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4H Wildlife Management Program  
Michigan State University Cooperative Extension Service  
4-H Club Bulletin  
Charles Shick, Game Management  
Issued June 1971  
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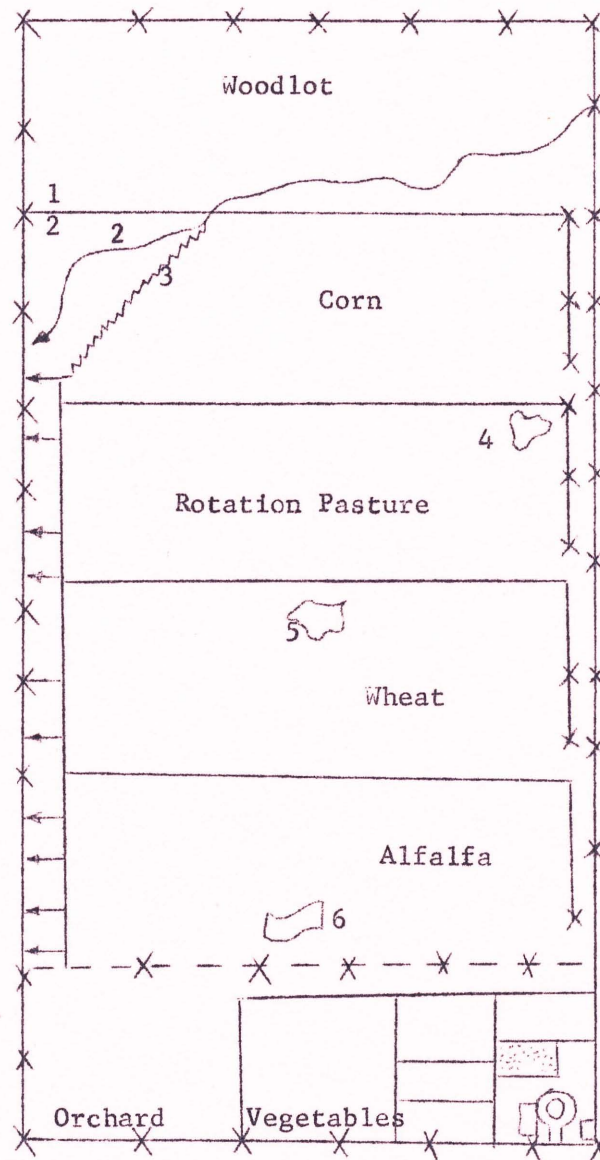
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# 4-H WILDLIFE MANAGEMENT PROGRAM

Charles Shick

Extension Specialist in Game Management



- 1 Squirrel Box
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- 6 Feeding Station

4-H Club Program  
Cooperative Extension Service  
Michigan State University  
East Lansing, Michigan

## 4-H WILDLIFE MANAGEMENT PROGRAM

Charles Shick, Extension Specialist

in

Game Management

### Objectives

1. To create interest and appreciation for wildlife found on Michigan farms.
2. To create an understanding of problems related to wildlife conservation.
3. To improve southern Michigan farms for wildlife through good land-use practices.
4. To show the relationship between natural resources and people.

### Requirements

1. Since this is a farm game project, it is available only to 4-H members living south of highway M-20, including Huron County.
2. Any 4-H Club member who has attained the age of 12 can participate in the program.
3. Each member should plant a minimum of 500 trees and shrubs for the benefit of wildlife.
4. Owners of farms for which 4-H Club members plan to obtain trees and shrubs from the Michigan Conservation Department without cost will be asked to enter into an agreement with this state organization. If, however, a person wishes to obtain trees from other sources, he can do so without cooperating with the Conservation Department.
5. Each member should submit a report on conservation activities.
6. Each member is asked to prepare an exhibit for "Achievement Day" or county fair.
7. Write for and read the bulletins under "study material." In most instances, single copies may be obtained without cost.
8. Each member should make two maps of the farm, showing planting sites and other features. One must be submitted to the 4-H Club Agent by February 20. The second map is for the exhibit and landowner's record.
9. Each member should submit a list of required planting stock to the 4-H Club Agent with his map.
10. Each member should construct one or more nest boxes for squirrels or one or more bird houses.

### Exhibit for "Achievement Day":

Each member is required to exhibit a map of the farm showing where wildlife plantings were made, a nest box for squirrels or bird house and a note book containing a report of conservation activities on "Achievement Day" or at the local county fair. Pictures showing planting operations and existing game cover can be used to good advantage as part of the exhibit. It is suggested that pictures be taken before plantings are made and after plantings are established, thus giving the before and after comparison.

### Writing the summary report:

All 4-H members wishing credit for work in wildlife management are required to submit a report summarizing their activities. The report can be prepared in the form of a notebook. It should tell how the map of the farm was made, that is, were aerial photographs used or was it prepared by pacing distances on the land? It should include the number and kinds of trees planted; the location of plantings, such as a hillside or fencerow. (Example: site #1, sandy hillside, 200 Red Pine, 50 Coralberry; site #2, fencerow clay loam soil, 1050 Multiflora Rose.)



The report should tell how each planting site will benefit wildlife, that is, will the trees or shrubs provide food and cover or both? What animals will be benefited - song birds, rabbits, squirrels, pheasants, quail, etc.?

The summary should include the number of hours devoted to making the farm plan and also the hours spent planting the trees and shrubs. Include the equipment used in planting. (Example: tractor and plow for installing a Multiflora Rose fence; tractor and plow for making furrows for pines; or shovel for planting shrubs and trees in odd fence corner.)

If brush piles were constructed, tell where and how many. What animals will be benefited?

Tell how some of the wildlife plantings will aid in soil and water conservation.

Include snapshots and magazine pictures which show good land-use practices which benefit wildlife.

Study Material:

Wildlife Conservation for 4-H Clubs, Bulletin 134.1 A - Bulletin Office,  
Michigan State University, East Lansing, Michigan

\* \* \* \* \*

How to Plant Forest Trees, Extension Folder F-32  
Producing Wildlife by Good Farm Land Use, Extension Bulletin 218  
Conserving Soil by Better Land Use Practices, Extension Bulletin 203  
Multiflora Rose for Living Fences and Wildlife, U.S.D.A. Leaflet 256  
The Wind Break as a Farm Asset, U.S.D.A. Bulletin 1405

Bulletin Office  
Michigan State University  
East Lansing, Michigan

\* \* \* \* \*

The Farmer and Wildlife

Wildlife Management Institute  
Investment Building  
Washington 5, D.C.

\* \* \* \* \*

A Guide for Making Wildlife Food and Cover Plantings on Farmlands  
Wildlife Notes  
The Status of Multiflora Rose in Michigan, 1951  
Wildlife Management Program for Southern Michigan Farms  
A Cooperative Hunting Plan for Michigan Farms  
Artificial Dens for Squirrels

Department of Land and Water Conservation  
Michigan State University  
East Lansing, Michigan



the greater is its ability to produce wildlife. Strip cropping, a recommended soil conservation practice, often provides additional "edge" for wildlife.

For the reasons described here, one of the aims in managing farm land for wildlife is to create brush "edges." Hedges and clump planning of trees and shrubs form "edge" and will provide wild animals and birds with food and nesting, resting and escape cover. Brushy fencerows also serve as travel lanes between larger cover areas such as marsh, woods and cropland.

Thus, southern Michigan farms in most instances can be improved for wildlife by the addition of food and cover producing shrubs where they will not interfere with the routine farm program. Most of the plantings can be tied in with good soil and water conservation practices.

### WE START OUR PROJECT

#### Making a map of the farm:

Sketch duplicate maps of your farm showing location of fields; woodlots; fences; fencerow cover; marshland; swales; ditches; unusual surfaces such as hillsides and gullies; building; roads; etc. (See attached map and legend sheet.) One map will be submitted to your 4-H Club Agent and the other will be for your own use. Aerial photographs and "graph" paper will save you much time in drawing your map. You may be able to get such aerial photos in your local Soil Conservation Service office or Production and Marketing Administration Office.

Use a scale of 1" to each 40 rods (660 feet) in making the map you will send to your 4-H Club Agent. The second map is for your conservation exhibit and record, thus a larger scale can be used. The maps should show the farm owner's name, your name, farm acreage, section number, townline, range, township, county and date map was made. Indicate the direction of north on your map.

#### Where and how to plant for wildlife:

After you have completed your map of the farm, determine the sites you wish to improve. There are probably many places to work on but you are reminded to choose only a few since you will be limited as to how much you can plant. Where sod is not heavy and therefore scalping is not necessary, one person can plant about 500 trees and shrubs in a day. On the other hand, where sod is thick and scalping is necessary, one person can plant only about 250 trees. For this reason, pick out two or three sites and do a good job. About 1000 Multiflora Rose can be planted for a living fence in a half day by two people, a tractor and a plow. The pamphlet A Guide for Wildlife Food and Cover Plantings on Farmlands should be helpful to you in determining spacing and arrangement of trees and shrubs. They could be any of the following places where trees and shrubs will not interfere with the usual farming operations:

- |   |                           |
|---|---------------------------|
| 1. Eroded or sandy hillside                 | 5. Woodlot borders        |
| 2. Sandy, dry, non-tillable areas           | 6. Fence rows             |
| 3. Odd fence corners not suited for farming | 7. Edge of marsh or swale |
| 4. Windbreaks                               | 8. Stream and ditch banks |
|   | 9. Gully                  |

Each planting site should be designated on the map with a number. (See sample plan.) For example, if you plan to develop a steep hillside, an odd fence corner, fencerow, and a woodlot border, the hillside might be numbered as site #1. The



### Wildlife values on the farm:

Michigan's wild bird and animal resources represent a valuable crop. Each year the meat and fur provided by wildlife amounts to more than \$10,000,000. Muskrats, the bulk of which are trapped in southern Michigan, provide the state with a "million dollar" industry. Many farm folk take advantage of the extra cash provided by the open season on muskrats. In 1949, the small game harvest in Michigan produced about 864,000 pheasants, 1,940,000 cottontail rabbits, and 674,000 fox squirrels. Most of these animals were taken on southern Michigan farms.

Over and above the money values of the game and fur crop, is the recreation that hunting and trapping affords to nearly 700,000 small game hunters and about 40,000 trappers, many of them people who live and work on farms. The enjoyment they derive cannot be determined in terms of dollars and cents but most people will agree that it exceeds the value of the fur crop and edible meat by many times.

Each fall during the hunting season, hunters spend much money for equipment, clothing, gasoline, shells, food, etc. Some of this cash is distributed in small farm communities, thus affording an outlet for some of the local farm products. The money spent by hunters is an important portion of Michigan's multi-million dollar tourist industry.

Another recognized value of Michigan's wildlife comes in the form of pest control. Songbirds and game birds eat many kinds of insect life and weedseeds. Hawks, owls, foxes and other animals are responsible for destroying large numbers of mice. If all the young lived and produced young, one pair of meadow mice could increase to a million animals in a single year. Because of the feeding habits of some of our larger birds, animals and other factors, this rate of increase does not happen in nature.

The value of wildlife to the hundreds of people - consisting of campers, tourists, naturalists, picnickers, photographers and rural folk who simply enjoy the presence of wild animals - should not be underestimated. To all these groups the mere fact that animals are around adds to better living. The value of the enjoyment provided by wild birds and animals, perhaps can best be interpreted in terms of health, happiness, and spiritual life.

### Wildlife management on the farm:

The landowner is in an excellent position to influence wildlife populations beneficially or otherwise. The land-use practices he carries on are often important in determining the numbers and kinds of wildlife he will have on his farm. The removal of all cover (wooded areas, fencerows, etc.) will result in fewer songbirds and game animals.

In a general way a good job of farming, one which considers soil and water conservation, will result in good game management. Classifying each acre of land according to its best use provides small areas on the farm on which wildlife is the major crop. Such areas may include marshland, swales, woodlots, odd corners which are not adapted for general farming, windbreaks and so on. They generally can be improved for wildlife by additional plantings of food and cover producing trees and shrubs. It should be remembered, however, that all parts of the farm should be considered in managing wildlife even though some fields may be growing corn, hay, or timber. The "edge" provided by field borders is important to wild birds and animals. ("Edge" is a term applied to boundaries between two or more types of cover. Example: where a cornfield boundary meets the edge of a marsh or hayfield.) Brushy "edges" where several kinds of cover come together make the best kind of homes for wildlife. Thus the greater the combination of cover on a farm,



windbreak planting on the north side of the woodlot could be indicated as site #2, the proposed Multiflora Rose hedge fence #3 and the odd fence corner site #4, and so on.

Eroded hillsides and other larger non-tillable areas can be planted to mixed pines and shrubs. To create as much "edge" as possible on a large area (one acre or more), plant in clumps rather than one continuous planting. A clump should consist of a minimum of fifty seedling pines. Surround the clumps by shrubs such as a Coralberry, Bush Honeysuckle, or Multiflora Rose. Use 8' x 8' or 10' x 10' spacing for pines, and about 4' spacing for shrubs. Where possible, shrubs should be planted about 10 to 15 feet from pine trees. When a tractor is used, make furrows along the contour of the hill. Evergreen trees can be cut and sold when they reach Christmas tree size.

Odd corners which are not suited for cultivation are best for growing shrubs. Coralberry and Bush Honeysuckle spaced five feet apart will make a good planting for wildlife and at the same time add beauty to the landscape.

Fencerows can be developed into travel lanes, nesting sites, roosting areas, resting places and feeding grounds for songbirds, game birds and other animals. Multiflora Rose can be planted on well-drained clay to sandy-loam soils as a living hedge. Some fencerows can be planted with Coralberry, Bush Honeysuckle and various kinds of Dogwood. In fencerows shrubs can be spaced 5 feet apart. For a living hedge fence on clay or sandy loam soils, Multiflora Rose should be spaced about 18 inches apart. A tractor and a plow come in handy for establishing Multiflora Rose fences.

Windbreaks can be developed adjacent to farm buildings and the north or west sides of woodlots. Pines and spruces are most suitable for this purpose. They should be planted in at least two staggered rows. A few shrubs such as Coralberry, Bush Honeysuckle and Multiflora Rose can be planted on the windward side to furnish food as well as cover for wildlife. Evergreen windbreaks offer nesting sites and travel lanes for wildlife.

Woodlot edges can be planted with a mixture of pines and shrubs already mentioned in this outline. This is a good forestry practice as well as a good game management measure since the evergreen trees and shrubs will prevent winds from drying the ground cover in the woodlot. When planted for a living hedge, Multiflora Rose should be planted on clay or sandy loam soils far enough from the woodlot so that shade will not prevent its growth. Nut trees, spaced 20 to 30 feet apart, can be planted along the edge of woodlots where a windbreak is not needed.

Marshland and swale borders provide good sites for shrub plantings such as Coralberry, high bush Cranberry, Bush Honeysuckle and most of the native Dogwoods. These shrubs will grow well next to the marsh or swale. Spruce trees, with a scattering of pine, will do well on similar sites.

Ditch bank plantings will depend upon the wishes of the landowner. Either shrubs or evergreens can be used, depending on soil and moisture conditions. FOR ADDITIONAL INFORMATION ON HOW TO PLANT TREES AND SHRUBS READ THE FOLLOWING BULLETINS WHICH WERE MENTIONED IN THE SECTION ON STUDY MATERIALS:

"How to Plant Forest Trees"

"The Windbreak as a Farm Asset"

"Multiflora Rose for Living Fences and Wildlife"

"A Guide for Making Wildlife Food and Cover Plantings on Farmlands"



What to plant: Next determine what trees and shrubs will grow on the soil of sites you selected for improving for wildlife. Remember that some plants are very exacting in their requirements. If planted on the wrong site, they will die. Below is a list of suggested trees and shrubs and their site requirements. Most of the seedlings are available without cost under the Conservation Department's game food and cover improvement program. They may, however, be purchased from private nurseries.

Shrubs

Site Requirements

Coralberry-----clay, clay loam, sandy loam, sand, sand blows  
Bush Honeysuckle-----clay, clay loam, sandy loam, sand  
Multiflora Rose\*-----clay, clay loam, sandy loam  
Fragrant Sumac-----sandy loam, sand  
Nannyberry-----clay, clay loam, sandy loam

Conifers (Evergreens)

White Pine-----sandy loam, sand  
Red Pine-----sandy loam, sand, sand blows  
Austrian Pine-----sandy loam, sand, clay soils, (alkaline soils)  
Scotch Pine-----sandy loam, sand, sand blows  
Norway Spruce-----clay, clay loam, sandy loam  
White Spruce-----clay, clay loam, sandy loam  
Jack Pine-----sandy loam, sand, sand blows

Deciduous Trees

Black Walnut-----clay, clay loam, sandy loam  
Balck locust-----clay, clay loam, sandy loam, sand

\* For living hedges, plant Multiflora Rose only on well-drained clay, clay loam and sandy loam soils.

How to obtain planting stock without cost:

Some seedling trees and shrubs which will provide food and cover for wildlife can be purchased from private tree nurseries, Michigan State University's Forest Nursery, or from the Forestry Division of the Michigan Department of Conservation. 4-H Club members who are interested in buying their stock can do so. Others can obtain trees and shrubs under the plan outlined below.

Because it is recognized that farm folk are in a good position to do something worth-while for wildlife and since the bulk of the small game harvest is taken from privately owned farms, the Game Division of the Michigan Conservation Department is sponsoring a project called "farm game habitat improvement program." It is designed to help landowners who are interested in making southern Michigan farms more attractive for wildlife. Under the program, the Game Division will provide technical assistance and food and cover producing shrubs to farmers without cost.

Since the farm game habitat improvement program was designed to help farm game in southern Michigan and because most of the trees and shrubs are adapted to the southern farming areas, the program is limited to farms located south of Bay City and Muskegon. The planting stock cannot be used for landscaping around buildings and there is a limit of \$100.00 per farm for planting stock and materials.

Before trees and shrubs can be delivered under the Game Division's Food and Cover Improvement Program, the landowners and a representative of the Conservation Department are required to sign an agreement. Under the agreement, the landowner gives assurance that the trees and shrubs will be planted and protected from grazing, burning, and other forms of destruction for a period of ten years. After this time evergreen trees can be cut and sold for Christmas trees. Although the right to grant or refuse hunting privilege will remain with the landowner, he is asked not to make a direct charge for hunting privileges.

The program is financed through the provisions of the federal Pittman-Robertson Act. Seventy-five per cent of the money comes from a federal tax on guns and ammunition. Twenty-five per cent is derived from the sale of Michigan hunting licenses.

Most 4-H Club members living in southern Michigan can take advantage of the free trees and shrubs provided under the Game Division's farm game habitat improvement program. Consult your 4-H Agent concerning the agreement between landowners and Conservation Department.

#### Making your order for planting stock:

After you have made duplicate maps of your farm and located suitable planting sites, determine how many trees and shrubs you can plant or will need to complete your program. Remember that in a day one man can plant about 500 trees and shrubs with a shovel on sandy soil where scalping is not necessary. When the sod is thick and scalping is necessary, he can plant about 250. Estimate the size of planting sites by pacing the distances. Average spacing for trees and shrubs is listed below:

#### SPACING

Average spacing for all evergreens should be about 10' x 10'  
Nut trees in fencerows - 8 rods apart  
Shrubs in fencerows - 5 feet apart  
Shrubs in open areas - 3 to 5 feet apart  
Multiflora Rose as living fence - 12" to 18" apart

Prepare a list of planting stock required in duplicate, on 8½ x 11 inch paper. Indicate the landowner's name and mailing address, your name and address, name of your 4-H Club. List the number, kind and size you will improve for wildlife. Under each site number, list the amount and kind of seedlings you will need. Then total the stock to be ordered for all planting sites on your farm. Since nurseries package trees and shrubs in bundles of 50, order each kind of tree or shrub in multiples of 50. This will prevent confusion when stock is packed for shipping. Determine estimated cost of trees and shrubs at the rate of \$20 per thousand seedlings. A sample tree and shrub order is shown on the next page and a map of a typical farm is shown on the following page.



Land Owner's Name \_\_\_\_\_ 4-H Member \_\_\_\_\_  
 Address \_\_\_\_\_ Address \_\_\_\_\_  
 City or Town \_\_\_\_\_ City or Town \_\_\_\_\_  
 Name of 4-H Club \_\_\_\_\_

Planting stock required for wildlife management program:

Site #1 (Half-acre [100' x 200'], eroded hillside - sandy loam, dry)

- 50 Scotch Pine
- 50 Red Pine
- 100 Bush Honeysuckle
- 500 Multiflora Rose

Site #2 (660 feet of fencerow having clay loam soil)

- 450 Multiflora Rose (for living fence)

Site #3 (30' x 100', .7 acre, marsh border - sandy loam)

- 50 Nannyberry
- 50 Norway Spruce
- 100 Multiflora Rose

(Note: The extra spruce and Nannyberry will be planted along remainder of marsh border)

Total stock required for entire farm:

Spruce - Norway	-----50
Pines - Red	-----50
Scotch	-----50
Shrubs - Bush Honeysuckle	----150
Multiflora Rose	----1050
Nannyberry	-----50

1350

Checked and ok'd by \_\_\_\_\_

Estimated Cost

\_\_\_\_\_  
4-H Club Agent

\$67.50



Land Owner's Name John Jones

4-H Member Harry Jones

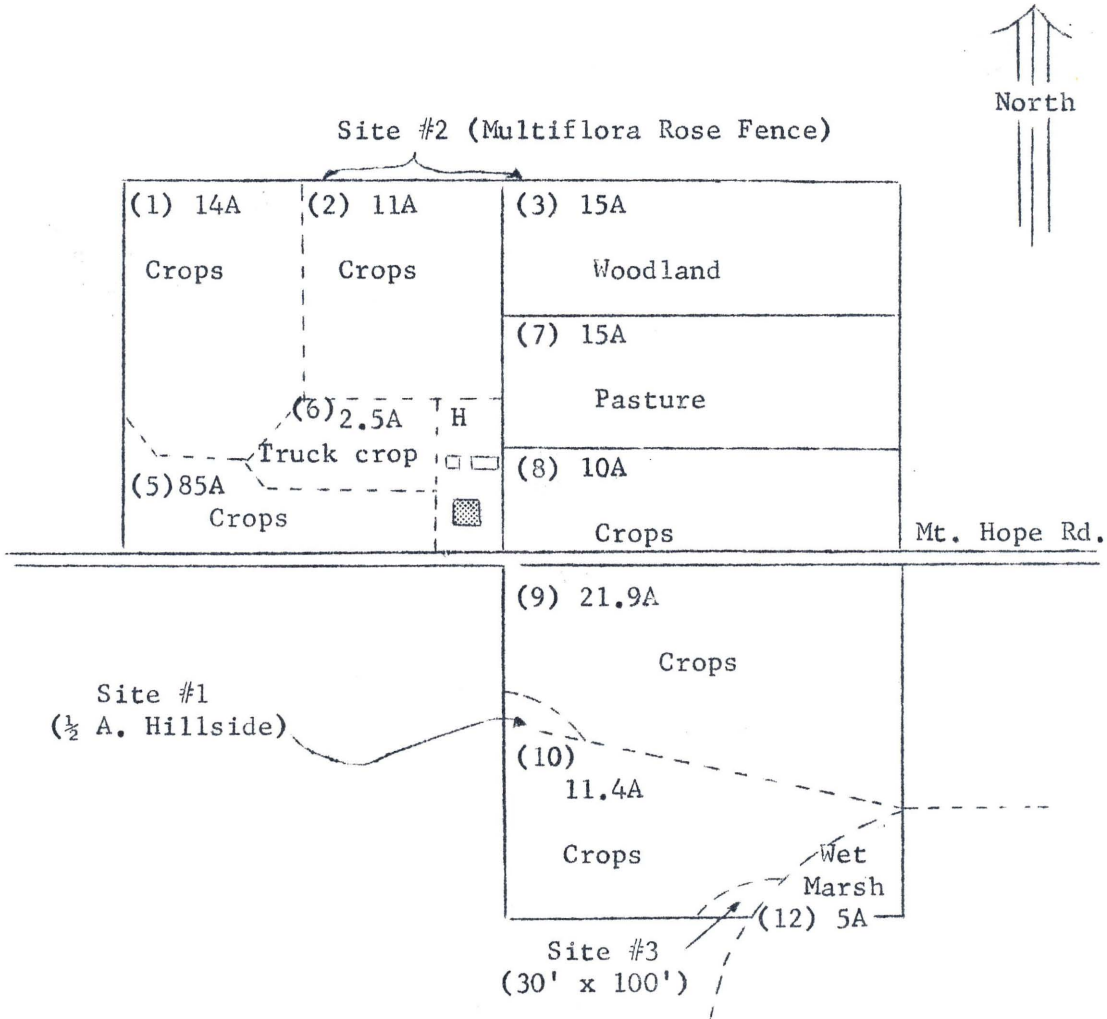
Address R #3

Address R #3

City or Town Okemos, Mich.

City or Town Okemos, Mich.

Name of 4-H Club HAPPY VALLEY 4-H



Scale 1" = 40 Rods (660')

Location of Farm

County INGHAM Co.

Township MERIDIAN TWP

Section 2 & 3

Total Acres 120A

IMPORTANT:

BEFORE FEBRUARY 20th, AFTER YOU HAVE COMPLETED DRAWING A MAP OF YOUR FARM AND DETERMINED THE KIND AND NUMBERS OF TREES AND SHRUBS NEEDED, HAVE THE LANDOWNER CHECK AND APPROVE THE PLAN. THEN SEND ONE COPY OF YOUR MAP AND A COPY OF YOUR LIST OF REQUIRED PLANTING STOCK TO YOUR 4-H CLUB AGENT. HE WILL MAIL THEM TO:

GAME DIVISION  
Michigan Department of Conservation  
Lansing 13, Michigan

Some qualified member of the Conservation Department will check your plans. For this reason it is urged that you make a neat plan of your farm. Some modifications will be made by the Conservation Department if needed. After the plans have been approved, an agreement will be mailed to the owner of the farm for his signature. He should return the agreement as soon as possible. The signed agreement gives assurance that the seedlings provided will be planted and protected on the locations indicated on your map. Your one map and list of trees and shrubs needed will be kept in the files of the Game Division. The trees will be shipped to you by parcel post.

Nest boxes and brush piles:

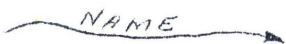
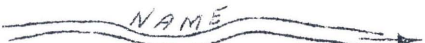



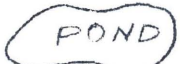


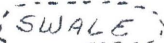




For constructing nest boxes for squirrels, bird houses, and brush piles for rabbits and other animals, read pages 27 to 33 in the bulletin, "Wildlife Conservation for 4-H Clubs."

\* \* \* \* \*

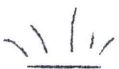
Caution

1. Make certain your plans are neat and complete.
2. Submit your map and your list of required trees and shrubs to your 4-H Club Agent by February 20.
3. Order trees and shrubs in multiples of 50. Nurseries generally put 50 shrubs in one bundle.
4. Plant your trees and shrubs as soon as possible after receiving them.
5. After trees and shrubs have been planted, protect them from grazing livestock and fire.

FARM-GAME COVER LEGEND

- Farm boundary (no fence) \_\_\_\_\_
- Wire fence (boundary & interior) -x-x-x-x-x-
- Proposed fence -|\_|\_|\_|-
- Fence to be removed -o-o-o-o-
- Border between two vegetation types or two fields without fence  
-----
- Roads \_\_\_\_\_
- Farm Road or lane = - - - - -
- Stream  Stream
- River  River
- Drainage Ditch  Drainage Ditch
- Railroad  Railroad
- Sod waterways  Sod waterways
- Pond  Pond
- Sand blow  Sand blow
- Pot hole  Pot hole
- Wet swale  Wet swale
- Woodland - Woodland
- Any land cropped - Crops
- Permanent Pasture - Pasture
- Idle land - Idle (If cover is present label with type of cover, i.e., brush, scrub oak, etc.)
- Building occupied by owner 
- Other Buildings 
- Diversion terrace  Diversion terrace
- Terrace  Terrace
- Orchards - Orchard or abbreviation



Marsh -  Marsh

Swamp - Swamp (Brushy and timbered lowland)

Existing pine plantings - Pine planting

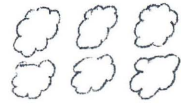
Existing wildlife planting - wildlife planting

Existing windbreak 

Proposed windbreak  Labeled with site no.

Brushy fencerow 

Conifer clump plantings \* \* \* Shrub clump plantings



Edge plantings 

Rose fence 

Larger areas to be planted to a mixture of clumps will be labeled with a site number and planting instructions will be given in the write-up.


Seedlings will be outlined with a dashed line and labeled with a site number.

Indicate gullies to be planted in the write-up only.

Other important features can be labeled on the map.

Indicate land use or cover type of adjoining fields.

Indicate name of roads, distance and direction to nearest town or highway.

Indicate north. 

Indicate scale of map (1" = 40 rods) or (1" = 660 feet).

Indicate number of acres in farm.