

Invasive Exotic Plants

Give Them A Niche, And They Take A Mile

The Problem: People have been moving plants around the Earth's continents for centuries. Plants have long been valued for their use as food, shelter, medicine and ornament, and have been widely introduced to new areas intentionally so that we may take advantage of the many benefits they offer. Additional plant species have made their way to new places accidentally in the ballast of ships, on machinery, and through various other avenues of transport.

In most cases, **exotic plants** are not a threat to **natural communities** and do not interfere with our use and enjoyment of natural resources. Most introduced plant species have remained an asset in our yards, gardens, agricultural lands and developed areas.

Among the many thousands of species that have been intentionally or accidentally introduced, however, some have an aggressive growth habit that has resulted in their spread throughout natural communities. Once established, these **invasive exotic plants** can significantly disrupt habitats. The exotics often lack the predators that keep them in check in their own native regions.

As a result, the plants can run rampant, out-competing **native plants** for space, sunlight, and nutrients. Native plants help keep an ecosystem healthy and stable and are generally more beneficial to wildlife populations.

Infestations of exotic plants can also interfere with navigation, recreation, power generation, water supplies, production on agricultural and range lands, and create public health and safety hazards. The direct monetary costs of trying to control some of these plant pests and alleviate their negative effects on human activities and the environment are enormous, running into hundreds of millions of dollars annually in the United States.

A Solution: The Vermont Invasive Exotic Plant Fact Sheet Series was developed by the Vermont Agency of Natural Resources and The Nature Conservancy of Vermont to increase awareness of existing and potential invasive exotic plant problems in Vermont, and to promote cooperative efforts to address these problems. Many individuals outside the Agency contributed to their development. The series represents a list of 32 state quarantined species.

In April 2002, the Vermont Department of Agriculture, Food & Markets adopted a plant quarantine rule to regulate the importation, movement, sale, possession, cultivation, and/or distribution of certain invasive plants. The Noxious Weed Quarantine Rule creates two quarantine categories. Class A species are not yet known to occur in Vermont and are all species on the federal noxious weed list. The movement, importation, sale, possession, cultivation, and/or distribution of Class A plants is prohibited. Class B species occur in Vermont and pose a serious threat to the state. The rule prohibits the movement, sale, and/or distribution of Class B species.

Addressing the problem of invasive exotic plants in Vermont will not be quick or easy, but it is not impossible. This effort requires cooperative work on three fronts:

GLOSSARY of TERMS

Exotic Plant: A plant species which has been purposefully or accidentally introduced outside its original geographic range.

Natural Communities: Assemblages of plants and animals that are found recurring across the landscape under similar environmental conditions where natural processes, rather than human disturbances, prevail.

Invasive Exotic Plant: An exotic plant species which is able to proliferate and aggressively alter or displace native biological communities.

Native Plant: A plant species that can be shown to have been present in the region for at least 100 years and for which there is no evidence that it is an exotic plant.

1. *Prevention of New Introductions*

Status - Invasive exotic plants that have not yet been introduced into an area

Objective - Prevent introduction

Rationale - The most successful and cost-effective solution *prevents* invasive exotic plants from getting a foot-hold in the first place

Action - Raise public awareness, practice spread prevention techniques, enforce the Quarantine Rule

2. *Eradication of New Infestations*

Status - Invasive exotic plants that have been recently introduced and the population is not yet well-established or widespread

Objective - Eradicate infestation or prevent further spread

Rationale - Attacking an infestation while its density and range are limited offers the best prospect for elimination or containment of the species, saving both money and natural resources

Actions - Train volunteers to identify invasive exotic plants, educate about Vermont's Quarantine Rule, conduct monitoring programs for early detection, have a quick response plan in place

3. *Management of Established Populations*

Status - Invasive exotic plants that are already well established and widespread

Objective - Manage the infestation

Rationale - Minimize negative effects on ecosystems and biological diversity, maximize human use and enjoyment of the infested area

Actions - Investigate long-term, site-specific control options, implement control and restoration strategies*, evaluate programs to identify areas for improvement

*Control efforts can vary from the use of mechanical, chemical, or biological means, to employing habitat manipulation strategies. Fighting invasive exotic plants presents special challenges, since it is necessary to ensure that the control measures themselves do not inadvertently cause further harm to sensitive species or ecosystems, or to people.

Many control activities, particularly those conducted in lakes and ponds, require a permit from the Vermont Agency of Natural Resources (802-241-3777). The use of herbicides may also require a special license from the Vermont Department of Agriculture, Food and Markets (802-828-2431). Always check with the appropriate state and local authorities before conducting any control program.