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## Vocational Agriculture Forestry Lesson 1: How are Trees Useful to Us

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E. J. Lott

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Notes on Forestry and Wood-use

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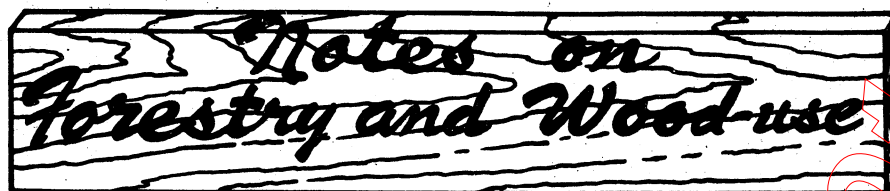
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CO-OPERATIVE EXTENSION WORK  
IN  
AGRICULTURE AND HOME ECONOMICS  
STATE OF INDIANA



PURDUE UNIVERSITY AGRICULTURAL EXTENSION  
SERVICE, AND U. S. DEPARTMENT OF  
AGRICULTURE CO-OPERATING

AGRICULTURAL EXTENSION SERVICE  
LAFAYETTE, INDIANA

November, 1959

Mimeo F-14

VOCATIONAL AGRICULTURE FORESTRY LESSONS

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LESSON I

HOW TREES ARE USEFUL TO US

Goal: To learn how we depend upon trees and forest land in our everyday living.

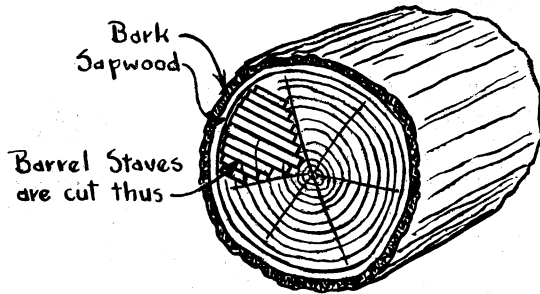
Products From Indiana Farmwoods

Indiana is known the world over for its production of excellent hardwood timber. White oak logs have long been exported to England and other European countries. Because of the excellent quality of our hardwoods, they have been widely used in special products such as furniture, baskets, handles, boxes, ball bats, clothes pins, barrels and a great variety of other every-day items.

The annual timber harvest in Indiana is approximately 350,000,000 board feet. This is almost entirely hardwoods with the exception of a small amount of pine and cedar which is cut in south-central Indiana. Much of this fine timber is used within the state by our own wood-using industries and sawmills which number nearly 1000.

High quality logs of white oak and black walnut are widely and vigorously sought after for veneer logs to be sliced or sawed into thin sheets which are used in furniture making. Tulip poplar, sweet gum, sycamore, black cherry and hard maple are also commonly used in the veneer industry. Another form of veneer is that used in the manufacture of market baskets, egg crates, strawberry boxes and apple boxes. Cottonwood, elm, tulip poplar, sweet gum and beech are the species most commonly used for this purpose.

Indiana's hardwoods are admirably suited for the making of the highest quality furniture. In addition to veneered furniture, many factories use birch, beech and hickory for sewing cabinets, book racks and rustic furniture. Hickory poles are chiefly used for the rustic furniture due to their smooth bark and small amount of taper.



How Barrel Staves are cut

White ash logs are used almost exclusively for making baseball bats, and many types of handles. Beech is the best liked wood for clothes pins. Oak and other hardwoods are cut for mine props and railroad ties and are often shipped long distances.

Pulpwood for making roofing paper and other pulp products is cut from cottonwood, willow and other trees having wood of a soft texture.

Other uses for our hardwood timber are fence posts, fuelwood and lumber. These make up an appreciable percentage of our production of wood products from the farm woods. Lumber is, of course, one of the most important of these items. Much of this is custom-sawed and returned to the farm for use in building homes, barns, hog houses, corn cribs, feeders, gates, fences and in farm construction. The remainder of the lumber is largely used by furniture, box and other factories.

#### Forest Land Conserves Soil and Water

In addition to providing us with many useful products, trees are very important in Indiana because they prevent soil erosion and rapid run-off of water on steep hillsides. Soil and water are two of our most important resources. Uncontrolled water is the cause of much destruction to our soil, crops, livestock and homes.

Such poor practices as uncontrolled forest fires, grazing of forest land, stripping of timber from steep slopes and drainage of natural reservoirs contribute to floods and water shortages. Good forestry practices on rough, timbered ground will help to regulate stream flow because the forest soil retains and stores water.

As rain falls in the forest, parts of the rain clings to the leaves of trees and plants where it later evaporates. The trees cause other raindrops to be broken up thus preventing splashing on the soil. This water falls to the forest floor, filters into the topsoil, and sinks gradually into the soft absorbent soil beneath. After the rain stops, slow drainage through the soil continues and some of the water finds its way underground to springs and streams. Thus the forest helps to stabilize water supplies and prevent erosion by slowing down the rate and amount of water run-off.

Snow accumulation and melting is also influenced by good forest cover. Protected from sun and wind, snow will remain in the forest from one to five weeks longer than on open ground. Also, more of the melting snow is absorbed by the loose, porous, frequently unfrozen woods soil than the soil of commonly frozen open fields.

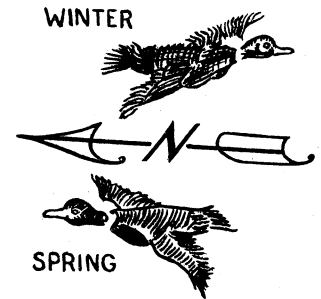
#### Other Beneficial Effects of Woodland

Wind - Have you ever noticed how cattle will turn to the woods or a group of trees for protection from the cold winter wind? The protection of livestock, buildings and even soil from wind is an important benefit of either natural or planted windbreaks.

Small farm woods scattered over our agricultural areas do much to protect the soil from dust storms and erosion caused by strong, sweeping winds. Continued removal of timbered tracts from these areas increases the possibilities of wind erosion and creates the need for man-planted windbreaks.

Wildlife - The woods has long been known as the home of wild animals and birds. Heavy growth of shrubs and trees along woods borders provide food and cover necessary for quail and other game. Wildlife experts agree that food and protection must be available if we are to have abundant game. Simply stocking an area with game birds will not assure successful hunting trips. The birds must be able to find sufficient food and cover to protect them from predators. Very little game food or cover is provided by a grazed or burned over woods

If an occasional hollow tree is left in the woods, raccoons, opossums, squirrels, woodpeckers and even wood ducks will be encouraged. A hollow log will provide a hiding place for many wild animals.



#### QUESTIONS

1. Give three uses for veneer.
2. Why are cottonwood and willow desirable for making wood pulp?
3. What are the two largest uses of Indiana farm timber?
4. Why should trees be permitted to grow on steep hillsides?
5. Give three reasons for planting tree windbreaks.

#### SUGGESTED ACTIVITIES

1. List the number of items in your home, or on your farm made from Indiana hardwood trees.
2. Compare samples of surface water runoff after a hard rain from an open cultivated field and a protected woods.
3. Find out from your County Agent, or District Forester, the number of acres of farm-woods in your county.

Further information or additional copies of this mimeograph can be obtained through your County Agent or nearest forester, or the Department of Forestry and Conservation at Purdue University, Lafayette, Indiana.