

Instructions for MSU Wireworm Survey 2014

Store this kit in a cool dry spot until it is used

This kit contains supplies needed for burying 10 stocking traps, including:

- 10 stocking traps containing ½ cup wheat-barley mix
- 1 set of instructions
- 1 plastic bag to soak traps in
- 10 plastic bags for retrieved traps
- 1 vial of 95% ethyl alcohol (for wireworms retrieved from the stocking traps)
- 1 data sheet for cooperator to fill out and return to MSU

Traps can be deployed 10 – 14 days prior to planting (otherwise tillage will destroy the traps), or they can be deployed soon after planting. Pre-planting results can be used to determine whether seed treatment is warranted. Post-planting is useful for monitoring wireworm activity, but no rescue treatments are available once the crop is in. For each field being surveyed, place ten stocking traps in the soil at least 50 feet apart in areas where crop stands are thin or have had a history of wireworm damage. *If there is no past history of wireworm damage, place the stocking traps randomly throughout the field.*

Step 1: Field selection

Small grains, corn, alfalfa, potato, and pulse crops are commonly surveyed, but any field including fallow can be used. Preference can be given to fields that have been continuously cropped, since they are at higher risk. Preference can also be given to fields that are not treated with insecticides, though treated areas can be used.

Step 2: Soaking the stocking traps

The stocking traps must be soaked in plenty of water overnight (plastic bag provided) before deploying, to ensure quick germination.

Step 3: Burying the stocking traps (Figure 2, reverse)

Dig a hole in the soil about 3-5 inches deep. Place the stocking trap in the bottom of the hole and cover with soil, leaving string tail above ground to help locate trap later. Cover the place with the black plastic sheet using the staples. Flag the location.

Step 4: Collecting the stocking traps (Figure 3)

After 10 - 14 days retrieve the traps (NOTE: If they have not germinated due to cool soil temperatures consider leaving them in the ground for one more week). Carefully remove the stocking traps and several inches of the surrounding soil with a shovel and place the material in a plastic bag. A few wireworms may chew into the stocking or be caught in the mesh, but most will be in the surrounding soil. Take care not to leave samples in a hot vehicle.

Step 5: Sorting the stocking trap contents

*(***If you prefer to skip this step, bring the bagged samples and your data sheet to your county ag extension agent – PROMPTLY to prevent rotting - and we will sort them for you***)* Because the bulk samples are too large and heavy to mail, please sort the wireworms out by hand. Spread the soil onto a broad surface. Samples can be mixed. Break the soil apart, collect any wireworms (pictures on the back of this page), and put them in the vial of alcohol. You may find both wireworms and non-wireworms. If you're unsure of what you're seeing, just put everything in the vial.

Step 6: Complete the DATA SHEET, and be sure to include it with your sample. Leave vials and data sheet with your county ag extension agent, or mail to: Ruth O'Neill, 56 Marsh Lab, 1911 W. Lincoln Ave., Bozeman MT 59717

Questions? Contact:

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Identifying Wireworm (Figure 1, right):

The first step to scouting for wireworms is correctly identifying them. Wireworms are $\frac{1}{4}$ to $\frac{3}{4}$ of an inch in length. They are white, cream-colored, or copper-colored, and have 3 pairs of short legs behind the head. Most have hard wiry bodies, but a few of the smaller species are softer-bodied.



Where and When to Scout:

Wireworm scouting should start in fields that have a history of thin patchy stand development and excessive weed pressure. Begin sampling when soil temperature reaches a minimum of 45°F in the spring. Sampling should be completed prior

to planting if used to make decisions about applying insecticidal seed treatments. Alternatively, traps can be used during stand establishment to check whether wireworms are present, but there are no treatment options available once the crop is established.

Figure 2. Burying the stocking traps (step 3)



Figure 3. Collecting the stocking traps (step 4): Be sure to collect several inches of soil surrounding the stocking

