

# FORAGE & FIELD CROP SEEDING GUIDE

*for Tennessee*

Gary Bates, Professor, Plant Sciences  
Craig Harper, Professor, Forestry, Wildlife and Fisheries  
Angela McClure, Associate Professor, Plant Sciences  
Tyson Raper, Assistant Professor, Plant Sciences  
Virginia Sykes, Assistant Professor, Plant Sciences

## Professor Joe Burns



Funding for this publication was provided by the Joe Burns Memorial Endowment. Professor Joe Burns spent his career educating forage producers in Tennessee and across the Southeast. He was a nationally renowned forage specialist with University of Tennessee Extension and served in that role for 37 years before retiring in 1992. During his career, he was honored as the Tennessee Man of the Year in agriculture by Progressive Farmer magazine and was awarded both the Merit Award and the Distinguished Grasslander Award from the American Forage and Grassland Council. Burns was well-known not only for his knowledge but also for his kind and encouraging attitude. He was a role model and mentor for many faculty at UT and producers across the state.

Species/description	seeding rate (lb/acre)	depth (inches)	Seeding date		comments
			Spring	Fall	
<b>alfalfa</b> cool-season perennial	15-20	¼ - ½	Mar 1-May 15	Aug 15-Sept 15	If a pure stand is to be fall planted, seedings should be made early to decrease risk of Sclerotinia. Do not no-till plant in fall. If planted in mixture with cool-season perennial grass, use half rate of each species and plant in fall.
<b>American jointvetch</b> warm-season annual	20	¼	Apr 15-June 15	----	Tolerant of poorly drained conditions. Excellent forage and cover for wildlife.
<b>Austrian winter peas</b> cool-season annual	50	1-2	----	Aug 15-Oct 1	Good fall/winter cover crop and forage for wildlife.
<b>barley</b> cool-season annual	100-150 (2-3 bu)	1-2	----	Sept 1-Nov 1	Not recommended for wildlife.
<b>bermudagrass</b> warm-season perennial	Sprigged: 25-30 cu ft	1-3	Apr 15-July 1	----	Vegetatively propagated varieties can be planted earlier than seeded varieties. Select varieties with cold tolerance.
	Seeded: 5-8 lb/acre	¼	May 1-July 1		
<b>bluestem, big</b> warm-season perennial	8-10 PLS*	¼ - ½	Apr 15-June 1	----	Fluffy seed requires special drill for seeding. Weed control during first year is critical due to slow seedling growth. Seeding depth is critical.
<b>bluestem, little</b> warm-season perennial	8-10 PLS*	¼	Apr 15-June 1	----	Fluffy seed. Weed control during first year is critical due to slow seedling growth. Seeding depth is critical. If for wildlife habitat, reduce seeding rate to 1-3 lb.
<b>birdsfoot trefoil</b> cool-season perennial	6-10	¼ - ½	Feb 15-Apr 1	Aug 15-Oct 1	Usually has disease problems in Tennessee conditions. Not recommended for wildlife.
<b>bromegrass, smooth</b> cool-season perennial	15-20	¼ - ½	----	Aug 15-Oct 1	Poor drought and heat tolerance limits use in Tennessee. Not recommended for wildlife.
<b>buckwheat</b> warm-season annual	35-50	1-2	Apr 15-Aug 1	----	Used little for livestock forage. Good forage and seed production for wildlife.
<b>chicory</b> cool-season perennial	10	¼ - ½	Mar 1-May 1	Aug 15-Oct 1	Very drought-tolerant. Excellent forage for wildlife. Fall planting gives most consistent stands.
<b>clover, arrowleaf</b> cool-season annual	6-10	¼ - ½	----	Aug 15-Oct 1	Inoculate seed prior to planting.
<b>clover, alsike</b> cool-season perennial	6-10	¼ - ½	Feb 15-Apr 1	Aug 15-Oct 1	Tolerant of poorly drained conditions. Acts as annual in Tennessee.
<b>clover, crimson</b> cool-season annual	20-25	¼ - ½	----	Aug 15-Oct 1	Inoculate seed. Used for forage and cover crop. Continuous use can result in increased crown rot.
<b>clover, red</b> cool-season biennial	10	¼ - ½	Feb 15-Apr 1	Aug 15-Oct 1	Good seedling vigor. More upright than white clover. Good clover for mixtures with cool-season grasses. Excellent for deer and turkeys.
<b>clover, white</b> (ladino, intermediate) cool-season perennial	2	¼	Feb 15-Apr 1	Aug 15-Oct 1	Good for mix with cool-season perennial grasses. Ladino-types are taller than intermediates. Intermediates are more persistent.

\* PLS = % pure live seed = % GERMINATION x % PURITY. Both of these are found on seed tag. Be sure to purchase preinoculated legume seed, or inoculate raw seed prior to planting.

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<b>corn</b> warm-season annual	28,000-36,000 seeds per acre	1½-2	Mar 21-May 25	----	Plant higher rate under irrigation, in better soils when planting early. Plant as early as practical for best upland grain yields.
<b>cotton</b> warm-season annual	30,000 - 55,000 plants per acre	¾ - 1½ inches	Apr 20 - May 10	----	Best to plant when soil at 3 in depth at 10 AM = 65F and the forecasted DD60 accumulation for the five days following planting is greater than 25 DD60s.
<b>cowpeas</b> warm-season annual	50-100	1-3	Apr 15-July 1	----	Excellent forage and wildlife planting.
<b>crabgrass</b> warm-season annual	3-5 lb PLS	¼ - ½	May 1-July 1	----	Good forage quality. Can manage to allow reseeding. Not recommended for wildlife.
<b>dallisgrass</b> warm-season perennial	20-30	¼ - ½	Mar 15-Apr 15	----	Poor seed viability. Not recommended for wildlife.
<b>eastern gamagrass</b> warm-season perennial	10 PLS*	½ - 1	Apr 15-June 1	----	Bunch grass. Large seed planted similar to corn. Seed dormancy can be a concern.
<b>Egyptian wheat</b> warm-season annual	15	½	Apr 15-June 15	----	Good cover and seed producer for birds.
<b>indiangrass</b> warm-season perennial	8-10 PLS*	¼ - ½	Apr 15-June 1	----	Native grass with fluffy seed requires drill with agitators and picker wheels. Weed control during first year is critical due to slow seedling growth. Seeding depth is critical.
<b>lablab (hyacinth bean)</b> warm-season annual	25-40	½ - 1½	Apr 15-July 1	----	Vining legume producing most growth from mid- to late summer. Excellent forage for deer.
<b>Kentucky bluegrass</b> cool-season perennial	10-12	¼	----	Aug 15-Oct 1	Poor seedling vigor. Poor drought tolerance. Not recommended for wildlife.
<b>lespedeza, annual</b> warm-season annual	Kobe: 40 Korean: 25	¼	Feb 15-Apr 15	----	Kobe best for mixture with tall fescue.
<b>lespedeza, sericea</b> warm-season perennial	30	¼	Apr 1-June 1	----	Better hay crop than grazing. Tannins limit palatability for grazing. Not recommended for wildlife.
<b>millet, browntop</b> warm-season annual	25-40	½ - ¾	May 1-June 15	----	Not as high forage yield as pearl millet. Expect one cutting. Used mostly as food plot for mourning dove and ducks.
<b>millet, foxtail (German)</b> warm-season annual	20-25	½ - ¾	May 1-June 15	----	Emergency hay use. Usually one cutting. Used mostly as food plot for mourning dove and ducks.
<b>millet, Japanese</b> warm-season annual	25	½ - ¾	May 1-Aug 15	----	Excellent seed producer for ducks in and around wetland areas.
<b>millet, pearl</b> warm-season annual	20	½ - ¾	May 1-June 15	----	Good choice as emergency hay crop.
<b>millet, proso</b> warm-season annual	30	¼ - ½	Apr 15-June 15	----	Excellent seed producer for birds.
<b>oats</b> cool-season annual	100-150	1-2	Feb 20-Apr 1	Aug 15-Oct 1	Limited cold tolerance. Best companion crop of small grains due to limited competition with desired crop. Excellent forage for deer.

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<b>orchardgrass</b> cool-season perennial	10-15 3-5 in. alfalfa	¼ - ½	----	Aug 15-Oct 1	Good hay crop. Fall seeding is best. Not recommended for wildlife.
<b>partridge pea</b> warm-season annual	4	¼	Feb 15-June 1	----	Excellent forage and cover for wildlife.
<b>popcorn</b> warm-season annual	0.5-1 lb	1	Apr 1-June 1	----	
<b>rape</b> cool-season annual	6-8	¼ - ½	Feb 15-Mar 31	Aug 15-Oct 1	Forage attractive after several frosts.
<b>reed canarygrass</b> cool-season perennial	10-12	¼ - ½	----	Aug 15-Oct 1	Best choice for wet conditions. Alkaloids make it less desirable for forage.
<b>rye</b> cool-season annual	100-150 (2-3 bu)	1-2	----	Aug 15-Oct 1	Earliest of all small grains. Good species to mix with annual ryegrass for fall/winter/spring grazing.
<b>ryegrass, annual</b> cool-season annual	20-30	¼ - ½	Feb 20-Apr 1	Aug 15-Oct 15	High-quality winter annual. Not recommended for wildlife.
<b>ryegrass, perennial</b> cool-season perennial	20-30	¼ - ½	----	Aug 15-Oct 15	Does not persist well. Practically annual in Tennessee. Not recommended for wildlife.
<b>sesame</b> warm-season annual	12	½	Apr 15-June 1	----	Good seed producer for birds.
<b>sideoats grama</b> warm-season perennial	2-4	¼ - ½	Apr 15-June 1	----	Short native grass. Limited forage use. Can provide nesting cover for quail.
<b>sorghum, grain</b> warm-season annual	6-8	1½	May 1-June 15	----	Good silage crop for late planting.
<b>sorghum, sweet</b> warm-season annual	4-6	1½	May 1-June 15	----	
<b>soybeans, forage</b> warm-season annual	75-150	1-2	May 1-June 15	----	Choose forage type or late maturity group for hay. Cut at 50 percent bloom. Excellent forage planting for deer.
<b>soybeans, oilseed</b> warm-season annual	140-150K seeds per acre 60-65 pounds per acre	1-1½	Apr 16-June 15	----	
<b>sudangrass and hybrids</b> warm-season annual	45 broadcast 30 drilled	½ - 2	Apr 20-June 15	----	High-yielding summer annuals. Grazing or hay use.
<b>sunflower</b> warm-season annual	25	1-2	Apr 15-May 15	----	Excellent seed producer for mourning dove and some songbirds.
<b>sweetclover</b> cool-season biennial	20	¼ - ½	Feb 20-Apr 1	Aug 15-Oct 1	Not recommended for wildlife.
<b>switchgrass</b> warm-season perennial	5-8 PLS*	¼ - ½	Apr 15-May 30	----	Forage and biomass use. Weed control during first year critical due to slow seedling growth. Seeding depth is critical. If for wildlife habitat, reduce seeding rate 50 percent.
<b>tall fescue</b> cool-season perennial	15-20	¼ - ½	----	Aug 15-Oct 1	Endophyte-infected is most persistent cool-season grass available. Mix with red and white clover. Not recommended for wildlife.

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<b>teffgrass</b> warm-season annual	6-8	¼	May 1-June 15	----	Smaller stems than other warm-season annuals. Good hay crop. Small seed size makes seeding depth critical. Not recommended for wildlife.
<b>turnips</b> cool-season annual	3-6	¼	Apr 1-June 1	Aug 15- Oct 1	Early fall grazing crop. For wildlife, most palatable after frost.
<b>timothy</b> cool-season perennial	8	¼ - ½	----	Aug 15-Oct 1	Poor drought tolerance. Stand life of one to two years. Not recommended for wildlife.
<b>vetch, hairy</b> cool-season annual	30	1-2	----	Aug 15-Oct 1	Mostly used as cover crop. Not recommended for wildlife.
<b>wheat, forage</b> cool-season annual	120-180 (2-3 bu)	1-2	----	Aug 15-Nov 1	Seed in September only if fall grazing is expected. Seed in October for grain/spring grazing. Select awnless varieties for wildlife.
<b>wheat, grain</b> cool-season annual	1.2-1.5 million plants per acre	1-1½, not to exceed 2	----	Oct 15-Nov 10	Up seeding rate by 30-50 percent if planting in adverse conditions, if broadcasting, or if using bin-run seed.

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