



Woodland Management for Farms and Ranches

Most farms and ranches in Kansas contain some woodland acres. Unfortunately, many landowners do not realize maximum benefits from their woodlands. An understanding of how woodland management works and applicable practices can help landowners make efficient use of woodlands to meet land-ownership goals.

Woodlands are a renewable resource providing wood products, a filter for water, wildlife habitat, soil-erosion control, streambank stabilization, recreation, and scenic beauty.

Your woodland may be providing some of these benefits already. However, until you take time to look closely at your woodland, you will not know what benefits you are receiving and what benefits you can achieve. By walking through your woodland and taking notes, you can gather information that will help you develop a management plan that will meet your ownership goals. As you develop a plan, keep in mind that some areas of your woodland are better suited for certain uses than others.

Getting Acquainted with Your Woodland

A full view of your property and knowledge of the number of woodland acres are helpful in planning. The county Farm Service Agency (FSA) office can provide an aerial photograph of your property and help you determine the number of woodland acres you have.

With the aerial photograph in hand, walk through your woodland. Look for and identify on the photograph such things as:

- Boundary lines
- Topography (ridges, slopes, drainages)
- Trees (species, sizes, appearance)
- Soils (rock outcroppings, wet areas, major soil changes)
- Wildlife (observed, trails, signs)
- Ground plants (shrubs, grasses)
- Special features (old home sites, special trees, power lines, pipelines)
- Openings within woodland (estimate size)
- Adjacent land use (cropland, pasture land)



- Damaged areas (due to fire, storms, or forest health problems)

Take notes on what you observe. Delineate bottomland and upland, indicating the species of trees present. Note shrubs and other low-growing plants that provide food and cover for wildlife. Openings within the woodland and

bottomland clearings adjoining the woodland may make excellent planting sites to increase woodland acreage, improve overall productivity, protect streams, and provide plant diversity for wildlife.

Locate streams or major drainage patterns on the photograph, along with obvious soil features such as rock outcroppings, wet

areas and major soil changes. Tree growth depends on soil type and depth. Generally, soils on ridgetops and slopes are shallow, while bottomland soils near streams and rivers are deep and fertile. Specific information on soils is available from the county Natural Resources Conservation Service (NRCS) offices.

What Now?

After gathering information about your woodland, you are faced with three alternatives:

1. Do nothing — leave the woodland as it is;
2. Convert a portion of the woodland to another use; or
3. Improve the woodland for greater benefits.

Leave As It Is

Many people have the misconception that woodlands remain the same if left alone. Woodlands, however, are dynamic communities. Trees begin life, grow, and die, constantly changing the appearance of the woodland. Tree species also compete with one another. For example, oak and hickory eventually dominate some unmanaged upland areas, while hackberry may dominate bottomlands. Many popular commercial species such as black walnut and pecan will gradually disappear from the woodland if no management is practiced.



Doing nothing is seldom a good choice. It usually is more costly in the long run when lost benefits are considered. For example, you pay taxes each year whether the woodland is working for you or not. Can you afford not to use your woodland?

Other Uses

Converting part of the woodland to other short-term agricultural uses may seem to be a good alternative. However, before clearing, it is wise to compare the costs of clearing with the benefits you receive from a productive woodland. Consider the impact on the land from a rapid shift in use. Clearing a woodland may cause excessive soil erosion that pollutes the stream. In addition, taxes on woodland acres are considerably less than cropland or pasture land.



There may be certain wooded areas on your farm composed entirely of undesirable trees that you may want to clear. An old field that has reverted to honeylocust, elm, and osage-orange, for example, may be a good candidate. If the soil is conducive to good tree growth,

consider planting desirable timber species such as black walnut or oak.

Greater Benefits

Woodlands can provide long-term economic returns from products such as sawlogs, posts, firewood, and



lumber for on-farm or commercial use. Woodland management – the process of increasing production to achieve your goals – is an alternative that warrants careful consideration.

The type of management depends on the type of trees present, their condition, your goals and what the woodland is capable of producing. For example, it is not practical to plant walnut and pecan for commercial timber production on shallow upland soils. Your investment in time, money, and labor will exceed economic returns.

Woodland Management

There are four components of woodland management that should be considered when planning work in your woodland:

1. Protection
2. Harvesting
3. Improvement work
4. Planting

Protection

Your first management priority may be to protect the woodland from destructive agents. This includes suppressing wildfires,

eliminating destructive grazing by domestic livestock, and avoiding indiscriminate use of chemical herbicides in and around the woodland. Fire, destructive grazing, and misuse of herbicides decrease woodland productivity by damaging commercial timber and eliminating desirable seedling trees. In some cases, prescribed fire is used for rangeland management next to the woodland. Making firebreaks to prevent a fire from entering the woodland should be considered.

Harvesting

Selective harvesting contributes to healthy, vigorous woodlands by creating openings that allow more room for existing trees to grow and provide space for establishing new trees. This has the benefit of continuous wood production. In addition, a variety of plants will eventually fill in the openings, increasing food and cover for wildlife.



Trees such as black walnut, black cherry, cottonwood, oak, green ash, hackberry, maple, sycamore, basswood, and pecan can be sold on the commercial market. Commercial tree value is based on species, quality, and size. When you plan to sell trees from your woodland, always select and mark the trees prior to selling and sell them through competitive bid sales.

If equipment is available, you can cut and haul logs to a sawmill or contract with a portable sawmill to saw the logs into lumber for use on your farm. On-farm lumber can be used to construct gates, corrals and outbuildings. Most woodlands



can provide a source of fence posts. Posts made from osage-orange, black locust, or mulberry will last 15 years or longer.

Any tree, regardless of species or quality, can supply firewood for home use or for additional income when sold on retail markets. However, good quality, commercially valuable trees should be left for future timber harvests. They will be more valuable to you as timber products than firewood.

If done properly, harvesting firewood is a good management tool. Removing damaged, poorly formed, and undesirable trees will gradually improve the quality and value of your woodland.

Tops remaining after a commercial timber harvest provide an excellent source of firewood. Limbs too small for firewood can be stacked in openings or cut up until they are on the ground to increase the rate of decomposition.

Woodland Improvement

Trees in your woodland may not be growing to their full potential. Overcrowding reduces growth due to competition for space, moisture, nutrients, and sunlight. Removing undesirable

trees is necessary to regulate the type of trees in your woodland and to promote optimum growth. Selecting the best trees (crop trees) for future use and removal (or killing and letting stand) those that compete directly with crop trees will provide growing room and maintain optimum growth.

Pruning dead and low-growing limbs in crop trees will improve stem quality and increase their commercial value. Vines, especially grape vines, can shade tree crowns and reduce growth. Grape vines growing in crop trees should be killed to allow the development of large tree crowns.

The process of removing competing trees, pruning crop trees, and killing grape vines is called timber stand improvement. Woodlands may appear untidy after timber stand improvement work, but felled trees soon decompose, adding nutrients to the soil for additional tree growth. The added sunlight reaching the woodland floor allows a variety of plants to grow, creating new wildlife habitat.

Planting

Openings in woodlands, created naturally or by harvesting, will eventually fill in with offspring from surrounding trees. Planting, however, may be necessary to ensure the kind of trees needed to obtain the desired benefits you want from your woodland. Large openings,



¼ acre or more in size, can be planted successfully with tree seedlings or seeds. Most trees need overhead sunlight for proper growth and should not be planted under the canopies of existing trees. In some cases, after harvesting, it is good to create larger openings where a tree was harvested. This may include



cutting or killing trees of poor species or quality (such as elm and hackberry) to increase the opening size so desirable trees (black walnut, oak) can be planted.

Planting also may be done to develop or expand the woodland. Small fields, uneconomical to farm, are ideal for tree planting. Kinds of trees to plant depend on the type and depth of the soil. Make sure to check the soil type in which you are intending to plant trees. Tree species

should be matched with the soil type to get maximum benefits.

Wildlife habitat is enhanced by planting a variety of trees and shrubs along field and woodland borders. These plantings provide food and cover year-round.

Other Benefits

A little additional work may bring other benefits from your woodland. There may be a particular area that warrants cleaning up to provide a spot for picnics and other outdoor activities.

Trails carefully cut through the woodland provide access for harvesting work and can be used for hiking and observing wildlife for year-round enjoyment.

Woodlands also provide a protective covering over the soil. Trees intercept rainfall, reducing its eroding effects. Extensive root systems help hold erodible soils in place, especially along streams. Woodland soils are porous and able to absorb and hold large quantities of water. For these reasons, a buffer strip of healthy trees should be maintained along streams and drainage areas to reduce soil erosion and enhance water quality.

Deciding what to do in your woodland requires some study and perhaps some assistance. District Foresters can help in making practical and realistic management decisions. An on-site visit can be



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scheduled through your county Natural Resources Conservation Service or your local K-State Research and Extension office. Publications discussing particular aspects of woodland management can be obtained from county K-State Research and Extension offices, our web site, or the Kansas Forest Service at (785) 532-3300.

Recommended Publications

Marketing Kansas Timber, C-542

Tree Planting Guide, C-596

Improving Black Walnut Stands, L-718

Planting Black Walnut, L-731

Improving Your Woodland for Timber Production, L-725

Managing Your Woodland for Firewood, MF-773

Kansas Forest Service, Serving Your Needs, L-847

Chainsaws: Safety, Operation, Tree Felling Techniques, MF-2103

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