

Contact Information

Wax Worm Suppliers

Best Bet Inc.
bestbetinc@aol.com
218 659-4202

Speedy Worm
<http://speedyworm.com>
sales@speedyworm.com
320 762-8247

Grubco
<http://grubco.com>
800 222-3563

For More Information

Visit our website:
www.alfalfasnoutbeetle.org or contact your
local Cornell Cooperative Extension Office.

Contact Shields Lab directly:

**Tony Testa, 607-591-1493,
at28@cornell.edu**

**We would to thank the following
agencies for their continued support
in Northern N.Y.**



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REARING MY OWN NEMATODES

Why rear your own nematodes?



The purpose of rearing your own nematodes is to reduce the cost of nematode application and address a pest issue on your farm. By rearing your own nematodes you are developing a system that works best for your schedule.

Time Frame Checklist:

- Location: Find location to store cups with inoculated nematode cups. Location should be dark and at a temperature of 65 to 75 F.
- Harvest Date: Determine Harvest Date
- Order Wax Worms: 17 to 21 days before harvest
- Order starter cups of Nematodes: 17 to 21 days before harvest
- Arrival Wax Worms and Starter Cups: 1-3 days before harvest
- Inoculate Field Cups: 24-48 hours after arrival
- Check Field Cups 90-100% dead wax worms: 3 days after inoculation
- Emergence of injective juvenile nematodes: 12-14 days after inoculation
- Nematodes Applied to Fields: 3-7 days after emergence



SC nematodes that have killed the wax worms.

SF nematodes that have killed the wax worms.

HB nematodes that have killed the wax worms.

Which nematodes will I be able to rear?

A combination of two different nematodes is recommended to rear but need to be reared separately.

- *Steinernema carpocapsae* (SC): SC can be found on the first two inches of the soil and remain in that location.
- *S. feltiae* (SF): SF is like SC and stays in one location however below the top two inches.
- *Heterorhabditis bacteriophora* (HB): HB tends to wander and hunts out its prey.

Rearing Nematode Supplies

- Wax worms cups order from bait supplier (Grubco or Best Bet)
- Nematode Starter Cups: From Shields Lab
- Non-chlorinated water
- Coffee Scoop-Apx. 1 oz. in size
- Mesh screen and dishpan to rinse cups/collect nematodes



Wax Worm Cups



Starter Cups



Rearing Nematodes

1. A single species starter cup labeled Sc, Sf, or Hb will arrive from the Shields Lab containing enough nematodes to inoculate apx. 100 cups. Nematodes will be emerging from larvae cadavers and will appear as a yellow-film on edges of the cups and lid.
2. Wax worm cups from the bait supplier should be ordered to arrive within a day of receiving the starter cups. They will contain live larvae which will be infected by the emerging nematodes.
3. To infect the wax worm cups, empty the contents from your designated starter cup into your mesh screen and gently flush using the non-chlorinated water all nematodes from the sawdust into dishpan until you have accumulated apx. 1 gal of water.
4. To inoculate cups, remove lids on wax worm cups and stir the nematode water solution gently to prevent nematode settling, then dip coffee scoop into nematode water solution. Each coffee scoop will contain apx. 1 oz. of nematodes (15,000/cup).
5. Pour contents of one coffee scoop over the live worm cups trying to moisten the entire surface of each cup.
6. Once nematodes have been dosed, replace lid on cups and label each cup with species of nematode and date of inoculation.



7. Clean mesh screen, dish pan, and coffee scoop with alcohol or Clorox and rinse thoroughly to avoid cross contamination.

8. Repeat steps 3-7 with the remaining starter cup (s) containing the different species of nematodes.

9. Store cups between 65 and 75F in a cool and dark location to incubate the nematodes.

10. After 7-days, add small amounts of moisture with a spray bottle, continuing checking moisture in cups until yellow-film develops.



Nematodes Emerging

Nematode Emerge

A yellow film (same as starter cup) should be seen in each of the inoculated field cups within 12-14 days. The SC cups may emerge more quickly than the other species cups. Application can begin within 1-3 days for best results, can be used up to 5 days after.

Nematode Results

After the nematodes are applied they will attack the designated pest. Over time the population of nematodes will continue to grow and they will move throughout the soil. This is not a biopesticide and will not work overnight.