

# Eastern Persimmon: Identification and Management in Pastures and Rangeland

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Eastern persimmon (*Diospyros virginiana* L.) is a native tree species also known as common persimmon, possumwood, American ebony, white ebony and butterwood. It has a natural range that extends from the upper Atlantic Coast west to Nebraska, south to Texas and east to Florida. The range has expanded to most of the Continental United States, primarily due to fruit tree and ornamental plantings. It is best adapted to deep, moist, well-drained soils, but can thrive on a wide variety of sites. Eastern persimmon readily reproduces from seeds dispersed by wildlife or water movement, and can become invasive in pastures and rangeland. It is a relatively slow growing tree, but develops a strong taproot as a seedling. After the first year of growth, eastern persimmon can quickly resprout from secondary buds if the top growth is removed.

## Identification

The Eastern persimmon is a member of the ebony family (Ebenaceae). At maturity, trees may be up to 70 feet tall, but are more commonly only up to 40 feet tall. The bark is gray or dark brown, thick and blocky with deep fissures. Eastern persimmon leaf arrangement is alternate, and its leaves are glossy, simple, 1 to 2 inches wide and 2 to 4 inches long with smooth margins. Eastern persimmon trees ►

*Top photo: Mature tree of eastern persimmon.  
Bottom photo: Mature eastern persimmon bark.*



are dioecious, meaning trees produce either male or female flowers. Female flowers are solitary, cream or greenish-yellow, and fragrant. Male flowers are greenish-yellow and occur in clusters of two or three. The fruits are berries 1 to 2 inches wide and green or yellow before ripening to a reddish or yellowish-orange in the fall.

### Management Considerations

Eastern persimmon management is highly dependent on the intended usage of a particular property. The fruits are a winter food source for white-tailed deer, swine, bear, turkey, quail and many other birds and mammals. People consume the ripe fruit fresh, and it is used in cookies and cakes. The wood is hard, smooth and even textured. Before the advent of metal driving clubs, persimmon wood was used to make the finest quality wooden golf clubs available. The deep taproot makes the persimmon valuable for erosion control. It is also valuable as visual cover for wildlife species during the warm season and provides nesting habitat for some birds. These beneficial attributes are offset by lost forage production and utilization in rangelands and pastures where eastern persimmons become established. In areas where horses consume the mature fruit, it has the potential to cause impaction colic.

Eastern persimmon is normally not a dominant species in mature forest stands. It is primarily a colonizer species that is replaced by climax species over time. Due to its tolerance of shade, it may persist as part of the mature forest understory for many years.

### Management Methods

#### Prescribed fire

Eastern persimmon is top-killed by burning, but readily resprouts from the existing root mass. The kill may be per-



*Top photo: Eastern persimmon leaves*

*Bottom photo: Eastern persimmon fruit beginning to turn color as they ripen*

manent in very severe fires that char the soil and kill the crown and shallow roots and rootstocks. Maintaining a regular prescribed burning program can prevent eastern persimmon from developing into a significant problem.

Prior to initiating a prescribed burning program, obtain all necessary training and experience, and become familiar with laws pertaining to prescribed burning in a specific locality.



Top photo: Grove of eastern persimmon trees in a pasture

Bottom photo: Multi-stem sprout of eastern persimmon

## Mechanical methods

Eastern persimmon can be mechanically cut with a chain saw, tree shear, hand loppers or other suitable tools. The trees should be cut as close to ground level as possible, with the cut as flat as feasible to aid in a herbicide

stump treatment soaking into the freshly cut wood. Eastern persimmons are known to resprout, so unless the stump is treated with an appropriate herbicide, it is very likely to grow back. This regrowth is typically multi-

stemmed and will be more difficult to control with herbicide than the original tree, due to the low foliage to root mass ratio.

A very effective cut stump treatment is 1 part triclopyr (example: Remedy®) and 3 parts diesel or mineral oil. Apply to the sides of the freshly cut stump and outer portion of the cut surface, especially the cambium, in a manner that thoroughly wets the stem and root collar area, but not to the point of runoff. In order to be effective, the treatment must be applied to a fresh cut, preferably within an hour of cutting. If labor is available, having one person cutting and another immediately stump treating is effective to help ensure no stumps are missed and the treatment is applied quickly.

To clear large, dense areas, a bulldozer or track-hoe may be necessary, but resprouting from secondary buds will occur.

## Chemical control

There are several herbicides labeled for eastern persimmon control or suppression, but it is very difficult to obtain good root kill and will usually require retreatment. Although recommendations vary, the following treatments have been the most successful in our experience.

For high-volume foliar treatment of individual plants, apply 0.25 to 1.0% triclopyr (Example: Remedy®) and 0.5% non-ionic surfactant. Spray to thoroughly wet the foliage. Apply from late spring, after the leaves are fully expanded and mature, through fall. Do not apply during periods of drought stress. Application periods are usually late May through June and again in September when early fall rains have alleviated summer drought stress. If it is a regrowth stand, wait until the resprouts are at least 4 feet tall before treating. In a 2009 initiated trial on a two-year ▶

regrowth stand of eastern persimmon, a high-volume foliar treatment of 0.25% triclopyr maintained 100% control one year after application.

For low-volume basal bark treatments, apply a mixture of 25% triclopyr (Example: Remedy®) and 75% diesel fuel or sprayable mineral oil to the lower 12-18 inches of the trunk in a manner that thoroughly wets the lower trunk and root collar area, but not to the point of runoff. This method is highly effective on trees with a stem diameter less than 6 inches and smooth, immature bark. Control of larger trees with thick, rough bark will be significantly reduced. The application can be done anytime except when snow or ice prevents good coverage, or when the stem surface is saturated with water and will not absorb the solution. In the same 2009 initiated trial, this treatment also maintained 100% control one year after application.

For broadcast foliar treatments, apply 1 to 2 quarts triclopyr (Example: Remedy®) per acre in sufficient volume to provide good coverage of the foliage. Use a surfactant at 0.25 to 0.5% of the total mix volume. Apply from late spring, after the leaves are fully expanded and mature, through fall. Do not apply during periods of drought stress. Application periods are usually late May through June and again in September when early fall rains have alleviated summer drought stress. If it is a regrowth stand, wait until the resprouts are at least 4 feet tall before treating. Broadcast treatments are usually only partially effective and need for retreatment is highly likely.

For basal soil treatments, apply undiluted picloram (Example: Tordon 22K®) or hexazinone liquid (example: Velpar L®) with an exact delivery handgun applicator set to 4 millili-

ters per trigger pull. A Velpar Gun applicator, available from Helena Chemical Company, works well or an applicator similar to an Ivomec® gun is also effective. Apply 4 milliliters of undiluted herbicide for each inch of trunk diameter at breast height. If treating resprouts, base the number of 4-milliliter applications on the diameter of the original tree, not on the diameter of the resprouts. If diameter of the original tree is difficult to determine, apply 4 milliliters of undiluted herbicide for each 3 feet of canopy width. If multiple 4-milliliter applications are required for each plant, space them evenly around the trunk. Direct the treatment to the soil within approximately 3 feet of the root collar. Apply from spring green-up through early summer. Rainfall is required after application to move the herbicide into the root zone. Expect the grass to be dead for one to two years in a 3- to 4-foot diameter area around each application site. Use basal soil treatments with extreme caution near desirable trees since these herbicides are absorbed through the roots and can cause severe damage or death of a desirable tree that has roots in the treated zone. In the same 2009 initiated trial, the picloram treatment was slower to act, but provided 100% control one year after application. In demonstrations conducted in 2010, the hexazinone treatment provided excellent control of smaller trees and fair control or suppression of larger trees. Although control was evident one year after application, resprouts were a concern.

After Eastern persimmon trees have been killed by herbicides, dispose of the dead trees by bulldozing into piles and burning. Be sure to make sure the trees are completely dead before disposal.

## Summary

Eastern persimmon is a native tree that is a normal part of many Texas and Oklahoma landscapes. It can be a positive or a negative component depending on the goals for the property. Each property manager must decide how Eastern persimmon fits with his or her goals and how to best manage them.

Always read and follow label directions. No discrimination is intended and no endorsement is implied for any specific products. References to specific products or trade names are for educational purposes only. ■

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