

Invasive Plant Management Tips 2/13/20

| Common Name | How they grow | Herbicides | Notes |
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| <p>Chinese Tallow <i>Triadica sebifera</i></p>  | <p>Regrowth often occurs from cut stumps or roots, and new growth via the seed bank. Native species are crowded out once Chinese tallow becomes established. The leaves and fruit are toxic to cattle and cause nausea and vomiting in humans.</p> <p>Chinese tallow are able to persist pesticide and mechanical management due to its propensity for regrowth and large seed bank. Seeds can last up to 5 years on the soil.</p> | <p>Timing of application is also an important consideration to ensure treatments are as efficient as possible. Best applied October-January.</p> <p>Make sure spray equipment is resistant to oil-based carriers.</p> <p>SMALL TREES (under 6in diameter): Hand pulling works for small seedlings. Foliar application can be useful for smaller trees. Use a 15-20% triclopyr and oil solution. Adding a surfactant (oil) increases absorption of the herbicide.</p> <p>OVER 6 INCH DIAMETER: Cut-stump, basal bark, or “hack and squirt” are advised for larger individuals.</p> <ul style="list-style-type: none"> • 20% triclopyr and oil solution. • 25% Remedy Ultra (60% triclopyr ester) is diesel-soluble can be mixed with basal oil or diesel fuel (25%= 1 qt. herbicide per 3-gal. oil or fuel). | <p>Do not attempt a cut stump or basal bark treatment during seed production (August to early September). This can increase the chance of spreading viable seed.</p> <p>When treating by water, remember their seedpods float and re-sprout in a new location.</p>  |

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| <p data-bbox="107 386 365 467">Chinese Privet <i>Ligustrum sinense</i></p>  | <p data-bbox="485 191 909 456">Chinese privet tends to dominate the shrub layer of any habitat that it invades. It changes the natural species composition of the ecosystem by choking out native plant species.</p> <p data-bbox="485 505 898 688">It colonizes by root sprouts and spreads widely by having an abundant number of seeds dispersed by birds and other animals.</p> | <p data-bbox="938 191 1276 220">Best applied August-Dec.</p> <p data-bbox="938 256 1404 323">Use a surfactant like Cide-Kick II for these.</p> <p data-bbox="938 358 1465 425">Make sure spray equipment is resistant to oil-based carriers.</p> <p data-bbox="938 474 1178 503">Foliar application</p> <ul data-bbox="938 513 1415 625" style="list-style-type: none"> • 3% glyphosate herbicide (4 oz. per gallon of water) • 1% Arsenal AC (imazapyr) <p data-bbox="938 673 1461 813">Basal Bark application for stems too tall for foliar spray. This requires a mixture of herbicide, surfactant and oil/diesel fuel:</p> <ul data-bbox="938 829 1461 1170" style="list-style-type: none"> • 25% Remedy Ultra (60% triclopyr ester) is diesel-soluble can be mixed with basal oil or diesel fuel (25%= 1 qt. herbicide per 3-gal. oil or fuel). • If using glyphosate for basal application (at least 41% active ingredient), prepare a 25% mixture of glyphosate in water (1 qt. glyphosate w/ 3-gal. water). <p data-bbox="938 1219 1402 1286">You can use “crop oil concentrate” instead of basal oil.</p> | <p data-bbox="1499 191 1959 336">When safety to surrounding vegetation desired, or dealing with large stems, use cut and treat method.</p> <p data-bbox="1499 384 1965 451">Cut and treat: After cutting, immediately treat the stumps with:</p> <ul data-bbox="1499 467 1990 691" style="list-style-type: none"> • 10% Arsenal AC (imazapyr) in water <ul data-bbox="1549 505 1990 571" style="list-style-type: none"> ○ Make a 25% solution (1 qt./ 3-gal. water) with a surfactant. • 10% Velpar L (Hexazinone) <ul data-bbox="1549 620 1990 686" style="list-style-type: none"> ○ Make a 25% solution (1 qt./ 3-gal. water) with a surfactant.  |

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| <p data-bbox="109 399 260 435">Nandina</p> <p data-bbox="109 444 361 477"><i>Nandina domestica</i></p>  | <p data-bbox="546 185 932 331">Nandina is a somewhat slow-growing semi-evergreen shrub. Plants cane-like stems resembles Bamboo.</p> <ul data-bbox="546 341 995 883" style="list-style-type: none"> <li data-bbox="546 341 995 451">• Has very deep root systems that allows it to persist after cutting it back. <li data-bbox="546 461 953 493">• Can also spread by rhizomes. <li data-bbox="546 542 995 883">• Foliage is lace-like, leaves divided into oval leaflets. New growth is pink or red, turning green and then becoming purplish, bronze, or red into the fall and winter. Clusters of white or cream blossoms appear at the end of spring, and Red berries form. | <p data-bbox="1024 185 1465 295">Managers suggest that follow-up treatments are often necessary for effective control of Nandina.</p> <p data-bbox="1024 337 1423 483">Most recommended treatment is Cut and Treat. After cutting, immediately treat the stumps with:</p> <ul data-bbox="1024 493 1457 639" style="list-style-type: none"> <li data-bbox="1024 493 1457 639">• Glyphosate or triclopyr (1% solution with 0.25% surfactant) are the best alternatives to date. | <p data-bbox="1491 185 1990 370">Because it produces abundant seed crops and seeds remain on the plant for several months, take extra care to prevent seed spread and dispersal during the removal process.</p> <ul data-bbox="1491 380 1974 646" style="list-style-type: none"> <li data-bbox="1491 380 1974 526">• Ideally, physical or mechanical control should occur before seed production. If present, collect and destroy seeds. <li data-bbox="1491 535 1974 646">• Mechanical control alone is ineffective since small pieces of roots can re-sprout.  |

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| <p data-bbox="107 334 436 418">Japanese Climbing Fern</p> <p data-bbox="107 435 380 464"><i>Lygodium japonicum</i></p>  <p data-bbox="338 1352 478 1373">UGA5302045</p> | <p data-bbox="512 196 873 342">It is a perennial vine-type fern, reaching up to 90 feet in length. It grows by underground rhizomes.</p> <ul data-bbox="512 354 884 656" style="list-style-type: none"> <li data-bbox="512 354 884 461">• Leaves are lacy and finely divided, arranged opposite on the vine. <li data-bbox="512 472 884 656">• Vines are green to orange to black and wiry, often infesting trees and shrubs forming dense mats of vegetation. <p data-bbox="512 704 884 850">Japanese climbing fern can grow in sun or shade, damp, disturbed or undisturbed areas.</p> <p data-bbox="512 899 873 1078">It can grow so dense that it forms a living 'wall', leading to the elimination of seedlings and other native vegetation.</p> | <p data-bbox="917 196 1436 418">Steps to prevent spore movement or formation are the key in controlling climbing fern. Control measures should be employed when the fern is not producing spores, which occurs in the late summer/early fall.</p> <p data-bbox="917 467 1436 769">2 to 3 % solution of glyphosate (Roundup, etc.) is effective. Another herbicide, metsulfuron (Escort), provides excellent control at rates of 0.5 to 1 oz. per acre. Be sure to include a non-ionic surfactant at 0.25% (10 mLs or 2 teaspoons per gallon of spray solution).</p>  <p data-bbox="1829 1352 1969 1373">5476331</p> | <p data-bbox="1472 196 1990 342">Hand pulling is one mechanical strategy for the removal of small patches of these climbing ferns; however, it will regrow from hand pulling.</p> <p data-bbox="1472 391 1969 537">Machinery can be used to remove the large mats of foliage that form over vegetation in areas where compaction is not a concern.</p> <p data-bbox="1472 586 1969 764">Fire will kill it back, but regrowth occurs. Fire also causes major damage to the native vegetation as the fire climbs up the vines into the canopy of the trees and shrubs.</p> |

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| <p data-bbox="107 407 336 537">Japanese Honeysuckle <i>Lonicera japonica</i></p>  | <p data-bbox="485 191 942 537">This plant directly competes for and blocks out sunlight for native plants with their dense canopy. Trees or shrubs they climb upon get pulled down by this plant once they have died. It is able to function as a climbing vine or a dense mat, making it more adaptive than native vines.</p> <p data-bbox="485 581 930 768">Once established, colonies can spread rapidly and in the absence of stems to twine upon, they can form dense monospecific mats up to 5 feet deep</p> | <p data-bbox="963 191 1432 459">Controlling Japanese honeysuckle may require determined and continual effort. Because it readily sprouts in response to stem damage, single treatments are unlikely to eradicate established plants.</p> <p data-bbox="963 503 1404 613">Try foliar-spraying on a warm day in winter to reduce damage to other non-target plants.</p> <p data-bbox="963 657 1417 768">Systemic herbicides such as glyphosate and triclopyr are effective even in foliar application.</p>  | <p data-bbox="1453 191 1934 302">Combined mechanical and chemical strategies can provide some effectiveness for management.</p> <p data-bbox="1453 345 1959 456">Cut and Treat: Can work; but it usually requires several years of repeated application.</p> <p data-bbox="1453 500 1990 729">Thicket treatment: Allow the cut stems to re-sprout, then spot-spray the sprouts with a 5% solution of glyphosate with surfactant. Increase solution strength if necessary and re-treat as needed for complete control.</p> |

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| <p>Elephant Ear <i>Alocasia spp.</i> and <i>Colocasia esculenta</i></p> | <p>Elephant ears are actually a group of plants scientifically known as <i>Alocasia</i>, <i>Colocasia</i>, and <i>Xanthosoma</i>.</p> <p>The tuberous bulb that grows the elephant ear plant is known as a cormel. The plants produce a lateral root system that gives it additional strength. Cormels of the plant are easy to plant and transplant.</p> <p>They are invasive in warm climates, especially if planted near water.</p> <ul style="list-style-type: none"> • If elephant ears invade natural waterways, the thick roots systems can clog shallow water. This prevents water flow and kills fish that live nearby. • The large leaves also can kill native species by blocking too much of the available sunlight. | <p>These species can be hard to eradicate with herbicides. Repeated applications of a 2% solution of glyphosate on the surfaces of the leaves may be effective.</p> <p>If these plants are growing along the shore of a body of water, be VERY careful about Herbicide application.</p> <p>Do NOT use herbicides if the water body has fish or drains into drinking water supplies.</p> | <p>Care should be take when removing elephant ears by hand, as all species are poisonous and can irritate skin.</p> <p>Wear gloves, long sleeves, long pants, and close-toed shoes when working with these plants.</p> <ul style="list-style-type: none"> • <i>Alocasia</i> species are highly toxic. Do not ingest or get in your eyes. <p>Mechanical: In addition to herbicide application, you can dig out the plants. Dig down 2-3 feet to make sure you are getting all the tubers out.</p> <p>Cut and Treat: Apply glyphosate to the young leaves on any new shoots that grow from roots.</p> |
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