



## Introduction

Farmland is a critical habitat for many species of wildlife. It's also a rapidly disappearing feature of our landscape. During the first two centuries of settlement in New Hampshire, the landscape shifted from forests to fields. Before colonization, what was to become the granite state was 90 percent forested. By the time of the Revolution, farming was New Hampshire's largest industry. By the mid-1800's, 60 percent of the state was in agricultural lands.

Most farms were abandoned and fields grew to forests as successional processes took over. As the number of farms dwindled, so did the wildlife which inhabited them. Today, New Hampshire's farmland comprises approximately 3 percent of the state's total area. Its value to wildlife that depends on farmland habitats increases in importance as farmlands continue to disappear.

Farming and wildlife habitats are compatible. There are many easy and practical management techniques landowners can do to ensure farmland habitats remain available for the wildlife that require them.

## Farmland Habitats Used By Wildlife

There are several different types of habitats found on farmland:

**Upland fields** are typically too wet or rocky for cultivating and are used as pastures. Grazing livestock keep the grass short, creating a habitat suitable for eastern bluebirds, field sparrows, eastern moles and American goldfinches.

Tall, grassy areas or **hayfields** provide perches for bobolinks, thatch for ground-nesting birds, and insects for brood-rearing songbirds. Hayfields are the preferred habitats for turkey vultures, meadow voles and meadowlarks.



# Wildlife Habitat Improvement: Farmlands and Wildlife



**Orchards** with stands of fruit trees and a grassy floor beneath support yellow-bellied sapsuckers, eastern kingbirds, eastern bluebirds, orchard orioles and woodland voles.

**Cultivated lands** provide cover and food for wildlife such as deer, geese and wild turkey. After the growing season, ring-necked pheasant, killdeer, red fox, and northern flicker use the cultivated fields.

**Abandoned fields** on the way to becoming forest consist of overgrown shrubs and trees such as blueberry, juniper, eastern red cedar, aspen, apple, cherry, birches and white pine. Abandoned fields provide an excellent habitat for rabbits, deer, and many songbirds.

**Edges** are the borders between two different habitats such as a forest and field. Edges provide habitats for cardinals, indigo buntings, catbirds, rabbits and towhees.

**Hedgerows** and **fencerows** between fields are used for food, cover and perch sites by eastern kingbirds, meadowlarks, eastern phoebes and rabbits. These areas also provide travel corridors for small mammals and perches for American kestrels and red-tailed hawks that feed on the small mammals.

## Enhancement of Farmland Habitats

There are many opportunities to enhance farmland habitats for wildlife. Though some wildlife present an economic loss to landowners, most present no conflict and are actually beneficial. Hawks, owls and red foxes feed on rodents that destroy grains and crops. Even bats and birds consume nuisance insects.



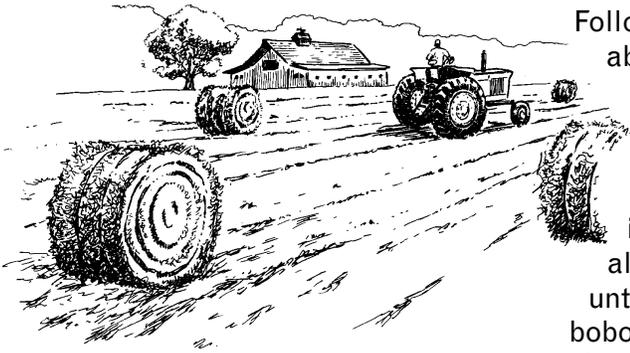
**Food Plots** can provide food for a variety of wildlife. For best results, place food plots near good cover, such as shrubby or wooded areas, and planted at least 30 to 50 feet wide.

Corn is the most popular forage plant, but annual rye, millet and buckwheat are also beneficial. During times of poor acorn production and severe winters, corn will be used heavily by turkey and deer. Turkeys eat one-half an ear of corn a day, so 12 50-foot rows of standing corn will support 20 turkeys for three months.

Perennial crops of clover, alfalfa and other legumes can be planted to provide turkeys, songbirds, rabbits and deer continued feeding opportunities during the summer. Sunflower beds around the edge of fields also provide more food for birds and small mammals.

Food plots should be managed on a rotational basis, and left idle for three years after planting. By leaving plots idle, early successional vegetation will attract insects, songbirds and other wildlife.

**Fallow Fielding and Crop Rotation** are good ways to create wildlife food and cover. An example of a crop rotation pattern includes three years of corn followed by at least one year of a cover crop. Turning the cover crop over each fall and planting winter rye is recommended to reduce erosion. Whatever crops are planted, fallow fielding for a year or two and cover cropping during the rotation benefit wildlife.



**Mowing Hayfields** benefits many species of wildlife.

Following a harvest, foxes, hawks and owls find an abundance of vulnerable prey. However, whether hayfields are mowed for aesthetics or harvested for forage, many birds, small mammals, snakes, turtles, and even fawns are lost because of mowing. Placing the cutting blade to a height of six inches helps prevent the loss of wildlife. Mowing also should be avoided from April through mid-July, until ground nesters such as meadowlarks and bobolinks are finished nesting. If mowing must be done before mid-July, leaving unmowed patches or strips of grass or wet swales can limit the impact on ground nesting species.

If open fields are maintained for aesthetics, mowing strips or patches increases habitat diversity. Allowing strips 30 to 50 feet wide to grow for two or three years promotes shrubby vegetation for browse and cover. Once established, mowing every three to five years maintains the habitat, preventing woody vegetation from taking over.



**Grassy and Shrubby Borders** can be established by leaving uncut strips 25 to 50 feet wide along hayfield edges, or uncut areas in wet swales. This nesting and brood rearing cover habitat can also serve as a deer and turkey food plot. The area can be maintained by mowing every three to five years.

**Controlled Burning** of old fields and pastures on a periodic basis improves grass and brush habitat for wildlife. Fire removes accumulated dead plant materials and releases nutrients. The lush herbaceous growth following fire provides browse and cover for deer, grouse, and rabbits and attracts insects and songbirds who feed on them. Before any burning is done, obtain a permit from the town fire warden.

**Hedgerows** 30 to 50 feet wide provide good escape cover, food, rest area and travel corridor. Existing hedgerows can be maintained by thinning to release mast producing trees and shrubs and increase vertical diversity. By not mowing and tilling areas next to fences, vegetation will naturally fill in. Once a dense hedgerow has been established, it can be maintained on a 10 to 20 year basis by cutting, mowing or burning.

**Snags, cavity trees, and perches** that many birds and wildlife depend upon are also found in hedgerows and along edges. Snags are dead or partially dead standing trees used as drumming, food and perch sites. Dead limbs with good vantage points along old fields, hedgerows and pastures make excellent perches.

Red-tailed hawks, kestrels and other raptors that forage and nest in the open country use high perches such as utility lines and tall snag trees. Low perches, less than 10 feet such as fence posts, provide sites for singing and insect hawking birds such as eastern phoebes, eastern kingbirds, northern mockingbirds, song sparrows and eastern meadowlarks.

Snags and cavity trees are frequently chosen for use as firewood. However, retaining trees with cavities of various sizes and snag trees of different heights benefit a variety of wildlife.

**Brush Piles** benefit wildlife by providing dense cover, escape, resting, feeding and nesting areas. Place four to five large logs 10 inches or more in diameter in a crisscross pattern to form the base. Loosely placing smaller limbs and twigs on top creates the canopy. Piles can be five to 15 feet in diameter and four feet high, and placed along woodland edges and hedgerows. The loosely stacked pile allows weeds and vegetation to grow in and around the pile as a food source, while providing easy movement and protection for wildlife within the pile.

**Artificial Nest Boxes** can supplement wildlife habitats where natural cavities are scarce. Eastern bluebirds are the most notable species that benefit from nest boxes. Ideal habitats for bluebirds are old fields or pastures bordered by mixed hardwoods. Bluebird nest boxes should be placed four to six feet above the ground and 100 yards apart along a fence line or field edge. Artificial nest boxes can also supplement natural cavities for kestrels, bats, swallows, and other wildlife. Nest boxes need to be maintained with an annual cleaning before the arrival of birds in early spring.

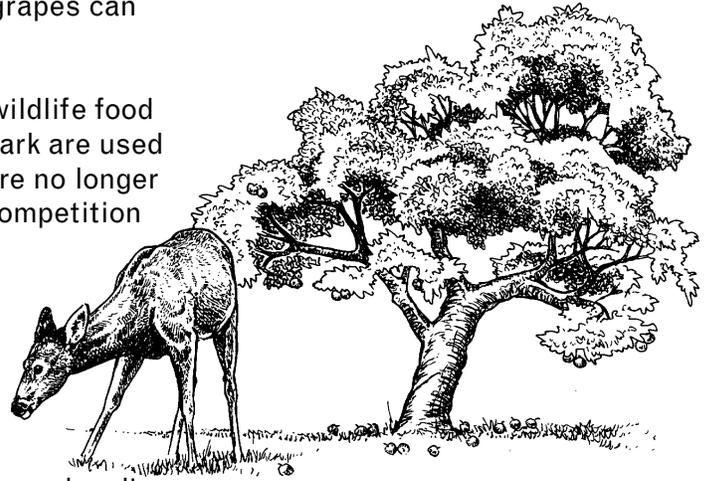
Most areas naturally fill with vegetation, but where erosion is a threat or there are few fruiting shrubs, **plantings** can enhance wildlife food and cover. Before planting, take an inventory of what's already growing on the property. Plantings can be done along fence rows, hedgerows, or to supplement an edge habitat.



Know the site and plants you choose. Some plants prefer shade to sun or wet soil to dry soil. Arrange plantings to create a diversity of high and low vegetation and interspersed food and cover.

Trees that provide wildlife food include black cherry, red and white oak, mountain ash, dogwoods, crabapples, and hawthorns. Shrubs include blueberry, dogwood, sumac and viburnum. Even vines such as Virginia creeper and wild grapes can fill spaces and provide benefits to wildlife.

**Wild Apple Trees** are one of the most valuable wildlife food resources. The fruit, leaves, buds, twigs, and even bark are used by wildlife. Many properties have apple trees that are no longer managed and their productivity is low because of competition from other vegetation. Remove all shrubs and vegetation from around apple trees to reduce crowding, shading and competition. Doing this increases an apple tree's productivity and its value to wildlife.

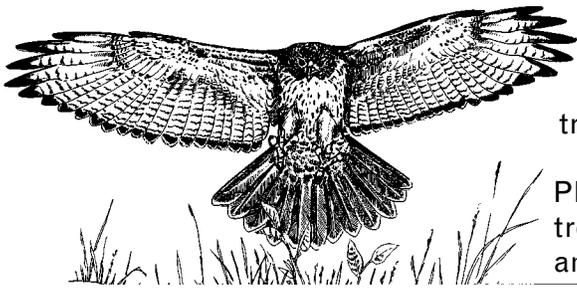


**Farm Ponds** can be managed to attract wildlife and for recreational purposes. To reduce soil erosion and sedimentation, keep livestock out of the pond and away from banks. If the pond is a water supply for livestock, limit their use to a small section of the shoreline.

Vegetation allowed to fill around the shoreline stabilizes the shore edge and provides cover, food and nesting habitat for most wildlife. Placing a small amount of brush in the shallow water near the edge will give frogs, toads and salamanders a place to lay their eggs. Floating logs near the edge also provide habitats for salamanders as well as sunning and resting areas for turtles and ducks. Adding rocks offers preferred sunning sites for turtles and snakes.

## Integrated Pest Management

Integrated pest management (IPM) is an approach that reduces the use of chemicals and encourages other strategies to reduce and control pests. Natural enemies of farm pests include pest predators, parasites and diseases. These natural enemies are generally species specific and can eliminate a pest without negative effects on wildlife or the environment.



Examples of integrated pest management include crop rotation and alternative planting dates, use of pesticide-resistant crops and livestock, mechanical and physical controls, and chemical controls, as needed.

Placing guards such as hardware cloth around the bases of trees can also stop rabbits and small mammals from gnawing and girdling trees.

Mowing around the bases of fruit trees will keep small mammals away by exposing the area to potential predators. The placement of artificial nest boxes in orchards may help control populations of voles and other small mammals. American kestrels feed during the day in open country and readily take to nest boxes. Barred, saw-whet, and screech owls will nest in artificial cavities and feed on small mammals at night. For information on dimensions and placement, see UNH Cooperative Extension Publication: *Raptors in New Hampshire Orchards*.

For more information regarding your farmland and help on integrated pest management, contact your local UNH County Extension Educator in Agricultural Resources.

This publication is one of a series on Wildlife Habitat Improvement. More information and additional help can be obtained through your local UNH Cooperative Extension office.

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**Sept. 1995**