

Fact Sheet

WHAT ARE NATIVE GRASSES?

Warm-season grasses are a group of grasses which reach their maximum productivity during summer. Their growth begins when soil temperature reaches approximately 55° F, and their growth rate increases with temperature to a maximum of about 90° F. In Arkansas, native warm-season grasses (NWSGs) have been largely replaced by introduced grasses.

WILDLIFE BENEFITS

Research has shown that a greater diversity of wildlife species utilize NWSGs than introduced grasses. NWSGs are bunchgrasses; they grow upright with bare ground in between. This provides overhead cover for protection, quality nesting habitat, and open travel corridors, and attracts insects.

RECOMMENDED NWSG SPECIES AND CULTIVARS FOR ARKANSAS*

Big Bluestem – ‘Roundtree’ (IA), ‘Kaw’ (KS), ‘Earl’ (TX)

Little Bluestem – ‘Aldous’ (KS), ‘Cimarron’ (OK-KS)

Indiangrass – ‘Rumsey’ (IL), ‘Osage’ (KS),
‘Cheyenne’ (OK), ‘Lometa’ (TX)

Sideoats Grama – ‘Haskell’ (TX), ‘El Reno’ (KS)
Switchgrass – ‘Cave-in-Rock’ (IL),

‘Shawnee’ (IL), ‘Blackwell’ (n. OK),
‘Kanlow’ (s. OK), ‘Alamo’ (s. TX)

Eastern Gamagrass – ‘Pete’ (KS), ‘Iuka’ (OK)

* Local ecotypes of the listed species are also recommended.

SEED CHARACTERISTICS

Big bluestem, little bluestem, indiangrass, and sideoats grama seeds are hairy and/or awned, making the seed fluffy and difficult to handle. Debearded (awns and hairs removed) seed is available but is more expensive. Most fluffy seed available contains a high percentage of chaff (stems and leaves). Eastern gamagrass and switchgrass seeds are smooth. Eastern gamagrass is large, comparable to corn kernels, whereas switchgrass is small, much like clover.

PURE LIVE SEED (PLS)

Native seed does not have dependable germination and often cannot be cleaned to pure seed easily. Therefore, native grass and forb seed is specified and sold by the pounds of pure live seed to account for low germination and chaffy seed. Drills must be calibrated so they sow enough bulk seed to deliver the specified amount of pure live seed (PLS). The amount of bulk seed necessary to yield a given weight of PLS is calculated as follows:

Pounds of Bulk Seed = Pounds of Pure Live Seed

Purity (decimal) x Germination (decimal)

Example: To sow 10 lbs PLS with 50% purity and 50% germination, sow $10 / 0.5 \times 0.5 = 40$ lbs bulk seed.

PLANTING RATE

Planting rates of 4-6 lbs/acre PLS of NWSGs for drilled seed, and about one-third more for broadcast seed, are recommended for establishing stands for conservation purposes (wildlife, erosion control). These rates are considerably less than those used to establish livestock forage. A minimum of 3 or more NWSG species plus legumes and/or forbs is recommended for wildlife plantings.

PLANTING DEPTH

Seed depth is critical. Planting too deep is a common cause of stand failure. Optimum depth for most NWSGs is ¼ inch deep, and seeds planted deeper than ½ inch are not likely to germinate. The exception is eastern gamagrass, which should be planted 1 inch deep. When drilling, up to one-third of the seed may be left on top of the ground as long as the press wheels are ensuring good seed-to-soil contact.

PLANTING TIME

Northern NWSG cultivars (all but Texas) generally require a cold, moist stratification before they will germinate, whereas southern cultivars (Texas) do not. Also, most NWSGs will not germinate once soil temperature falls below 55° F.

	Plant Hardiness Zone 6	Plant Hardiness Zone 7	Plant Hardiness Zone 8
Northern Cultivars	Dec. 1 – Apr. 10	Dec. 15 – Apr. 10	Jan. 1 – Mar. 20
Southern Cultivars	N/A	Jan. 1 – May 1	Jan. 1 – May 1

Eastern gamagrass: Sow unstratified seed from November 1 until the ground hardens in northern Arkansas, and December 1 until hard ground in southern Arkansas. Sow stratified seed at normal corn planting time, generally April 15 to May 15.

SOIL AMENDMENTS

Soils should be tested and lime applied, if necessary, to bring the pH up to at least 5.5. A pH of 5.5-6.5 is preferred for most NWSGs. It may be beneficial to apply phosphorous and potassium if the soil test indicates they are below minimum levels. Nitrogen should not be applied because it stimulates weed competition.

SEEDING METHOD

Seeding may be performed by drilling or broadcasting.

Drilling:

Fluffy seed that has not been debarbed or that contains high percentages of chaff must be planted with a specialized warm-season no-till grass drill. These drills have grass seed boxes with dividers and agitators, picker wheels, and oversized drop tubes. The Arkansas Game and Fish Commission has several specialized NWSG no-till drills distributed throughout Arkansas available for use by landowners.

Debarbed seed with the chaff removed can be planted with a conventional drill. A possible exception to this is little bluestem, which can rarely be debarbed completely without damaging the seed.

Smooth seeds such as switchgrass can be planted using a conventional drill with the legume box set to place the seed ¼ inch deep. Fluffy seeds that have been debarbed can also be planted with a conventional drill; however, debarbed seed is expensive. Eastern gamagrass seed can be planted with a corn planter.

When drilling a mix of grasses and forbs where the seed has been debarbed, the grass and forb seed can be mixed together and all of it drilled through the same box. When the seed is not debarbed and the chaff has not been removed, it is recommended that the small smooth seed in the mix be run through the legume box and the larger smooth forb seed be run in the cool-season box, or else some areas will get no grass seed and other areas no forb seed.

Broadcasting:

Broadcasting with a spreader is an optional approach to drilling. Carriers may be necessary to allow spreading of fluffy seeds. Fertilizer should not be used as a carrier.

SEEDBED PREPARATION AND PLANTING

Seed may be drilled no-till into crop residue or killed sods; drilled into clean-tilled seedbeds; or broadcast on clean-tilled seedbeds and covered by rolling or cultipacking. Clean-tilled seedbeds should be fine-textured, firm, and as level as and weed-free as possible. No-till drilling reduces soil disturbance, thereby reducing weed competition and erosion, and is the preferred method for highly erodible soils.

Drilled no-till into crop residue: Seed may be drilled no-till into relatively weed-free crop stubble that has been left standing from the previous year. However, where hipped rows and/or crop residue will likely impede seeding with the drill, it is recommended to follow the clean-till method below.

Drilled no-till into killed sod: Seed may be drilled no-till into introduced cool- or warm-season sods killed with herbicide prior to planting. The most effective time to conduct this herbicide application is when the grass is actively growing – the previous summer for warm-season grasses (i.e., bermudagrass) or the previous fall for cool-season grasses (i.e., fescue). As much vegetation and thatch as possible should be removed before herbicide application (to allow herbicide to adequately contact the actively growing target grass) and before drilling seed (to provide a clean seedbed that will not prevent the drill from making good ground contact).

Clean-till: For fields cropped the previous year and relatively weed-free, the seedbed should be prepared by shallow disking followed by rolling or cultipacking. If drilling seed, unless a drill with press wheels is used, rolling or cultipacking is necessary after drilling. If broadcasting seed, the seedbed should be prepared by shallow disking followed and then rolled or cultipacked. After the seed is broadcast, rolling or cultipacking is again necessary to cover the seed.

Fallow fields: For fallow fields, or for fields cropped the previous year but with weed problems, the seedbed should be prepared by deep plowing in late fall to put weed seeds too deep to sprout, then disked shallow in spring to avoid bringing up weed seeds and to kill sprouted weeds, and then rolled or cultipacked. If drilling seed, unless a drill with press wheels is used, rolling or cultipacking is necessary after drilling. If broadcasting seed, the seedbed should be prepared by shallow disking and then rolled or cultipacked. After the seed is broadcast, rolling or cultipacking is again necessary to cover the seed.

ESTABLISHMENT PHASE AND CONTROL OF COMPETITION

NWSGs often take more than one year to become established. Some seeds will not germinate the first year.

Warm-season grasses thrive in direct sunlight. Control of competition is critical during the establishment phase of NWSGs. Annual grasses are the main concern, but broadleaf weeds may also be a problem. During the first summer of establishment, as weeds reach a height of 18 inches, stands should be rotary-mowed to a height just above the establishing NWSGs, but never less than 8-10 inches.

Herbicides labeled for use on NWSG's may also be used to control competition. Native forbs/legumes planted in the mix should be considered when planning herbicide use.

HERBICIDE APPLICATION

The University of Arkansas Cooperative Extension Service (UACES) should be contacted for information on herbicides to use for establishing NWSG mixes.

MANAGEMENT

To meet wildlife objectives, prescribed burning is the preferred management tool. It is best to burn one-third of the area every year on a 3-year rotation so there are two other areas remaining with different levels of residue. Strip disking is another option and is also best applied by disking one-third of the area every year on a 3-year rotation. Neither prescribed burning nor strip disking should be done until NWSGs are well established (year 4).

SPECIFICATIONS

Requirements. The practice shall be performed in a manner consistent with the NRCS Field Border (386) technical standard and specification, but only as it pertains to the wildlife purpose of the practice. Eligible plant species are limited to native warm-season grasses, legumes, forbs and shrubs beneficial for northern bobwhite quail and grassland songbirds as listed in Part B of this specification sheet. Cover establishment will be primarily by planting, with limited allowance of natural herbaceous succession. Eligible field border areas are determined based on the designated crop field boundary delineated on official Farm Service Agency imagery. It is strongly recommended that all sides of a field be buffered, but the actual edges buffered will be determined by the landowner and the planner. When the landowner does plan to enroll all sides of a field, a minimum 50-foot corridor shall not be enrolled to allow field access. For the life of the contract, buffers shall not be used as turn rows or roads, or for storage of crops or equipment.

Temporary Cover. Temporary cover when required is authorized in accordance with §3.A (C/S policy) of Notice CRP-479. A current soil test is strongly recommended for determining lime and fertilizer requirements of temporary cover. In lieu of a soil test, apply 30 pounds of nitrogen, 60 pounds of phosphorus, 60 pounds of potassium and one ton of lime per acre at the time of planting.

Seedbed Preparation and Planting. Native warm-season grasses may be drilled no-till into crop residue or killed sods, drilled into prepared seedbeds, or broadcast on prepared seedbeds and covered by cultipacking or rolling. Prepared seedbeds should be fine-textured, firm, and as weed-free and level as possible. They should be prepared at a minimum by disking and then rolling or cultipacking; plowing before disking may also be necessary. The seedbed should be packed after seeding – if broadcasting, by rolling or cultipacking; if drilling, by rolling or cultipacking if the drill is not equipped with press wheels. The no-till method of seedbed preparation and planting is recommended for highly erodible sites.

Competition Control. Follow-up weed control may be necessary during the establishment year if weeds are extremely thick or if large infestations of noxious weeds are present. When weeds reach a height of 18 inches, they should be rotary-mowed to a height just above the establishing native warm-season grasses, but never less than 8-12 inches. Herbicides labeled for use on native warm-season grasses may also be used to control competition. Native forbs/legumes planted in the mix should be considered when planning herbicide use.

Lime and Fertilizer. Shrub and native grass plantings do not require fertilizer. Application of phosphorus and potash may still be beneficial to native grass plantings and can be applied and cost-shared based on a current soil test. For soils in excess of a pH 5.5, lime is not required. In the absence of a soil test, lime is required to be applied at the rate of 1 ton per acre. Cost sharing shall be based on the current soil test when available.

Herbicides. Follow University of Arkansas Cooperative Extension Service recommendations for application of herbicides to eradicate introduced sods (i.e., fescue or bermudagrass) and to establish native warm-season grass mixes.

Natural Succession. An assessment will be conducted at each site by NRCS or the technical service provider to determine if the site qualifies to establish by natural succession

PLANTS

Species of Native Grasses, Legumes, and Forbs 1/

Native Grasses

- Bluestem, Big
- Bluestem, Little
- Gamagrass, Eastern
- Grama, Sideoats
- Indiangrass
- Switchgrass

Native Legumes/Forbs

Legumes:

- Aechynomene
- Bundleflower, Illinois
- Pea, Partridge

Wildflowers:

- Blackeyed Susan
- Coneflower, Purple
- Coreopsis, Lanceleaf
- Coreopsis, Plains
- Indian Blanket
- Primrose, Evening
- Sunflower, Maximillian
- Sunflower, Tickseed

1/ Other species of grasses, legumes, and forbs may be added to this listing but must be approved by NRCS before being planted.

Plant Hardiness Zone 6 – Northern Arkansas (Wildlife Plantings)							
Drainage Adapta- tion	Mix	Lbs/Ac of Pure Live Seed (PLS)		Seed- ing Dates	Major Land Resource Area (MLRA)		
		Drilled	Broad- cast		Mountains (MLRA N)	Delta (MLRA O)	Coastal Plain (MLRA P)
					Cultivar/s	Cultivar/s	Cultivar/s
Well	Big Bluestem	2.25	3.0	Dec. 1 to May 31	Roundtree, Kaw	Roundtree, Kaw	N/A
	Little Bluestem	1.25	1.75		Aldous, Cimarron	Aldous, Cimarron	
	Indiangrass	2.25	3.0		Rumsey, Osage, Cheyenne	Rumsey, Osage, Cheyenne	
	Partridge Pea <u>or</u>	1.0	1.0		Comanche, Riley	Comanche	
	Illinois Bundleflower	2.25	3.0		Sabine, Reno	Sabine	
Well	Big Bluestem	2.25	3.25	Dec. 1 to May 31	Roundtree, Kaw	Roundtree, Kaw	N/A
	Indiangrass	2.25	3.25		Rumsey, Osage, Cheyenne	Rumsey, Osage, Cheyenne	
	Switchgrass	1.0	1.0		Blackwell (upland), Kanlow (lowland)	Kanlow (lowland), Blackwell (upland)	
	Partridge Pea <u>or</u>	1.0	1.0		Comanche, Riley	Comanche	
	Illinois Bundleflower	2.25	3.0		Sabine, Reno	Sabine	
Well to Excessive	Little Bluestem	1.25	2.0	Dec. 1 to May 31	Aldous, Cimarron	Aldous, Cimarron	N/A
	Indiangrass	2.25	3.25		Rumsey, Osage (dry sites), Cheyenne	Rumsey, Osage (dry sites), Cheyenne	
	Switchgrass	1.0	1.0		Blackwell (upland and/or dry sites), Kanlow (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland)	
	Partridge Pea <u>or</u>	1.0	1.0		Comanche, Riley	Comanche	
	Illinois Bundleflower	2.25	3.0		Sabine, Reno	Sabine	
Well to Excessive	Little Bluestem	1.25	1.75	Dec. 1 to May 31	Aldous, Cimarron	N/A	N/A
	Indiangrass	2.25	3.0		Rumsey, Osage (dry sites), Cheyenne		
	Sideoats Grama	2.0	2.75		El Reno		
	Partridge Pea <u>or</u>	1.0	1.0		Comanche, Riley		
	Illinois Bundleflower	2.25	3.0		Sabine, Reno		
Poor	Eastern Gamagrass	5.0	7.0	Dec. 1 to May 31	Pete, Iuka	Pete, Iuka	N/A
	Switchgrass	1.0	1.0		Blackwell, Kanlow (wet sites)	Blackwell, Kanlow (wet sites)	
	Aeschynomene	1.0	1.0		Common seed	Common seed	

Plant Hardiness Zone 7 – Central Arkansas (Wildlife Plantings)

Drainage Adapta- tion	Mix	Lbs/Ac of Pure Live Seed (PLS)		Seed- ing Dates	Major Land Resource Area (MLRA)		
		Drilled	Broad- cast		Mountains (MLRA N)	Delta (MLRA O)	Coastal Plain (MLRA P)
					Cultivar/s	Cultivar/s	Cultivar/s
					Cultivar/s	Cultivar/s	Cultivar/s
Well	Big Bluestem	2.25	3.0	Dec. 1 to May 31	Roundtree, Kaw, Earl	Roundtree, Kaw, Earl	Kaw, Earl
	Little Bluestem	1.25	1.75		Aldous, Cimarron	Aldous, Cimarron	Aldous, Cimarron
	Indiangrass	2.25	3.0		Rumsey, Osage, Cheyenne, Lometa	Rumsey, Osage, Cheyenne, Lometa	Osage, Cheyenne, Lometa
	Partridge Pea or Illinois Bundleflower	1.0	1.0		Comanche, Riley	Comanche, Lark	Comanche
		2.25	3.0		Sabine, Reno	Sabine	Sabine
Well	Big Bluestem	2.25	3.25	Dec. 1 to May 31	Roundtree, Kaw, Earl	Roundtree, Kaw	Kaw, Earl
	Indiangrass	2.25	3.25		Rumsey, Osage, Cheyenne, Lometa	Rumsey, Osage, Cheyenne, Lometa	Osage, Cheyenne, Lometa
	Switchgrass	1.0	1.0		Blackwell (upland), Kanlow (lowland), Alamo (lowland)	Blackwell (upland), Kanlow (lowland), Alamo (lowland)	Blackwell (upland), Kanlow (lowland), Alamo (lowland)
	Partridge Pea or Illinois Bundleflower	1.0	1.0		Comanche, Riley	Comanche, Lark	Comanche
		2.25	3.0		Sabine, Reno	Sabine	Sabine
Well to Excessive	Little Bluestem	1.25	2.0	Dec. 1 to May 31	Aldous, Cimarron	Aldous, Cimarron	Aldous, Cimarron
	Indiangrass	2.25	3.25		Rumsey, Osage (dry sites), Cheyenne, Lometa	Rumsey, Osage (dry sites), Cheyenne, Lometa	Osage, Cheyenne, Lometa
	Switchgrass	1.0	1.0		Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)
	Partridge Pea or Illinois Bundleflower	1.0	1.0		Comanche, Riley	Comanche, Lark	Comanche
		2.25	3.0		Sabine, Reno	Sabine	Sabine
Well to Excessive	Little Bluestem	1.25	1.75	Dec. 1 to May 31	Aldous, Cimarron	N/A	N/A
	Indiangrass	2.25	3.0		Rumsey, Osage (dry sites), Cheyenne, Lometa		
	Sideoats Grama	2.0	2.75		Haskell, El Reno		
	Partridge Pea or Illinois Bundleflower	1.0	1.0		Comanche, Riley		
		3.0	3.0		Sabine, Reno		
Poor	Eastern Gamagrass	5.0	7.0	Dec. 1 to May 31	Pete, Iuka	Pete, Iuka	Pete, Iuka
	Switchgrass	1.0	1.0		Blackwell, Kanlow (wet sites), Alamo (wet sites)	Blackwell, Kanlow (wet sites), Alamo (wet sites)	Blackwell, Kanlow (wet sites), Alamo (wet sites)
	Aeschynomene	1.0	1.0		Common seed	Common seed	Common seed

Plant Hardiness Zone 8 – Southern Arkansas (Wildlife Plantings)							
Drainage Adapta- tion	Mix	Lbs/Ac of Pure Live Seed (PLS)		Seed- ing Dates	Major Land Resource Area (MLRA)		
		Drilled	Broad- cast		Mountains (MLRA N)	Delta (MLRA O)	Coastal Plain (MLRA P)
					Cultivar/s	Cultivar/s	Cultivar/s
Well	Big Bluestem	2.25	3.0	Dec. 15 to May 31	N/A	Earl	Earl
	Little Bluestem	1.25	1.75			Cimarron	Cimarron
	Indiangrass	2.25	3.0			Cheyenne, Lometa	Cheyenne, Lometa
	Partridge Pea <u>or</u>	1.0	1.0			Comanche, Lark	Comanche
	Illinois Bundleflower	2.25	3.0			Sabine	Sabine
Well	Big Bluestem	2.25	3.25	Dec. 15 to May 31	N/A	Earl	Earl
	Indiangrass	2.25	3.25			Cheyenne, Lometa	Cheyenne, Lometa
	Switchgrass	1.0	1.0			Blackwell (upland), Kanlow (lowland), Alamo (lowland)	Blackwell (upland), Kanlow (lowland), Alamo (lowland)
	Partridge Pea <u>or</u>	1.0	1.0			Comanche, Lark	Comanche
	Illinois Bundleflower	2.25	3.0			Sabine	Sabine
Well to Excessive	Little Bluestem	1.25	2.0	Dec. 15 to May 31	N/A	Cimarron	Cimarron
	Indiangrass	2.25	3.25			Cheyenne, Lometa	Cheyenne, Lometa
	Switchgrass	1.0	1.0			Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)
	Partridge Pea <u>or</u>		1.0			Comanche, Lark	Comanche
	Illinois Bundleflower		3.0			Sabine	Sabine
Poor	Eastern Gamagrass	5.0	7.0	Dec. 15 to May 31	N/A	Pete, Iuka	Pete, Iuka
	Switchgrass	1.0	1.0			Blackwell, Kanlow (wet sites), Alamo (wet sites)	Blackwell, Kanlow (wet sites), Alamo (wet sites)
	Aeschynomene	1.0	1.0			Common seed	Common seed

1/ On sites with well-drained to excessively-drained soils, the following native wildflowers may be added to mixes at a

seeding rate of 0.25 lb/ac PLS per species:

Blackeyed Susan	Indian Blanket
Coneflower, Purple	Primrose, Evening
Coreopsis, Lanceleaf	Sunflower, Maximillian
Coreopsis, Plains	Sunflower, Tickseed

2/ Local ecotypes or other cultivars adapted to the site (soil drainage, plant hardiness zone, and major land resource area)

may be used in place of the cultivars listed for any species.

3/ Other mixes may be added to this listing but must be approved by NRCS before being planted.

Suitable Shrubs 1/, 2/, 3/, 4/

Species	Allowable Spacing Range (Ft)	Drainage Adaptation	Plant Hardiness Zone	Major Land Resource Area	Planting Dates
Beautberry, American	3-6	Well to poor	All	All	Dec. 1 to Mar. 31
Dogwood					
Rough-leaved Dogwood	5-8	Well to poor	All	All	
Silky Dogwood	3-6	Well to poor	All	N	
Gray Dogwood	3-6	Well	All	All	
Elderberry, Common	5-8	Well to poor	All	All	
Hawthorn:					
Cockspur Hawthorn	5-8	Well to excessive	All	All	
Washington Hawthorn	5-8	Well to excessive	All	All	
Holly, Deciduous (Possumhaw)	5-8	Well to poor	All	All	
Indigobush	5-8	Well to poor	All	All	
Plum:					
American (Wild) Plum	5-8	Well	All	All	
Chickasaw Plum	5-8	Well	All	All	
Spicebush	5-8	Well to poor	All	All	
Sumac:					
Fragrant Sumac	3-6	Well to excessive	All	All	
Smooth Sumac	3-6	Well to excessive	All	All	

1/ It is recommended to plant a mix containing at least 2 species of shrubs.

2/ To provide essential loafing and winter cover for northern bobwhite, it is recommended to establish areas of planted shrubs to serve as “covey headquarters” sites. These sites should be a minimum of 20 feet wide and cover 1,500 square feet. They should comprise at least 5% of the practice area and be no more than 0.25 mile linear distance from one another (the 0.25 mile distance between “covey headquarters” sites applies to buffers 30 feet wide; for wider buffers, this distance should be reduced accordingly). Shrubs should be planted at either 5-ft x 5-ft or 6-ft x 6-ft spacings. Preferred shrub species for this purpose are dogwoods, plums, or sumacs.

3/ Number of shrubs per acre at allowable spacings:

3 ft x 3 ft = 4,840
 4 ft x 4 ft = 2,723
 5 ft x 5 ft = 1,742
 6 ft x 6 ft = 1,210
 7 ft x 7 ft = 889
 8 ft x 8 ft = 680

4/ Other species of shrubs may be added to this listing but must be approved by NRCS before being planted.

C. TEMPORARY COVER

Eligible Temporary Cover Species for Summer or Winter Cover 1/

Summer Cover						
Species	Lbs per Acre		Drainage Adaptation	Plant Hardiness Zone	Major Land Resource Area	Planting Dates
	Drilled	Broadcast				
Millet, Browntop	15-20	20-30	Well to excessive	All	All	Apr. 1 to Aug. 15
Millet, Japanese	10-15	20-30	Well to poor	All	All	Apr. 1 to Aug. 15
Millet, Proso	20-30	30-40	Well to excessive	All	All	Apr. 1 to Aug. 15
Oats	90-120	120-150	Well	All	All	Feb. 1 to Apr. 1

Winter Cover						
Species	Lbs per Acre		Drainage Adaptation	Plant Hardiness Zone	Major Land Resource Area	Planting Dates
	Drilled	Broadcast				
Oats	90-120	120-150	Well	All	All	Sep. 1 to Dec. 1
Wheat	90-120	120-150	Well	All	All	Sep. 1 to Dec. 1
Triticale	90-120	120-150	Well to poor	All	All	Sep. 1 to Dec. 1
Barley	90-120	120-150	Well	All	All	Sep. 1 to Dec. 1

1/ Other temporary cover species are eligible but must be approved by NRCS before being planted.

Mixes of Native Grasses, Legumes, and Forbs 1/, 2/, 3/

Plant Hardiness Zone 6 – Northern Arkansas (Forage Plantings)							
Drainage Adapta- tion	Mix	Lbs/Ac of Pure Live Seed (PLS)		Seed- ing Dates	Major Land Resource Area (MLRA)		
		Drilled	Broad- cast		Mountains (MLRA N)	Delta (MLRA O)	Coastal Plain (MLRA P)
					Cultivar/s	Cultivar/s	Cultivar/s
Well	Big Bluestem	4.0	5.0	Dec. 1 to May 31	Roundtree, Kaw	Roundtree, Kaw	N/A
	Little Bluestem	2.0	2.0		Aldous, Cimarron	Aldous, Cimarron	
	Indiangrass	4.0	5.0		Rumsey, Osage, Cheyenne	Rumsey, Osage, Cheyenne	
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno	Comanche Sabine	
Well	Big Bluestem	4.0	5.0	Dec. 1 to May 31	Roundtree, Kaw	Roundtree, Kaw	N/A
	Indiangrass	4.0	5.0		Rumsey, Osage, Cheyenne	Rumsey, Osage, Cheyenne	
	Switchgrass	2.0	2.0		Blackwell (upland), Kanlow (lowland)	Kanlow (lowland), Blackwell (upland)	
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno	Comanche Sabine	
Well to Excessive	Little Bluestem	4.0	5.0	Dec. 1 to May 31	Aldous, Cimarron	Aldous, Cimarron	N/A
	Indiangrass	5.0	6.0		Rumsey, Osage (dry sites), Cheyenne	Rumsey, Osage (dry sites), Cheyenne	
	Switchgrass	2.0	2.0		Blackwell (upland and/or dry sites), Kanlow (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland)	
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno	Comanche Sabine	
Well to Excessive	Little Bluestem	4.0	5.0	Dec. 1 to May 31	Aldous, Cimarron	N/A	N/A
	Indiangrass	5.0	6.0		Rumsey, Osage (dry sites), Cheyenne		
	Sideoats Grama	4.0	5.0		El Reno		
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno		
Poor	Eastern Gamagrass	8.0	10.0	Dec. 1 to May 31	Pete, Iuka	Pete, Iuka	N/A
	Switchgrass	2.0	2.0		Blackwell, Kanlow (wet sites)	Blackwell, Kanlow (wet sites)	
	Annual Lespedeza	10.0	15.0		Common seed	Common seed	

Plant Hardiness Zone 7 – Central Arkansas (Forage Plantings)							
Drainage Adapta- tion	Mix	Lbs/Ac of Pure Live Seed (PLS)		Seed- ing Dates	Major Land Resource Area (MLRA)		
		Drilled	Broad- cast		Mountains (MLRA N)	Delta (MLRA O)	Coastal Plain (MLRA P)
					Cultivar/s	Cultivar/s	Cultivar/s
Well	Big Bluestem	4.0	5.0	Dec. 1 to May 31	Roundtree, Kaw, Earl	Roundtree, Kaw, Earl	Kaw, Earl
	Little Bluestem	2.0	2.0		Aldous, Cimarron	Aldous, Cimarron	Aldous, Cimarron
	Indiangrass	4.0	5.0		Rumsey, Osage, Cheyenne, Lometa	Rumsey, Osage, Cheyenne, Lometa	Osage, Cheyenne, Lometa
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno	Comanche, Lark Sabine	Comanche Sabine
Well	Big Bluestem	4.0	5.0	Dec. 1 to May 31	Roundtree, Kaw, Earl	Roundtree, Kaw	Kaw, Earl
	Indiangrass	4.0	5.0		Rumsey, Osage, Cheyenne, Lometa	Rumsey, Osage, Cheyenne, Lometa	Osage, Cheyenne, Lometa
	Switchgrass	2.0	2.0		Blackwell (upland), Kanlow (lowland), Alamo (lowland)	Blackwell (upland), Kanlow (lowland), Alamo (lowland)	Blackwell (upland), Kanlow (lowland), Alamo (lowland)
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno	Comanche, Lark Sabine	Comanche Sabine
Well to Excessive	Little Bluestem	4.0	5.0	Dec. 1 to May 31	Aldous, Cimarron	Aldous, Cimarron	Aldous, Cimarron
	Indiangrass	5.0	6.0		Rumsey, Osage (dry sites), Cheyenne, Lometa	Rumsey, Osage (dry sites), Cheyenne, Lometa	Osage, Cheyenne, Lometa
	Switchgrass	2.0	2.0		Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno	Comanche, Lark Sabine	Comanche Sabine
Well to Excessive	Little Bluestem	4.0	5.0	Dec. 1 to May 31	Aldous, Cimarron	N/A	N/A
	Indiangrass	5.0	6.0		Rumsey, Osage (dry sites), Cheyenne, Lometa		
	Sideoats Grama	4.0	5.0		Haskell, El Reno		
	Annual Lespedeza	10.0	15.0		Comanche, Riley Sabine, Reno		
Poor	Eastern Gamagrass	8.0	10.0	Dec. 1 to May 31	Pete, Iuka	Pete, Iuka	Pete, Iuka
	Switchgrass	2.0	2.0		Blackwell, Kanlow (wet sites), Alamo (wet sites)	Blackwell, Kanlow (wet sites), Alamo (wet sites)	Blackwell, Kanlow (wet sites), Alamo (wet sites)
	Annual Lespedeza	10.0	15.0		Common seed	Common seed	Common seed

Plant Hardiness Zone 8 – Southern Arkansas (Forage Plantings)									
Drainage Adapta- tion	Mix	Lbs/Ac of Pure Live Seed (PLS)		Seed- ing Dates	Major Land Resource Area (MLRA)				
		Drilled	Broad- cast		Mountains (MLRA N)	Delta (MLRA O)	Coastal Plain (MLRA P)		
					Cultivar/s	Cultivar/s	Cultivar/s		
Well	Big Bluestem	4.0	5.0	Dec. 15 to May 31	N/A	Earl	Earl		
	Little Bluestem	2.0	2.0			Cimarron	Cimarron		
	Indiangrass	4.0	5.0			Cheyenne, Lometa	Cheyenne, Lometa		
	Annual Lespedeza	10.0	15.0			Comanche, Lark Sabine	Comanche Sabine		
Well	Big Bluestem	4.0	5.0	Dec. 15 to May 31	N/A	Earl	Earl		
	Indiangrass	4.0	5.0			Cheyenne, Lometa	Cheyenne, Lometa		
	Switchgrass	2.0	2.0			Blackwell (upland), Kanlow (lowland), Alamo (lowland)	Blackwell (upland), Kanlow (lowland), Alamo (lowland)		
	Annual Lespedeza	10.0	15.0			Comanche, Lark Sabine	Comanche Sabine		
Well to Excessive	Little Bluestem	4.0	5.0	Dec. 15 to May 31	N/A	Cimarron	Cimarron		
	Indiangrass	5.0	6.0			Cheyenne, Lometa	Cheyenne, Lometa		
	Switchgrass	2.0	2.0			Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)	Blackwell (upland and/or dry sites), Kanlow (lowland), Alamo (lowland)		
	Annual Lespedeza	10.0	15.0			Comanche, Lark Sabine	Comanche Sabine		
Poor	Eastern Gamagrass	8.0	10.0	Dec. 15 to May 31	N/A	Pete, Iuka	Pete, Iuka		
	Switchgrass	2.0	2.0			Blackwell, Kanlow (wet sites), Alamo (wet sites)	Blackwell, Kanlow (wet sites), Alamo (wet sites)		
	Annual Lespedeza	10.0	15.0			Common seed	Common seed		

1/ Annual lespedeza planted in NWSG mixes should be planted at a rate of 10 lb/ac drilled or 15 lb/ac broadcast. Use Kobe in the southern 2/3 of the state and Korean or Marion in the northern 2/3 of the state.

2/ Local ecotypes or other cultivars adapted to the site (soil drainage, plant hardiness zone, and major land resource area) may be used in place of the cultivars listed for any species.

3/ Other mixes may be added to this listing but must be approved by NRCS before being planted.

4/ To maximize wildlife value in forage plantings, plant at the recommended wildlife rate rather than the forage rate within 100 feet of woody cover.

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