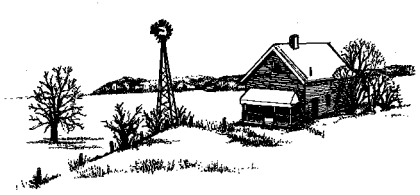
PRIVATE LAND PARTNERSHIPS
WORKING TOGETHER FOR WILDLIFE

OLD FIELDS

Old fields are those which contain annual plants, perennial broadleaf plants, or a mixture of the two, as well as perennial grasses. Old fields, which include crop stubblefields allowed to lie fallow, are fairly abundant in Michigan, especially where agriculture has been practiced. These land types occur when land goes out of cultivation for a period of time. Some people quit farming, others let fields lie fallow for a year or two, and still others enroll idle acres in federal conservation programs. Old fields may appear to be wastelands but they actually are capable of supporting many kinds of birds and small mammals. For example, foxes, coyotes, hawks, and owls hunt in old fields, pheasants and songbirds live in them, and deer bed there.

Federal conservation programs pay landowners not to produce crops on those acres but to establish permanent vegetative cover to protect the soil from erosion; reduce water, air, and land pollution; and provide wildlife habitat. If your land qualifies, you can apply for cost-sharing programs that may help pay for seedbed preparation,



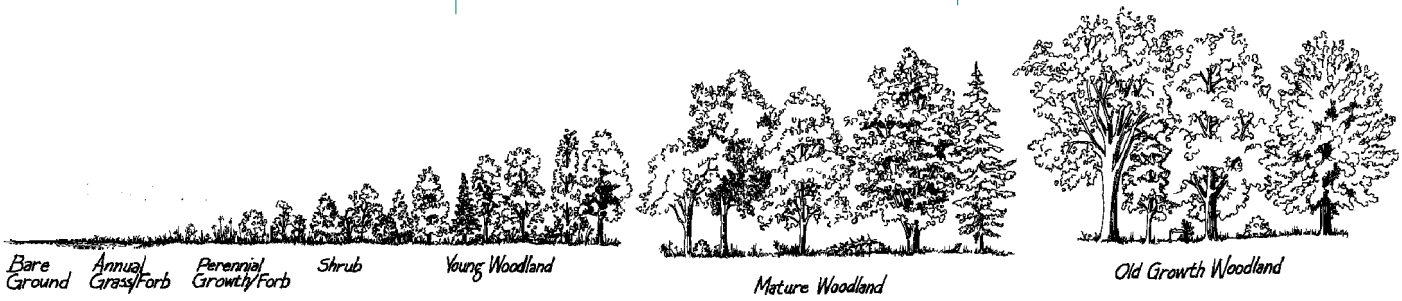
fencing, liming materials, fertilizer, seed, and seeding operation, and pesticides. For more information, contact your county Conservation District.

Land managers should decide whether to keep fields idle or convert them to grassland. This chapter explains the benefits to wildlife that occur when fields are left idle and natural succession is managed.

The Role of Succession — A Land Aging Process

Old fields left idle are one of the early stages in the five steps of the natural cycle of succession that, over time, turns bare ground into a forest. Bare soil is the starting point. The first plants to establish themselves in bare soil are annual plants which live one growing season and then die, such as ragweed, pigweed, smartweed, lambsquarter, foxtail, pokeweed, barnyard grass (wild millet), and mare's tail. These plants provide seasonal nesting and brood-rearing habitat for pheasants, quail, bluebirds, and other songbirds, and insects for food.

The next successional stage is biennials and perennials. Perennials are those non-woody plants that grow back year after year. These include goldenrod, asters, milkweed, daisy fleabane, other forbs, and many kinds of grasses and clovers bush, ladino, common white, alsike, and others. Biennials are those plants that grow one year and produce seed the next year. They include sweet clover, mullein, curly dock, wild mustard (yellow rocket), shepherd's purse, black mustard, foxglove, and the thistles. Small mammals such as mice, rabbits, and skunks now begin to use the habitat, along with foxes, hawks, and owls, an abundance of butterflies, meadowlarks, bobo-links, Savannah sparrows, and other songbirds.




opposum

After a few years, sumac, dogwood, blackberry, autumn olive, buckthorn, and other shrubby plants begin to invade the habitat. It now becomes more attractive to raccoons, opossums, deer, and songbirds such as cardinals, gray catbirds, and juncos.

As succession continues, red maple, cottonwood, birch, aspen, and chokecherry are tree species most likely to invade. During the early stage of this forest development, young seedlings provide browse for rabbits and deer. The increasing amount of vertical structure attracts thrushes, woodpeckers, blue jays, and orioles. As the forest grows over time, more shade-tolerant trees like sugar maple and beech invade. Squirrels, wild turkeys, deer, and wood ducks are examples of wildlife that eat the nuts produced by these trees, which also furnish den cavities for screech owls, squirrels, raccoons, woodpeckers, nuthatches, and chickadees.

Managing Succession

You can manage your land for any stage of succession, or you can create as much diversity as possible by managing for several stages at once. How you manage your old field depends on three items:

(1) the goals of your overall plan

2) the size, shape, and other conditions of your property

(3) what "tools" you choose.

There are at least three “tools” to maintain idle fields.

Prescribed burning is the well-planned and controlled use of fire to speed up or set back natural succession. In forests, a very hot fire will set back succession, but a cool fire in a young forest can actually advance succession. To fully understand the results of burning habitat on your land, consult with a wildlife biologist or other professional. Also, be sure to check with the local fire department to see what regulations apply. Remember that prescribed burning can be dangerous and should be done with the help of a trained professional.

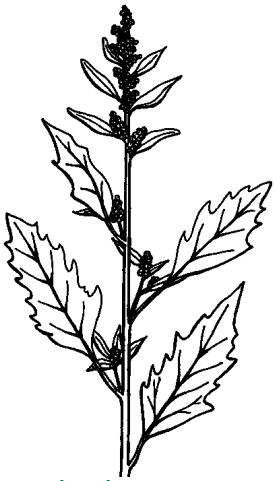
For more information see the **Prescribed Burning** chapter within this section.

Chemicals such as herbicides and fertilizers are often used to maintain openings in forests, to control the invasion of woody plants in the early stages of succession, or to promote the growth of desirable plant species by eliminating their competition. The use of herbicides, if applied properly, changes habitat but generally does not have a toxic effect on wildlife. The use of fertilizers tends to increase plant growth and nutrition.


ragweed


pigweed


barnyard grass


lambsquarter


quack grass

Chemicals such as 2-4-D will eliminate broadleaves for a season and reduce diversity in the stand. Herbicides such as glyph-osate (Round-Up) will kill all plants. If you disk the field without using an herbicide, quack grass will quickly spread eliminating valuable annuals. Using a herbicide will reduce quack grass and allow the favored annuals to come back. Seeds of annual plants are larger than those of perennials and are more preferred by wild-life. Important ones are giant and common ragweed, smartweed, barnyard grass, lambsquarter, pigweed, and foxtail. Wildlife use this food year around, but it becomes most important in winter and early spring. Indiscriminate use of herbicides or fertilizers, however, can have more negative than positive effects. Seek the advice of a conservation professional before applying chemicals.

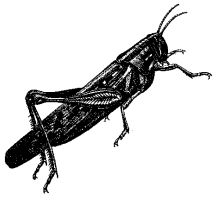
Mechanical alterations, which include mowing, manual cutting, discing, and plowing, are other methods for maintaining early successional stages and for removing unwanted vegetation. Soil type, depth, potential erosion, and the size and density of the target vegetation are all factors to consider. Also, the mowing of some woody species causes them to grow faster and spread more rapidly.

Fields left alone for eight to 10 years will produce primarily goldenrod and asters, which have limited value to wildlife. Discing a portion of the idle field each year on a three- to five-year rotation will restore root vigor by reducing the effects of crowded root systems. Discing will also scatter the seed to better establish valuable annuals. For example, if your idle field is 25 acres, disc five acres (five one-acre blocks or strips) each year to get the complete range of early successional annuals, biennials, and perennials.

Site Preparation and Stand Maintenance

Field preparation should create a bare-soil condition through plowing or repeated discing. Eliminate quack grass with Round-Up or a similar herbicide. After the last field tillage, the seeds of dormant annual plants will grow into the prepared site and provide first year food and cover. Augment, if you wish, with a cover crop of small grain. The best soil pH for weed growth and crop growth is 6.0 to 6.5. If soil pH is above 5.5, the dormant seeds of various clovers (which you can rotate with periodic discing) will naturally sprout and provide two or three years of food and cover. If pH is below 5.5, add lime.

Second-year growth will show more annuals, plus biennials and seedling perennials. Each successive year will show a greater percentage of perennial forbs and grasses. A once-over deep discing during the spring of the fourth year will again create a mixed annual-perennial crop. A heavy discing two or three times over will set back the site even further. Continue to disc on a rotational basis or recycle the field by plowing if grasses and perennial forbs cover more than 70 percent of the ground surface.

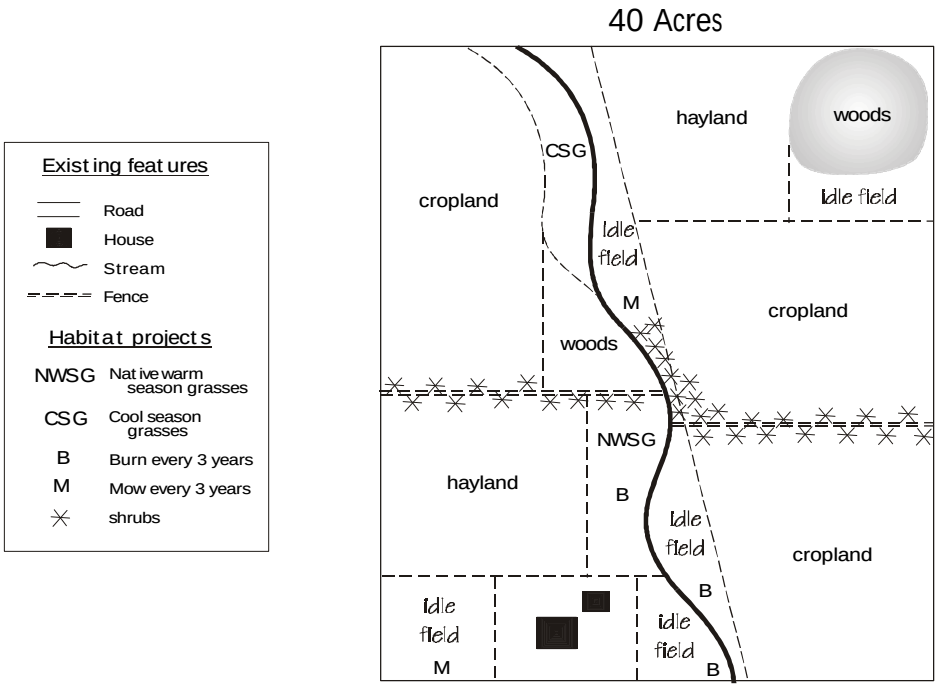

grasshoppers are abundant in old fields.

Planting Options

Because plantings assist the advancement of succession, they are usually done in combination with one or more of the other tools. The timing of discing or other treatments determines which annual weed varieties will dominate in an idled field. Fields treated from April 15 to June 1 will usually explode with lambsquarter, pigweed, and ragweed. The earlier the treatment, the more ragweed will appear in the stand. Stands prepared later in the summer will favor annual grasses and the establishment of biennials.


redtop

You can help provide additional wildlife food by planting a crop in the old field and not harvesting it. A field prepared in September and lightly seeded to winter wheat (one bushel per acre) will provide wheat seed, abundant insect life and a late crop of ragweed seed. The mixture of unharvested wheat and ragweed will furnish a food source and summer/fall roosting cover for pheasants, quail, and rabbits. Some of the wheat will provide a second-year crop through volunteer seeding. Likewise, a field planted in early spring (before May 1) to oats (one bushel per acre) will create a



This map is an example that demonstrates the many management options discussed throughout this chapter. The option(s) you choose should depend not only on your goals, but the location, condition, and present use of your land.

similar food/cover situation for one year. Not being winter hardy, the oats will offer a food source for only one year.

If you plan to manage idle fields for grassland habitat, consider planting cool season and warm season grasses. Cool season grasses are those species which grow most rapidly during spring and early summer and again at the end of summer and early fall when cool nights follow warm days. These include grasses such as orchard grass, timothy grass, June grass, and redtop, which are usually mixed with many kinds of clovers (white and red). Warm-season grasses grow most rapidly during the peak of summer when warm nights follow hot days. Growth slows in fall when soil temperatures drop. Native grasses to Michigan include Indiangrass, switchgrass, big bluestem, and little bluestem. Whenever possible, plant native species and follow natural patterns as dictated by the terrain and soil conditions of your property. Questions about suitable plants, sources of planting stock, and ground preparation are best answered by your Conservation District wildlife biologist, local extension agent, or NRCS staff. For more information, see the chapters on **Cool Season** and **Warm Season Grasses** in this section.


Indiangrass

In summary, old fields provide not only a variety of benefits to wildlife but also help protect soil from erosion and reduce water, air, and land pollution. There are many management options that can assist you in maintaining your old field. Choose one that will help meet your wildlife goals.

FOR ADDITIONAL CHAPTERS CONTACT:
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Private Land Partnerships: This partnership was formed between both private and public organizations in order to address private lands wildlife issues. Individuals share resources, information, and expertise. This landowner's guide has been a combined effort between these groups working towards one goal: Natural Resources Education. We hope this manual provides you with the knowledge and the motivation to make positive changes for our environment.