Forest Grazing Hurts

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MOST MISSOURI WOODLANDS have a history of some kind of domestic livestock grazing since settlement by the white man in the early 1800s. Settlers immediately set about converting woodland to farm uses, but the conversion was a slow process. They first had to clear and crop enough ground to supply their own food needs, leaving livestock to sustain themselves on whatever palatable natural vegetation they could find growing in the forest.

Although early farmers and stockmen had to graze woodlands out of necessity, this is not the case today.

Even with an ample supply of open ground available to support livestock, many landowners still allow their woodlands to be grazed. Since cattle are the predominant livestock allowed to graze woodlands, this article will be concerned primarily with them, although much of the information pertains to any type of livestock, including hogs.

Ask a forester about grazing woodlands and he will expound upon the bad effects grazing has on a productive forest. Often this information falls on deaf ears. Many landowners have the misconception that trees and forests are virtually indestructible. Given the long life span of most trees and their ability to withstand many naturally occurring stresses, it's not hard to see why many people think this way.

Ask a stockman about grazing woodlands and a variety of answers may be given. The first and foremost point they may make is the production losses with cattle grazed on woodlands (either in whole or part) as compared to those fed on improved pasture. Studies show it can take up to 40 acres of woodland to provide the same quantity of forage as one acre of grassland.

Grazing on forest vegetation can lead to low weight gains (sometimes even weight loss), poorer quality meat and, on occasion, mortality, especially if cattle ingest toxic vegetation in combination with existing malnutrition or illness.

Missouri's woodlands contain several kinds of plants poisonous to livestock. Many have a disagreeable taste that ordinarily discourages livestock. Since cattle are "grazers" they prefer to feed on grasses and certain legumes, unlike "browsers," such as deer, whose diet includes a wide variety of plant material. Although cattle aren't browsers, in a woodland environment they are often forced to eat plants they normally wouldn't choose.

Poisonous species include **black cherry** *(Prunus serotina).* This "wild" cherry's wood is commonly used to make furniture and the fruit can be made into jelly. It is the leaves that cause problems for cattle. Hydrocyanic or prussic acid contained in the leaves, especially wilted ones, can be deadly.

Other common toxic woody species include **Ohio buckeye** *(Aesculus glabra)* and **poison ivy** *(Rhus radicans).*

Some herbaceous species are toxic to livestock. Most of these are called by the generic term "weeds." Parts of the familiar purple-stemmed **pokeweed** *(Phytolacca americana)* can cause trouble if ingested, depending on which part and which stage of growth the plant is in. Surprisingly, the root can also be used to prepare a medicine for garget (swelling of the throat) in cattle.

White snakeroot *(Eupatorium rugosum)* is another culprit in livestock poisoning. Snakeroot along with the pretty but poisonous **bracken fern** *(Pteridium aquilinum)* grow in moist, shady areas sometimes forming thickets. Perhaps the most ominous of the bunch is **black nightshade** *(Solanum americanum).* The green and unripe berries and fresh leaves can poison grazing livestock.

While the vegetation in woodlands can sometimes have unwanted effects on livestock, the effects of livestock on the health and productivity of a woodlot can be just as unwanted. Damage that can occur to woodlands includes damage to the trees

The ground stripped bare of vegetation by grazing (next page) stands in sharp contrast to the healthy growth of a well-managed forest.

Jim Rathert

themselves, soil compaction and erosion, and destruction of wildlife habitat.

Seedling and sapling trees are the first to be hurt. These slender young trees, which are the next generation of the forest, are at just the right size and height to be eaten and destroyed by livestock. Feeding livestock will strip foliage and bark from the trees, and trample and break the stems.

Even large trees are not immune to livestock damage. Wounding of the lower trunk and roots can occur from rubbing and the cutting of sharp hooves. These wounds are prime entry points for insects and disease. When it comes time to harvest trees from a grazed woodland, the quality and value of the timber will be less becauseof the rot and stain caused by wounding.

Bob DeWitt

As the older trees die or are harvested there are few young trees to replace them. Trees that are more resistant to grazing may increase in number, while more valuable trees that are less resistant to grazing decrease.

Oaks and hickories are a good example. Most of a tree's feeder roots lie very near the soil's surface and are easily damaged by trampling livestock. Oaks do not tolerate this disturbance and soil compaction as well as hickories and may be grazed out of the woodland.

Elm, red cedar, hawthorn and dogwood may also become predominant in a grazed woodlot. In addition, seeds ofundesirable trees such as honeylocust are spread by roaming livestock. Many a pasture has been degraded by cattle returning from the woods with a "bellyful" of honeylocust seeds.

Beside the damage that can occur to trees, the soil disturbance and compaction from grazing contributes greatly to soil erosion. In fact, soil erosion on a heavily grazed woodland can be 110 times greater than that of an ungrazed woodland. Ungrazed forest land is the best protector of soil. Erosion amounts are almost too small to measure. In many forested situations soil actually builds faster than it erodes. When livestock are allowed in a woodlot the soil protection characteristics are quickly lost.

Fish habitat damaged by erosion is not the only habitat that can be lost because of grazing. Wildlife food and cover can also disappear in a grazed woodland. The same young trees and low growing vegetation that livestock are forced to eat in a "woodland pasture" are also some of the most important in attracting and keeping a diverse and healthy wildlife population.

To further compound the problem the seeds and nuts (mast) that trees produce, especially acorns, are likely to decrease in number as the tree's health declines. If livestock are allowed to eat the mast crop as well as the vegetation, there is nothing left for wildlife. Beside the decline in wildlife, other woodland products such as mushrooms and ginseng can be lost.

Woodlands and livestock just don't mix. Most farmers have enough forage and pastureland without using their woodlands for additional "pasture." Admittedly some trees are needed to shade livestock in the summer, protect them from the winds in winter and to provide shelter when the young are born. However, the forest acreage needed for these purposes is relatively small and can be satisfied by an odd corner or small section of woods left available in scattered spots around the farm.

Any quality, productive woodlands should be managed and fenced to exclude livestock. Fencing is expensive but in the long run the higher returns on livestock and timber may more than offset the initial cost. Cost-sharing is often available for this type of fencing through county Soil and Water Conservation Districts or the county Agricultural Stabilization and Conservation Service (ASCS) office. Also, less expensive electric fencing may be suitable in some cases.

The benefits of keeping livestock production and timber production separate are many, as are the problems if they're not. Quality trees and quality livestock can grow side by side; together they spell trouble for both.

A FOREST PANTRY OF POISON

Don Kurz

Bracken fern

Jim Rathert

White snakeroot

Jim Rathert

Wild black cherry

Jim Rathert

Poison ivy

Plants can pack a potent poison for cattle turned loose in the woods.

Don Kurz

Black nightshade

Bob DeWitt

Buckeye

Jim Rathert

Pokeweed

A tree's roots (page 3), exposed by foraging animals, leave the tree vulnerable to insects and disease.

Reprinted from the October 1989 *Missouri Conservationist*.

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