

# PREVENTING HARMS FROM INVASIVE PLANTS

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## WHY IT MATTERS

The Virginia Department of Conservation and Recreation (DCR) lists 90 invasive plants that “pose a threat to Virginia’s forests, native grasslands, wetlands or waterways.”<sup>1</sup> Across Virginia, invasive plants are growing in number, spreading quickly, and radically altering our natural environments. Trees like Callery (Bradford) pear proliferate throughout our forests and farmlands, creating dense monocultures that prevent the growth of native species and ruin crops. Native shrubs that are critical for migratory birds and wildlife are being replaced by non-native invasive shrubs like Autumn olive and Chinese privet. Japanese stiltgrass and Wavy-leaf grass form dense mats on the forest floor, preventing our native trees from regenerating. Among the most dire threats are vines like English Ivy, Asiatic Bittersweet, Mile-a-Minute, Kudzu, and Porcelain-berry that smother mature trees and tear down the forest canopy. These plants move slowly enough to not be noticed by laypeople, but fast enough that in another generation we will lose large amounts of tree cover and the integrity of our local ecosystems.

The changes go beyond the trees, shrubs, and ground covers. Native plants are the foundation of our local ecosystems. Our native wildlife and pollinators are interdependent with native plants and generally are unable to utilize the non-native invaders. Approximately 20-45% of our native bees are entirely dependent on a single native plant species or genus for their nectar; if their food source is eliminated by invasive plants, they will become extinct, and the plant will not be able to reproduce.<sup>2</sup> Other impacts include documented changes in soil chemistry, increased run-off and erosion, and warmer stream temperatures as streamside forest canopies disappear. The result will be a degradation to our natural heritage, loss of ecological stability and resilience, and a decline in all the lifeforms that currently thrive in our native environments.

## CURRENT LANDSCAPE

Virginia has made recent policy progress on invasive species and in 2024 has initiated partial funding of the Virginia Invasive Species Management Plan (VISMP). The VISMP needs sufficient, sustained financial and technical support to achieve its goals.

Recently enacted policies in Virginia include: prohibiting state agencies from planting, selling, or propagating invasive plants; requiring tradespersons involved with proposing or installing plants to provide written notification to property owners for all plants proposed for installation that are included on the list of invasive plants; and allowing localities to permit the supervised use of herbicides by volunteers on public lands. These are important policies but their scope only allows them to make incremental progress, whereas measurable reductions to the harms caused to our state’s economy, environment, or human and animal health are needed statewide.

Current research in deploying drone technology is proving promising. A 2023 study found that the cost of detecting and controlling invasive pines using drones “was reduced

to approximately one-third compared with traditional methods [and the] time needed to detect and control invasive trees was more than seven times less compared with traditional active search and control.”<sup>3</sup>

Efforts to eradicate invasives have engaged thousands of landowners and volunteers across the Commonwealth. For example, in Fairfax County, the Invasive Management Area program had 5,847 volunteers in 2023, a 17% growth over the prior period.

Education and awareness are increasing; however, approximately 40 invasive plant species are still available for sale in Virginia. Per the Virginia Invasive Species Working Group, the impact of all invasive flora and fauna on the Commonwealth’s economy is estimated to be more than \$1 billion per year.<sup>4</sup>

## OPPORTUNITIES

### EDUCATING CONSUMERS

Citizens have demonstrated they do not want to unwittingly purchase invasive plants.<sup>5</sup> Requiring that all vendors who wish to continue selling invasive plants label their inventory as such will assist consumers in making educated decisions.

### DETERMINING SCOPE

Solving problems requires comprehensive, accurate data to ensure the interventions will be timely and sufficient. Virginians need a current study to fully understand the impact of invasive plants on our environment, economy, and health; and adequately determine the most cost-effective reduction measures.

### SUPPORTING LANDOWNERS

More than 80% of land in Virginia is privately owned.<sup>6</sup> Treating invasive plants is time-consuming, labor-intensive, and expensive work. Property owners have demonstrated that they are willing to put in time and materials but need assistance to remediate and remove invasive plants that have encroached on their land and help protect neighboring public lands such as our state forests and local parks. A pilot cost-share program, similar to the **Virginia Conservation Assistance Program (VCAP)**, could help Virginia residents pay for the removal of invasive plants.

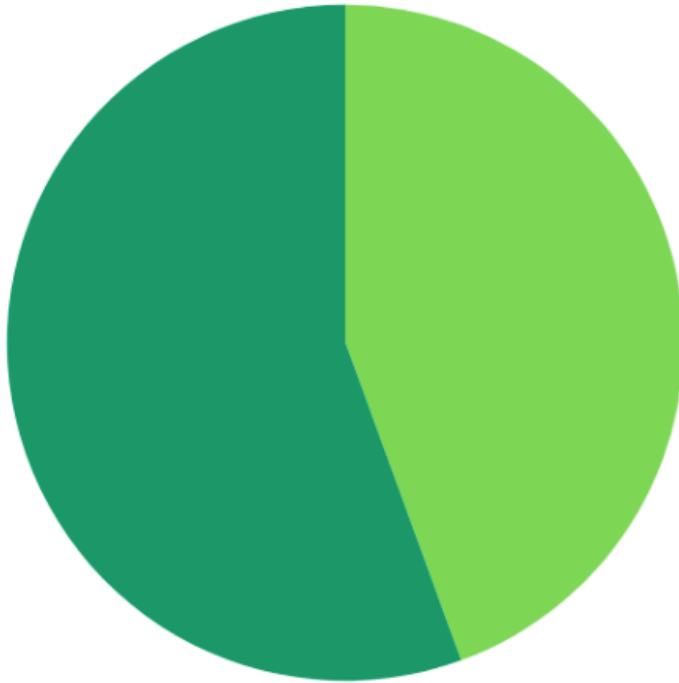
### INTRODUCING TECHNOLOGY

Drones are currently being deployed to reduce the impact of invasive plants in agricultural fields. Invasives in remote areas are particularly challenging. Using drones would allow agencies and volunteers to reach less accessible locations. UVA is designing a study to show that specific plants can be both mapped and treated with drones over a wide area. This project will need state funding.

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## INVASIVE PLANTS IN COMMERCE



### ■ Sold in Nurseries

40 of the 90 invasive plants listed on the Virginia DCR Invasive Plant Species List are still sold in nurseries or available online across the state.

### ■ Non-commercial

50 invasive plants listed on the Virginia DCR Invasive Plant Species List were imported unintentionally or have been removed from the trade.

## TOP TAKEAWAYS

DCR lists 90 invasive plants that “pose a threat to Virginia’s forests, native grasslands, wetlands or waterways” and approximately 40 of these invasive plant species are still available for sale in Virginia.

Virginians have demonstrated they do not want to unwittingly purchase invasive plants and are struggling to manage and control the explosion of harmful invasive plants on their properties.

Labeling plants, cost-share programs for landowners, and drone technology are all policy solutions that have been shown to reduce invasive plants.

## ENDNOTES

1. “Invasive Plants Species List,” Virginia Department of Conservation and Recreation, <https://www.dcr.virginia.gov/natural-heritage/invspdflist>.
2. “Native Bees,” Master Gardener, (June 12, 2024). <https://extension.psu.edu/programs/master-gardener/counties/monroe/news/native-bees?>
3. Rafael Barbizan Sühs, Silvia R Ziller, and Michele Dechoum, “Is the Use of Drones Cost-Effective and Efficient in Detecting Invasive Alien Trees? A Case Study from a Subtropical Coastal Ecosystem.” *Biological Invasions*, (November 2023), <https://doi.org/10.1007/s10530-023-03190-5>.
4. “About Invasive Species in Virginia.” Virginia Invasive Species, (Accessed June 12, 2024). <https://www.invasivespeciesva.org/about>.
5. “Sign the Petition.” Change.org. <https://www.change.org/p/stop-home-depot-from-selling-invasive-plants>.
6. “Featured Map: Land Ownership Types across the U.S.,” Texas A&M NRI, <https://nri.tamu.edu/blog/2021/september/featured-map-land-ownership-types-across-the-us/>.
7. Rafael Barbizan Sühs, Silvia R Ziller, and Michele Dechoum, “Is the Use of Drones Cost-Effective and Efficient in Detecting Invasive Alien Trees? A Case Study from a Subtropical Coastal Ecosystem.” *Biological Invasions*, (November 2023), <https://doi.org/10.1007/s10530-023-03190-5>.