

N1a– Kansas Cover Mix Guidance for CP25

Mixed Grass Prairie (Seeding Rates and Mixtures)

Mixed grass prairies shall be planted to a minimum of five native grass species and a mixture of 10 native forbs and/or legumes equaling 1.0 PLS pound per acre.

Geographic Area: Barton, Clark, Comanche, Edwards, Ellis, Ford, Graham, Hodgeman, Kiowa, Ness, Norton, Osborne, Pawnee Phillips, Pratt, Rooks, Rush, Russell, Smith, Stafford, and Trego Counties in Kansas.

Species (minimum of <i>five</i> grass species, grass species mix must total 100 percent, plus 1 PLS lb of forb/legume mix)	pls/lbs/ac	Percent of Grass Mixture
Big bluestem	6.0	20-30
Little bluestem	4.0	10-20
Indiangrass	6.0	0-10
Switchgrass	3.0	10-20
Sideoats grama	6.0	0-20
Blue grama	2.0	10-20
Buffalograss	5.0	0-10
Western wheatgrass	10.0	10-15
Forb/legume species (minimum of 10 from the list below)*	1.0	Add 1 PLS lb/ac
*Forb species selected must be adapted to the site. Refer to the Field Office Technical Guide, Section II, Ecological Site Descriptions (Range Sites), for additional guidance on forb seeding rates and species selection on a specific site.		

Commercially Available Native Forbs**

Arkansas rose (<i>Rosa arkansana</i>)	Missouri goldenrod (<i>Solidago missouriensis</i>)
Blackeyed Susan (<i>Rudbeckia hirta</i>)	Pitcher sage (<i>Salvia azurea</i>)
Blanketflower (<i>Gaillardia aristata</i>)	Plains coreopsis (<i>Coreopsis tinctoria</i>)
Butterfly milkweed (<i>Asclepias tuberosa</i>)	Purple coneflower/Blacksampson (<i>Echinacea angustifolia</i>)
Clasping coneflower (<i>Dracopis amplexicaulis</i>)	Roundhead lespedeza (<i>Lespedeza capitata</i>)
Cudweed sagewort (<i>Artemisia ludoviciana</i>)	Scarlet globemallow (<i>Sphaeralcea coccinea</i>)
Dotted gayfeather (<i>Liatris punctata</i>)	Shell leaf penstemon/large beardtongue (<i>Penstemon grandiflorus</i>)
Englemann's daisy (<i>Engelmannia peristenia</i>)	Showy partridgepea (<i>Chamaecrista fasciculata</i>)
False sunflower/Smooth oxeye (<i>Heliopsis helianthoides</i>)	Stiff goldenrod (<i>Oligoneuron rigidum</i>)
Fringed sagewort (<i>Artemisia frigida</i>)	Stiff sunflower (<i>Helianthus paniculatus</i>)
Grayhead coneflower (<i>Ratibida pinnata</i>)	Swamp milkweed (<i>Asclepias incarnata</i>)
Hairy goldenaster (<i>Heterotheca villosa</i>)	Upright coneflower (<i>Ratibida columnifera</i>)
Illinois bundleflower (<i>Desmanthus illinoensis</i>)	White aster (<i>Symphyotrichum ericoides</i>)
Indian blanket (<i>Gaillardia pulchella</i>)	White prairieclover (<i>Dalea candida</i>)
Leadplant (<i>Amorpha canescens</i>)	
Maximilian sunflower (<i>Helianthus maximiliani</i>)	

**Refer to the Field Office Technical Guide, Section II, Ecological Site Descriptions (Range Sites), for guidance on species adaptability to range sites and additional species that are not listed above. Refer to Conservation Practice 643, Restoration and Management of Rare or Declining Habitats, for additional practice guidance.

Sand Prairie (Seeding Rates and Mixtures)

Sand prairies shall be planted to a minimum of five native grass species and five forb/legume species. One percent of the acreage shall be planted to shrubs.

Geographic Area: Barton, Edwards, Harvey, Kiowa, Kingman, Pawnee, Pratt, Reno, Rice, and Stafford Counties in Kansas.

This seeding mixture is to be applied on the following range sites: Choppy Sands, Sands, Sandy, Sandy Lowland, Sandy Terrace, and Sub-irrigated with a sandy surface texture.

Species (minimum of five grass species, grass species mix must total 100 percent, plus 1 PLS lb of forb/legume mix, plus shrubs)	pls/lbs/ac	Percent of Grass Mixture
Big bluestem or Sand bluestem	6.0	10-20
Little bluestem	4.0	10-20
Indiangrass	6.0	10-20
Switchgrass	3.0	10-20
Sand lovegrass	2.0	0-20
Sideoats grama	6.0	0-10
Blue grama	2.0	0-15
Prairie sandreed	4.0	0-10
Giant sandreed	4.0	0-10
Forb/legume species (minimum of five from the list below)*	1.0	Add 1 PLS lb/ac
Shrubs (i.e., sandplum, golden currant)	1 percent of acreage	1 percent of area to be seeded
*Forb species selected must be adapted to the site. Refer to the Field Office Technical Guide, Section II, Ecological Site Descriptions (Range Sites), for additional guidance on forb seeding rates and species selection on a specific site.		

Commercially Available Native Forbs**

Catsclaw sensitive briar (*Mimosa nuttallii*)
 Compassplant (*Silphium laciniatum*)
 Dotted gayfeather (*Liatris punctata*)
 Illinois bundleflower (*Desmanthus illnoensis*)
 Maximilian sunflower (*Helianthus maximiliani*)
 Pale purple coneflower (*Echinacea pallida*)
 Pitcher sage (*Salvia azurea*)
 Prairie sunflower (*Helianthus petiolaris*)

Purple prairieclover (*Dalea purpurea*)
 Roundhead lespedeza (*Lespedeza capitata*)
 Showy partridgepea (*Chamaecrista fasciculata*)
 Silktop dalea (*Dalea aurea*)
 Slimflower scurfpea (*Psoralidium tenuiflorum*)
 Texas croton (*Croton texensis*)
 Upright coneflower (*Ratibida columnifera*)
 Virginia tephrosia (*Tephrosia virginiana*)

Sandsage Prairie (Seeding Rates and Mixtures)

Sandsage prairies shall be planted to a minimum of five native grass species, and four forb/legume species, and an additional 0.10 PLS pound per acre sandsage.

Geographic Area: Clark, Comanche, Edwards, Finney, Ford, Gray, Grant, Hamilton, Haskell, Kearny, Kiowa, Lane, Meade, Morton, Scott, Seward, Stanton, and Stevens Counties in Kansas.

This seeding mixture is to be applied on range sites: Choppy Sands, Sands, Sandy, Sandy Lowland, Sandy Terrace, and Sub-irrigated range sites with sandy surface texture.

Species (Minimum of five grass species. Grass species mix must total 100 percent, plus 1 PLS lb of forb/legume mix and 0.1 PLS lb Sand sagebrush per acre.)	pls/lbs/ac	Percent of Grass Mixture
Big bluestem or Sand bluestem	6.0	10-20
Little bluestem	4.0	10-20
Indiangrass	6.0	10-20
Switchgrass	3.0	10-20
Sand lovegrass	2.0	0-20
Sideoats grama	6.0	0-10
Blue grama	2.0	0-15
Prairie sandreed	4.0	0-10
Giant sandreed	4.0	0-10
Forb/legume species (minimum of four from the list below)*	1.0	Add 1 PLS lb/ac
Sand sagebrush	0.10	0.10 PLS lb/ac
*Forb species selected must be adapted to the site. Refer to the Field Office Technical Guide, Section II, Ecological Site Descriptions (Range Sites), for additional guidance on forb seeding rates and species selection on a specific site.		

Commercially Available Native Forbs**

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| Dotted gayfeather (<i>Liatris punctata</i>) | Pitcher sage (<i>Salvia azurea</i>) |
| Englemann's daisy (<i>Engelmannia peristenia</i>) | Purple praireclover (<i>Dalea purpurea</i>) |
| Illinois bundleflower (<i>Desmanthus illinoensis</i>) | Showy partridgepea (<i>Chamaecrista fasciculata</i>) |
| Indian blanket (<i>Gaillardia pulchella</i>) | Upright coneflower (<i>Ratibida columnifera</i>) |
| Maximillian sunflower (<i>Helianthus maximilian</i>) | |

Refer to Conservation Practice 643, Restoration and Management of Rare or Declining Habitats, for additional practice guidance.

Shortgrass Prairie (Seeding Rates and Mixtures)

Shortgrass prairies shall be planted to a minimum of five native grass species and four native forb/legume species.

Geographic area: Cheyenne, Decatur, Finney, Gove, Grant, Gray, Greeley, Hamilton, Haskell, Kearny, Lane, Logan, Meade, Morton, Rawlins, Scott, Seward, Sherman, Sheridan, Stanton, Stevens, Thomas, Wallace, and Wichita Counties.

Species (minimum of five grass species, grass species mix must total 100 percent, plus 1 PLS lb of forb/legume mix)	pls/lbs/ac	Percent of Grass Mixture
Blue grama	2.0	30% required
Buffalograss	5.0	15% required
Switchgrass	3.0	10-20
Little bluestem	4.0	0-20
Big bluestem	6.0	0-15
Sideoats grama	6.0	10-30
Western wheatgrass	10.0	0-15
Forb/legume species (minimum of four from the list below)*	1.0	Add 1 PLS lb/ac
*Forb species selected must be adapted to the site. Refer to the Field Office Technical Guide, Section II, Ecological Site Descriptions (Range Sites), for additional guidance on forb seeding rates and species selection on a specific site.		

Commercially Available Native Forbs**

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| Purple coneflower/Blacksampson (<i>Echinacea angustifolia</i>) | Maximillian sunflower (<i>Helianthus maximiliani</i>) |
| Dotted gayfeather (<i>Liatris punctata</i>) | Purple prairie clover (<i>Dalea purpurea</i>) |
| Englemann's daisy (<i>Engelmannia perstenia</i>) | Pitcher sage (<i>Salvia azurea</i>) |
| Illinois bundleflower (<i>Desmanthus illinoensis</i>) | Upright coneflower (<i>Ratibida columnifera</i>) |
| Leadplant (<i>Amorpha canescens</i>) | |

**Refer to the Field Office Technical Guide, Section II, Ecological Site Descriptions (Range Sites), for guidance on species adaptability to range sites and additional species that are not listed above.

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Tallgrass Prairie (Seeding Rates and Mixtures)

Tallgrass prairies shall be planted to a minimum of five native grass species and ten native forb/legume species.

Geographic area: Jewell, Mitchell, Lincoln, Ellsworth, Rice, Reno, Kingman, Barber, and all counties to the east thereof in Kansas.

Species (minimum of five grass species, grass species mix must total 100%, plus 1 PLS lb of forb/legume mix)	PLS Pounds per Acre	Percent of Grass Mixture
Big bluestem	6.0	15-35
Little bluestem	4.0	15-30
Indiangrass	6.0	10-25
Switchgrass	3.0	5-20
Sideoats grama	6.0	0-20
Blue grama	2.0	0-15
Buffalograss	5.0	0-10
Western wheatgrass	10.0	0-15
Forb/legume species (minimum of ten from the list below)*	1.0	Add 1 PLS lb/ac
*Forb species selected must be adapted to the site. Refer to the Field Office Technical Guide, Section II, Ecological Site Descriptions (Range Sites), for additional guidance on forb seeding rates and species selection on a specific site.		

Commercially Available Native Forbs**

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| Arkansas rose (<i>Rosa arkansana</i>) | New England aster (<i>Symphyotrichum novae-angliae</i>) |
| Blackeyed Susan (<i>Rudbeckia hirta</i>) | Pale purple coneflower (<i>Echinacea pallida</i>) |
| Blanketflower (<i>Gaillardia aristata</i>) | Pitcher sage (<i>Salvia azurea</i>) |
| Butterfly milkweed (<i>Asclepias tuberosa</i>) | Plains coreopsis (<i>Coreopsis tinctoria</i>) |
| Canada milkvetch (<i>Astragalus canadensis</i>) | Prairie aster (<i>Symphyotrichum patens</i>) |
| Clasping coneflower (<i>Dracopis amplexicaulis</i>) | Purple coneflower/Blacksampson (<i>Echinacea angustifolia</i>) |
| Cudweed sagewort (<i>Artemisia ludoviciana</i>) | Purple coneflower (<i>Echinacea purpurea</i>) |
| Dotted gayfeather (<i>Liatris punctata</i>) | Purple prairieclover (<i>Dalea purpurea</i>) |
| Englemann's daisy (<i>Engelmannia peristenia</i>) | Roundhead lespedeza (<i>Lespedeza capitata</i>) |
| False sunflower/Smooth oxeye (<i>Heliopsis helianthoides</i>) | Scarlet globemallow (<i>Sphaeralcea coccinea</i>) |
| Fringed sagewort (<i>Artemisia frigida</i>) | Shell leaf penstemon/large beardtongue (<i>Penstemon grandiflorus</i>) |
| Grayhead coneflower (<i>Ratibida pinnata</i>) | Showy partridgepea (<i>Chamaecrista fasciculata</i>) |
| Hairy goldenaster (<i>Heterotheca villosa</i>) | Stiff goldenrod (<i>Oligoneuron rigidum</i>) |
| Illinois bundleflower (<i>Desmanthus illnoensis</i>) | Stiff sunflower (<i>Helianthus pauciflorus</i>) |
| Indian blanket (<i>Gaillardia pulchella</i>) | Swamp milkweed (<i>Asclepias incarnata</i>) |
| Lance-leaf coreopsis (<i>Coreopsis lanceolata</i>) | Thickspike gayfeather (<i>Liatris pycnostachya</i>) |
| Leadplant (<i>Amorpha canescens</i>) | Upright coneflower (<i>Ratibida columnifera</i>) |
| Maximilian sunflower (<i>Helianthus maximiliani</i>) | White aster (<i>Symphyotrichum ericoides</i>) |
| Missouri goldenrod (<i>Solidago missouriensis</i>) | White prairieclover (<i>Dalea canida</i>) |
| Missouri Primrose (<i>Oenothera macrocarpa</i>) | Wild bergamot (<i>Monarda fistulosa</i>) |

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