

FORESTRY IN IOWA

by

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Most people think of Iowa as a rich, agricultural state with seas of corn and a dearth of forest lands. While this is essentially true, there are still two and one-half million of the original seven million acres of forests in our state. Basically, the timber is still confined to the principal waterways and the rolling hills, and is made up almost entirely of hardwoods. More than 88 percent of the forest lands are privately owned by some 35,000 Iowa families. Approximately 30,000 acres of forests are under state ownership, and 13,000 acres are presently owned by the Federal Government.

The first sawmill was located in Allamakee County in 1829. By 1850 mills were in operation in Dubuque, Scott, Muscatine, Des Moines, Johnson and perhaps other Iowa counties. In 1860 over 540 mills were operating in Iowa. Of the 183,000,000 board feet of lumber annually cut by these mills, some 22,000,000 came from native Iowa timberlands, and the balance was from the white pine logs rafted down the Mississippi River from the great forests in Minnesota and Wisconsin. It is said that by 1877 Clinton, Iowa was the largest lumber-producing center in the world.

Shortly after the turn of the century the huge log rafts with the itinerant loggers ceased to come from the North. Mill owners looked to the native Iowa trees for new sources of supply and designed new uses to utilize these products.

The production of lumber reached an all-time low in the depression period of 1932 to 1936, when only 3 to 5 million board feet were produced. Post-depression years showed a slight increase, but it was not until the years of World War II that production of lumber jumped appreciably. By the end of the war over 90 million feet were being produced, and by 1950 an estimated 5 million feet of specialty logs



Fire tower on the Yellow River State Forest, Northeastern Iowa.

were exported from Iowa for the production of furniture, veneers, and other fine wood products.

A decade ago a reported 1,008 sawmills were located in Iowa. It should be pointed out however, that many of these did only custom sawing and operated for a brief period during the year. In 1961 reports indicated 583 mills were operating in Iowa. In 1963 approximately 250 mills operated on a year 'round basis in commercial production of lumber and wood specialties.

So far we have talked only about lumber milling operations. While this has been an extremely valuable enterprise, both to our pioneer forefathers and to our present economy as well, it represents only one use of our great heritage, the forests.

There are four basic timber types in Iowa as classified by the *Iowa Forest Resources Survey* published in 1958. Two of these types, the elm-ash-cottonwood type, and the oak-hickory type, make up 87 percent of the present forest cover. The northern hardwood type, occupying only about 3 percent of Iowa's forest cover, includes the valuable timber in the rough lands of northeast Iowa. The fourth type includes the remaining 10 percent of the cover and is made up

of three minor cover types including bur oak, aspen-birch and hardwood-red cedar.

The elm-ash-cottonwood association is found throughout Iowa, especially along the stream courses and moist, lowland slopes. Many trees of commercial importance are found in these associations, including the American and red elm (*Ulmus americana* and *rubra*), silver maple (*Acer saccharinum*), cottonwood (*Populus sp.*), ash (*Fraxinus, sp.*) and willow (*Salix sp.*). The oak-hickory type is found on the drier, upland slopes throughout the state and especially in the hill lands of southern and western Iowa, and includes white and northern red oak (*Quercus alba* and *rubra*), hickory (*Carya sp.*), basswood (*Tilia americana*), and to a lesser degree, walnut (*Juglans sp.*). Bur oak (*Quercus macrocarpa*) is common to abundant on the slopes of western Iowa and in some instances makes up almost a pure stand. The important northern hardwood type of northeast Iowa includes such valuable species as maple, basswood and red oak. Man-made plantations now total over 45,000 acres. These plantations consist largely of pines and some hardwoods and are for purposes



Ledges State Park, one of Iowa's many forest recreation areas.



Preparing seedlings for overwintering at the State Forest Nursery, Ames, Iowa.

of land reclamation, soil protection, wildlife cover plantings, Christmas tree plantings, and recreational uses.

Public Ownership

Public management of forest lands in Iowa is largely favorable. Many of these lands have been set up under long-range management plans by state agencies, county and federal services. These lands are inventoried by foresters to determine the species composition, age of the trees, quality and associated values. The timber is managed to provide for periodic harvest, thinning and other practices to keep it healthy and productive. Some of the state lands are managed, not only for maximum timber production, but for multiple public recreational use as well. The

10,000 acre Yellow River Forest Area near McGregor in Clayton County is an excellent example of multiple use of forest lands in Iowa. Here timber management, fish and wildlife management, picnicking, camping, hiking, horseback trail riding, and many other outdoor recreational uses go hand in hand under managed supervision. Other similar multiple use areas are planned for Iowa, and some will include the construction of small artificial lakes that will fill a two-fold purpose. These small lakes will be used not only for fire protection, but for fishing as well.

We have found in Iowa that good forestry practices and wildlife management and recreational uses can be compatible on forests as small as 6 to 10 thousand acres. Den trees for raccoon and other boreal mammals are marked and left uncut by the foresters. Brush piles are properly placed in open areas for rabbits. Some browse trees are uncut and even planted in some areas, together with food plots of domestic grains for deer, wild turkey and other forest game. Lakes built for fire protection are stocked with bass and panfish and provide excellent fishing. Primitive type camping and picnicking areas are provided at strategic points for the ever-increasing numbers of visitors to the beautiful forest areas. *Recreation can be compatible with forest management as long as the primary purpose of the area receives first consideration.*

Private Ownership

Unfortunately the management of Iowa's privately owned forest lands is not generally as favorable as

the situation on public forest lands. Exceptions of course include forests under management by large wood products companies and private plantations.

Past practices have left most of the private woodlands of Iowa in poor condition with respect to the goal of optimum timber growth and periodic financial yields. In many areas of the state the forests have been repeatedly high-graded, leaving only trees of poor quality and a high percentage of undesirable trees. Forest land grazing has been generally damaging to Iowa's woodlands. Unmanaged forests are producing only part of the potential and resulting dollars that could be sustained year after year. In Iowa the program known as Cooperative Forestry Management holds promise of helping Iowa's woodland owners realize a dollar return and related recreational value from their holdings. By assisting the private landowner directly the forester can go over his woodland and in preparing a plan make individual recommendations. An unmanaged timber will usually yield some commercial products. By restricting grazing, reproduction will soon become re-established.

The woodland owners in Iowa have an advantage of legislation which provides a tax-saving benefit to those who maintain a well-stocked stand of trees. The landowners must protect the land from fire, and also eliminate grazing from the woodland. The law states that the per acre assessment shall be \$4.00. Many landowners realize as much as 70 percent reduction in taxes on their forest lands.

The service foresters of the Conservation Commission now number eight. In providing services to the 35,000 woodland owners in Iowa, it is obvious that this service is spread very thin. In recent years they



Ames Forest Research Center's Amana Colonies field office where studies in soils, tree physiology and establishment of hardwood plantations are carried on.

were able to give direct service to only about 1500 to 1600 owners.

Foresters are now employed by Iowa wood-using industries. In addition to this, owners with large

acres of woodlands can hire consulting foresters to develop forest management plans.

In recent years the market for smaller diameter and previously undesirable trees has developed. Pulpwood mills have been able to utilize nearly all



Part of Iowa's ever-growing Pulpwood Industry supplied by approximately 11,000 acres of tree farms.

species now growing in the state. A typical tree, once considered a weed tree of no commercial value, is the basswood. Today this tree finds a ready market in the veneering industry.

Looking Ahead

What does the future hold for Forestry in Iowa? The recent *Iowa Soil and Water Conservation Needs Inventory* prepared by various state and federal agencies shows that the forest acreage will continue to decline in the decade ahead. By 1975 it is estimated that the forest acreage will total with under two million acres. Present forest cover will decline with population increases, urban sprawl, superhighway development, and other land adjustment programs. Multiple use of the remaining forest lands must therefore become a reality.

Private, state and federal long-range planners are estimating the needs of recreation for the people of the United States, not only for the present, but for 1975 and the year 2000. Populations are expected to double in many communities. Since many areas of recreation on the seaboards and other vacation places are already overrun, we can anticipate a movement of tourists into the vast, undeveloped midlands of the nation.

With the anticipated increase in our own population and the influx of tourists from congested areas elsewhere, it behooves us to plan well for the future. Intensive management of our present forest lands is a must. New methods of utilization of the less desirable timber through forestry research should be stepped up. Multiple use of our forest lands must be considered if we are to receive benefits appropriated

for recreation in the future by state and federal governments. Future planning must provide for havens of beauty and solitude in our forests for the multitudes who prefer peace and quiet to the hilarious revelry afforded at the honky-tonks and Coney Island-type spas.

Wildlife plantings for food and cover is a continuing function of forest land. Aboresal mammals and forest game birds, including deer, raccoon, squirrels, wild turkey and grouse need the protection and food provided by forest trees, while farm game need the food and shelter of the brush-type forest edge.

Iowa's forest economy is expanding annually. Once again, the Mississippi River towns support a large forest industry, including pulp mills, millwork

plants and kiln drying operations. The river mills represent only a portion of the 600 wood-using industries of the state of Iowa. Presently, factory employment for the wood-using industries ranks fourth in Iowa with a payroll of 43 million annually.

The forest products harvested are worth more than 9 million dollars per year to woodland owners, and production is increasing. The value of this important industry, that is, the value of shipments less the cost of materials, fuel, etc. is 70 million dollars annually.

Recently in Iowa, a Christmas Tree Growers Association was formed. In coming years Iowa producers may well provide the bulk of the Christmas trees for Iowans.

Although land prices have made the forest economy a rather dull picture in past years, the increased markets with their higher prices, tax benefits and forest value from recreational users has changed the present picture considerably.

Last, but certainly not least, we must consider the aesthetic value of trees in Iowa. These native woodlots not only beautify our state highway systems and other areas where they exist, but afford recreational areas and homes for wildlife. The literal translation of the word "Iowa" by the Indian is "beautiful land." Trees and their management through forestry practices will add beauty to the rich, rolling prairie lands of Iowa. It behooves all of us then to do our part in promoting good forestry practices in this beautiful land of ours.



Preparing hardwood rotary cut veneer for manufacture.

