows. Shrub must be managed to prevent unwanted growth. Excellent cover & food for wildlife.

¹ Bu = 4/5 cu. ft.

² Soil temps should be 65°F

³ No certified standards apply. Minimum requirements are State Seed Laws only.

⁴ No minimum requirements. For sale, must have germ, purity and weed seed % on tag.

⁵ Legumes require rhizobium bacteria for nitrogen fixation. Use the appropriate inoculant.

⁶ Reduce rate by 1/3-2/3 if mixing with a grass or other legume.

⁷ Plant small seeded legumes and grasses 0-1/4" deep. Other legumes 1/4-1/2" deep. Small grains and large seeded legumes such as lupine should be planted 3/4 -1" deep.

⁸ LV = Limestone Valley & Mountains P = Piedmont C = Coastal Plains S = Statewide

CROP	Lbs. Seed/ Bu.	Approx. Seeds/ Oz.	Seeding Rate (B) Broadcast (D) Drill (R) Rows	Approx. Planting Date ⁸	Growth Type	Certified Seed Quality			Remarks
						Min. Germ %	Min. Purity %	Max. weed seed	
Lespedeza thunbergii	60	2,800-4,200	D: 8-10 lbs/A (30-36"R) (scarified) Live plants: 10,000/36" R	P/C: Mar. 1-May 1	Warm season perennial: wildlife	80	98	1%	Use wide rows. Shrub must be managed to prevent unwanted growth. Excellent cover & food for wildlife.
Lupine (blue, white)	60	65-200 (white usually has larger seed than blue)	D: 60-90 lbs/A B: 75-100 lbs/A	LV: Sept. 15-30 P: Sept. 15-Oct. 15 C: Oct. 15-Nov. 15	Cool season annual: hay, grazing, soil improvement	80	98	0.3%	Adapted best to sandy, loam soils. Only sweet varieties are suitable for grazing.
Partridge Pea	—	—	D: 5-10 lbs/A B: 15-20 lbs/A	P/C: Mar. 1-May 1	Warm season annual: wildlife	—	—	— ⁴	May require acid scarification to improve germ. Hard seed. Most productive type is showy partridge pea.
Rhizoma peanuts (perennial)	Vegetatively propagated	—	80-100 bu Rhizomes/A	C: Dec-early March	Warm season perennial: soil improvement, hay, grazing	90% living sprigs		Can contain 2% other living plants	Most Varieties developed in FL. Can be high quality hay.
Sesbania	60	2,500-2,980	D/B: 20-25 lbs/A	C: May 1-June 15	Warm season perennial: wildlife, soil improvement	—	—	— ⁴	Very tall growing. Grows well in poorly drained areas. Considered a weed pest in GA.
Sweetclover	60	16,000	D/B: 10-15 lbs/A (scarified) ⁶	LV/P: Sept. 1-Oct. 10	Cool season biennial: grazing, hay, soil improvement	80	99	0.5%	Used primarily for soil improvements and a crop for honey production.
Vetch common (hybrids)	60	600-1,000	D/B: 15-25 lbs/A ⁶	P: Sept. 1-Oct. 15 C: Sept. 15-Nov. 1	Cool season annual: grazing, wildlife, soil improvement	80	98	0.25%	New hybrid varieties have shown poor winter hardiness. Produces growth and seed earlier than hairy. Res. to many nematodes.
Vetch hairy	60	1,000-1,250	D/B: 20-30 lbs/A ⁶	LV/P: Sept. 1-Oct. 15 C: Sept. 15-Nov. 1	Cool season annual: grazing, wildlife, soil improvement	80	98	0.25%	A cold hardy vetch. Poor reseeded and susceptible to nematodes.
Winter peas (Austrian)	60	100-300	D/B: 30-35 lbs/A	S: Sept. 1-Oct. 30	Cool season annual: soil improvement, wildlife	80	98	0.1%	Growth period similar to vetch. Commonly used for soil improvement.

¹ Bu = 4/5 cu. ft.

² Soil temps should be 65°F.

³ No certified standards apply. Minimum requirements are State Seed Laws only.

⁴ No minimum requirements. For sale, must have germ, purity and weed seed % on tag.

⁵ Legumes require rhizobium bacteria for nitrogen fixation. Use the appropriate inoculant.

⁶ Reduce rate by 1/3-2/3 if mixing with a grass or other legume.

⁷ Plant small seeded legumes and grasses 0-1/4" deep. Other legumes 1/4-1/2" deep. Small grains and large seeded legumes such as lupine should be planted 3/4 -1" deep.

⁸ LV = Limestone Valley & Mountains P = Piedmont C = Coastal Plains S = Statewide

CROP	Lbs. Seed/ Bu.	Approx. Seeds/ Oz.	Seeding Rate (B) Broadcast (D) Drill (R) Rows	Approx. Planting Date ⁸	Growth Type	Certified Seed Quality			Remarks
						Min. Germ %	Min. Purity %	Max. weed seed	
OTHER									
Buckwheat	48	1,275-1,500	D/B: 30-60 lbs/A	S: Apr. 15-June 15	Warm season annual: forb, grain, wildlife, soil improvement	—	—	— ⁴	A short season crop. Good for honey production.
Chufa	44	varies	D: 25-35 lbs/A (12" R) B: 50-60 lbs/A	C: May 15-June 30	Warm season perennial: sedge, wildlife	—	—	— ⁴	Should be planted in sandy textured soils. Very similar to nutsedge.
Sesame	46	8,000-11,000	D: 1 lb/A in 36" Rows	C: May 1-June 15	Warm season annual: forb, wildlife, oil, seed crop, human consumption	—	—	— ⁴	Also known as "orobenne." Most varieties shatter readily. Require 90-120 days to maturity.
Sunflowers	30	350-400	18,000-22,000	C/P: April-June	Warm season feed, wildlife	85	97	0.2	Use oil types for wildlife food plots.
¹ Bu = 4/5 cu. ft. ² Soil temps should be 65°F ³ No certified standards apply. Minimum requirements are State Seed Laws only. ⁴ No minimum requirements. For sale, must have germ, purity and weed seed % on tag. ⁵ Legumes require rhizobium bacteria for nitrogen fixation. Use the appropriate inoculant. ⁶ Reduce rate by 1/3-2/3 if mixing with a grass or other legume. ⁷ Plant small seeded legumes and grasses 0-1/4" deep. Other legumes 1/4-1/2" deep. Small grains and large seeded legumes such as lupine should be planted 3/4 -1" deep. ⁸ LV = Limestone Valley & Mountains P = Piedmont C = Coastal Plains S = Statewide									

extension.uga.edu

Circular 814

Revised December 2018

Published by the University of Georgia in cooperation with Fort Valley State University, the U.S. Department of Agriculture, and counties of the state. For more information, contact your local UGA Cooperative Extension office.
The University of Georgia College of Agricultural and Environmental Sciences (working cooperatively with Fort Valley State University, the U.S. Department of Agriculture, and the counties of Georgia) offers its educational programs, assistance, and materials to all people without regard to race, color, religion, sex, national origin, disability, gender identity, sexual orientation or protected veteran status and is an Equal Opportunity, Affirmative Action organization.