Herbicide Application for Early Successional Habitat

Figure 1. Stand of fescue grass providing little wildlife habitat

PURPOSE:

The application of herbicides can be used to create a diverse plant community on certain Kansas grasslands. The result is more suitable habitat for wildlife by chemically suppressing dominant grasses. Early successional plant communities, consisting of a diverse mixture of native grasses, forbs, and legumes are required by a wide variety of wildlife species. Stands of smooth brome or fescue often become dominated by these grasses due to their sod forming nature, especially if there has been no recent disturbance *(Figure 1).* These conditions make the grassland much less desirable to wildlife, particularly ground nesting birds like bobwhite quail and ring-necked pheasant. Herbicide is commonly used on mature grass stands to promote early successional plants. Strategically applying specific herbicides to grasslands can improve plant diversity by reducing the vigor and abundance of dominant plants that choke out desirable grassland vegetation. Areas that have been sprayed will support a wider variety of plants; producing an abundance of wildflowers, insects, and seeds; which are essential for numerous wildlife species *(Figure 2).* Although this practice is used primarily to suppress grasses, it can also be used in areas dominated by perennial forbs, broad-leaved plants, or other dominant vegetation. It is important to use the proper herbicide to achieve the desired results.

SPECIFICATIONS:

- The goal of strip spraying is not to eradicate vegetation, but to reduce its abundance and vigor to allow higher plant diversity within the sprayed areas.
- Suppressing dominant grasses stimulates growth of annual and perennial forbs and creates more open space at ground level to allow for the movement of young birds and other wildlife.
- In order to achieve this goal, apply approved herbicides in long strips. Read the herbicide label to determine its effectiveness at controlling the target species and follow all label directions.

Figure 2. Two years after fall herbicide application targeting smooth brome grass.

SPECIFICATIONS:

- If the existing vegetation is extremely tall and rank from years of non-disturbance, consider implementing prescribed burns or mowing areas where herbicide is to be applied.
- Sprayed strips should be between 20 and 70 feet in width.
- Alternate sprayed strips with strips of unsprayed vegetation 2 to 3 times the width of that which is sprayed.
- For best results, spray 1/3 of the field each year, alternating the treated strips each year *(Figure 3).*
- Sprayed strips should follow the contour of the field and should be as long as possible to minimize any potential soil erosion.

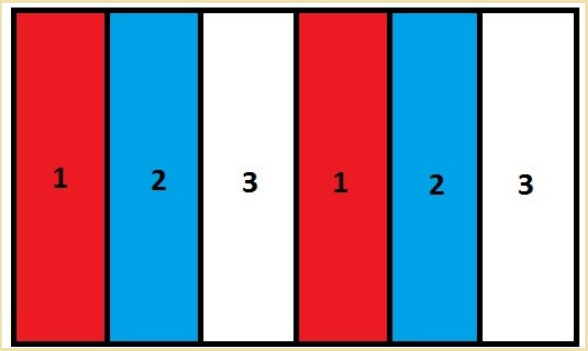


Figure 3. Alternate areas sprayed each year. Example: Spray Red in year 1, Blue in year 2, White in year 3.

- Sprayed strips should be parallel to brushy cover if present to provide the best brood rearing habitat benefits (Figure 4).
- All spraying should be completed in the timeframe in which target plants are actively growing. For cool season grasses (fescue and brome), the ideal dates would be March 15th – May 15th and again in Autumn, between October 1st and December 1st. For warm season prairie grasses, spray once the grasses reach 6 to 8 inches in height for best effectiveness. The timeframe to complete the spraying for native warm season grasses is between May 1st and September 15th.
- For questions regarding types of herbicides and timing, contact your local KDWPT Wildlife Biologist or local K-State Extension Office.

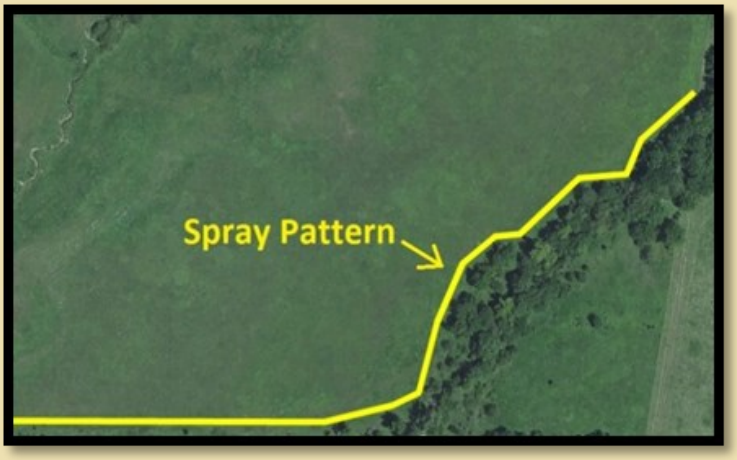
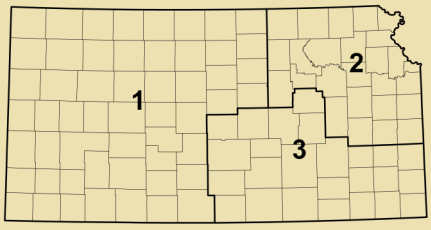


Figure 4. Spray parallel to brushy cover to maximize wildlife utilization within the strips. Follow the same pattern in successive strips in the rest of the field after skipping double the width of the spray swath.

January 2016



Region 1
1426 Hwy 183 Alt.
PO Box 338
Hays, KS 67601
(785) 628-8614

Region 2
300 SW Wanamaker
Topeka, KS 66606
(785) 273-6740

Region 3
6232 E. 29th St. N
Wichita, KS 67220
(316) 683-8069

AD ASTRA PER ASPERA
Kansas
Department of Wildlife, Parks and Tourism