

INVASIVE PLANT FACTSHEET

Camphor tree (*Cinnamomum camphora* (L.) J. Presl)

Problems: Camphor trees form dense stands in wetlands and riparian habitats that reduce the amount of sunlight and nutrients available to native flora, reducing the biological diversity of invaded areas. The plant thrives in a wide variety of soil types, produces a large seed crop each year, and can regrow from damaged tissue. This tree flourishes in habitats ranging from roadsides to riverbanks, but it is not extremely cold tolerant.

Regulations: No federal or MS regulations prohibiting movement of this plant.

Description: Camphor tree is a broadleaf evergreen with simple, alternate, glossy leaves. When leaves are crushed, they release the scent of camphor. This plant can grow from 15-30 meters tall. The bark of the tree ranges from scaly to furrowed with a grey-brown hue. Camphor produces small white flowers in the spring and fruits as a small black drupe (berry) in fall; trees produce greater than 100,000 seeds each year.

Dispersal: *Cinnamomum camphora* is native to the subtropical regions of east Asia and was cultivated for lumber and oil; it was dispersed along European trade routes from the mid to late 1800s. It can now be found in Africa, Europe, Central America, South America, Australia, the southeastern United States, and California. The seeds are spread by birds through the ingestion of fruits, water currents, and the tree can resprout from cut stumps. Camphortree is present in all 3 coastal counties of Mississippi but is capable of invading wetlands and marshes in the southern half of the state.

Control Strategies: Physical – physical control methods are unlikely to work as the plant can survive a range of environmental conditions. Mechanical - hand removal of seedlings is possible, but it is extremely labor intensive, and plants can grow back if all roots are not removed. Mechanical tillage of seedlings will kill plants but likely to cause reinfestation. Biological - there are no known biological control mechanisms for camphor tree. Chemical - the herbicide triclopyr has been shown to be effective against camphor trees as cut stump treatments or as a foliar spray for young trees. Foliar applications of glyphosate or imazamox are also effective on immature trees that are less than ten feet tall. Cut stump treatments should be applied immediately after the cut to the outer 20% of the stump face to ensure adequate coverage of the vascular tissue (Table 1).

Acknowledgements: This project was funded by the Mississippi Aquatic Invasive Species Council through the Mississippi Department of Environmental Quality from a grant provided by the U.S. Fish and Wildlife Service.

References

Turnage, G. 2019. A Brief Introduction to Factors Affecting Water Quality, Aquatic Weed Control, Herbicide Labels, & Mixing Calculations. Mississippi State University, Geosystems Research Institute Report #5084. Pp. 22.

Enloe SF, K Langeland, J Ferrell, B Sellers, and G MacDonald. 2018. Integrated management of non-native plants in natural areas of Florida. University of Florida, Center for Aquatic and Invasive Plants. 35 pp.

Miller JH, ST Manning, and SF Enloe. 2015. A management guide for invasive plants in southern forests. USDA Southern Research Station, Technical Report SRS-131. 133 pp.

Self B. 2020. Herbicidal Control of Invasive Tree, Shrub, and Vine Species in Mississippi. Mississippi State University, Extension Service Publication #3474.

Tables and Figures

Table 1. Chemical control strategies for camphor tree; the first row for each herbicide is the amount of formulated product needed for commercial applications (100-gal solution), the second row is the amount of product needed for private landowners (25-gal of solution; typical ATV sprayer size); all rates are in imperial units (see Turnage 2019 for instructions on calculating ac-ft; and to gain a greater understanding of how aquatic plant management and aquatic ecosystem processes affect each other).

HERBICIDE ^{*,†}	SPOT RATE	BROADCAST RATE	SURFACTANT	NOTES
Triclopyr	INJECTION	75% solution	-	June-Nov, injection spacing on herbicide label
	CUT STUMP	30% solution	-	Apply immediately after cut to outer 20% of stump
Triclopyr	2%	2 gal/ac	1% (1 gal)	Apply to seedlings/saplings (<10 ft height)
		0.5 gal	1 qt	
Glyphosate	2%	2 gal/ac	1% (1 gal)	Apply to seedlings/saplings (<10 ft height)
		0.5 gal	1 qt	
Imazamox	2%	2 gal/ac	1% (1 gal)	Apply to seedlings/saplings (<10 ft height)
		0.5 gal	1 qt	

*Triclopyr rates are based on a 3.0 lb./gal amine formulation, glyphosate rates are based on 5.4 lb./gal formulation, and imazamox rates are based on a 1 lb./gal formulation; see Turnage (2019) regarding herbicide labels and formulation determination.

†This table is meant to be an aid in mixing herbicide solutions; it is not meant to be used as a replacement for herbicide label recommendations.



5421918



UGA5284089

Figure 1. Image of camphortree leaves and fruit (left) and mature tree (right). Image credit: L - JH Miller (USDA; www.bugwood.org); R - K Starr (Starr Environmental; www.bugwood.org).

Author Contact Information:

Gray Turnage, PhD.
Assistant Research/Extension Professor
Mississippi State University, Geosystems Research Institute
2 Research Blvd., Starkville, MS 39759
662-325-7527, Gturnage@gri.msstate.edu
www.gri.msstate.edu

