

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:

PURPOSE: Without disturbance, over time grassland fields often become dominated by dense sod or monotypic grassy vegetation, which 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 compete and crowd out other desirable plants. Used properly, this is an excellent way to enhance grassland habitat for bobwhite quail and other wildlife. Herbicide application can enhance habitat quality by releasing important food and cover plants, resulting in an increased abundance and diversity of food and cover available to a wide range of wildlife species. To be effective, complete herbicide spraying next to areas of shrubby cover such as covey headquarters, downed tree structures, edge feathering or live shrub thickets.



A dense grass field with chemically suppressed grass strip in center results in significant gains in plant structure and diversity.

SPECIFICATIONS:

- The purpose of the 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, but not eliminate vegetation. Spraying should be done when the vegetation you wish to retard is actively growing (see table below for recommended spray dates). To be effective, herbicides must be applied when grasses are actively growing which may result in narrowing these dates based on weather conditions.

Plant	Recommended Spraying Dates*
Cool-season grasses (fescue, orchard grass, 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 may differ.

- Spraying may be done in blocks or strips, and 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. Spray the final undisturbed block or strip the third year. Ideally, one-third of the field will be treated each year. Re-treat sprayed areas as needed to maintain desired plant diversity. This develops adjacent strips of vegetation of three different ages.
- The sprayed areas will provide a wider array of plants, providing a greater abundance and diversity of seed and insects, which are important for many wildlife species. Wildlife friendly legumes can be overseeded into the sprayed strips to enhance the benefits of a herbicide application (see JS-BIOL-20 Native Forb and Non-native Legume Interseeding). **DO NOT plant** serecia 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 vegetation and to improve the effectiveness of the herbicide treatment. Allow the mowed or burned vegetation to regrow 6 to 8 inches of new growth before treating.
- Light disking or prescribed burning can also be performed after the herbicide application to further enhance habitat conditions for some wildlife species.
- 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. Be certain that the herbicide(s) selected will control the targeted plant(s). Follow all label directions.

MAINTENANCE:

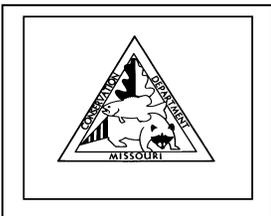
- Exclude livestock from natural headquarters and plantings.
- Use herbicides to suppress invasive vegetation and to control noxious weeds.
- Use light disking or prescribed burning in areas with heavy ground litter.
- Retreat sprayed areas as needed to maintain desired plant diversity.

PRIMARY HABITAT CONSIDERATIONS:

- Provide 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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