

## **Animal Enhancement Activity – KS-ANM22 Restoration and Management of Rare and Declining Habitats**

### **Kansas Criteria for National Animal Enhancement Activity – ANM22**

1. Types of habitat eligible for rare and declining status are: Tallgrass prairie, mixed grass prairie, sand prairie, shortgrass prairie, and sandsage prairie.
2. For land currently identified as rangeland, Ecological Site Descriptions (ESDs) shall be used to determine targeted species composition. Management practices identified as necessary to restore plant communities shall be identified. Practices identified or targeted as necessary to restore habitat shall be wildlife-friendly and not detrimental to favorable or desired plant species.
3. For new plantings, refer to Conservation Practice 643, Rare and Declining Habitat, for specific species by habitat type to be seeded and tables referenced.

**Tallgrass prairie:** Tallgrass prairies will be planted to a minimum of five native grass species and ten native forb/legume species. Seeding rates and mixtures are shown in Table S-2.

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

**Mixed grass prairie:** Mixed grass prairies will be planted to a minimum of five native grass species and a mixture of ten native forbs and/or legumes equaling 1 pure live seed (PLS) pound per acre. Seeding rates and mixtures are shown in Table S-2a.

*Geographic area:* Norton, Phillips, Smith, Graham, Rooks, Osborne, Trego, Ellis, Russell, Ness, Rush, Barton, Hodgeman, and Pawnee counties in Kansas.

**Sand prairie:** Sand prairies will be planted to a minimum of five native grass species and five forb/legume species. One percent of the acreage will be planted to sand plum. Seeding rates and mixtures are shown in Table S-3.

*Geographic area:* Barton, Edwards, Harvey, Kiowa, Kingman, Pawnee, Pratt, Reno, Rice, and Stafford counties in Kansas applied on the following ecological sites: Choppy Sands, Sands, Sandy, Sandy Lowland, Sandy Terrace, and sub-irrigated with a sandy surface texture.

**Shortgrass prairie:** Shortgrass prairies will be planted to a minimum of five native grass species and four native forb/legume species. Seeding rates and mixtures are shown in Table S-4.

*Geographic area:* Cheyenne, Decatur, Finney, Gove, Grant, Gray, Greeley, Hamilton, Haskell, Kearny, Lane, Logan, Meade, Rawlins, Scott, Sherman, Sheridan, Stanton, Thomas, Wallace, and Wichita Counties. This area is within Major Land Resource Area (MLRA) 72 and includes the predominant soil series of Campus, Colby, Elkader, Keith, Kuma, Mansic, Mansker, Richfield, and Ulysses.

Sandsage prairie: Sandsage prairies will be planted to a minimum of five native grass species, four forb/legume species, and 0.10 PLS pound per acre sandsage. Seeding rates and mixtures are shown in Table S-5.

*Geographic area:* Clark, Comanche, Edwards, Finney, Ford, Gray, Grant, Hamilton, Haskell, Kearny, Kiowa, Lane, Meade, Morton, Scott, Seward, Stanton, and Stevens counties in Kansas on the following ecological sites: Choppy Sands, Sands, Sandy, Sandy Lowland, Sandy Terrace, and sub-irrigated range sites with sandy surface texture.

#### 4. Seeding

Methods: Refer to Conservation Practice Standard 550, Range Planting, for cover crop, seedbed preparation, planting rates, depth of planting, seeding dates, seed origin, and other planting requirements. When possible and commercially available, native ecotypes should be utilized in place of certified varieties. Forb/legume species must be adapted to the site. Use the electronic Field Office Technical Guide (eFOTG), Section II, ESDs, as a reference to determine forb/legume species adaptability.

No-till drills utilized for planting native grasses and forbs should include depth bands (½-inch), notched coulters ahead of double-disk openers, packer wheels, seedbox with auger-like agitator, oversized seed tubes to accommodate fluffy grass seed, and a separate seedbox for forb and small grass seed. Standard grass drills have the same requirements. However, notched coulters are not necessary. Ideal depth for planting native forbs is slightly less than that for native grasses, and care must be taken not to plant native forb seed too deep; however, seed-soil contact is very important.

Fertility: Refer to Conservation Practice Standard 550, Range Planting, for lime and fertilizer requirements for native grass species.

Most native legumes are pH sensitive. If the pH is highly acidic (below 5.0), lime should be applied according to a current soil test recommendation. When soil phosphorus test levels are low (below 15 ppm Bray P-1 and below 10 ppm Sodium Bicarbonate), apply approximately 10 lbs  $P_2O_5$ /ac when placed with seed and 20 lbs/ac when broadcast. Soil samples for phosphorus should be taken to a depth of three inches, and soil samples for pH should be taken to a depth of eight inches. If the site is naturally low or high in pH, select native species adapted to these conditions.

Weed Control: Noxious weeds will be controlled by spot treatment, spraying with labeled herbicides (herbicides must not compromise the desired plant composition).

A wick applicator may be used for applying a non-selective translocated herbicide. An analysis of potential weed competition will be made prior to seeding in order to recommend appropriate weed control strategy.

All chemicals used must be registered, handled, and applied in accordance with product label directions. For application guidelines, refer to eFOTG, Section I, Chemical Weed Control for Field Crops, Pastures, Rangeland, and Non-cropland; the Kansas State University (KSU) Agricultural Experiment Station; and the Cooperative Extension Service.

Weedy grasses such as foxtail, barnyard grass, sandbur, annual bromes, crabgrass, or other annual grasses should not be mowed or shredded unless severe shading occurs. Shredding may cause these annual grasses to stool out causing more competition to seeded grasses. When necessary, mowing or shredding must be completed such that more leaves are cut from weedy grasses than from seeded grasses and discontinued in late July to early August. Pre-emergent herbicides may be appropriate for some warm season grass and forb seedings (refer to the product label).