

# Invasive Plants

*Frequently Asked Questions  
for Long Island's Horticulture Professionals*



Yellow Flag Iris



Japanese Honeysuckle



Purple Loosestrife



**Cornell University**  
Cooperative Extension  
of Suffolk County

## **Cornell Cooperative Extension of Suffolk County**

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2009



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Cornell Cooperative Extension is funded in part by Suffolk County through the office of Steve Levy, County Executive, and the County Legislature.*

### **1. What is an invasive species?**

An invasive species is legally defined as an organism that is not native to the ecosystem under consideration AND whose introduction causes or is likely to cause harm to the environment, economy, and/or human health.

### **2. Where do invasive plants come from?**

Most invasive plants were intentionally brought into a specific area for their ornamental value or ability to be used for food, fiber, or habitat restoration. Unfortunately, no one recognized the negative impact the species would have on the environment, economy, or human health until after the species was established.

Some invasive plants have been accidentally introduced through such means as ship-ballast, soil, or various imported plant materials and crop seeds.

### **3. What makes a plant invasive?**

Non-native species are able to become invasive due to the fact that they did not evolve with the local flora and fauna. Because a non-native plant did not evolve with the local species, it may have few or no predators or pests in its new location. It also may have developed superior ways to acquire essential resources such as water or sunlight compared to the local species, which makes it a better competitor.

The following characteristics allow a plant to adapt quickly to a new environment, thrive, and spread. Most invasive plants possess one or more of these characteristics:

- Abundant reproduction
- Rapid growth rate
- Short generation time
- Ability to occupy many different habitats
- Ability to adapt to changing environments
- Effective seed dispersal
- Long-lived seeds
- Poisonous or allergenic to other organisms



Burning Bush

It should be noted that only a very small percentage of all the non-native species in the United States are actually invasive. However, this small percentage is able to cause an incredible amount of damage to native ecosystems.

### **4. How do invasive plants cause harm to the environment?**

Invasive plants harm the environment by invading natural ecosystems and displacing the native flora. This in turn affects wildlife and other species which may be dependent upon the local flora for food or habitat. By replacing the native plants, invasive species disrupt natural ecosystem processes such as hydrology, nutrient cycling, wildfire regime, natural succession, and soil conservation. This leads to ecological instability and decreased biodiversity.

The introduction and spread of invasive species has been determined to be the second leading cause of global biodiversity loss. (Habitat loss is the number one leading cause.) About 42% of species listed on the U.S. Threatened or Endangered Species Lists are considered to be at risk primarily due to competition or predation from invasive species (Pimentel et al. 2005)<sup>1</sup>.

Furthermore, many invasive plants require the use of herbicides for control measures to be effective. This may increase risk to non-target organisms.

### **5. How do invasive plants cause economic loss?**

Invasive plants negatively impact the economy by increasing associated losses and damages and by requiring control costs. For example, invasive plants can directly reduce crop yield, be toxic to cattle, replace valuable forage plants, and increase the need for herbicide applications and other control measures. Aquatic invasive plants can also impact fish stocks, choke waterways, and reduce the recreational uses of rivers and lakes.

The annual cost to the US economy for invasive weeds is estimated to be \$27 billion in crop systems, \$6 billion in pastures and rangeland, \$1 billion in golf courses, and \$500 million in residential yards and gardens (Pimentel et al. 2005). The losses, damages, and control costs of trees and shrubs further increase the total cost of invasive plant species.

<sup>1</sup> Pimentel, D., R. Zuniga, and D. Morrison. 2005. Update on the environmental and economic costs associated with alien-invasive species in the United States. *Ecological Economics* 52: 273 – 288.

## 6. What is being done about invasive plants on Long Island?

Representatives from federal, state, and county agencies and private organizations across Long Island have come together and recognized the problem of invasive species. In 2007, both Nassau and Suffolk Counties passed legislation that prohibited the sale, transport, distribution, and propagation of dozens of invasive species. This list of invasive species has been termed the "Do Not Sell" List. Two years later, on January 1<sup>st</sup>, 2009, it became illegal to conduct the above-mentioned activities for the invasive species listed in Table 1 in both Nassau and Suffolk Counties.

The Nassau and Suffolk Counties' invasive plant legislation is similar to legislation passed in other localities such as the State of Connecticut and the Commonwealth of Massachusetts. Connecticut began banning the sale, transport, distribution, and propagation of select invasive plants May 2004. Massachusetts began banning the importation of select invasive plants January 1<sup>st</sup>, 2006.

## 7. What about invasive plants currently not on the Do Not Sell List?

Beginning in 2008, a Scientific Review Committee spearheaded by the Brooklyn Botanic Garden and the Nature Conservancy began evaluating just how invasive, invasive plants are on Long Island. In total, the Review Committee assessed over 140 species of plants, from waterweeds, to vines, to trees and shrubs, for their invasiveness potential on Long Island. Based upon the Review Committee's scientific results, future additions to the Do Not Sell List have been approved and are listed in Table 2. Ban dates range from January 1st, 2011 to January 1st, 2016. The purpose of these phase-out periods is to allow nurseries to unload existing inventory.

In addition to the Do Not Sell List, a "Management" List of plants was also created. It is *recommended* that the invasive species listed in Table 3 are not bought or planted, especially by Nassau or Suffolk County agencies and for homes near natural habitats. It is recommended that plants on the Management List be removed or monitored if already present. Most of the plants on the Management List have also been reviewed by the Scientific Review Committee. Other members of the Review Committee include representatives from the Long Island Farm Bureau, Long Island Nursery & Landscape Association, and Cornell Cooperative Extension of Suffolk County.

## 8. What can I do about invasive plants?

Educate yourself and your clients on how to identify invasive plants. Start with your own nursery or landscape and make sure to not sell or plant species that are on the Do Not Sell and Management Lists. Consider growing or planting species native to Long Island or the Northeast. Native plants seem to be gaining in popularity and this may be a growing niche market that you can capitalize on. However, be sure to remember that there are also many non-native, NON-invasive ornamental plants that also make great selections. If you are planting in a tough location, you will have more choices in your plant palette if you use both natives and non-invasive, non-natives.

On clients' landscapes, you can use various methods to control invasive plants that have already established there. Some invasives are successfully controlled using chemical means and others are successfully controlled using mechanical or manual means such as hand-pulling. You might want to think about using a combination of different methods. (Standard pesticide regulations apply when using herbicides.) Be sure to dispose of invasive plants properly.

### For more information:

#### Cornell Cooperative Extension of Suffolk County

[www.ccesuffolk.org](http://www.ccesuffolk.org)

#### New York Invasive Species Clearinghouse

[www.nyis.info](http://www.nyis.info)

#### New York Flora Atlas

[www.newyork.plantatlas.usf.edu](http://www.newyork.plantatlas.usf.edu)

#### Invasive Plants of the Eastern United States

[www.invasive.org/eastern/](http://www.invasive.org/eastern/)

#### The Global Invasive Species Database

[www.issg.org/database/welcome/](http://www.issg.org/database/welcome/)

#### Brooklyn Botanic Garden

1000 Washington Avenue  
Brooklyn, NY 11225  
718-623-7200 [www.bbg.org](http://www.bbg.org)

#### Amended Nassau County Local Law 22-2009:

[www.nassaucountyny.gov/agencies/Legis/local.html](http://www.nassaucountyny.gov/agencies/Legis/local.html)

#### Original Suffolk County Local Law 22-2007:

Chapter 278A Article 2  
<http://legis.suffolkcountyny.gov/main.html>

Burrell, C. 2007. **Native Alternatives to Invasive Plants**. Brooklyn Botanic Garden, Inc: Brooklyn, NY. 240 pp.

Randall, J. and J. Marinelli. 1996. **Invasive Plants: Weeds of the Global Garden**. Brooklyn Botanic Garden Publications, Handbook #149 in the 21<sup>st</sup> Century Gardening Series. Science Press, a division of the Mack Printing Group.



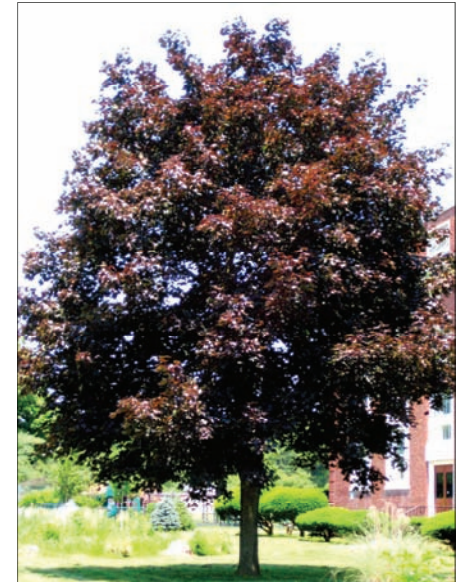
## Table 1: Do Not Sell List

(Ban began Jan. 1<sup>st</sup> 2009)

<i>Alliaria petiolata</i>	Garlic mustard	<i>Phalaris arundinacea</i>	Reed canary-grass
<i>Ampelopsis brevipedunculata</i>	Porcelain-berry	<i>Phragmites australis</i> subsp. <i>australis</i>	Common reed grass
<i>Anthriscus sylvestris</i>	Wild chervil	<i>Potamogeton crispus</i>	Curly pondweed
<i>Aralia elata</i>	Japanese angelica tree	<i>Pueraria montana</i> var. <i>lobata</i>	Kudzu
<i>Artemisia vulgaris</i>	Mugwort, Common wormwood	<i>Ranunculus ficaria</i>	Lesser celandine
<i>Cabomba caroliniana</i>	Carolina fanwort, Cabomba	<i>Rhamnus cathartica</i>	Common buckthorn
<i>Cardamine impatiens</i>	Narrowleaf bittercress	<i>Rosa multiflora</i>	Multiflora rose
<i>Celastrus orbiculatus</i>	Oriental bittersweet	<i>Rubus phoenicolasius</i>	Wineberry
<i>Centaurea stoebe</i> subsp. <i>micranthos</i>	Spotted knapweed, Spotted star-thistle	<i>Senecio jacobaea</i>	Tansy ragwort
<i>Cirsium arvense</i>	Canada thistle	<i>Silphium perfoliatum</i> var. <i>perfoliatum</i>	Cup-plant
<i>Cynanchum louiseae</i>	Black swallow-wort	<i>Trapa natans</i>	Water chestnut
<i>Cynanchum rossicum</i>	European or Pale swallow-wort	<i>Vitex rotundifolia</i>	Beach vitex, Roundleaf chastetree
<i>Egeria densa</i>	Brazilian water weed		
<i>Elaeagnus umbellata</i>	Autumn-olive		
<i>Euphorbia cyparissias</i>	Cypress spurge		
<i>Euphorbia esula</i>	Leafy spurge		
<i>Fallopia japonica</i>	Japanese knotweed		
<i>Froelichia gracilis</i>	Cottonweed		
<i>Heracleum mantegazzianum</i>	Giant hogweed		
<i>Humulus japonicus</i>	Japanese hops		
<i>Hydrilla verticillata</i>	Hydrilla, Water tyme		
<i>Hydrocharis morsus-ranae</i>	Frogbit		
<i>Lepidium latifolium</i>	Broadleaf pepperweed		
<i>Lespedeza cuneata</i>	Chinese lespedeza		
<i>Ligustrum obtusifolium</i>	Border privet		
<i>Ludwigia grandiflora</i>	Uruguayan primrose-willow		
<i>Ludwigia peploides</i>	Floating primrose-willow		
<i>Lythrum salicaria</i>	Purple loosestrife		
<i>Microstegium vimineum</i>	Japanese stilt grass		
<i>Myriophyllum aquaticum</i>	Parrot feather, Brazilian water-milfoil		
<i>Myriophyllum spicatum</i>	Eurasian water-milfoil		
<i>Nymphoides peltata</i>	Yellow floating heart		
<i>Persicaria perfoliata</i>	Mile-a-minute weed		

### The Do Not Sell List

The Do Not Sell List consists of over 60 of the worst invasive plants! Species on the Do Not Sell List are “very highly invasive” or “highly invasive” according to the independent Scientific Review Committee. It is illegal to sell, transport, distribute, or propagate species on the Do Not Sell List in both Nassau and Suffolk Counties. Many of the plants on the following page are still of horticultural value will be added to the Do Not Sell List in coming years.



'Crimson King' Norway Maple

**Table 2: Additions to the Do Not Sell List**

		<b>Ban date</b>
<i>Clematis terniflora</i>	Japanese virgin's bower, Sweetautumn clematis	1/1/2011
<i>Lonicera x bella</i>	Bell's honeysuckle	1/1/2011
<i>Lonicera japonica</i>	Japanese honeysuckle	1/1/2011
<i>Lonicera maackii</i>	Amur honeysuckle	1/1/2011
<i>Lonicera morrowii</i>	Morrow's honeysuckle	1/1/2011
<i>Lonicera tatarica</i>	Tatarian honeysuckle	1/1/2011
<i>Lysimachia nummularia</i>	Moneywort, Creeping jenny	1/1/2011
<i>Lysimachia vulgaris</i>	Garden loosestrife	1/1/2011
<i>Myriophyllum heterophyllum</i>	Broadleaf water-milfoil	1/1/2011
<i>Iris pseudacorus</i>	Yellow flag iris	1/1/2012
<i>Acer platanoides</i> (except 'Crimson King' + 'Royal Red')	Norway maple	1/1/2013
<i>Acer pseudoplatanus</i>	Sycamore maple	1/1/2013
<i>Euonymus fortunei</i>	Wintercreeper euonymus	1/1/2013
<i>Phellodendron amurense/ japonicum</i>	Amur corktree	1/1/2013
<i>Rhamnus frangula</i>	Smooth buckthorn	1/1/2013
<i>Robinia pseudoacacia</i>	Black locust	1/1/2013
<i>Salix atrocinerea/ cinerea</i>	Gray florist's willow	1/1/2013
<i>Berberis thunbergii</i>	Japanese barberry	1/1/2014
<i>Acer platanoides</i> 'Crimson King' + 'Royal Red'	Crimson King + Royal Red Norway maple	1/1/2016
<i>Euonymus alatus</i>	Winged euonymus, Burn- ing bush	1/1/2016

**The Management List**

The Management List on the following page consists of over 70 invasive plants. Although not as highly invasive as plants on the Do Not Sell List, it is *recommended* that these plants are not planted on Long Island, especially by county agencies or for homes near natural habitats. Species on the Management List are "moderately invasive" according to the independent Scientific Review Committee.



English Ivy



Callery Pear



Japanese Wisteria

**Table 3: Management List**

(NOT illegal status)

<i>Acer ginnala</i>	Amur maple	<i>Kochia scoparia</i>	Mexican summer-cypress
<i>Aegopodium podagraria</i>	Goutweed	<i>Ligustrum ovalifolium</i>	California privet
<i>Agrostis stolonifera</i>	Creeping bentgrass	<i>Ligustrum vulgare</i>	European privet
<i>Ailanthus altissima</i>	Tree-of-heaven	<i>Lobelia chinensis</i>	Chinese lobelia
<i>Aira caryophylllea</i>	Silver hairgrass	<i>Lychnis flos-cuculi</i>	Ragged robin
<i>Akebia quinata</i>	Chocolate vine	<i>Miscanthus sinensis</i>	Japanese silver grass
<i>Allium vineale</i>	Field garlic	<i>Morus alba</i>	White mulberry
<i>Alnus glutinosa</i>	European or Black alder	<i>Najas minor</i>	Eutrophic water-nymph
<i>Amorpha fruticosa</i>	False indigo	<i>Nasturtium officinale</i>	Watercress
<i>Bambusa, Dendrocalamus, Phyllostachys, etc.</i>	Bamboo (several genera, many species)	<i>Nelumbo nucifera</i>	Sacred lotus
<i>Berberis vulgaris</i>	Common or European barberry	<i>Onopordum acanthium</i>	Scotch cotton-thistle
<i>Bromus tectorum</i>	Cheat grass, Drooping brome	<i>Ornithogalum umbellatum</i>	Star-of-Bethlehem
<i>Butomus umbellatus</i>	Flowering rush	<i>Paulownia tomentosa</i>	Princess tree
<i>Carex kobomugi</i>	Japanese sedge, Asiatic sand sedge	<i>Persicaria longiseta</i>	Creeping smartweed
<i>Cercidiphyllum japonicum</i>	Katsuratree	<i>Pinellia ternata</i>	Crowdipper, Green dragon
<i>Cirsium palustre</i>	Marsh thistle	<i>Pinus thunbergii</i>	Japanese black pine
<i>Coronilla varia</i>	Crown vetch	<i>Poa compressa</i>	Canada blue-grass
<i>Datura stramonium</i>	Jimsonweed, Common thorn-apple	<i>Poa pratensis</i>	Kentucky bluegrass
<i>Elaeagnus angustifolia</i>	Russian-olive	<i>Populus alba</i>	White poplar
<i>Elsholtzia ciliata</i>	Crested elsholtzia	<i>Pyrus calleryana</i>	Callery pear
<i>Epilobium hirsutum</i>	Hairy willow herb, Codlins and cream	<i>Ranunculus repens</i>	Creeping buttercup
<i>Eragrostis curvula</i>	Weeping love grass	<i>Rhodotypos scandens</i>	Jetbead
<i>Euphorbia lathyris</i>	Caper spurge	<i>Rosa rugosa</i>	Japanese or Rugosa rose
<i>Fallopia baldschuanica</i>	Silver lace or fleece vine	<i>Rubus laciniatus</i>	Evergreen blackberry
<i>Festuca filiformis</i>	Hair fescue, Fineleaf sheep fescue	<i>Rumex acetosella</i>	Sheep sorrel, Sourgrass
<i>Galega officinalis</i>	Professor weed, Goat's rue	<i>Schedonorus arundinaceus</i>	Tall or Kentucky fescue
<i>Geranium nepalense</i>	Nepalese crane's-bill	<i>Spiraea japonica</i>	Japanese spirea
<i>Glaucium flavum</i>	Sea poppy, Yellow horned poppy	<i>Stratiotes aloides</i>	Water soldiers
<i>Glechoma hederacea</i>	Ground-ivy	<i>Styrax japonicus</i>	Japanese snowbell
<i>Glyceria maxima</i>	Tall glyceria, English watergrass, Reed manna grass	<i>Tanacetum vulgare</i>	Common tansy
<i>Hedera helix</i>	English ivy	<i>Tribulus terrestris</i>	Puncture vine
<i>Hesperis matronalis</i>	Dame's rocket	<i>Tussilago farfara</i>	Coltsfoot
<i>Imperata cylindrica</i>	Cogon grass	<i>Valeriana officinalis</i>	Common valerian
<i>Ipomea hederacea</i>	Morning glory	<i>Verbena bonariensis</i>	Purpletop verbain
		<i>Veronica beccabunga</i>	European speedwell
		<i>Viburnum opulus var. opulus</i>	European cranberry bush
		<i>Vinca minor</i>	Periwinkle
		<i>Wisteria sinensis/ floribunda</i>	Chinese and Japanese wisteria