

Strip Disking

Disking is one of the simplest, most effective, and least expensive techniques available to the land manager for improving habitat. It involves the use of a disk, or what is sometimes referred to as a harrow, to disturb the soil (Figure 1). Disking as a means of wildlife habitat improvement provides numerous benefits. It sets back natural succession by cutting up grassy vegetation, thus preventing an area from maturing into briars and shrubs. It can eliminate or reduce a thick mat or carpet of grass, such as fescue, which is a barrier to movement and feeding for many species of wildlife. Quail especially need areas of open ground to be able to get to and from each habitat type. Disking also encourages the natural revegetation* of annual grasses and forbs (native broadleaf plants) that are a major wildlife food source. It even creates areas of bare soil for sowing seeds valuable as wildlife food or cover.

On many agricultural production farms, disking is an annual fall and spring event. Unless planting a cover crop, fall disking should be avoided. This practice eliminates much needed winter cover and food for wildlife. Regular ground disturbance resulting from normal farming practices creates habitat conditions that are critically important to some species of wildlife. This is one explanation for how

production farms are able to provide habitat for “farm wildlife” such as quail and rabbits. On pastures, hay lands, or nonagricultural open lands where the landowner desires to improve conditions for wildlife species that benefit from ground disturbance, disking is a primary management tool.



Figure 1. Strip disking creates open spaces in grass stands and stimulates seed producing plants.



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Figure 2. One-third of long, narrow fields can be disked each year, producing a three-year rotation.

Types of Equipment

Disks are commonly used on most farms for the purpose of leveling and smoothing crop fields and seed-beds. They come in various sizes, from those 30 inches wide pulled by a riding lawnmower, 4-wheeler, or small garden tractor, to those 15 feet wide or wider that are pulled by the largest 4 wheel-drive diesel tractors.

Disks are made in three basic styles: 1) A pick-up disk is one that is raised or lowered by the 3-point connection to the tractor. 2) A wheeled disk is equipped to ride on tires and is raised by hydraulic cylinders attached to those wheels. 3) The last type of disk is the drag disk. Though the cutting depth and angle of this disk may be adjusted, the drag disk cannot be picked up off the ground. This makes transportation of the disk an issue.

When choosing what size and style of disk to use, keep in mind where and how it will be used. Disks smaller than 6 feet may not be heavy enough to cut through thick grass and into the soil. Disks wider than 8 feet may be difficult to transport along narrow farm lanes and woodland trails. If you are mainly doing wildlife habitat work, a suitable setup is a 3-point hitch pick-up disk, 6 to 8 feet wide, pulled by a 20 to 40 horsepower tractor. You don't need to go out and purchase a tractor and disk to get underway with habitat improvement. You generally can rent the equipment from your local farm supply store, contract the equipment and/or labor from a local farmer, or borrow it from a friend. Regardless of which size or style equipment you have or how you obtain it, with proper planning its use on your property will make some dramatic improvements to many species of wildlife.

Strip Disking

Strip disking simply involves purposely creating ground disturbance to release grass-bound fields, reduce litter accumulation, create bare ground, stimulate germination of desirable seed-producing plants, and increase insect populations for birds to feed upon. Strip disking should be done in long linear strips (10-15 feet minimum width and as long as possible) and always adjacent to good escape cover (Figure 2). To prevent erosion, strips should follow the contour of the land and be separated by undisked strips 2-3 times the width of the disked area. The ground is simply disked deep enough to kill the existing vegetation (3-4 inches is usually adequate) then left alone. If the sod is too heavy to al-

low adequate soil disturbance with a disk, then burning* or plowing could be used to remove the thick mat of growth. After initial removal of the sod or litter layer, periodic disking (Figure 3) prevents thick mats of vegetation from forming again and stimulates the growth of desirable annual plant species such as foxtail, ragweed, partridge pea, and Korean lespedeza. Usually a three-year rotation is optimal for strip disking. Heavy seed producing plants will volunteer into this disturbed soil very quickly and provide high-energy winter food supplies and attract insects for birds to feed upon. The disked areas will be open enough at ground level for easy movement by quail broods and other small wildlife, and provide dusting sites for birds to rid themselves of external parasites.

If an increase in seed production is desired, fertilizers recommended for legumes (which require no nitrogen addition) can be used at rates dictated by a soil test. Fertilizers may be applied to strips shortly after the disking is completed to enhance native plant production. The results of fertilization should be closely monitored to see which plants benefit, since in some instances undesirable grasses, like Bermuda grass, fescue, and crabgrass, may be encouraged by the increased soil fertility, especially if used in conjunction with summer disking or mowing. These weeds will often out-compete native quail food plants and reduce seed production, or they may choke out the desirable plants completely. On poor soils, some quail managers have had success increasing seed production on native plants by applying lime to raise pH levels of acidic soils. This enables plants to better absorb soil nutrients.

Strip disking can be a very effective and inexpensive tool for wildlife, especially quail. Always be sure to place disked strips in close proximity to adequate cover. The edges of native warm season grass* plantings, edges of standing crop fields*, around cover thickets*, along grown up fencerows, or along wildlife corridors* are all excellent locations. Monitor results of timing and fertilization of your strips to maximize benefits for wildlife.

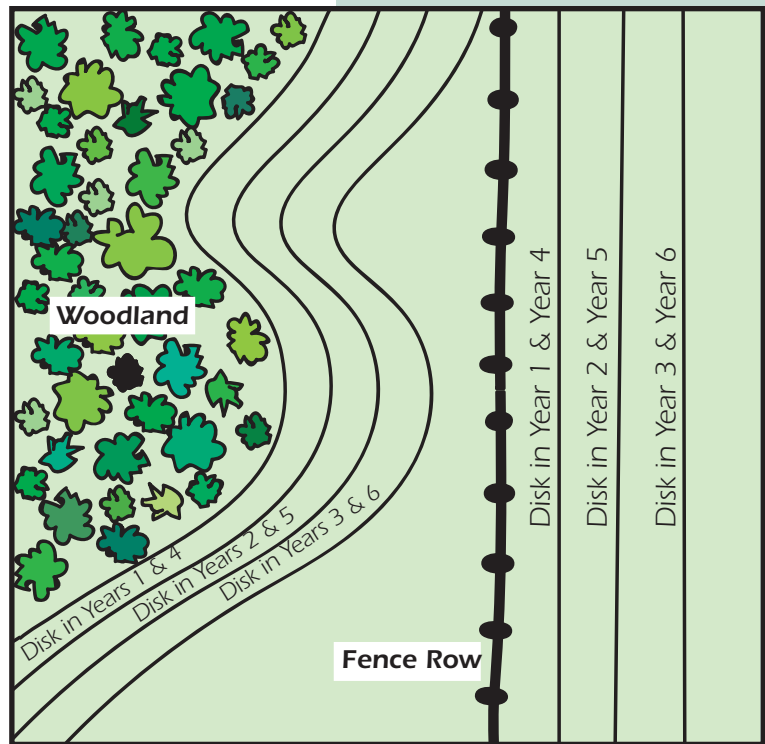


Figure 3. Field divided into strips for strip disking on a three-year rotation.

For greatest benefits, disked strips should be set up on a rotation.



A strip disking rotation provides several stages of early succession habitat in one small area for use by wildlife.

SUMMARY OF OPTIONS:

Location

Adjacent to cover thickets, native grasses, food plots, standing crops, fencerows, wildlife corridors

Equipment

Disk, Tractor, Plow

Number of disked areas per yr.

Landowner's discretion

Years in rotation

3, 4, 5

Timing for each area

Late winter, spring

Soil amendments

Optional, Based on soil test results



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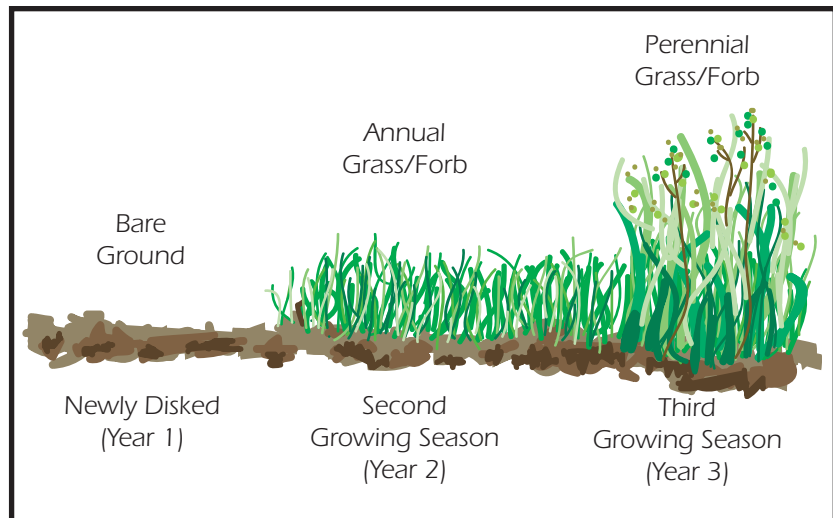


Figure 4. A three-year strip disking rotation produces different stages of growth in close proximity for use by wildlife.

*Related Habitat How-To references:

- Cover Thickets
- Edge Feathering
- Fescue Eradication
- Legumes
- Native Warm Season Grasses
- Prescribed Burning
- Soil Amendments
- Wildlife Corridors
- Cropland Management

Planning for My Property