

You may hear a number of terms used when discussing the topic of invasive plants. Here are a few definitions to help keep them straight.

Native or Indigenous - Any plant that was growing when European settlers arrived. Plants are always native to a particular location - a region of the world, a country, a region of a country, a state, a portion of a state, or even a particular habitat within an area.

Non-native, Exotic, Alien, Introduced, Non-indigenous - All refer to the same thing, a plant that is not native to the ecosystem.

Aggressive - Any plant that grows and spreads rapidly, crowding out other plants. Can be native or non-native. Most invasive plants are aggressive but not all aggressive plants are invasive. May provide benefits in certain circumstances where other plants won't grow. For more information see the brochure on [Aggressive Plants](#).

Invasive - A non-native plant that grows aggressively and replaces native vegetation, causing environmental or economic harm. Degrees of invasiveness are not all equal - some spread faster and take over more thoroughly than others. Some may only be invasive in certain areas or under certain conditions (climate, soil, disturbed areas, moisture, etc).

Potentially invasive - Not yet a problem but may become one in the future. May currently be a problem in other regions of the country with similar conditions.

Weed - Any plant that is growing where it is not wanted. One person's weed may be another person's treasure. Many native plants are considered "weeds". Often aggressive (this is what makes them undesired).

Species of Concern - Informal term, has been used to refer to either declining or endangered natives or to potentially invasive species.

There are two legal definitions you should be familiar with. These lists are subject to change - new species are added as needed.

Illinois Noxious Weed Law - This applies to plants that may harm crops, livestock, property, or public health. They can be native or non-native and should be controlled and eradicated.

Plants currently on the list are marijuana, musk and Canada thistles, kudzu, perennial sowthistle, perennial sorghums, and ragweed (common and giant - only considered noxious within urban areas), As you can see, most of these are unlikely to be grown as ornamental plants.

Illinois Exotic Weed Act - This applies to non-native plants that naturalize and degrade natural habitats or threaten native species. Currently on the list are non-native buckthorns (6 species), Japanese and exotic bush honeysuckle, exotic olives (such as Russian and autumn), multiflora rose, purple loosestrife, salt cedar, poison hemlock, oriental bittersweet, lesser celandine, giant hogweed, teasel, kudzu, and several knotweeds. While many of these have been or are currently grown as ornamentals, it is illegal to sell, distribute, or plant these without a permit. While removal of existing plants is not required, if you have any of these you might consider replacing them with a native or non-invasive plant.

Local and federal laws may also apply. There are many other plants that are invasive or potentially so, but these are some of the biggest threats.

There are a number of invasive aquatic plants that affect bodies of water of all sizes. There are also exotic insects and diseases that can affect native plants and ecosystems. Dutch elm disease, emerald ash borer, and Japanese beetle are just a few examples. In this brochure we will confine our discussion to terrestrial invasive plants.

How Did Invasive Plants Get Here?

All non-native plants, including invasive ones, arrive through human intervention, either accidental or intentional.

Settlers brought familiar plants with them when they moved to new unfamiliar locations. Botanists often accompanied explorers, bringing home exotic plants to study and plant in gardens and parks. Even today new species may be imported by growers or brought home by travelers.

Some plants were introduced as agricultural crops or for livestock grazing. Others were planted in natural areas for erosion control or to provide food and habitat for wildlife.

Many arrived accidentally through various forms of transportation. Seeds and other plant parts find many ways to hitch a ride - on the hulls of ships or in ballast or containers, as contaminants in feed or seed, in wood products or palettes, or in luggage or on the clothes of travelers.

What Makes a Non-Native Plant Invasive?

It all depends on how the plant responds to its new environment. Plants naturally aggressive in their native habitat may be especially aggressive when introduced elsewhere. However, there's no way to predict which plant will be a problem and which won't. Some may remain well-behaved for years before "suddenly" causing problems. You never know what will happen if a plant is taken out of its native environment, a reason to be cautious in the future.

A few factors that contribute to invasiveness include:

- Competitive advantages - A non-native plant may have no environmental controls or natural enemies such as diseases, insects, and other animals to help keep it in check.
- Rapid reproduction - Prolific seed or berry production, aggressive rhizomes and dense root systems.
- Fast growth rate.
- Longer growing season - Some non-natives grow and leaf out earlier in spring and hold their leaves longer in fall than native plants. Early spring growth can shade or crowd out natives before they can get started.
- Adaptability - Able to grow in a wide variety of habitats and growing conditions.
- Allelopathic plants produce chemicals that may inhibit the growth of nearby plants.

How Do Invasives Spread to Other Areas?

In addition to the factors mentioned in the previous section that help invasives spread within an area, seeds and other plant parts can travel long distances and become established in new locations.

Seeds can be carried by wind, water, and animals (either as sticky seeds attached to the fur or body, or eaten and carried through the digestive tract). Humans can carry seeds attached to shoes or clothing. Seeds can be spread by agricultural or mowing machinery, by trucks and cars, by trans-

portation of forage crops, or as dried plants used in crafts. Again we see transportation as a method of dispersal - often invasives show up first along roadways.

People may say "It doesn't spread in my yard, so how can it be a problem?" As discussed above, seeds can be carried for many miles. Also, gardeners perform maintenance - weeding, dead-heading, mulching, using pre-emergent herbicides, etc. - and may not even realize they're controlling an invasive plant.

Why Are Invasive Plants a Problem?

Invasive plants outcompete and crowd out native plants, especially rare, endangered, or fragile species. They reduce diversity and may create a monoculture. They destroy plants that native pollinators and other animals depend on for survival. In addition to physically crowding out native species, exotics may hybridize with them, diluting the gene pool.

They may also degrade wildlife habitat and water quality, reduce the quality of agricultural land, increase soil erosion, and reduce recreational opportunities. Much money is spent each year trying to control invasive plants. And, on a less pragmatic but no less important note, natural heritage and history are lost for future generations.

Many invasive plants do attract pollinators, but native plants also provide nectar for a wide variety of native pollinators, without damage to native habitat.

What Can We Do?

- Don't plant invasive species. Consider removing ones you already have and replacing with native or non-invasive varieties. (Alternatives are suggested later in this brochure.) Research before you buy - there are often both invasive and non-invasive or native species available. Be aware that some plants sold as sterile hybrids may revert or cross with native species.
- Prevent invasives from reproducing. Remove and dispose of seedheads before they mature.
- If you live in a rural area, plant and maintain desirable native plants in natural areas. A healthy ecosystem is more resistant to invasion. Try to minimize soil disturbance - invasive plants may spread faster in disturbed areas.

- Learn to recognize invasive plants, especially if you live near or spend time in natural areas. Invasive plants may be more of a problem in woodland areas where there is less ongoing maintenance. Monitor areas - it's always easier and less costly if invasive plants are caught early. Volunteer to help organizations working to control invasive species.
- Don't drive through infested areas. Remove seeds from clothing and pets after walking. Use care when mowing or using other machinery to avoid spreading seeds.
- Spread the word - let others know why invasive plants are a problem and what they can do to help.
- Control any invasive plants on your property.

Controlling Invasive Plants

Control depends on the degree of invasiveness - some may not be a problem if managed wisely while others should be attacked aggressively. Prioritize your efforts - time and money are limited. Concentrate first on species with the greatest potential for harm and work from least to most infested areas. Eliminate seed producers first. Be careful not to carry seed with you to new areas. Total eradication may not be possible - think in terms of reduction to acceptable levels (this requires ongoing effort).

The optimal time for control will vary with the species and the method used. Different techniques (or combination of techniques) work best in different situations. Techniques used include manual or mechanical (pulling, cutting), chemical (herbicides), and biological (grazing, microbial diseases). Especially in a prairie situation, fire can sometimes help control invasive plants. Many natives are better adapted to survive (and actually thrive with) fire than most exotic species. Whatever method you use, always follow up and continue monitoring "cleared" sites.

Detailed information on specific control methods is beyond the scope of this brochure. More information about invasive plants can be found at the [USDA](#), [Illinois DNR](#), [Midwest Invasive Plant Network](#), and many other sources.

Other Invasives & Alternatives

Other invasive or potentially invasive trees, shrubs, and vines include:

Norway & Amur maple	Black locust
Siberian elm	Tree of heaven
Callery (Bradford) pear	White mulberry
Burning bush	Japanese yew
Japanese barberry	Privet
Wintercreeper	English ivy

There are many attractive alternatives to try, although they may not have all of the desirable characteristics of the invasive plant. Here is just a sampling:

Red maple	Oaks
Hornbeams	Yellowwood
Fringe tree	Dogwood
Serviceberry	Chokeberry
Blueberry	Viburnums
Sumacs	Winterberry
Ninebark	Spicebush
Fothergilla	Virginia creeper

Invasive herbaceous ornamental plants:

Dame's rocket	Oxeye daisy
Queen Anne's lace	Bishop's weed
Some ornamental grasses	Knapweed

Some of these are sometimes included in less expensive wildflower mixes.

For native alternatives see the brochure [Using Native Plants in the Garden](#). A few include:

Butterfly weed	Coneflower
Joe Pye weed	Baptisia
Liatris (blazing star)	Cardinal flower

Non-ornamental herbaceous invasive or potentially invasive plants include garlic mustard, bromes, sweet clover, foxtail, mullein, lespedeza, Japanese stilt grass, and crown vetch.

This is a vast and complicated subject. We've tried to give an introduction (and hopefully not confused readers too much). We encourage you to seek out more information and do whatever you can to help control invasive plants.

For more information on gardening please visit:

<http://web.extension.illinois.edu/state/horticulture/index.php>

or

call University of Illinois Extension
Knox County Office
309-342-5108

Other information brochures can be found online at <http://web.extension.illinois.edu/hknw/hort.html>

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The Problem of Invasive Plants



Garden Tips
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