



# Chinaberry (*Melia azedarach*) Control Herbicide Options

Dr. E. David Dickens, *Forest Productivity Professor*; Dr. David Clabo, *Forest Productivity Professor*; and David J. Moorhead, *Emeritus Silviculture Professor*; UGA Warnell School of Forestry and Natural Resources

## BRIEF

Chinaberry tree (*Melia azedarach*) is an invasive tree species that was introduced to the United States during the mid-1800s from Asia as an ornamental species. Though a member of the mahogany family, this species has softer and less durable wood than other mahogany species. This species can be 50 feet tall in the southeastern United States, but it is most often between 20 and 40 feet tall. It often occurs on field edges, fence rows, and in un-kept depressions. Large Chinaberry populations are not common within pine stands. It is a deciduous tree that has alternate 2 to 3 times pinnately compound green leaves that turn yellow in the fall. This species is often spread by seed from trees as young as 4-5 years old by birds. Seeds are a circular, and produced within a yellow fruit (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 nearby are not to be killed.

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

There are other name brand and generic herbicides with the same active ingredient for many of the forest herbicides listed below that can be substituted for the products in this paper. The rate per acre or percent solution may change though due to different amounts of active ingredient.

#### **Forestry Garlon® XRT** (Corteva Agriscience; 83.9% triclopyr; 6.3 lb per gal)

- A FOLIAR active herbicide
- Apply as 1%-2% solution in water + 1% non-ionic surfactant, methylated seed oil (MSO), or crop oil (Garlon 3A or 4 Ultra can also be used but at a 2%-3% solution – DO NOT use Garlon® 4 Ultra or Forestry Garlon® XRT when temperature is greater than 86 degrees F, use Garlon® 3A which is 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.
- Apply using 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 triclopyr is foliar active only, it is a safer herbicide to use where desirable plants are nearby versus imazapyr, which is also soil active

#### **Arsenal® AC** (BASF; 53% imazapyr; 4 lb per gal)

- A SOIL + FOLIAR active herbicide
- Apply as 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.
- Apply using 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 triclopyr rather than imazapyr where there are sensitive, desirable plants nearby as imazapyr 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” method as noted by Moorhead on [www.bugwood.org](http://www.bugwood.org) use Arsenal® as a 20% solution in a quart to gallon spray bottle, calibrate spray bottle using water to deliver 1 milliliter (*ml*) per trigger pull (usually a partial trigger pull).
- Add the Arsenal® (6.4 oz/qt container or 25.6 oz per gallon sprayer) and water to the spray bottle. Agitate or shake (be certain 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 of herbicide solution 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 desirable plants are nearby, as at this concentration, desirable plants may die.
- 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** (Corteva Agriscience; 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) as a 15% solution + water (or crop oil or bark penetrant oil) using a quart to gallon spray bottle (Garlon® 3A or 4 Ultra can also be used but as a 25% solution in water, crop oil, or bark penetrant oil)
- Application timing is from mid-October to early February

**Pathfinder® II** (Corteva Agriscience; 13% triclopyr; 0.75 lb per gal)

- A FOLIAR active herbicide – a ready to use (RTU) product
- 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
- Application timing is from mid-October to early February

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

**ORTHO Brush-B-Gon**

**Enforcer Brush Killer**

**Vine-X**

**Follow label directions and wear all personal protective equipment as required by the label when applying herbicides.**



Photo 1: A Chinaberry tree in the summer



Photo 2: Chinaberry tree with fruit





Photo 3: *Chinaberry* fruit (1/2 – 3/4" diameter)



Photo 4: *Chinaberry* flowers



Photo 5: *Young Chinaberry tree bark*



Photo 6: *Mature Chinaberry bark*





**Photo 7:** The “back and squirt” materials needed for larger diameter trees.



**Photo 8:** The back and squirt equipment and steps (one back per 3” tree diameter using 4 lb acid equivalent imazapyr products).

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