

FORAGE AND FIELD CROP SEEDING GUIDE FOR TENNESSEE

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Species/description	Monoculture seeding rate (lb/acre)*	Depth (inches)	Seeding date		Comments
			spring	fall	
alfalfa 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.
American jointvetch warm-season annual	15-20	¼	Apr 15-June 15	----	Tolerant of poorly drained conditions. Excellent forage and cover for wildlife.
Austrian winter peas cool-season annual	50	1-2	----	Aug. 15-Oct. 1	Good fall/winter cover crop and forage for wildlife.
barley cool-season annual	100-150 (2-3 bu)	1-2	----	Sept. 1-Nov. 1	Not recommended for wildlife.
bermudagrass 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		
bluestem, big warm-season perennial	7-10	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. If for wildlife habitat, reduce seeding rate 50 percent. Pay attention to PLS level (see footnote).
bluestem, little warm-season perennial	7-10	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 50 percent. Pay attention to PLS level (see footnote).
birdsfoot trefoil 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.
bromegrass, smooth cool-season perennial	15-20	¼ - ½	----	Aug 15-Oct 1	Poor drought and heat tolerance limits use in Tennessee. Not recommended for wildlife.
buckwheat warm-season annual	35-50	1-2	Apr 15-Aug. 1	----	Used little for livestock forage. Good forage and seed production for wildlife.
chicory 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.
clover, arrowleaf cool-season annual	6-10	¼ - ½	----	Aug 15-Oct 1	Inoculate seed prior to planting.
clover, alsike 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.

* 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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			Spring	Fall	
clover, crimson 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.
clover, red cool-season biennial	10	¼ - ½	Feb 15-Apr 1	Aug 15-Oct 1	Use 4 lb/acre if mixed with white clover. Good seedling vigor. More upright than white clover. Good clover for mixtures with cool-season grasses. Excellent
clover, white (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.
corn 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.
cotton warm-season annual	30,000-55,000 plants per acre	½ -1½	Apr 20-May 10	----	Best to plant when soil at 3" at 10 AM = 65°F and the forecasted DD60 accumulation for the five days following planting is greater than 25 DD60s.
cowpeas warm-season annual	50-100	1-3	Apr 15-July 1	----	Excellent forage and wildlife planting.
crabgrass warm-season annual	3-5	¼ - ½	May 1-July 1	----	Good forage quality. Can manage to allow reseeding. Not recommended for wildlife. Pay attention to PLS level (see footnote).
dallisgrass warm-season	20-30	¼ - ½	Mar 15-Apr 15	----	Poor seed viability. Not recommended for wildlife.
eastern gamagrass warm-season perennial	10-12	½ - 1	Apr 15-June 1	----	Bunch grass. Large seed planted similar to corn. Seed dormancy can be a concern. If for wildlife habitat, reduce seeding rate 50 percent. Pay attention to PLS level (see footnote).
Egyptian wheat warm-season annual	15	½	Apr 15-June 15	----	Good cover and seed producer for birds.
indiangrass warm-season perennial	7-10	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. If for wildlife habitat, reduce seeding rate 50 percent. Pay attention to PLS level (see footnote).
lablab (hyacinth bean) warm-season annual	25-40	½ - 1 ½	Apr 15-July 1	----	Vining legume producing most growth from mid- to late summer. Excellent forage for deer.
Kentucky bluegrass cool-season perennial	10-12	¼	----	Aug 15-Oct 1	Poor seedling vigor. Poor drought tolerance. Not recommended for wildlife.

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			Spring	Fall	
lespedeza, annual warm-season annual	Kobe: 40 Korean: 25	¼	Feb 15-Apr 15	----	Kobe best for mixture with tall fescue.
lespedeza, sericea warm-season perennial	30	¼	Apr 1-June 1	----	Better hay crop than grazing. Tannins limit palatability for grazing. Not recommended for wildlife.
millet, browntop warm-season annual	25-40	½ - ¾	May 1-June 15	----	Not as high-yielding as pearl millet. Expect one cutting. Used mostly as food plot for mourning dove and ducks.
millet, foxtail (German) 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.
millet, Japanese warm-season annual	25	½ - ¾	May 1-Aug 15	----	Excellent seed producer for ducks in and around wetland areas.
millet, pearl warm-season annual	20	½ - ¾	May 1-June 15	----	Good choice as emergency hay crop.
millet, proso warm-season annual	30	¼ - ½	Apr 15-June 15	----	Excellent seed producer for birds.
oats 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.
orchardgrass cool-season perennial	10-15	¼ - ½	----	Aug 15-Oct 1	Use 3-5 lb/acre if mixed with alfalfa. Good hay crop. Fall seeding is best. Not recommended for wildlife.
partridge pea warm-season annual	1-4	¼	Feb 15-June 1	----	Excellent forage and cover for wildlife.
popcorn warm-season annual	0.5-1	1	Apr 1-June 1	----	
rape cool-season annual	6-8	¼ - ½	Feb 15-Mar 31	Aug 15-Oct 1	Forage attractive after several frosts.
reed canarygrass cool-season perennial	10-12	¼ - ½	----	Aug 15-Oct 1	Best choice for wet conditions. Alkaloids make it less desirable for forage.
rye 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.
ryegrass, annual cool-season annual	20-30	¼ - ½	Feb 20-Apr 1	Aug 15-Oct 15	High-quality winter annual. Not recommended for wildlife.
ryegrass, perennial cool-season perennial	20-30	¼ - ½	----	Aug 15-Oct 15	Does not persist well. Practically annual in Tennessee. Not recommended for wildlife.
sesame warm-season annual	12	½	Apr 15-June 1	----	Good seed producer for birds.
sideoats grama warm-season perennial	2-4	¼ - ½	Apr 15-June 1	----	Short native grass. Limited forage use. Excellent nesting cover for quail.
sorghum, grain warm-season annual	6-8	1½	May 1-June 15	----	Good silage crop for late planting.

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			Spring	Fall	
sorghum, sweet warm-season annual	4-6	1½	May 1-June 15	----	
soybeans, forage 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.
soybeans, oilseed warm-season annual	135-150K seeds per acre 60-65 pounds per acre	1-1½	Mar 21-June 15	----	Plant higher rate when planting early and/or late. Plant as early as practical for best upland grain yields.
sudangrass and hybrids warm-season annual	45 broadcast 30 drilled	½ -2	Apr 20-June 15	----	High-yielding summer annuals. Grazing or hay use.
sunflower warm-season annual	25	1-2	Apr 15-May 15	----	Excellent seed producer for mourning dove and some songbirds.
sweetclover cool-season biennial	20	¼ - ½	Feb 20-Apr 1	Aug 15-Oct 1	
switchgrass warm-season perennial	5-8	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. Pay attention to PLS level (see footnote).
tall fescue 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.
teffgrass 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.
turnips cool-season annual	3-6	¼	Apr 1-June 1	Aug 15-Oct 1	Early fall grazing crop.
timothy cool-season perennial	8	¼ - ½	----	Aug 15-Oct 1	Poor drought tolerance. Stand life of one to two years. Not recommended for wildlife.
vetch, hairy cool-season annual	30	1-2	----	Aug 15-Oct 1	Mostly used as cover crop. Not recommended for wildlife.
Wheat, forage 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.
Wheat, grain 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 broadcast, or if using bin-run seed.

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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.



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