

PLANT SALE GUIDELINES TO MINIMIZE THE CHANCE OF JUMPING WORM SPREAD

Dr. Ann Hazelrigg, University of Vermont Extension; Dr. Josef Gorres, University of Vermont Department of Plant and Soil Science; and Robilee Smith, Extension Master Gardener

Disclaimer: These guidelines will only minimize the chance of spread. Jumping worm cocoons are very small (2 to 4 mm, approximately 1/12 to 1/6 inches) and are often undetected in soil or compost.

INTRODUCTION

A new and destructive group of earthworms has been invading Vermont and surrounding areas – these include *Amyntas agrestis*, *Amyntas tokioensis* and *Metaphire hilgendorfi*. The *Amyntas agrestis* are commonly known as “snake worms”, “jumping worms” or “jumper worms”.

They are 70 to 160 mm long (about 3 to 6 inches, even as long as 8 inches) and 5 to 8 mm wide (around 1/5 to 1/3 inches). Because they live near the soil surface, the worms have more pigment on their dorsal (top) side than other worms, usually reddish but can often appear somewhat brownish or purplish with some iridescence. The mature worm has a mostly white but sometimes pinkish ring (clitellum) around the body. When touched or disturbed, the worm flails or jumps.

There are no pesticides currently labelled for nor other viable control methods to manage these invasive pests yet. However, we can all work to limit the spread of these worms, including through the transport of plants or soils that may occur during plant sales. Therefore, the following guidelines have been provided for Extension Master Gardener and other community projects considering plant sales.

MINIMIZING THE SPREAD OF JUMPING WORMS THROUGH PLANT SALES

Thoroughly inspect all nursery species before digging plants -- look for the presence of worms themselves or signs thereof, such as their characteristic castings, described as gravel-like or like loose coffee grounds.

- Do NOT bring any plants from known infested gardens or landscapes to the sale.
- Consider selling cuttings in water or bare root plants to minimize chance of introduction. For most ornamentals, root washing is easy. Prepare two buckets of water. Swish the roots through the first bucket, gently massaging off the soil attached to the roots. Inspect to see whether more soil needs to be removed, then swish around in second bucket to remove the last bits of soil. Check the roots for small hatchling worms and/or cocoons which are usually very spherical and dark to light brown in color.



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- Check all potted plants before transporting to the sale by removing them from the pot to look for active worms or castings.
- Do NOT use any compost or potting media/soil for potting plants that has not been solarized. You can solarize soils placing a low pile (between 6 to 8 inches deep, 10 to 15 feet long and 4 to 8 feet wide) on top of a clear piece of plastic like a painter's drop cloth, then cover it with a sheet of the same material, tucking in the edges to prevent worms from escaping. Leave in the sun for 2 to 3 days to get the temperature over 150 °F which will kill both cocoons and worms. Check the temperature with a thermometer if you have one. Pre-bagged compost or soils can be left in bags to solarize as above.
- To surface sterilize pots and flats, first clean them to remove soil and plant matter. Then, soak in a 10% chlorine bleach solution for 30 minutes. Replenish solution every 2 hours for sterilizing multiple pots/flats.
- Since the worms live near the soil surface, egg cocoons can also be transported in gardening equipment and boot treads, so you should brush off boots or shoes and wash gardening tools if you have been in an area that might be affected by these worms.

It is a good idea to collect and destroy jumping worms when you see them. You can seal them in a plastic bag and solarize them by leaving them in the sun or you can put them in a bucket of soapy water. You can then dispose them in the trash (and it is safe to put dead worms into the compost). By reducing the adult population, it should reduce the number of egg-carrying cocoons in the soil.

RESOURCES

The following resources provide additional information on jumping worm identification and management.

Vermont Invasives Site for Jumping Worms: <https://vtinvasives.org/invasive/jumping-worms>

Invasive Worms, UVM Entomology Research Laboratory:
<https://www.uvm.edu/~entlab/Forest%20IPM/Worms/InvasiveWorms.html>

Underground Invaders: Impacts and Implications of Non-native Earthworms in North America:
<http://www.nyisri.org/2016/09/underground-invaders-impacts-implications-non-native-earthworms-north-america/>

Invasive Species for Homeowners: Asian Jumping Worm, Cornell University:
<http://ccetompkins.org/resources/jumping-worm-fact-sheet>