



STRIP SPRAYING



Creation of new habitats by the planting of cool season grasses and legumes, seeding of warm season grasses and forbs, or allowing areas to re-vegetate through natural succession (annual weeds) is the easy part of wildlife management. The general perception is that once an area is established to a suitable wildlife cover, you can just sit back and reap the benefits of your hard work. Nothing could be further from the truth. Over time, dense sod and often monotypic grasses such as fescue will dominate grassy areas. This is normal plant succession. As dense grasses take over, annual forbs and grasses are eliminated, and bare soil between plants is reduced or lost. This succession or change, leads to the loss of diversity and the decline of wildlife habitat for several wildlife species. Some wildlife species such as Henslows Sparrows do prefer thick, dense grass stands. However, if disturbance is completely eliminated, shrubs and trees will eventually replace grassland areas.

Disturbance is the key to maintaining diverse grassland communities. Strip spraying with herbicides can provide the necessary disturbance to setback thick grass stands, and improve plant diversity. Strip spraying herbicides can improve habitat quality by releasing annual forbs (broadleaf plants) and grasses, which provide important food and cover sources for a variety of wildlife species. Along with a change in the plant species, spraying also changes the structure of the grassland community. Thick confining grass stands will be turned into more open, clumpy grasslands that provide critical open spaces at the ground level. These open areas, or bare soil,

are important for the movement of wildlife through grass stands. If grasslands have developed a thick mat of dead litter, **Strip Disking** or **Prescribed Burning** may be necessary to reduce litter. Insects, that are more abundant in early successional “weedy” patches, are critical for the development of bobwhite quail, pheasant, wild turkey and songbird chicks. Open areas allow for easier movement throughout the grassland to find insects. Strip spraying provides the important management objectives of increasing important seed producing plants, reducing woody growth, increasing open spaces and bare soil to promote wildlife mobility, and increasing insect populations.

Spray strips should be 20 to 70 feet wide. On lands enrolled into the Conservation Reserve Program (CRP), the maximum allowable width is 50 feet. Spray strips should be alternated with strips of unsprayed vegetation two or three times the width of the spray strips. These alternating strips would be sprayed over the next two to three years. Ideally 1/3 rd of the field will be sprayed in a year. For fields enrolled in the CRP program this is the maximum amount allowed to be disturbed in a year. Spray strip treatments would be repeated as the grassland growth and succession dictates. The resulting mosaic pattern produced by strip spraying will provide different vegetative successional stages; meeting the habitat needs of wildlife species that require either thick or thin (or both) stands of grasses. Spray strips should be as long as possible and follow the field contour to reduce erosion. Strips should be parallel to brushy cover where it is available. Brushy islands scattered around the field can be left unsprayed to provide escape cover throughout the field. In grasslands dominated by sod grasses such as fescue, it may be desired to eliminate all of the grass at one time (see **Fescue Eradication**).

Spraying should be completed when the target plants are actively growing. For cool-season grasses (fescue, orchardgrass, timothy, brome) spray dates would be mid-March to mid-May, or September 15 to October 31st. For warm season or prairie grasses, spray when the grasses are 6-8 inches tall. Spraying should be completed to avoid the primary nesting season. Consult your local Wildlife Biologist for recommended dates. Spray timing will have an impact on what plant species are produced. Spraying in summer, or early fall will tend to stimulate the production of plants such as common ragweed.



Valuable wildlife plants such as Common Ragweed are encouraged by fall strip spraying

Common ragweed provides valuable food and brood rearing cover for Bobwhite quail and pheasants. In areas where the current vegetation is extremely thick, or tall, consider mowing, grazing, or burning the areas prior to spraying to ensure adequate herbicide contact. Allow for 6 to 8 inches of re-growth before spraying.

Herbicide selection should be based on the target plant species. A broad-spectrum herbicide like glyphosate will kill most vegetation it comes in contact with and have no residual or pre-emergent effect. This type of herbicide is preferred in most cases. In instances where you have forbs present, but would like to thin the grasses use a grass herbicide that will not harm broadleaf plants. In the rare occasions where you want to thin broadleaf plants from a grass stand use a broadleaf herbicide. You can consult your local chemical dealer, Co-operative Extension office, or State Wildlife Biologist for herbicide recommendations. The goal of strip spraying is not to completely eliminate vegetation, but thin the stand and temporarily reduce the vigor. Use herbicides at the recommended rates to set back vegetation. **Be sure to read and follow all herbicide label directions.**

Now that you have sprayed your strips what needs to be done? That choice is up to you, and what is lacking in your habitat. You have completed the most important objective of creating a disturbance. The spray strips can be left to re-vegetate naturally with foxtail, ragweed, spurge, wild tomatoes, and other plants that already have seeds present in the seed bank (see **Natural Revegetation**). These annuals provide excellent wildlife habitat. If you would rather seed something into the spray strip, forbs and legumes can be seeded into the strips to increase green browse, provide seed production, and increase insect production (see **Legume Interseeding**). On strips that were fall sprayed, winter wheat can be drilled or broadcast onto the strips to assist with erosion control, provide green browse over winter, improve seed sources and nesting cover in the spring, and assist in inhibiting grasses in the spring.

Strip spraying is an approved practice for the Conservation Reserve Program. Strip spraying can be used as one of the practices for mid-contract management, which is required in recent CRP contracts. Older CRP contracts can complete mid-contract management projects to improve wildlife habitat as long as they have their Conservation Plan amended. To amend your plan, and improve your wildlife habitat, visit your local Natural Resource Conservation Service (NRCS) office, or contact your District Biologist.

Related Habitat Management Fact Sheets:

Natural Revegetation

Fescue Eradication

Strip Disking

Legume Interseeding

Warm Season Grass Management

Cool Season Grasses

Prescribed Burning

Wildflowers

Strip Mowing

Cropland Management

Prepared by the Indiana Department of Natural Resources, Division of Fish and Wildlife. For up-to-date information concerning the Indiana Division of Fish and Wildlife, or for information on the location of your District Wildlife Biologist, visit our website at www.wildlife.IN.gov