No matter how carefully you tend your black walnut trees, you still have to contend with animals that chew, gnaw, rub, break, or drill holes into the trees. Such damage may cause black walnuts-particularly seedlings and saplings-to grow slowly, fork, and even die. Below are the most common and the most destructive animals in black walnut stands and what you can do to keep them from damaging your trees.

Buck deer rub against young black walnut trees in the fall to remove the velvet from their antlers, often shredding the bark and leaving it hanging in strips. Larger trees are usually not affected. Deer may also nip the buds of seedlings, causing the main stems to fork. Tree growth may be stunted in areas of large deer populations because terminal buds are eaten by the deer every year.

Control:

- Surround the plantation with a 5-wire electric fence 60 inches high or an 8-foot-high woven wire fence (most effective, but most expensive method).
- Spray chemical deer repellent on trees. These repellents, however, are water soluble and must be reapplied after each rain.
- Hang deodorant bath soap or cloth bags containing tankage (dead animals that have been dried and ground) on every second or third tree around the perimeter of the plantation (least expensive, but probably least effective method).
- Interplant more desirable shrubs for browsing, such as autumn-olive.

Squirrels feed on walnuts while the nuts are still hanging on the tree in late summer and after they have fallen in the fall. Squirrels also dig up planted walnuts, sometimes even after the nuts have germinated. They locate buried seeds by smell and have been known to remove all seeds from some plantings.

Control:

- Place a generous portion of *fresh* cow manure on each nut to mask the odor coming from the nut. This is the cheapest and most effective squirrel repellent.
- Locate plantings at least 300 feet from standing timber because squirrels are reluctant to cross open spaces. If possible, delay planting until spring when alternative food sources are available.
- Cover seeds with mechanical barriers such as hardware cloth, wire cones, or burnt, punctured tin cans (fig. 1).

Deer

Squirrels

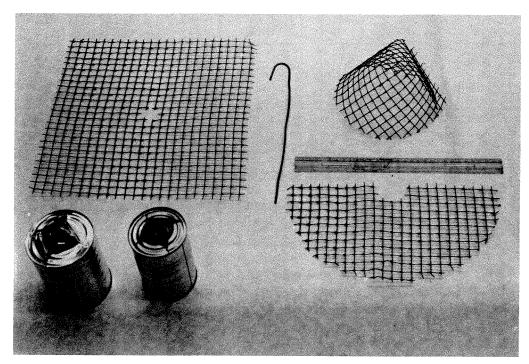


Figure 1.-Mechanical barriers (clockwise from upper left), such as I-foot squares of hardware cloth anchored with wire pins, cones cut from I-foot circles of hardware cloth, or punctured tin cans can prevent squirrels and other rodents from pilfering seed.

Hardware cloth.-A piece of coarse hardware cloth or chicken wire about 12 inches larger than the seed spot will generally protect the seed and allow the seedling to grow through the wire. Use metal pins made from #9 galvanized wire to hold down the corners. The hardware cloth or chicken wire should be removed in the fall after the seedling sheds its leaves.

Tin cans.-Place tin cans in a fire to remove the tin coating (so they will rust and disintegrate). Cut out one end of each can and make an x-cut in the other end. Pry up the four points to make a l-inch opening. Hold the can open end up and add 1 inch of soil. Drop in a nut and pack can full of soil. Place in planting hole with open end down and cover with an inch or two of soil.

Wire cones.-Cut two 12-inch-diameter semicircles from a 12-inch-square piece of hardware cloth. Roll each into a cone and fasten with small pieces of wire leaving a one inch hole at the top.

Mechanical barriers are effective but time-consuming and expensive to prepare and put into place.

Other Rodents

Mice, rabbits, and other small mammals gnaw on the stems of young trees, usually during winter, and remove patches of bark. Their teeth marks are usually visible at the base of the tree.

Control.-Put wire screening around the base of young walnut trees. Mow the plantation in the fall and place tall poles throughout the planting as rests for predatory birds.

Birds

Sometimes birds break the main stems or branches of young black walnut trees by perching on them. The broken main stem or branches usually remain hanging on the tree. Red-wing blackbirds and owls are the most common culprits. Yellow-breasted sapsuckers also damage black walnut trees by drilling holes in the tree and feeding directly on the sap. The sapsucker may drill test holes into several different trees until it finds a favorite tree. Sapsuckers will return to their favorite trees often and may nearly girdle them with peck holes. Although the holes normally heal over quickly, they cause defects and stain in the wood, reducing the value and quality of logs from these trees.

Control.-No measures are known that will prevent sapsucker damage. Warning: Do not remove the sapsuckers' favorite trees or they will move to new trees. For other birds, erect several tall poles at various places within the plantation to provide alternative perches for resting birds and to encourage the presence of predatory birds.

Domestic Livestock

Swine and cattle injure trees by seeking shelter under trees or by grazing too near trees. Their hooves can easily damage exposed roots near the groundline. Such damage may contribute to hollows in mature trees.

Control.-Place fences around trees in black walnut plantations destined for veneer or high-quality timber products.

Other Animals

Beaver damage to black walnut is rare, although trees may be killed because of floodings caused by beaver dams. Plantations near streams in areas of large beaver populations are most susceptible.

Control.-Break up newly formed dams, trap out the beaver.

Barbara C. Weber and J. W. Van Sambeek