



July 20, 2016

KANSAS RANGE TECHNICAL NOTE KS-9

SUBJECT: Identifying and Creating Lesser and Greater Prairie-Chicken Habitat

Purpose: To provide guidance for identifying and creating lesser and greater prairie-chicken habitat

Effective Date: Upon receipt

As a whole, distribution and numbers of both lesser and greater prairie-chickens have decreased significantly from historical levels and continue to be concerns in Kansas. Due to these concerns, upland bird specialists have identified the need to emphasize creating desired types of habitat for both species within a given region.

For the lesser prairie-chicken, both nesting and brood-rearing habitat are needed throughout known or identified occupation areas.

For the greater prairie-chicken, the primary lacking habitat type is adequate residual residue for nesting cover.

Recognition that most, if not all, desirable prairie-chicken habitat areas are grazed provides land managers the opportunity to shape or create desirable habitat through prescribed grazing, prescribed burning, targeted grazing systems, and tools specifically designed to create or manipulate native plant communities. This creation or manipulation should coincide with the identification of needed habitat types. Uniformity of vegetative structure and type should not be the first priority or goal when developing habitat. When opportunities arise, planners should make every effort to create multiple habitat or vegetative structure types within a grazing unit or target area. Systems which create uniformity in habitat structure type should only be planned when adjoining properties and habitat make it necessary to focus on single habitat structure types or when the target area is too small to implement a grazing system with multiple habitat and vegetative structure types. Habitat that displays diverse plant communities, structural heights, and multiple habitat types within a single grazing area or system should be the target.

Planning priorities should be as follows:

1. Tree removal
2. Stocking rates
3. Vegetative structural differences

Nesting Habitat

Canopy or ground cover of 60 to 80 percent grasses, forbs, or shrubs identified as 12 to 15 inches (West) and 15 to 22 inches (East) of residual cover primarily excluding seed stems, shall be available in the timeframe of April 15 through July 15, with the balance of pasture being short grazed, relatively bare, or low profile vegetation. Forbs and legumes may be present in low profile vegetation in order to attract insects to the area. Residual vegetative material is the primary key for successful nesting to occur.

(more)

DIST: A, F

Natural Resources Conservation Service
760 South Broadway Boulevard
Salina, Kansas 67401-4604

Phone: 785-823-4500
FAX: 855-533-5070
www.ks.nrcs.usda.gov

Whole field, springtime prescribed burning is not compatible for the development of nesting habitat or the accumulation of residual cover for the purpose of nest development unless the prescribed burning is accomplished through the use of patch burn grazing. If a producer wishes to focus on nesting habitat as their primary habitat goal, prescribed burning may not be completed on any one acre more than once in a three-year period.

For the growing season following a springtime prescribed burn, either brood-rearing and/or winter-cover habitat will be prescribed. The goal should be to create nesting habitat a minimum of two out of three years.

Types of grazing systems or prescriptions capable of creating nesting habitat

- Three-quarters or full-season grazing systems with light to moderate stocking rates (light to moderate stocking rates should be calculated using 16.5 percent harvest efficiency for light and 20 to 25 percent harvest efficiency for moderate). Grazing season length for 3/4-season systems shall not extend past August 15. Full-season grazing shall not extend past October 31.
- Access control (no livestock grazing) followed by light to moderate dormant season use creating patchy grazed areas.
- Rotational grazing systems with late season or dormant season rotations with light to moderate stocking rates, provides the opportunity for the grazing animals to create patchy grazed areas. Typically, this would be designed with 3 to 10 paddocks in a rotation. Intensely grazed patches are more difficult to create as the number of paddocks and stock density increases. Altering the stocking rate, changing the grazing intensities throughout the system such as skipping some paddocks during the growing season followed by limited dormant season grazing may be required to meet the targeted nesting habitat requirement. Paddocks shall only be grazed one time during the growing season to maximize predictability of created or desired habitat.
- Intensive early stocking (IES) with adequate late summer rest and limited dormant season grazing to create patchiness of both taller and short- or close-grazed forages. Grazing shall not occur past the 15th of July through the end of the growing season. Earlier pullout dates would be beneficial to ensure leafy re-growth. If prescribed burning is used in conjunction with IES, the target for that year should be to create brood-rearing habitat while moving in the direction of creating nesting habitat the spring following the IES. IES with the use of prescribed burning may not be scheduled more than **once in three years**.
- Patch burn grazing. Stocking rates shall be based upon the full acreage pasture in the patch burn system. No more than 1/3 of the acres targeted in the system shall be scheduled for prescribed burning in any one year. Currently, patch burn grazing is only recommended in precipitation zones of greater than 28 inches.
- Two pasture switch back systems with light to moderate stocking rates. These systems shall be designed with a first rotation occurring in mid to late June. The early grazed areas would be targeted for creating nesting habitat, while the late season grazed area would be targeted as brood-rearing habitat. A second rotation back into the first grazed area may need to occur after October 1 if patchy areas are devoid. Animal performance may suffer with this system especially if first rotation is closer to July than to the first of June.

NOTE: Light to moderate stocking rates should be calculated using 16.5 percent harvest efficiency for light and 20 to 25 percent harvest efficiency for moderate.

Examples

- One pasture system—3/4- or full-season grazing system designed with light to moderate stocking rates for two years followed by a prescribed burn and an IES with adequate late season rest.

- Rotational grazing systems with light to moderate stocking rates which create patchy grazing due to cattle selecting the most desirable species and time of grazing is limited to the time required to create target habitat structure. Grazing season shall be long enough to create patchy grazing at the end of the growing season. Paddock numbers should be between 2 and 10.
- Three-pasture system—Rotate three different grazing prescriptions through the three pastures over a three-year period. One pasture would be 3/4-season grazed light to moderately, a second pasture would be full-season light to moderately grazed, and a third pasture IES using prescribed burning prior to the growing season, followed by adequate late season rest. Pull off dates for the IES should be early enough to provide ample time for vegetative re-growth to occur (no later than July 15).
- Patch burn grazed where a pasture is divided into three relatively equally producing grazing units, not necessarily equal acres. No acres will be targeted to be burned more than once in a three year period. At least 1/3 of the whole pasture will be burned each year. Stocking rates should be based upon the entire grazing unit productivity even though the primary selected grazing area will be the acres exposed to prescribed burning that year.

Monitoring

- Monitoring shall be performed on a typical location which depicts the average created habitat type.
- Monitoring shall be performed following the last grazing event, at/or during the dormant season, or preferably at the beginning or during the targeted critical habitat period.

Brood-rearing

Short-grazed, relatively bare, or low profile vegetation present on 60 to 70 percent of the area for the timeframe of mid-June through mid-August, with the balance being residual cover with a structural height of 12 to 15 inches. Beneficial forbs or legumes which attract insects should be present and not discouraged.

This habitat type is important because it allows young chicks to move freely in search of insects or food. The associated 12- to 15-inch structural height provides quick access to temporary cover nearby from predators.

Creating both nesting and brood-rearing habitat within the same pasture can be difficult unless the producer elects to implement a grazing system which focuses on targeted grazing and stocking rates. Patch burn grazing systems may provide this opportunity where local culture favors the use of prescribed fire. When one habitat type is selected by a producer or determined to be necessary or lacking based upon approved or endorsed habitat tools, it is recommended a grazing system be designed to target that desired habitat for the whole pasture unit. If more than one grazing unit or pasture is targeted for the development of different prairie-chicken habitat types, separate grazing system designs and stocking rates should be developed.

Types of grazing systems or prescriptions capable of creating brood-rearing habitat

- IES with prescribed burning being used **no more than once in three years.**
- IES with late season use once every three years followed by full-season grazing the second year, and either full-season light to moderate grazing or IES without prescribed burning the third year.
- Patch burn grazing.
- Full-season grazing systems using light to moderate stocking rates and no rotations.
- Two pasture switch back systems with light to moderate stocking rates. These systems shall be designed with a first rotation occurring in mid- to late-June. The early grazed areas would be targeted for creating nesting habitat, while the late-season grazed area would be targeted as brood-rearing habitat. A second rotation back into the first grazed area may need to occur after October 1 if patchy areas are devoid. Animal performance may suffer with this system especially if first rotation is closer to July than to the first of June.

- A 3 to 6 pasture rotational grazing system using light to moderate stocking rates. These systems shall be designed to short graze half or 2/3 of the paddocks while leaving residual cover in the remaining half or 1/3 of the paddocks. Grazing intensity should be managed to create non-uniform grazing throughout each paddock and throughout the system.

Examples

- IES on acres where prescribed burning was not used. Grazing intensity and time of grazing event should be consistent with normal IES systems. Grazers should be removed by July 15. In areas where the potential of invading woody species exists, prescribed burning should be used once in three years or twice in five years followed by an IES system. To extend the creation of brood-rearing habitat, grazing systems in the tall-grass region may be scheduled for IES followed by late-season grazing once every three years. If late-season grazing is scheduled, the following year shall be full-season grazing. The third year may be either full-season grazing or IES without prescribed burning.
- Patch burn grazed pasture will be divided into three relatively equally producing grazing units. No acres will be targeted to be burned more than once in a three year period, but at least 1/3 of the whole pasture will be burned each year. Stocking rates should be based upon the entire grazing unit productivity even though the primary selected grazing area will be the acres exposed to prescribed burning that year.
- A rotational grazing system designed with 3 to 6 paddocks or pastures in close proximity. The system should be designed with the paddocks or pastures being grazed with light to moderate stocking numbers. In 2/3 of the paddocks or pastures, longer grazing periods shall be implemented resulting in many areas of the paddock or pasture being close grazed and some areas not being grazed at all. The remaining 1/3 of the paddock(s) or pasture(s) should have short grazing periods or even deferment scheduled, resulting in un-grazed or lightly grazed areas containing large amounts of residual material.

Monitoring

- Monitoring shall be performed on a typical location which depicts the average created habitat type.
- Monitoring shall be performed following the last grazing event, at/or during the dormant season, or preferably at the beginning of the targeted habitat period.

(signed)

DEAN KREHBIEL
State Resource Conservationist