



## Invasive Plants

# Best Management Practices for Homeowners

Updated April 2022

Non-native, invasive plants can be managed by the homeowner without the use of herbicides, but it requires persistence.

Three organic methods recommended include:

1. Extirpation (weeding): Pulling out plants including the root mass, is the most direct method of removal, but care needs to be taken with the plant material to ensure it does not spread to other locations. After the invasive plants are removed you must thoroughly dry roots and other plant parts away from contact with the ground to prevent re-rooting. Plant material killed through desiccation can be composted or disposed of with other brush. Check with your municipality for directions on disposal of invasive plant material if you do not want to compost it.
2. Starvation: Successive cutting of the above ground part of the plants during the growing season will prevent photosynthesis, and deplete the plant's carbohydrate stores in the roots as they try to resprout. This works well when you cannot successfully remove all of the roots. Girdling trees/shrubs by removing the bark and cambium in a circle all the way around the tree will kill these plants. Cutting woody vines above the root system will kill these, but let them die before attempting to remove from trees or structures, to prevent damage to the remaining tree or structure. Do this prior to the vine setting fruit.
3. Solarization: This method involves covering a low-growing invasive plant with clear plastic sheeting. The temperature under the plastic rises high enough to “cook” the plants. This technique can also kill beneficial microorganisms in the soil; after the plastic is removed, the area may benefit from applications of compost or compost tea.

After invasive plants are removed from any of these methods:

It is important to fill the void with mulch or a cover crop so that seeds brought to the surface during the removal process will be less likely to sprout, and also to replant with native species as soon as possible to prevent re-colonization by invasive plants.

It is also a good idea to apply compost or compost tea to the soil after invasives have been removed. Research shows that the majority of invasive plants produce allelopathic compounds. These compounds can directly inhibit neighboring native plants or indirectly suppress native plants by disrupting beneficial belowground microbial mutualisms, or alter soil chemistry/resources. Compost can reintroduce these microbial communities to the soil. About **80%** of land plants species rely on mycorrhizal relationships with fungi to provide them with inorganic compounds and trace elements, so healthy and diverse soil communities are essential for plants survive.

## Some Common Invasive Plants in Massachusetts



Black Swallowwort (*Cynanchum louiseae*) and pale swallowwort (*Cynanchum rossicum*)

- Dig out roots at any time during the growing season for several years, being careful to capture all pieces to prevent resprouting from root fragments.
- Cut or mow in summer to prevent seed production; monitor resprouting and cut again (starvation method).
- Smother the area of infestation.



Garlic Mustard (*Alliaria petiolata*)

- This is a biennial plant that makes seeds in the second year of its life.
- Hand pull plants to get entire root system or cut to ground before or during blooming in the spring to prevent seed production.
- You can pull rosettes (the first-year growth) in the fall.



Japanese honeysuckle (*Lonicera japonica*)

- Hand pull or uproot small infestations in spring through early summer.
- Mow low to ground at least twice annually.



Japanese knotweed (*Fallopia japonica*)

- Hand pull or uproot young plants in spring.
- Cut stalks repeatedly throughout the growing season, being careful not to scatter plant fragments that will resprout.
- For additional recommendations see <https://www.agriculture.nh.gov/publications-forms/documents/japanese-knotweed-bmps.pdf>



Multiflora rose (*Rosa multiflora*)

- Plants can be pulled in spring. Use a weed wrench on large plants. Some resprout will probably occur.
- Repeated cutting 3-6 times a growing season for several years can be effective.



Purple loosestrife (*Lythrum salicaria*)

- Hand dig when there are only a few plants (less than 10). Do this before seeds appear.
- *Galerucella* beetles eat leaf and roots and can be used on large stands. These beetles can be purchased as biological controls.



Autumn-olive (*Elaeagnus umbellate*)

- Hand-pull or uproot young plants when there is enough moisture to ensure the full root is removed.
- Mowing, cutting, and burning are not recommended, as they promote vigorous regrowth.
- Produces prolific fruits each season, and plants will continue to sprout from seed carried in from nearby properties.



Oriental/Asian bittersweet (*Celastrus orbiculatus*)

- Hand-pull small plants in spring, but must get entire root and runners, as even small fragments can resprout.
- For large plants, cut close to root collar every few weeks.



Burning-bush/ Winged euonymus (*Euonymus alatus*)

- Hand-pull smaller plants or weed wrench larger plants at any time when ground is soft, especially if soil is moist; be sure to remove the entire root system.
- Cut stumps back in fall or winter, then wrap with thick plastic; check and cut back any new growth.



Norway maple (*Acer platanoides*)

- Hand pull plants and seedlings any time of year, especially when the soil is wet; be sure to remove the entire root system. For larger plants, use a weed wrench.
- Cut stumps back in fall or winter, then wrap with thick plastic; check and cut back any new growth



Glossy buckthorn (*Frangula alnus*) and European buckthorn (*Rhamnus cathartica*)

- Seedlings and small plants can be pulled in early spring and summer, especially when the soil is wet; be sure to remove the entire root system. For larger plants, use a weed wrench.
- Cut plants back at any time of year, then wrap with thick plastic; check and cut back any new growth.
- Annual spring burning for 5 or 6 years will kill most seeds and older stems.



Japanese barberry (*Berberis thunbergii*)

- Hand pull plants and seedlings any time of year, especially when the soil is wet; be sure to remove the entire root system. For larger plants, use a weed wrench.
- Cut stumps back in fall or winter, then wrap with thick plastic; check and cut back any new growth.



Bush honeysuckles (*Lonicera maackii*, *L. morrowii*, *L. tatarica*, *L. xbella*) and other shrubby honeysuckles

- Hand pull plants and seedlings any time of year, especially when the soil is wet; be sure to remove the entire root system. For larger plants, use a weed wrench.
- Cut stumps back in fall or winter, then wrap with thick plastic; check and cut back any new growth.



English Ivy (*Hedera helix*)

- Hand pull plants, removing all of the roots and stems of the plants as they easily re-root.
- Repeated pulling will be necessary over two years to eradicate.
- Dry on a tarp all plant material until dead, prior to disposal. Prevent plant material from blowing away while dying as re-rooting is possible from any plant part.
- To remove from trees or structures, cut the main vine from the ground, allow to die in the tree or on the structure, then remove once the plant has dried out.

Drawn in part from Native Plant Trust "Common Invasive Species and How to Manage Them."