Weeds you should get to know

Old World climbing fern growing near an agricultural operation in Highlands County.
Species included: Old World climbing fern, Japanese climbing fern, cogon grass, tropical soda apple, downy rose myrtle and Chinese tallow tree

Introduction: An integrated approach to the control of invasive plants involves three components: prevention, detection and control. These methods should be applied to all invasive plants, including those identified in this booklet. Each land manager in Florida needs to be practicing these methods in order to stop the spread of invasive plants on their properties, onto adjacent properties and into other states.


Disclaimer: Federal law requires that anyone who applies a herbicide reads the entire label first and follows the label instructions. Contact IFAS for information on applying herbicides safely. Use of trade names in this publication does not imply endorsement of a particular product.
Old World Climbing Fern
Name: Old World Climbing Fern  
Scientific name: *Lygodium microphyllum*  
How to ID: Vinelike plants consisting of long, twining fronds up to 90 feet long. Rhizomes (underground stems), and rachis (main stem of the frond) are dark brown to black and wiry. Leafy branches off the main stem are 2 – 5 inches long with several pairs of leaflets. Non-fertile leaflets are oblongish without lobes. Fertile leaflets are fringed with tiny lobes of enrolled leaf tissue along the edge of the leaf. Climbs and covers trees and shrubs and is able to form dense mats up to 3 feet thick above soil. Common in moist areas, but also found in shallow water and dry areas.
Japanese Climbing Fern
Name: Japanese Climbing Fern
Scientific name: *Lygodium japonicum*
How to ID: Vinelike plants consisting of long, twining fronds up to 90 feet long. Rhizomes (underground stems), and rachis (main stem of the frond) are dark brown to black and wiry. Leafy branches off the main stem are 4 – 8 inches long with several pairs of leaflets. Non-fertile leaflets are triangular with lobes, appearing lacy. Fertile leaflets are smaller in shape with rows of enrolled leaf tissue along edge of the leaf. Climbs and covers trees and shrubs. Common in moist areas, however, seems to tolerate drier areas better than Old World climbing fern.
Cogon Grass
Name: Cogon Grass
Scientific name: *Imperata cylindrica*
How to ID: Dense, erect perennial grass growing 1 – 5 feet in height. Colony forming with tufts of long leaves, yellow-green blades, and silver-plumed flowers. Seeds in spring. Leaf blade has distinct off-center midrib, which is more apparent toward the tip of the blade. Serious weed of drylands in Florida, but also occurs in briefly flooded areas. Forms dense stands, which can cover large areas resulting in almost total displacement of other plants. Considered a significant fire hazard. Mostly unpalatable to wildlife and livestock.
Tropical Soda Apple
Name: Tropical Soda Apple
Scientific name: *Solanum viarum*
How to ID: Bushy, prickly herbaceous perennial plant. Plants grow from 3 – 6 feet tall, and the entire plant has thorns approximately 0.5 – 1 inch long. Has large, lobed leaves with hairy surfaces. The immature fruits look like tiny watermelons, but turn solid yellow at maturity. Seeds are highly viable. The flowers are white with yellow stamens. Commonly found in pastures, open disturbed sites, edges of woodlands and hardwood hammocks. Fruit readily consumed by livestock and wildlife. Can infest a pasture or native area within 1 – 2 years and degrade pasture value.
Downy Rose Myrtle
**Name:** Downy Rose Myrtle  
**Scientific name:** *Rhodomyrtus tomentosa*  
**How to ID:** Evergreen shrub that grows 6 feet tall (occasionally to 12 feet). Leaves are approximately 3 inches long and are glossy green above and densely soft-hairy below. A distinct feature on the underside of the leaf is the presence of 3 main veins running up from leaf base. Flowers are rose-pink and grow up to 1 inch across. Fruit is a bluish-purple berry about 1/2 inch across. It flowers profusely in the spring and can create large monocultures. Found along upland edges of wetlands and understories of native pine flatwoods. Threatens to become worse than Brazilian pepper in central Florida.
Chinese Tallow Tree
(popcorn tree)
Name: Chinese Tallow Tree (popcorn tree)
Scientific name: Sapium sebiferum
How to ID: Deciduous tree with milky sap that grows to 30 feet tall. Leaves are 1 – 2.5 inches wide with broadly rounded bases that taper to a slender point. It has small yellow flowers that are borne on spikes to 8 inches long and occur in the spring. Fruit is a 1/2-inch wide, 3-lobed capsule that turns brown at maturity to reveal 3 dull white seeds. The seeds, which often remain attached to the tree through the winter, resemble popcorn. This tree can thrive in well-drained uplands as well as in bottomlands, shores of waterbodies, and on floating islands.
Control Information
This information provides specific control tech-
niques for the species included in this publication. Following are tables of commercial products avail-
able for each herbicide active ingredient discussed.

Common Herbicide Application Methods
Foliar: Apply herbicide directly to the leaves of plant by thoroughly spraying to wet the leaf sur-
faces. Do not spray to the point of run-off. Surfac-
tants are often needed to facilitate spreading and penetration of the herbicide through plant cuticle: a thick, waxy, leaf layer present on most plants.

Cut stump: Cut down the tree or shrub, and immediately apply herbicide to the cut surface just inside the bark. The herbicide must be applied within minutes after the trunk is cut.

Basal Bark: Apply a 6 – 12 inch band of herbi-
cide around the circumference of the trunk of the plant, approximately 1 foot above ground, to where the trunk is entirely wet but not to the point of run-off. This treatment works best on young trees with smooth bark. It is usually not effective on older trees with thick corky bark.
Old World & Japanese Climbing Ferns
Small or low-growing infestations:
Use a foliar application of a 1% – 3% solution of glyphosate product (volume of herbicide/volume of diluent) or of metsulfuron methyl product applied at an equivalent of 2 oz. of product per 100 gallons (0.6 g/gal). The 2 herbicides are also often applied together. Plants treated with glyphosate alone will begin dying within 3 weeks, while plants treated with metsulfuron methyl alone may take several months. Treated populations MUST be monitored for regrowth and re-treated as necessary.

Vines climbing high into trees: Cut the plant at waist level and treat the rooted portion of the plant below the cut as described above. The portion of the plant left above the cut will die without application of herbicide. You MUST revisit the site within 6 months to a year to treat new infestations resulting from spore release. For most consistent results in both treatments, apply herbicide when plants are actively growing and not stressed by environmental conditions.
Cogon Grass

For dense stands, effective management combines mechanical and chemical treatments. 1) Mow or burn infestation in late spring to remove old growth and thatch layer. 2) Deeply disc site 6 – 8 weeks later, when grass has resprouted to a height of 6 – 12 inches. (Discing is not used in sensitive natural areas, but is ok on road shoulders, disturbed areas, etc. Clean equipment of contaminated dirt prior to moving from site.) 3) When regrowth has occurred or for sparse stands (small plant clumps or a low number of individual plants scattered in an area) use a foliar application of a 2% glyphosate product solution in areas that will be immediately revegetated. In areas where immediate revegetation is not planned, and non-target plant damage is not a concern, use a foliar application of a 1% – 1.5% imazapyr product solution. The addition of a non-ionic surfactant is recommended to increase herbicide uptake. A tank mix of imazapyr and glyphosate can be used. For a 1 gallon tank, use 2.5 oz. glyphosate product and 0.25 oz. imazaphyr
product. The best time to apply herbicides is in early fall before first frost. *Imazapyr* is highly active in soil. Nearby plants may be damaged by root uptake or improper application.

**Tropical Soda Apple**

For sparse stands (small patches of plants or a low number of individual plants scattered in an area): Either physically remove the plants (dig them with a shovel) or spray them with a herbicide. If the plants have mature fruit, remove the plants by digging and discard them in a safe location so seeds don’t spread. Use a foliar application of a 0.5% solution of triclopyr ester product using a 0.1% – 0.25% non-ionic surfactant or a 3% solution of glyphosate product. Coverage is important to get maximum control. Monitor the treated area for 1 – 2 years and re-treat when necessary (don’t allow new plants to produce fruit and seed).

For dense stands (> 50% of the ground cover in an area): Mow in the spring to a 2 – 4-inch
height. Repeat mowing at 50 – 60 day intervals to prevent flowering; then use a foliar application of 1 quart of triclopyr ester product per acre plus a non-ionic surfactant in late May/early June, when plant regrowth is at the first flowering stage. Monitor the treated site beginning in the fall and spot treat all plants in the pasture. Continue the monitoring and spot spraying for 2 – 3 years.

**Downy Rose Myrtle**

Two different application methods may be used. Use a basal bark application of a 10% – 20% triclopyr ester product solution. Because this is a multi-trunk plant, apply herbicide to all trunks for maximum effectiveness. For larger plants, follow-up treatment in 6 months – 1 year will be necessary. Alternatively, use a foliar application of a 1% imazapyr product solution mixed with a 1% methylated seed oil adjuvant solution. It may take 3 – 6 months to notice herbicide effects when using imazapyr. *See note on imazapyr in cogon grass section.*
Chinese Tallow Tree

For trees: Basal bark application or cut stump treatment of herbicide. Use a basal bark application of a 15% solution of triclopyr ester product to trees < 10 inches in diameter or a 20% solution to trees > 10 inches in diameter. For cut stump application, apply either a 20% solution of triclopyr ester product, a 10% solution of triclopyr amine product or a 2% – 3% solution of imazapyr product immediately to trunk. *See note on imazapyr in cogon grass section.* If trees are cut at a time when seeds are attached, make sure that the material is disposed of in such a way that the seeds will not be dispersed to new areas where they can germinate and produce new trees.

For saplings (> 10 inches): Use a foliar application of a 0.5% – 0.75% solution of imazapyr product. Seedlings up to 10 inches tall should be pulled by hand before they reach seed-bearing maturity.
**Herbicides available from agricultural suppliers.**

**May not be applied directly over water.**

<table>
<thead>
<tr>
<th>Active Ingredient</th>
<th>Products</th>
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<tbody>
<tr>
<td>Glyphosate (3 lb/gal)</td>
<td>Roundup Pro, Glypro Plus, Glyphos, Touchdown Pro (other products may be available)</td>
</tr>
<tr>
<td>Triclopyr ester (4 lb/gal)</td>
<td>Garlon 4</td>
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<tr>
<td>Triclopyr ester (0.75 lb/gal)</td>
<td>Pathfinder</td>
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<tr>
<td>Metsulfuron methyl (60% flowable powder)</td>
<td>Escort XP</td>
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<tr>
<td>Imazapyr (2 lb/gal)</td>
<td>Arsenal</td>
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<tr>
<td>Triclopyr amine (3 lb/gal)</td>
<td>Garlon 3A, Renovate</td>
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<tr>
<td>Imazapyr (2 lb/gal)</td>
<td>Habitat</td>
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