Corn Earworm (CEW) Trapping Instructions and Supply List

Pheromone traps are used to monitor for adult CEW moth migration from the southern US and when peak moth flight occurs. Sweet and field corn fields approaching fresh green silk stage are most attractive to the females depositing their eggs though other host crops including tomatoes, peppers, potatoes and others can also be attractive. CEW eggs are very difficult to see. In corn, they are laid directly on individual silks, making trap monitoring an important tool in knowing when they are present. This document only provides information on how to set up CEW traps. In crops like sweet corn where a spray threshold based on trap counts exist, please refer to your local extension sites for more information.

The **Trap Set Up Instructions** are below. **Trap Monitoring and Reporting Instructions** are on Page 2. Click on the following for a **CEW Trap Supply List and Trap Supply Companies.**

Trap Set Up Instructions

1. Use one Heliothis trap per field (Fig. 1a). Traps should be installed by **early June** and monitored at least weekly until early September. As peak flight approaches, plan to monitor the traps more frequently as the mesh buckets can fill up quickly and the moths can rub against each other losing their markings used to identify them.
2. Trap placement is very important. Each trap should be placed within grassy weeds along the field edge; avoid bare ground or along windbreaks or hedgerows.
3. Pound a 6-foot stake or metal T-bar into the ground and tie the Heliothis to the stake so that the trap bottom is no higher than 2 feet from the ground or 10 cm above the grassy weed canopy. Pull the anchor string away from the trap and anchor it to the ground to maintain the trap's conical shape.
4. Move the trap higher up the stake or T-bar as the vegetation grows taller or trim the vegetation under the trap to maintain the 10 cm of clearance above the grassy vegetation. Use a new pair of disposable gloves each time you handle a pheromone lure, especially when handling lures for the different strains, reducing the potential for cross contamination of the lures. Use a small binder clip or paper clip to attach the lure to the elastic band running across the opening of the bottom of the trap (Fig. 1b). **Change the lure every two weeks.**
5. When counting trap catches, carefully remove top mesh bucket from the Velcro ring and invert the cone to dump the contents into a Ziploc bag. If moths are still alive, place bag in a freezer for a few hours before counting them.

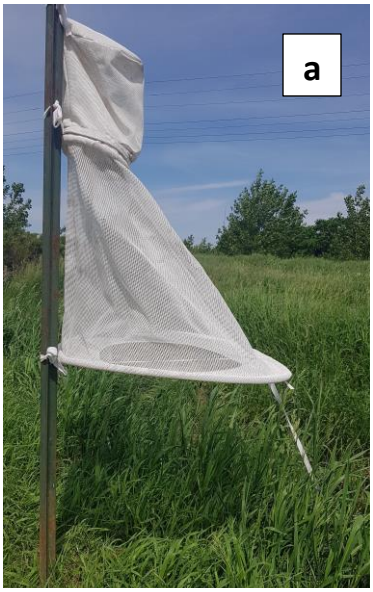

Figure 1. Heliothis trap with trap bottom having 10 cm clearance above grassy weeds and anchor pulling trap into cone (a). Lure is clipped onto elastic band at the trap opening (b).

Trap Monitoring and Reporting Instructions

1. Traps should be checked at least weekly. A trap week is considered Monday to Sunday.
2. Enter trap site details and weekly trap counts into the Great Lakes and Maritimes Pest Monitoring Network at: https://arcg.is/0aWqr0
3. For mapping purposes, we require traps to be checked no later than Tuesday of each week and trap count data need to be submitted to the network **no later than Wednesday mornings**. Trap counts entered are always for the previous week's moth catch.
4. As we approach peak flight, traps may need to be checked more than once a week so that moths are still easy to identify and have not lost all of their markings.
5. Change the CEW pheromone lures **every 2 weeks** so that the pheromone plume is strong enough to attract the moths to the trap. Discard the spent lure back at the office or at home.

CEW Moth Identification



Corn earworm moths are about the same size as western bean cutworm (32 - 45 mm). They are sand to tan brown in colour and have dark commas or "C"s on their forewings. If they have been in the trap for a while, they start to lose their markings. Go by their shape and sandy colour. Always best to check traps more than once a week so you can see them when they are fresh and get familiar with what they look like. Photo credits: T. Baute, OMAFRA