

TRIFOLIATE ORANGE (Hardy Orange or Flying Dragon)

Poncirus trifoliata

Trifoliate Orange is a concerning plant in the ornamental trade, and caution should be used when thinking about planting this tree. It is a very aggressive invader, thoroughly outcompeting many native species at ground level. Trifoliate Orange produces myriad seedlings in the subcanopy, and plants can be characterized as branching, thorny, tall shrub thickets. Thickets form in the vicinity of fruiting individuals and fruit is additionally dispersed by mammals eating the fruit.

A native of Asia, this plant has started to escape cultivation and become naturalized in small pockets around the state of NC. Because it is a cold-hardy plant, it was popular to use this plant as a root-stock for other citrus fruits. Trifoliate orange is currently known to grow in the following North Carolina Counties: Orange, Iredell, Mecklenburg, Buncombe, and Swain Counties (www.EDDMapS.org). The NC Natural Heritage Program has additionally documented it in Chatham, Davidson, Haywood, Stanly, and Durham Counties. Numbers of

reported occurrences in each county are low, but the spread is concerning. Trifoliate orange is more widespread to the south and southwest, growing in Florida and Oklahoma with scattered populations as far north as Pennsylvania. To eliminate spread of this plant, collect fruit in sealed plastic bags and dispose of them in a deeply buried landfill as garbage, not vegetative waste. Do not place the fruit in your compost!

When not fruiting, large thickets can be controlled by manual efforts, mechanical efforts (bulldozed), or chemical methods. When occurring in natural areas, it



Figure 1. Trifoliate Orange tree in fruit. Although beautiful as an ornamental, this plant poses real invasive threats to the landscape. (source: Edible Landscaping LLC)



Figure 2. Trifoliate Orange boasts incredibly dangerous thorns (3 inches long) and forms dense thickets. (source: What Grows There.com)



Figure 3. Trifoliate Orange leaves and fruit. (source: Ann Prince)

with prolonged contact. The bark is striped with vertical green sections. The plant can grow to 6 feet tall, but in some cases has been observed to grow nearly 20 feet tall.

It is unknown how widely this plant is sold in the ornamental trade, but an internet search shows that it is currently being sold at two nurseries in Chatham County, NC, as well as several other e-retailers.

responds well to repeated chemical treatments with 20% glyphosate, .8% triclopyr, or a mixture (cut-and-paint of large stems, spraying or cut-and-paint of small stems).

Trifoliate orange is recognized by its leaves-in-three occurring in an alternating pattern up the stem. This frost-hardy plant stays green nearly the entire year in NC. It also boasts impressive, large thorns (3 inches), all dark shiny green except in the late fall when it loses its leaves. In the spring, it has 4- to 7-petaled small white flowers (2 inches in diameter). Its fruit changes from green to bright yellow as it ripens in the spring. The fruits (measure 1-2.5 inches in diameter) are very seedy with almost no pulp. It is reported that the fruits are poisonous for human consumption, causing stomach pain and nausea, as well as skin irritation

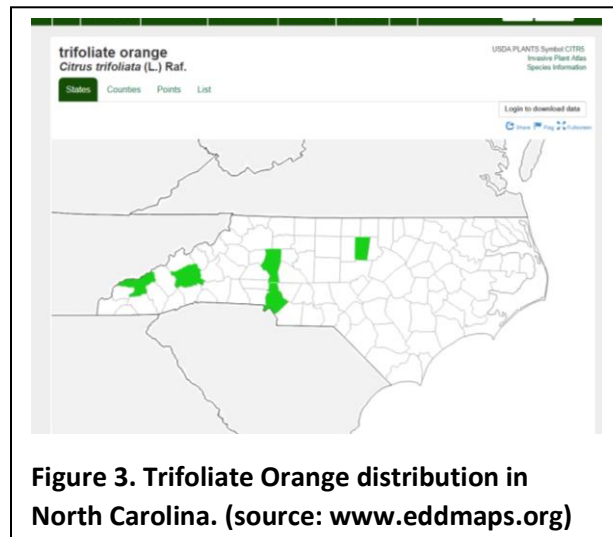


Figure 3. Trifoliate Orange distribution in North Carolina. (source: www.eddmaps.org)

The North Carolina Invasive Plant council strongly suggests that you discourage planting this plant, and to report naturalized incidences to www.EDDMapS.org.



For more information on this invasive plant, and others, please visit the North Carolina Invasive Plant Council website (nc-ipc.weebly.com).