



Native Grass and Forb Establishment

PURPOSE:

Native grasses, forbs (flowering broadleaf plants) and legumes (nitrogen fixing plants) are established for wildlife primarily to provide food and structural cover that most non-native plants, such as smooth brome and tall fescue, do not (*Figure 1*). Most native grasses grow in clumps, which creates an open structure at the ground level allowing small or young wildlife to move around easily while staying hidden from predators (*Figure 2*). The clumps of native grasses also creates ideal nesting habitat for ground nesting birds. Forbs and legumes attract beneficial insects that serve as the primary food source for most Kansas upland birds from April to October (*Figure 2*). Forbs and legumes also provide forage for deer and other wildlife. Seeds from forbs and legumes are eaten by wildlife throughout the fall and winter months when high energy carbohydrates are needed. Unlike non-native grasses, most native plants remain standing throughout the winter months, creating better protection from snow and harsh winter winds (*Figure 2*).



Figure 1. A diverse stand of native grasses and forbs provides cover and food for wildlife.

Stands of native grasses and forbs offer numerous benefits besides wildlife habitat. Native grasses and forbs are a good alternative for sites not suitable for traditional row crop agriculture, such as areas susceptible to continuous erosion, field corners, areas with poor drainage, and rocky or poor soils. When planted along waterways or creeks and streams, stands of native grasses and forbs can help enhance water quality by filtering excessive nutrients and toxins out of the water that would otherwise runoff the field and directly into the water supply. Native grasses also provide opportunities for livestock grazing and hay.

SPECIFICATIONS:

- Seeding rates and species will vary depending on geographic location, soil type, and desired uses (i.e. grazing, haying, wildlife habitat, Conservation Reserve Program (CRP), etc.). Commonly planted native warm season grasses in Kansas include big bluestem, little bluestem, switchgrass, indiagrass, and sideoats grama. Some of the forbs and legumes commonly included in a native Kansas mix include maximillian sunflower, partridge pea, Illinois bundleflower, purple prairie-clover, Indian blanketflower, and upright prairie coneflower. However, there are numerous other forbs and legumes which can be used. A more diverse planting of 15 plus species of grass and forbs will provide better overall wildlife habitat than a planting with fewer species. For best results select locally grown varieties that are suited for the local climate. Contact your local KDWPT wildlife biologist to get assistance with creating a suitable mix.
- The seedbed should be free of competing non-native cool season grasses and undesirable annual weeds. If the planting site is being converted from traditional row crop agriculture, the native seed mix can be planted after a fall harvested crop or a fall cover crop like sorghum. The soil surface should be mostly bare (except for standing stalks) and have little weed pressure. Be sure to check with a herbicide supplier and/or the chemical label to ensure that all pre-emergent and residual herbicides will be inactive by the time of planting.

- If the planting site is being converted from introduced cool season grasses, such as brome or tall fescue, it will need to be hayed or burned in late summer to remove any dead vegetation. The site then needs to be treated with a non-selective herbicide, such as glyphosate, around 7 days after the first killing frost of the fall. Follow herbicide label recommendations for appropriate rates and use. Herbicide application may need to be repeated in early spring to kill any areas missed or re-sprouting cool season grasses.
- Recommended seeding dates for native grasses, forbs and legumes is December 1st through May 15th. Seeds can be broadcast in winter and allowed to work their way into the soil when it freezes and thaws or they can be planted with a grass drill. When using a drill, it is very important not to drill the seed deeper than ¼ inch.
- The addition of phosphorous (P), potassium (K) and lime as needed may help establish a stand in a shorter amount of time. A soil test should be performed prior to adding any fertilizer. It is recommended that pH levels be around 6.0-6.5 and P and K values be around 31-120 and 161-320, respectively. Nitrogen should not be added as it will encourage undesirable weed growth.
- It can take between 1 and 5 years for a stand of native grasses, forbs and legumes to become established. Overall success can vary depending on soil type, moisture, seed quality, field preparation, and post planting management. Remember to follow NRCS guidelines for seedbed preparation, seeding, and future management of when enrolled in CRP or other USDA cost share programs.
- Mowing can help native grass and forb establishment by reducing competition. Mowing once in late June or early July is typically all that is necessary. It is important not to mow any shorter than 6 inches to avoid disturbing the young plants. As the perennial native grasses and forbs establish, competition from annual plants decreases over time. However, some spot treatments may be necessary for continued control of non-native cool season grasses and noxious weeds.

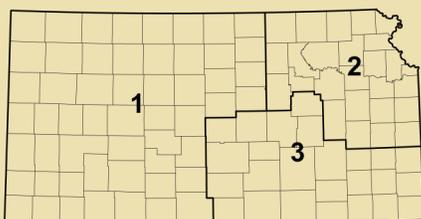


Figure 2. Left to right: Most native grasses grow in clumps that allow wildlife to move easily at ground level. Native flowering plants attract beneficial insects. Native grasses maintain vertical structure after frost and snow.

MAINTENANCE:

- Use appropriate herbicides to control noxious weeds and non-native cool season grasses.
- Native grasslands evolved with the periodic disturbance of fire and grazing. Prescribed burning and grazing, light disking, and/or managed haying should be utilized in order to maintain the quality of the grassland. Management practices should be conducted every 3-6 years, depending on location.
- Avoid disturbance on lands enrolled in CRP during the primary nesting season (April 15th-July15th).

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