Chinaberry (Melia azedarach) Control Herbicide Options

E. David Dickens – Forest Productivity Professor and David J. Moorhead – Silviculture Professor UGA Warnell School

Brief
Chinaberry trees (Melia azedarach) grow commonly 20 to 40 feet up to 50 feet tall in the SE US, often on field edges and fence rows. It is not often found in large populations within pine stands. It is a deciduous tree that has alternate, bipinnately compound green leaves that turn yellow in the fall. This species is often spread by birds carrying the seeds which are circular yellow fruits (drupe). The fruit is considered to be poisonous to humans. This paper will discuss herbicide options to control Chinaberry sprouts, saplings and trees and address where certain herbicides should be used (versus other herbicides) if sensitive plants near-by are not to be killed.

I. Chinaberry sprouts, seedlings, or saplings (2 to 12 feet tall):

FORESTRY GARLON® XRT (DOW AgroSciences 89.3% triclopyr; 6.3 lb per gal)

♦ A FOLIAR active herbicide

♦ Apply at 1 - 2% solution in water + 1% non-ionic surfactant, MSO, or crop oil (Garlon 3A, 4 or 4 Ultra can also be used but at a 2 - 3% solution – do not use Garlon 4, 4 Ultra when temperature is greater than 86 degrees F, use Garlon 3A the amine formulation)

♦ DIRECT spray Garlon, water and surfactant solution thoroughly wetting all foliage (just before the point of runoff), especially the sapling top. DO NOT spray desirable plants.

♦ A backpack sprayer, 12-volt operated 15 or 25 gallon tank sprayer (on an ATV or tractor) or PTO driven tractor mounted sprayer using a medium droplet size.

♦ Application timing is from mid-July to early October (prior to leaf color change)

♦ Because Garlon is foliar active only, it is a safer herbicide to use where desirable plants are in or near the treatment area Arsenal which is soil active

ARSENAL® AC (BASF; 53% imazapyr; 4 lb per gal)

♦ A SOIL + FOLIAR active herbicide

♦ Apply at 1% solution in water + 1% non-ionic surfactant, MSO, or crop oil
♦ DIRECT spray Arsenal, water and surfactant solution thoroughly wetting all foliage (just before the point of runoff), especially the sapling top. DO NOT spray desirable plants.

♦ A backpack sprayer, 12-volt operated 15 or 25 gallon tank sprayer (on an ATV or tractor) or PTO driven tractor mounted sprayer using a medium droplet size.

♦ Application timing is from mid-July to early October (prior to leaf color change)

♦ Consider using Garlon over Arsenal where there are sensitive, desirable plants near-by as Arsenal is soil + foliar active and if the applicator gets some product on the ground at this concentration in a small area, desirable plants may die.

II. Chinaberry trees (12 feet tall or taller):

FOR TREES at least 3” in diameter (“hack and squirt” method):

ARSENAL® AC (BASF; 53% imazapyr; 4 lb per gal)

♦ A SOIL + FOLIAR active herbicide

♦ Using the “hack and squirt” wide-spaced injection method with Arsenal at a 20% solution in water to apply 1 milliliter (ml) of the solution into (hacks) made through the bark into the cambium. Go to this link for detailed information http://www.bugwood.org/weeds/arsenal.html

♦ Mix Arsenal (3.2 oz/qt container or 12.8 oz per gallon sprayer) and water and dye, if desired, to the spray bottle. Agitate or shake (make sprayer top is on tight prior to shaking)

♦ Make one hack with a hatchet per 3” diameter of tree. While leaving the hatchet in the cut, spray 1 ml into the cut. If the tree is 6” diameter then make two hacks and two 1 ml squirts (1 ml /cut)

♦ DO NOT get the Arsenal spray solution on the ground if roots of desirable plants are growing in the treatment area, as at this concentration, the herbicide will be taken up by roots of desirable plants causing their injury or death.

♦ Application timing is from mid-October to early February

FOR TREES less than or greater than 3” diameter (cut stump treatment method):

FORESTRY GARLON® XRT (DOW AgroSciences 89.3% triclopyr; 6.3 lb per gal)

♦ A FOLIAR active herbicide

♦ Apply to freshly cut stumps (easiest to apply within seconds of cutting each stump but wait no more than 1 hour to apply ideally) @ 15% solution + water (or crop oil or bark penetrant oil) using a quart to gallon spray bottle (Garlon 3A, 4 or 4 Ultra can also be used but at a 25% solution in water or crop oil, or bark penetrant oil)
Application timing is from mid-October to early February

**PATHFINDER® II** (DOW AgroSciences 13% triclopyr; 0.75 lb per gal)

- A pre-mixed ready to use (RTU) product of triclopyr and basal oil for basal bark and cut stump treatments
- Apply to freshly cut stumps (easiest to apply within seconds of cutting each stump but wait no more than 1 hour to apply ideally) at full strength
- Apply as a basal spray thoroughly wetting the circumference of the lower 12 to 15 inches of the trunk, including the root collar area.
- Treatments can be applied throughout the year.

**Other Ready to Use (RTU) products that can be bought at some lawn and garden stores** (for applications to freshly cut stumps):

- ORTHO Brush-B-Gon
- Enforcer Brush Killer
- Vine-X

![Photo 1. A Chinaberry tree in the summer](5408409)
Photo 2. Chinaberry tree with fruit

Photo 4. Chinaberry fruit (1/2 – 3/4” diameter)
Photo 5. Chinaberry flowers

Photo 6. A young Chinaberry tree bark
Photo 7. Mature Chinaberry bark

Photo 8. The “hack and squirt” materials needed
Photo 9. The hack and squirt equipment and steps (one hack per 3” tree diameter)