



Remove and Destroy Protocol for Nursery Growers

These protocols are designed to help nursery growers determine the optimal way to remove and destroy infested or infected plant material when ordered as a result of a nursery inspection. A nursery grower is someone who grows, splits or propagates nursery stock which can overwinter in Wisconsin. Outlined below are common categories of infested or infected plant material and the specific protocols to follow under a remove and destroy order. Scout stock regularly and practice proper sanitation to prevent further spread.

Virus: Because **any** virus infecting plant material warrants a remove and destroy order, virus-infected nursery stock must be removed from sale and destroyed. Below are several common examples of viruses found in a nursery setting:

- Tobacco Rattle Virus
- Rose Mosaic Virus
- Impatiens Necrotic Spot Virus
- Hosta Virus X
- Iris Potyvirus
- Cucumber Mosaic Virus

To destroy infected material double-bag the plants and soil in garbage bags and dispose of according to local regulations. Dispose of contaminated containers, or sanitize remaining containers in a 10% bleach solution if you plan to reuse them. Infected material may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles. You may also return the infected stock to your supplier.

Insects: Certain insects warrant a remove and destroy order. Most of the time infested material may be pulled off the sale floor or quarantined, and then treated until the pest infestation is mitigated. There are certain cases, such as borer insect damage, where the infested plant material must be removed and destroyed. Below are several examples:

- Bronze Birch Borer
- Locust Borer
- Linden Borer
- Nematodes (e.g. Foliar Nematodes, Stem and Bulb Nematode, etc.)
- Quarantine Pests (e.g. Hemlock Woolly Adelgid, Spongy Moth, Box Tree Moth, etc.)
- Viburnum Borer
- Iris Borer
- Viburnum Leaf Beetle

To destroy infested material double-bag the plants and soil in garbage bags and dispose of according to local regulations. Dispose of contaminated containers, or sanitize the remaining containers in a 10% bleach solution if you plan to reuse them. Infested material may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles.

Diseases: Certain diseases warrant a remove and destroy order. In some cases, infected plants may be removed from sale, isolated and treated until the infection has been eliminated. However, there are various diseases that require immediate removal and destruction. Examples are listed below:

- Black Knot (trunk canker)
- Crown Gall
- Vascular Diseases (e.g. Verticillium Wilt)
- **Boxwood Blight****
- **Sudden Oak Death (*Phytophthora ramorum*)****
- Fireblight (trunk infection)
- Oak Wilt
- Chrysanthemum White Rust
- Quarantine Diseases (e.g. Sudden Oak Death, Thousand Cankers Disease of Walnut, etc.)

To destroy infected material double-bag the plants and soil in garbage bags and dispose of according to local regulations. Dispose of contaminated containers, or sanitize the remaining containers in a 10% bleach solution if you plan to reuse them. Infected material may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles.

****Removal and Destruction for these very infectious diseases of regulatory concern require additional precautions as directed by your inspector.**

NR-40: The NR 40 invasive species rule makes it illegal to possess, transport, transfer, or introduce certain invasive species in Wisconsin without a permit. If you have NR-40 plants for sale, you must remove them from sale, or return them to your supplier. Some species may also require destruction. A full list can be seen here: <http://dnr.wi.gov/topic/Invasives/>. Some common examples are listed below:

- Forget-me-not (*Myosotis sylvatica*)
- Parrot Feather (*Myriophyllum aquaticum*)
- Tartarian Honeysuckle (*Lonicera tatarica*)
- Blue Lyme Grass (*Leymus arenarius*)
- Chinese wisteria (*Wisteria sinensis*)
- Oriental Bittersweet (*Celastrus orbiculatus*)
- Moneywort (*Lysimachia nummularia*), *except yellow forms*
- Japanese barberry (*Berberis thunbergii*) + 25 cultivars

To destroy NR-40 plant species double-bag the plants and soil in garbage bags, label them "Invasive Plants", and throw in the trash. Dispose of contaminated containers, or sanitize the remaining containers in a 10% bleach solution if you plan to reuse them. Invasive species may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles. You may also return the regulated stock to your supplier.



Remove and Destroy Protocol for Nursery Dealers

These protocols are designed to help nursery dealers determine the optimal way to remove and destroy infested or infected plant material when ordered as a result of a nursery inspection. A nursery dealer is someone who buys nursery stock from a wholesaler or distributor and re-sells the nursery stock as-is. Outlined below are common categories of infested or infected plant material and the specific protocols to follow under a remove and destroy order.

Virus: Because **any** virus infecting plant material warrants a remove and destroy order, virus-infected nursery stock must be removed from sale and destroyed. Below are several common examples of viruses found in a nursery setting:

- Tobacco Rattle Virus
- Rose Mosaic Virus
- Impatiens Necrotic Spot Virus
- Hosta Virus X
- Iris Potyvirus
- Cucumber Mosaic Virus

To destroy infected material double-bag the plants and soil in garbage bags and dispose of according to local regulations. Dispose of contaminated containers, or sanitize remaining containers in a 10% bleach solution if you plan to reuse them. Infected material may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles. You may also return the infected stock to your supplier.

Insects: Certain insects warrant a remove and destroy order. Most of the time infested material may be pulled off the sale floor or quarantined, and then treated until the pest infestation is mitigated. There are certain cases, such as borer insect damage, where the infested plant material must be removed and destroyed. Below are several examples:

- Bronze Birch Borer & other trunk borers
- Viburnum Leaf Beetle
- Nematodes (e.g. Foliar Nematodes, Stem and Bulb Nematode, etc.)
- Quarantine Pests (e.g. Hemlock Woolly Adelgid, Spongy Moth, Box Tree Moth, etc.)
- Viburnum Borer
- Scale insects*

To destroy infested material double-bag the plants and soil in garbage bags and dispose of according to local regulations. Dispose of contaminated containers, or sanitize the remaining containers in a 10% bleach solution if you plan to reuse them. Infested material may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles.

**An infestation of scale insects requires a remove and destroy order in a nursery dealer setting and not a grower setting because the infestation would require a significant amount of time to remediate, and the plants wouldn't likely be overwintered. Talk to your inspector if you believe you can hold and treat the stock.*

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- Black Knot (trunk canker)
- Crown Gall
- Vascular Diseases (e.g. Verticillium Wilt)
- **Boxwood Blight****
- **Sudden Oak Death (*Phytophthora ramorum*)****
- Fireblight (trunk infection)
- Oak Wilt
- Chrysanthemum White Rust
- Quarantine Diseases (e.g. Sudden Oak Death, Thousand Cankers Disease of Walnut, etc.)

To destroy infected material double-bag the plants and soil in garbage bags and dispose of according to local regulations. Dispose of contaminated containers, or sanitize the remaining containers in a 10% bleach solution if you plan to reuse them. Infected material may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles.

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- Japanese barberry (*Berberis thunbergii*) + 25 cultivars

To destroy NR-40 plant species double-bag the plants and soil in garbage bags, label them "Invasive Plants", and throw in the trash. Dispose of contaminated containers, or sanitize the remaining containers in a 10% bleach solution if you plan to reuse them. Invasive species may also be burned, or buried to at least 3 ft. Do **NOT** compost material or put in cull piles. You may also return the regulated stock to your supplier.