

Herbicide Application for Plant Succession Management

Job Sheet

Natural Resources Conservation Service (NRCS)
 Missouri Department of Conservation (MDC)
 University Outreach and Extension – The School of Natural Resources

For:	County:
Field(s):	Farm #:
Date:	Tract #:
Designed By:	Contact Information:

A dense grass field with chemically suppressed grass strips interspersed, results in significant gains in plant structure and diversity.

PURPOSE: Without disturbance, over time both warm-season and cool- season grassland fields often become dominated by dense sod or monotypic grassy vegetation. This reduces habitat quality for a number of wildlife species. The use of herbicides can improve plant diversity by reducing the vigor and abundance of dominant plants that out-compete and crowd out other desirable plants. The sprayed areas will provide a wide array of plants, providing a greater abundance and diversity of forbs, legumes, seeds and insects, which are important for many wildlife species. Used properly, chemical suppression is an excellent way to enhance grassland habitat for bobwhite quail and other wildlife. This practice is used primarily to set back grasses, although it may also be used to improve habitat quality on fields dominated by perennial forbs, or broad-leaved plants. To provide enhanced wildlife habitat, complete herbicide spraying next to areas of shrubby cover such as covey headquarters, downed tree structures, edge feathering, or shrub thickets.



Selection of a chemical product should be based on several factors including the effectiveness of control on targeted plant(s), non-target species impacts, toxicological risks, and off-site movement of chemicals. Follow all label directions.

GENERAL SPECIFICATIONS:

The purpose of chemical suppression spraying is not to completely eradicate vegetation, but reduce its vigor and abundance to encourage additional plant diversity. To accomplish this, use herbicides at label rates to set back, or suppress, but not eliminate vegetation. To be effective, herbicides must be applied when the vegetation you wish to suppress is actively growing (see below table for recommended spray dates). Weather conditions, which will influence vegetation growth, may result in narrowing these dates.

Plant Type	Recommended Spraying Dates*
Cool-season grasses (fescue, orchard grass, brome etc...)	March 15 to May 15 or October 1 to December 1
Warm-season grasses (Indian grass, big bluestem, etc...)	May 1 to September 15

*Conservation Reserve Program (CRP) spraying dates differ.

Spraying should be done in blocks or strips and applied to 1/3 (preferred) to 1/2 of the field each year. Best results occur when different areas in the field are sprayed different years. If strip spraying, strips should be 25 to 75 feet wide. Strips should be separated from each other by an area of undisturbed vegetation twice as wide as the sprayed strip. Ideally, sprayed strips should be as long as possible and should follow the contour of the field to prevent erosion. One year later, spray a new block or strip of similar size in the adjacent unsprayed area (See Figure 1). Spray the final undisturbed block or strip the third year. This develops adjacent strips of vegetation of three different ages, providing three different stages of plant succession. Re-treat sprayed areas as needed to maintain desired plant diversity.

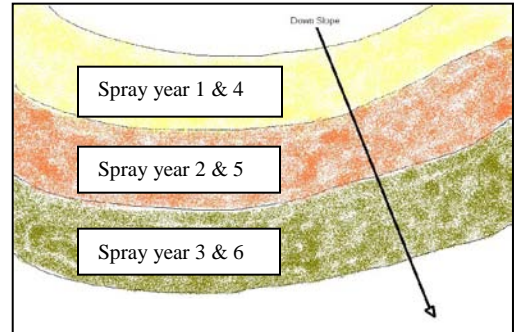


Figure 1.

Wildlife friendly legumes can be overseeded into the sprayed strips to enhance the benefits of an herbicide application (see JS-BIOL-20 Native Forb and Non-native Legume Interseeding). **DO NOT** plant sericia lespedeza, birds foot trefoil, sweet clovers, or crownvetch.

In areas of heavy residue, prescribed burning or mowing may be necessary prior to the herbicide application to remove dead or tall, thick vegetation and to improve the effectiveness of the herbicide treatment. Allow the mowed or burned vegetation to grow 6 to 8 inches of new growth before treating. Disking or prescribed burning can also be performed after the herbicide application to further enhance habitat conditions for some wildlife species.

RECOMMENDED ACTIONS:

- Read herbicide label and evaluate for factors including the effectiveness of control on targeted plant(s), non-target species impacts, toxicological risks, and off-site movement of chemicals. Follow all label directions.
- Apply herbicide in 25 to 75 foot wide strips along the contour, with an area of undisturbed vegetation twice as wide between the sprayed strips.
- Apply herbicide in blocks on approximately 1/3 of the field each year.
- Perform prescribed burning or mowing prior to herbicide application (Allow 6-8 inches of regrowth before application.)
- Perform disking or prescribed burning after the herbicide application.
- Overseed wildlife friendly legumes (December – April) or forbs (December – January) into the sprayed area.
- Re-treat sprayed areas as needed to maintain desired plant diversity.

MAINTENANCE:

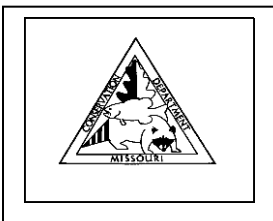
- Re-treat sprayed areas as needed to maintain desired plant diversity.
- Use herbicides to suppress invasive vegetation and to control noxious weeds.
- Use disking or prescribed burning in areas with heavy ground litter.

PRIMARY HABITAT CONSIDERATIONS:

- Provide food and natural cover sources for quail and other grassland wildlife.

Consult with NRCS, MDC wildlife professionals, or University Extension for additional recommendations.

Comment:



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