MARYLAND COOPERATIVE EXTENSION
UNIVERSITY OF MARYLAND
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Fact Sheet

Fact Sheet 600

Wildlife Management: Field Border Management

Several upland game and nongame wildlife species have undergone serious population declines in Maryland since the early 1970s. Many factors, including development, road construction, abnormal weather conditions and intensive farming practices, contribute to the problem. This fact sheet focuses on low maintenance practices that provide upland wildlife habitats without significantly impacting farm productivity.

Balancing Wildlife Management with Profitable Farming

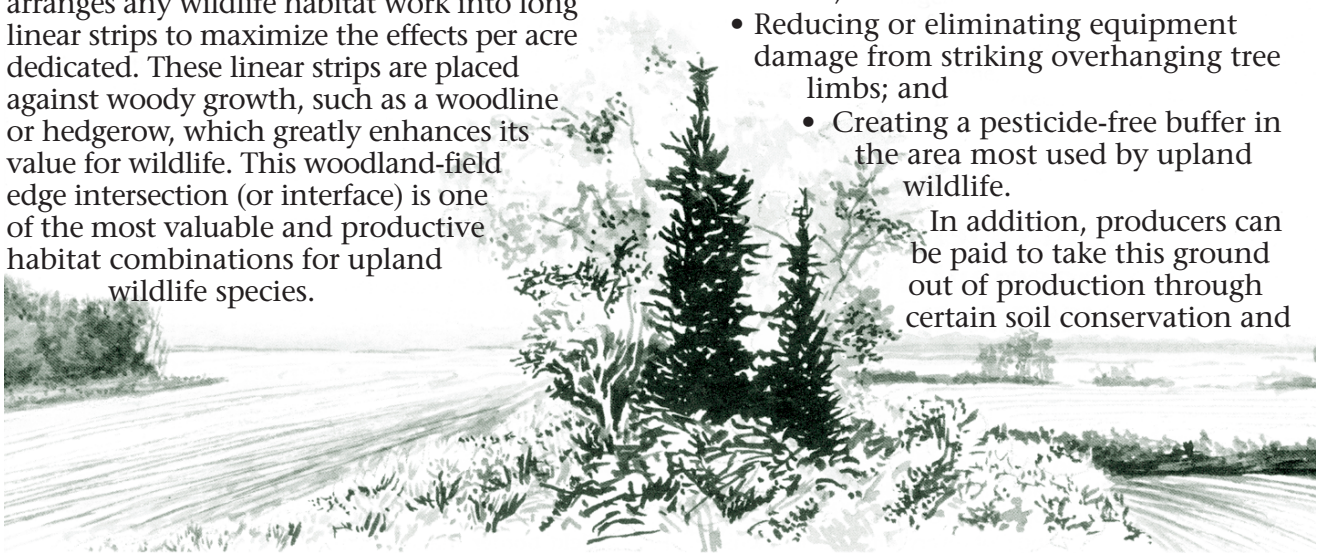
The system outlined in this fact sheet was designed by the Maryland Department of Natural Resources' Wildlife and Heritage Division to enhance habitat availability and value in areas subject to intensive agriculture. The approach, called field border management, focuses on farmland of least productivity and arranges any wildlife habitat work into long linear strips to maximize the effects per acre dedicated. These linear strips are placed against woody growth, such as a woodline or hedgerow, which greatly enhances its value for wildlife. This woodland-field edge intersection (or interface) is one of the most valuable and productive habitat combinations for upland wildlife species.

Benefits of Field Border Management

Field border management involves taking out of production up to 50 feet of field edge adjacent to permanent cover, such as a woodlot, treeline, hedgerow, or brushy creek bottom. This step minimizes income lost by the farmer, because this portion of a field is generally of low productivity yet requires the same expense to plant as the remainder of the field. Though most farmers recognize that this ground produces stunted crops because of shading and root competition from the adjacent woody growth, it is important to recognize that removing this ground from production has other advantages:

- Reducing planting time and costs without significantly affecting yields;
- Providing turn rows and convenient field access;
- Reducing or eliminating equipment damage from striking overhanging tree limbs; and
- Creating a pesticide-free buffer in the area most used by upland wildlife.

In addition, producers can be paid to take this ground out of production through certain soil conservation and



crop reduction incentive programs offered by various agencies.

A major advantage of the field border system is that the management of this strip can be modified to fit the desires and abilities of the landowner. Methods range from a minimum approach of mowing or disking on a 3-year rotation to prevent invasion by woody growth to a very intensive plan that involves planting nesting strips, food plots, and conifer clumps. A landowner interested in quail could focus on quail needs while another landowner concerned about wild turkeys could develop a management scheme specifically for that bird's needs.

Maryland Cooperative Extension and the Maryland Department of Natural Resources maintain trained staff to help landowners develop an approach to fit their interests and abilities. There is no charge or other obligation for these services.

Using Field Border Management to Provide Wildlife Habitats

Figures 1 through 4 illustrate possible wildlife habitat arrangements that can be made within field border strips. The fields shown are generic versions of what often is found in Maryland, tilled from woods to ditch to road. The figures show the same field managed at increasing intensities from the minimum application of establishing the strips and fallow disking plots every third year to intensive management, including food plots, nesting areas, and protective cover. The practices can be manipulated to fit the interests, time, and equipment of the landowner.

A Simple Approach

For a simple approach to field border management, leave up to 50 feet of the field untilled along any edge adjacent to woody growth, such as woods, treelines, or hedgerows. Mow and lightly disk the border every 3 years to prevent invasion by saplings or brush. Another option is to treat one-third of the border each year, rotating strips every 3 years (Figure 1). This rotation maximizes the fallow field-woods edge interface habitat that is so valuable to upland wildlife.

A Moderate Approach

A slightly more involved option is to plant the entire border to a clump-style grass, such as orchardgrass, or native warm-season grasses. These grasses tend toward clumpy growth and do not form a sod. Space between the clumps is an ideal spot for wildlife to nest and rear their offspring.

Native warm-season grasses are clump-style plants that occur naturally in Maryland. Indian grass, switchgrass, and big and little bluestem are popular varieties. Usually these grasses are planted together in a mix along with several wildflowers, such as black-eyed susans and partridge peas, to create a diverse stand of native plants. Once established, these stands are very durable and long-lived, typically requiring little annual maintenance. As native plants, warm-season grasses typically do not invade agricultural fields and are readily used by a variety of wildlife species, from butterflies to bobwhites. Many landowners have successfully planted their entire field border to a native grass and wildflower mix and have been rewarded by positive responses from wildlife.

Another moderate approach is to combine a nesting strip with the fallow rotation plot described above to provide a diversity of nesting, brood, and feeding cover (Figure 2). Nesting strips should be at least 300 feet long to avoid creating small nesting islands that increase predation loss.

An Intensive Approach

Add a winter food plot to increase the intensity of the moderate plan (Figure 3). To maximize benefits, winter food should hold some seed through early March and hold it above any snow cover. Dwarf or grain sorghum, soybeans, and shrub lespedezas are excellent examples of winter food. Another option is to leave standing crops, such as corn or soybeans along one edge of the border if the field is planted to grain.

A More Intensive Approach

This more intensive approach is designed to meet all the critical needs of upland wildlife (Figure 4). Groups of conifers (such as red cedar, scotch pine, and white pine) can be planted in the border corners, edges, or indentations along the edge of the woods. You can also remove canopy trees in a 50-foot to 60-foot strip on the edge of the woods to

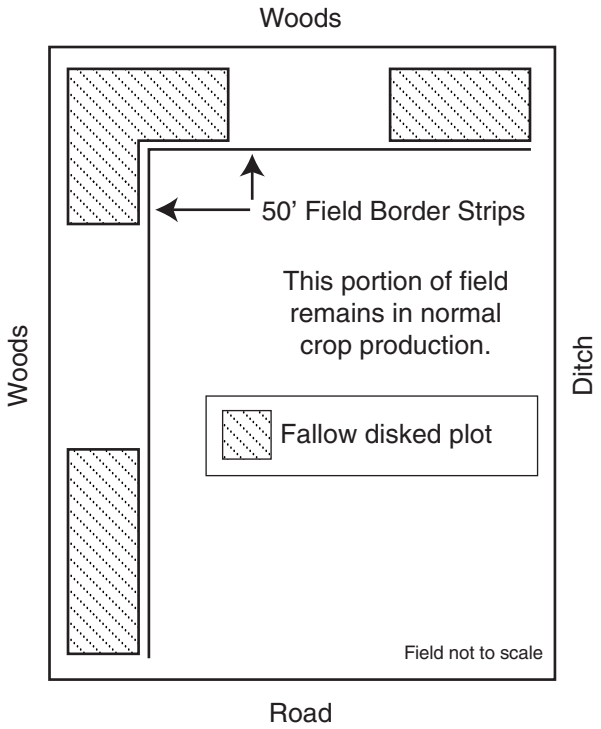


Figure 1. A simple field border management approach.

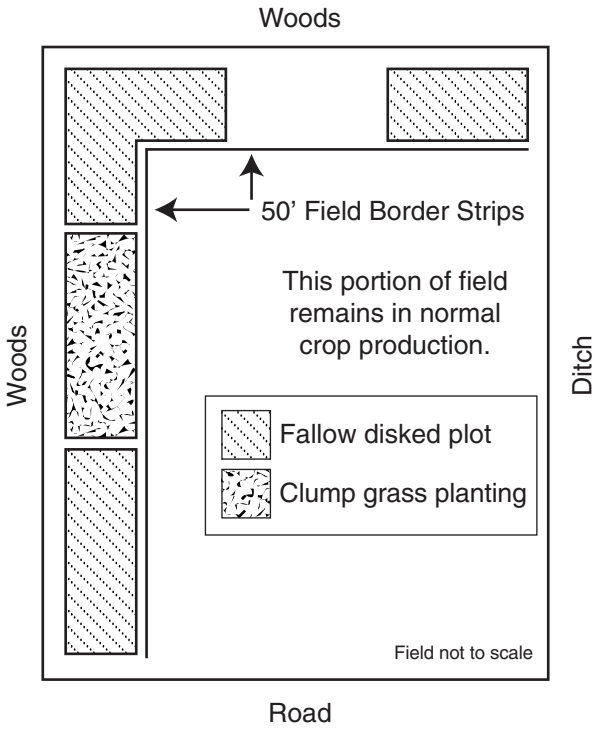


Figure 2. A moderate field border management approach.

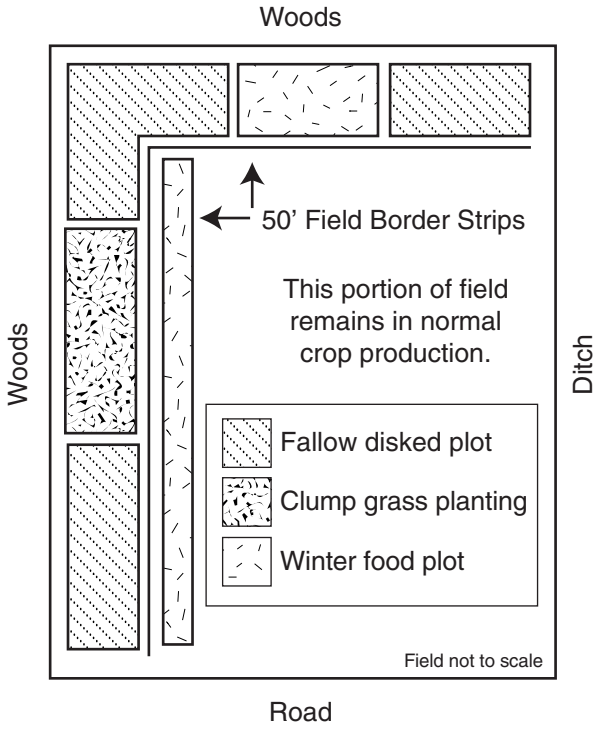


Figure 3. An intensive field border management approach.

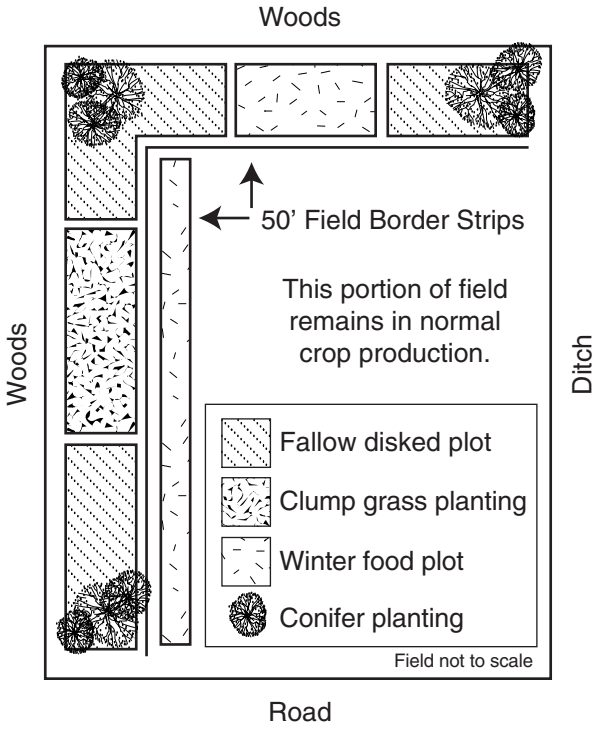


Figure 4. A more intensive field border management approach.

encourage cover-producing brush and small trees. The trees you remove can be used for firewood or saw logs, and limbs can be made into brush piles.

Field border management can make a dramatic difference in wildlife use of your field. Nonmigratory upland wildlife will flourish only if their year-round habitat needs are met. Usually, the most critical habitat components for upland species in Maryland are safe nesting cover, winter food, and winter cover. The field border management approach places these three components in close proximity along your field edge. This arrangement is accomplished with a minimum sacrifice of tillable acreage, because it takes over 870 feet of a 50-foot wide strip to equal 1 acre.

A Pesticide-Free Buffer

Pesticides are commonly used to help reduce damage from a variety of crop pests. While some researchers feel there is a connection between pesticide use and declining wildlife populations, other studies indicate farm chemicals are relatively harmless at recommended application rates. However, the use of certain agro-chemicals can result in serious environmental degradation, as was discovered years ago with the heavy use of DDT and dieldrin. Prudent application of pesticides is not only environmentally sound but it also makes economic sense. The field border management approach minimizes pesticide-upland wildlife contact. Not spraying the field border creates a pesticide-free buffer between the woodland edge and the tilled portion of the field. Because most upland wildlife activity is focused along the woodland edge-field interface, pesticide exposure is greatly reduced.

The field border management approach discussed in this fact sheet serves as only one example of how a field edge can be managed for wildlife. The different options and arrangements are almost endless, making it easy to meet efficiently and economically the upland wildlife interests of any field owner. There are many advantages to field border management:

- Lost farm income is minimized;
- Low maintenance is required;
- Habitat work is arranged in efficient linear strips;
- The highly productive woody growth-field edge interface is utilized;
- The practices are tailored to fit landowner interests, time, and equipment;
- Managed ground can easily be returned to crop production;
- The requirements of several incentive programs offered by various agencies are met;
- The approaches are compatible with the intense agricultural philosophy necessary to make a living at farming today; and
- A pesticide-free buffer is created between the woodland edge and the tilled portion of the field.

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