Trifoliate, Hardy Orange

Trifoliate or hardy orange [Poncirus trifoliata (L.) Raf.] is a deciduous, small tree or shrub to 20 feet (6 m) in height and with tufts of trifoliate (three-leaflet) leaves on densely packed thorny stems. White flowers cover plants in early spring to yield abundant small, fuzzy green orangelike fruit that turn yellow in fall. Many sprouts occur around stems but not from roots. Species spreads by prolific animal-dispersed seeds and colonizes by basal sprouts.

Management strategies:
- Do not plant. Remove prior plantings, and control sprouts and seedlings. Bag and dispose of fruit in a dumpster or burn.
- Treat when new plants are young to prevent seed formation.
- Cut and bulldoze when fruit are not present.
- Anticipate wider occupation when plants are present before disturbance.
- Cutting, tree injection, manual pulling, and tree wrenching are hindered by dense thorny branches and basal sprouts so use eye protection.
- Manually pull new seedlings and tree wrench saplings when soil is moist, ensuring removal of all roots.
- Burning treatments are suspected of having minimal topkill effect due to scant litter.
- Treatment combinations should be used that are appropriate for dense thickets with limited access. Access trails may need to be cut.

Recommended control procedures:
Large trees and saplings. Cut and immediately treat the stump tops with one of the following herbicides: a glyphosate herbicide or Garlon 3A as a 25-percent solution (3 quarts per 1-gallon mix). ORTHO Brush-B-Gon, Enforcer Brush Killer, and Vine-X are effective undiluted for treating cut-stumps and available in retail garden stores (safe to surrounding plants). A subsequent foliar application may be required to control new seedlings and resprouts.
Saplings. When safety to surrounding vegetation is desired, apply a basal spray of either Pathfinder II undiluted or Garlon 4 as a 20-percent solution (5 pints per 3-gallon mix) in a labeled basal oil product, vegetable oil or mineral oil with a penetrant, or fuel oil or diesel fuel (where permitted). Elsewhere, apply Stalker* as a 6- to 9-percent solution (1.5 to 2 pints per 3-gallon mix) in a labeled basal oil product, vegetable oil or mineral oil with a penetrant, or fuel oil or diesel fuel (where permitted).
Seedlings. When safety to surrounding vegetation is desired, thoroughly wet all leaves with a glyphosate herbicide or Garlon 3A as a 4-percent solution (1 pint per 3-gallon mix) in water with a surfactant; or if nontarget damage is not a concern, apply Arsenal AC* as a 0.5-percent solution (2 ounces per 3-gallon mix).

* Nontarget plants may be killed or injured by root uptake.