Cropland Management

A major problem facing small game and non-game wildlife species in Kentucky today is the lack of suitable reproductive and winter cover. This is why it is important that we incorporate wildlife management into our agricultural lands. Many wildlife species that once thrived in farmland settings are now experiencing long term population declines in association with intensified agricultural land use, herbicide and pesticide use, and mechanized farming. Years ago harvested crop fields provided essential wildlife cover and food. Now after harvest, grain fields provide very little wildlife benefit due to the lack of vertical cover or crop residue. Several practices can be implemented on any crop field to provide usable wildlife habitat, while at the same time improving soil and water quality.

Some view wildlife habitat enhancement negatively because it takes potential money-making crop acreage away from the landowner. This may not be the case at all. Most wildlife habitat enhancement practices on crop ground are readily accepted into federal and state cost-share programs. Some programs pay land rental payments for as many as 15 years at very reasonable rates. For more information on available programs in your area, contact your local Kentucky Department of Fish and Wildlife Resources wildlife biologist or call 1-800-858-1549. You may also contact your local Natural Resource Conservation Service office, listed under USDA in your telephone directory's government pages.

Conservation Tillage

Conservation tillage is a broad term that refers to several tillage methods that maintain crop residue on the field surface during the fall and winter months. This is an excellent practice for increasing wildlife habitat. By allowing crop residue to remain in the field, you reduce soil erosion, maintain soil moisture, increase organic matter, and provide wildlife forage. In contrast, if you plow or disk in the fall,

Figure 1. Leaving a few rows of standing crops around a field edge can provide winter food and cover as well as creating some edge effect between the cropland and the woodlands.

Field edges represent an opportunity to develop excellent wildlife habitat at a minimal cost.

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you create essentially barren land for wildlife and increase the potential for soil erosion. Such action also increases costs due to nutrient loss and increased fertilization needs. Fields disked in fall usually have to be tilled again in the spring as well due to soil compaction over the winter. If fall disking is necessary due to disease or insect problems, try to leave as many areas undisked as possible and plant the disked areas in a winter cover crop for forage and cover.

Crop Rotation

Crop rotation simply means planting different crops in the same field over successive years. Long-term rotation may include planting 3 or 4 different crops before returning to the same crop in a given field. Best results can be obtained by incorporating a legume (plant that adds nitrogen to the soil), such as soybeans, into the rotation. By rotating crops, you reduce the risk of crop disease, insect problems, and fertilizer requirements. Small grain crops, such as wheat and oats, should be incorporated into the rotation to provide nesting cover throughout the spring and early summer. Fallow fielding is another excellent way to allow the land to rest while creating wildlife cover. Fallow fields are crop fields that are taken out of rotation for one or more years. While fallow, the fields are simply allowed to grow up in natural vegetation. Although this vegetation may look like weeds, it provides important seeds, bugs, and cover for wildlife. Crop rotation with fallow fielding will provide increased diversity within any given area.

Field Edges

Field edges represent an opportunity to develop excellent wildlife habitat at minimal cost. They are often shaded and usually do not produce enough crops to justify harvesting. Try to leave the outside 4 or 5 rows of crops unharvested for wildlife. This is an easy way to develop long, linear annual grain food plots with little to no effort. Ideally, these strips should be left adjacent to brushy escape cover. If possible, leave them fallow for 2 to 3 years for nesting and brood-rearing cover. This can easily be achieved by alternating sides of the field left standing in crop. Let the strips sit idle and allow native vegetation to grow within the standing crop residue.

Figure 2. Late winter cover provided by a native grass filter strip. Not only does it provide excellent cover but erosion control as well.

It is also possible to establish grasses around the edges of crop fields, either as field borders* (strips of grass around the perimeter of crop fields) or filter strips* (field borders adjacent to rivers, creeks, and streams). Native warm season grasses* are ideal, although certain cool season grasses* can also be beneficial. Not only will this practice produce wildlife habitat, but native warm season grass also provides an excel-

lent source of summer hay. Riparian buffers, which consist of trees, shrubs, and grasses, are another option for managing streamsides* and wetland* habitat. Start your riparian buffer next to the body of water or wetland by planting trees, followed by a transitional zone of shrubs, and ending with a strip of grasses. The widths will vary and should be set by site-specific goals and needs.

Grassed Waterways

Shallow waterways running through crop fields should be planted to grass to prevent soil erosion, filter runoff water, and enhance wildlife habitat. In Kentucky, they are often planted to fescue. Although fescue will certainly provide excellent erosion control and water filtration, it is extremely detrimental to wildlife due to its thick, matted sod and inherent fungus. If possible plant waterways, or convert existing waterways that are primarily fescue to wildlife-friendly grasses. Options include a variety of cool and native warm season grasses such as redtop, orchardgrass, timothy, switchgrass, big bluestem, Indiangrass, and eastern gamagrass.

Figure 3. Grassed shallow waterways in crop fields prevent soil erosion, filter runoff water, and enhance wildlife habitat.

Terraces & Contour Buffers

Terraces are steps built across the slope of a field to intercept runoff water and reduce soil erosion. They are often sloped towards a waterway or wooded draw to handle the runoff water. Usually, they are planted to grasses. Again, native warm season grasses would be an excellent choice.

Contour buffer strips are suitable for crop fields with steep slopes. Contour buffer strips work just as their name implies. Simply follow the contour of the slope and establish wildlife-friendly perennial grasses. These strips slow water runoff, reduce soil erosion, and trap sediment, nutrients, and pesticides. The strips should alternate with wider strips of crop. The width of the alternating strips should be determined based on slope and soil type.

Fencerows

Shrubby fencerows around crop fields are very important areas for wildlife. They are often viewed negatively due to their appearance and the fact that they break up potentially larger fields into smaller units that are somewhat less efficient to farm. However, by the same token, they provide critical travel corridors* and escape cover for wildlife as well as natural windbreaks that reduce soil erosion. Ideally, fencerows should be 100 to 150 feet wide and encompass three transition zones on each side. The first zone or center should be trees, followed by shrubs, and ending with a strip of grasses on the outside. Again this is the ideal fencerow; not everyone is going to be able to develop such a fencerow. Narrower fencerows provide similar values and are also very important. By simply allowing grasses and forbs to grow up along and around old fences, you can enhance habitat for wildlife. All fencerows are valuable and need to be enhanced and not destroyed.

Fencerows, regardless of their width, are valuable wildlife corridors and should only be enhanced, not destroyed.

SUMMARY OF OPTIONS:

Conservation Tillage
Crop Rotation & Fallow Fielding
Leaving Standing Crop
Riparian Buffers (Streamside Management Zones)
Field Borders or Filter Strips
Grassed Waterways
Terraces & Contour Buffers
Fencerow Development (Wildlife Corridors)
Nest Boxes
Shallow Water Wetlands
Water Holes

Nest Boxes

Artificial nest boxes* can be added to cropland areas to enhance habitat for certain species of wildlife, such as eastern bluebirds, American kestrels, and Carolina wrens. They should be designed for the specific type of animal desired, using the appropriate cavity dimensions and entrance hole size. Placement, spacing, and height will vary. For more information, refer to the *Habitat How-To* entitled "Nesting Structures."

Water

Water is sometimes a limiting factor for wildlife in cropland systems. Several types of water-related practices can be implemented to benefit wildlife. Some of the more common practices include shallow water wetlands* and small, shallow ponds*. A good source of year around water can improve wildlife use in any given area. Take note of good watering sites on your property or the lack thereof. If you have large areas without accessible water, you should consider adding a wildlife watering pond. Shallow water areas are greatly beneficial to amphibians as well, which have become of great concern. Ideally, water sources should be available within one-half mile of any point on a farm, or distributed about one per 100 acres.

***Related *Habitat How-To* references:**

Streamside Management
Field Borders and Filter Strips
Wildlife Corridors
Trees and Shrubs
Native Warm Season Grasses
Cool Season Grasses
Legumes
Nesting Structures
Shallow Water Wetlands
Water Holes
Food Plots

Planning for My Property

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