



## PROTECTION



A good woodland protection program is essential to good woodland and wildlife management. Grazing by domestic livestock can be one of the worst offenders of a good woodland-wildlife program. Livestock should be eliminated from new tree plantings and closely monitored or removed from mature woodlands. Research conducted in Kansas indicates that cattle may reduce growth and natural reproduction of desirable hardwood trees. Fencing and alternative watering sources are good management tools to eliminate or limit livestock's damage to woodlands and essential wildlife habitat.

Although fire is utilized as a woodland management practice in various parts of the country, it is not a practice that is recommended for most woodlands in Kansas. Woodlands should be protected from fire by maintaining a firebreak around the woodland edge. However, fire can provide benefits to wildlife species such as bluebirds, kingbirds, bobwhite quail and turkey in dense woodlands but will definitely decrease woodland values. Fire in woodlands is only recommended as a controlled burn conducted in a specified area for the purpose of stimulating the development of grasses, shrubs and trees to improve wildlife food and cover.

### Food Value of Common Forest Trees, Shrubs, and vines for Wildlife

Species	Songbirds	Upland Game Birds	Big Game	Small Game	Furbearers
Oaks	Excellent	Excellent	Excellent	Excellent	Excellent
Redcedar	Good	Fair	Good	Poor	Poor
Hackberry	Excellent	Fair	Good	Good	Good
Walnut	Poor	Poor	Fair	Good	Poor
Pecan,					
Hickory	Fair	Fair	Fair	Good	Fair
Mulberry	Excellent		Excellent	Excellent	Excellent
Green ash	Fair	Fair	Fair	Fair	Poor
Elm	Poor	Fair	Good	Fair	Poor
Osage-Orange	Good	Poor	Poor	Good	Poor
Haw	Excellent	Excellent	Fair	Excellent	Excellent
Persimmon	Excellent	Good	Fair	Excellent	Excellent
Grape	Excellent	Fair	Excellent	Excellent	Excellent
Virginia					
creeper	Excellent	Fair	Excellent	Excellent	Excellent
Greenbriar	Excellent	Excellent	Excellent	Excellent	Excellent
Blackberry	Excellent	Excellent	Good	Excellent	Excellent
Elderberry	Excellent	Excellent	Excellent	Excellent	Excellent
Dogwood	Excellent	Excellent	Excellent	Fair	Fair
Coralberry	Fair	Fair	Fair	Poor	Poor
Plum	Excellent	Excellent	Excellent	Excellent	Excellent
Sumac	Fair	Fair	Fair	Poor	Poor



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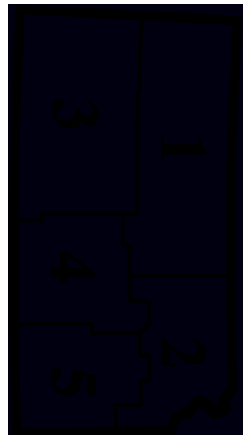
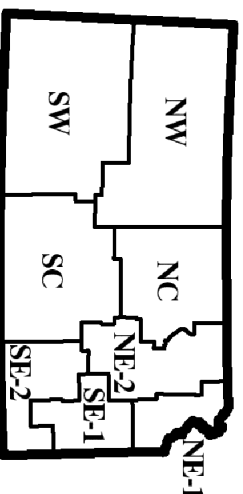
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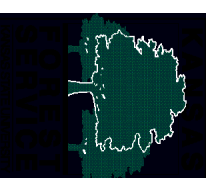
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# WOODLAND MANAGEMENT



# FOR WILDLIFE





## Woodland Management for Wildlife

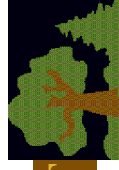


**W**oodlands are lands naturally covered with trees and shrubs. Woodlands offer wildlife protection from wind and snow, refuge from predators, and a variety of foods not found on other landscapes. Woodlands can reduce air temperature, suppress loud noise, and release oxygen into the atmosphere.

For the landowner, woodlands offer aesthetic beauty, improve water and air quality, provide valuable wildlife habitat and offer income opportunities.

Wildlife is an integral part of Kansas woodlands. Woodland owners can produce more wildlife in their woodlands with little or no loss to timber production. Forest wildlife

such as squirrels, deer, turkeys, and songbirds will benefit from good woodland management. Other wildlife species such as rabbits, quail, and raptors utilize the woodland edge (border where two different cover types come together). Many timber management practices result in good wildlife management practices.



### MANAGEMENT

**B**efore woodland management plans are developed, landowner objectives must be considered. Many owners will gladly incorporate wildlife management practices into their plans. Woodland managers must know the landowner's intended use of the area, what wildlife species the owner intends to manage for and the potential income the property is capable of producing.

An inventory of the woodland should be conducted. Inventorying will enable managers to determine which wildlife habitat components are present and which ones are missing. A list of plant species needed can be developed and information on planting procedures and maintenance of the planting can be provided. A forester and/or a wildlife biologist should be consulted for questions not answered in this brochure.



Kansas woodlands have great potential as habitat for a variety of wildlife species. Some woodland management practices that can be utilized to increase wildlife habitat and increase forest products include: 1) timber harvest; 2) timber stand improvement; 3) planting; 4) woodland border development; and 5) protection.

## TIMBER HARVEST

**T**imber harvest not only allows the owner to receive monetary value from the woodland, but is also a tool to

improve habitat. By cutting trees for logs, posts, firewood or other products, openings are created in the canopy. These openings allow sunlight to reach the forest floor stimulating plant growth. Proper harvest keeps a constant supply of timber growing and at the same time regenerates wildlife food and cover.

There are several methods of harvesting trees to aid wildlife. One of the best methods is to remove single trees that are mature. The number of trees removed will regulate the size of the openings created. Wildlife benefit from openings.

When harvesting timber it is important to leave den trees (trees with natural cavities), standing dead trees, food trees, and shrubs and vines. Usually about three or four den trees per acre (preferably with south facing openings) are sufficient. In any harvesting operation, leave a few food producing trees such as mulberry, oak, hickory, pecan, walnut, or hackberry. These species are utilized by many different kinds of wildlife. After harvest, do not burn or destroy the tops and branches. These materials provide excellent ground-level cover for wildlife when constructed as brushpiles near the edge of the woodland or logging road. Use large material to build a loose base, then stack smaller limbs on top, creating piles 4-5 feet high and 10-15 feet wide.

Living brush piles can also be created following a harvest by half-cutting trees so their tops or branches touch the ground. Cuts should be made 3 to 5 feet off the ground, opposite the desired direction of the fall. Make cuts just deep enough so tops can be pushed over, leaving a connecting strip of living bark. This technique should be used on lower quality trees that will not produce timber products. Suitable trees include hackberry, elm, oak and mulberry.





## TIMBER STAND IMPROVEMENT



**TSI** is a forestry practice of removing trees to improve the growth rate and/or quality of the best, high valued trees or crop trees. This practice is used to thin out trees whose growth is being restricted by the less desirable trees.

By incorporating some of the following suggestions, both wood production and wildlife can benefit from TSI.

- 1.) Leave three or four den trees per acre.
- 2.) Do not remove standing dead trees.
- 3.) Kill as many poor quality, low valued trees as possible by girdling and letting them stand.
- 4.) Do not chemically treat stumps; stump sprouts will provide beneficial browse and low-level cover.
- 5.) Kill only grapevines that are damaging future crop trees. Other vines, including Virginia creeper and poison ivy, cause little damage and may even be beneficial to crop trees.
- 6.) Thin around food trees such as



mulberry, oaks, persimmon, walnut, hickories, dogwood, paw paw, etc.

7.) Thinning material can be placed into brushpiles near the woodland edge or left in the woodland to recycle through the soil and provide habitat for invertebrates which may be important food for other woodland wildlife species.

8.) Remember to retain buffer strips along creek channels. The Kansas Forest Service recommends leaving a strip of trees and shrubs at least 35 to 65 feet wide to protect the stream bank from erosion, enhance fisheries and to reduce sediment and chemicals from entering the creek. Generally wider buffers are necessary to maximize wildlife benefits.



## PLANTINGS



New plantings of trees and shrubs can replenish the woodland and improve habitat. Quite often we neglect to replant woodlands that have been harvested and do not contain the proper species of trees for good timber production or wildlife habitat.

After a harvest, a decision must be made whether or not to maintain forest openings or allow them to return to forest. This will need to be an “on site” decision based on need for increased timber production or woodland openings for wildlife benefit. In a woodland that is in need of wildlife food production, it could be beneficial to replant forest openings with an oak species. If oak is not needed, plant a more valuable tree such as walnut or plant native grass and shrubs to increase woodland “edge”.

Quite often odd areas or idle acres (unproductive small acreage of farm land) are unsuited for crop production due to flooding or are just too small to farm efficiently. These areas are ideal for planting trees for timber products. If properly planned, these plantings can also benefit wildlife. When planting these areas to trees wildlife can



benefit by planting an occasional food producing tree or shrub. For, example, in a walnut plantation, wildlife could benefit by planting 4 or 5 oak trees per acre and including some fruit producing shrubs between trees within the rows.

New plantings can also be utilized to tie small woodlands together and create travel lanes (protective cover for wildlife travel) between woodlands or from woodlands to water. A good tree and shrub mixture is best suited for travel lane plantings.

## WOODLAND BORDERS



A simple method of creating woodland borders is to plant native grass and shrubs along the woodland edge. A good choice might include shrubs such as honeysuckle, choke cherry, fragrant sumac, american or sandhill plum.

If the owner is willing, it is also beneficial to leave 2 to 5 rows of unharvested crops adjacent to woodland borders. Crops that benefit wildlife the most include corn, soybeans and milo.