

# Pheromone Trap Instruction ~ Commercial Farms

## Setting up the Trap

For regional monitoring, we recommend the *Heliothis* Pheromone Trap (Figure One). Establish the trap about one month before planting.

## Trap Placement

Place the trap in the maize field or next to the field so that the scent of the pheromone is carried across the tops of the plants with the prevailing wind. Use a long pole (2-3 meters).

## Attach the pheromone

Use a paper clip or a thin piece of wire to pierce the rubber lure; attach the lure to the string across the bottom of the trap, centering the pheromones below the bottom hole. Change data sheets and replace the pheromone lure every three weeks. Store extra lures in the freezer.



**Figure One – Setting up the trap**



**Figure Two – Moth Trap**

## Check the Passageway

Make sure that the pathway is open from the pheromone up into the funnel (moth-trap). Make sure that leaves and tassels do not block entrance to the pheromone trap.

## Check for Moths

Empty the pheromone trap every week. Detach the “moth-trap” from the body of the pheromone trap. Turn the moth-trap upside down (Figure Two).

Live moths will crawl up the sides into the “pinch space”. Pinch the thorax of the moth between your thumb and forefinger through the cloth. This freezes the wing muscles and allows you to empty the trap and count the moths.

## Adjust Trap Height Every Week

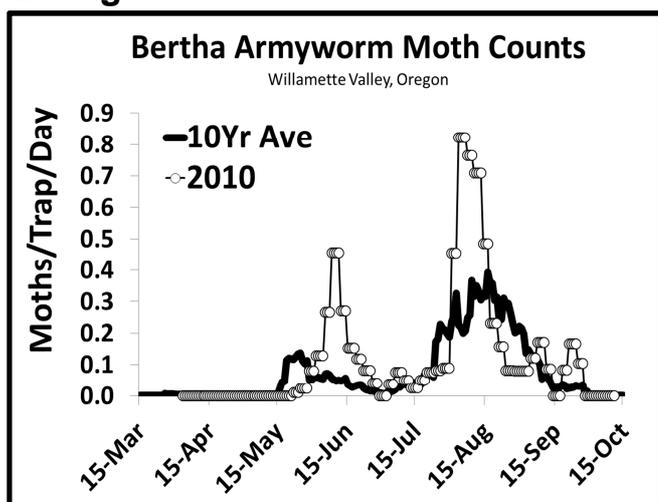
As the maize/corn plants grow tall, move the trap up the pole so that the bottom of the trap is always above the plants.

## Record the Data

- Today's Date, Date Last Checked, Days Since Last Check
- Maize Stage of Growth (See Handout)
- FAW moth counts, AAW moth counts

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## Background



Pheromone trap moth captures allow you to identify armyworm species and to determine whether you have an African (leaf eater) or Fall (whorl and ear/cob eater) armyworm infestation, or both. Pheromone trap moth-counts can be misleading. Across species, armyworm moth counts tend to remain low even during an outbreak (Figure Three – *Mamestra congrata*, Figure Four – *Spodoptera frugiperda*).

Pheromone trap moth captures tell you very little about egg-laying intensity. To determine egg-laying intensity, you must scout the field.

**Figure Three – Moth Counts Remain Low Even During an Outbreak**

## Interpreting the Moth Counts

Never base your spray decisions on moth-counts alone. Moth captures should promote more intensive field scouting.

Pheromone trap moth captures indicate egg-laying. Fresh window panes indicate egg-hatch. The combination of pheromone traps plus field scouting allow early detection of FAW infestations.

Moth counts above 0.5 moths per trap per day, on average, indicate significant egg-laying. Scout your fields carefully.

## Five-Steps-Repeat

### Before you leave the office:

- Check regional moth counts
- Check weather forecast

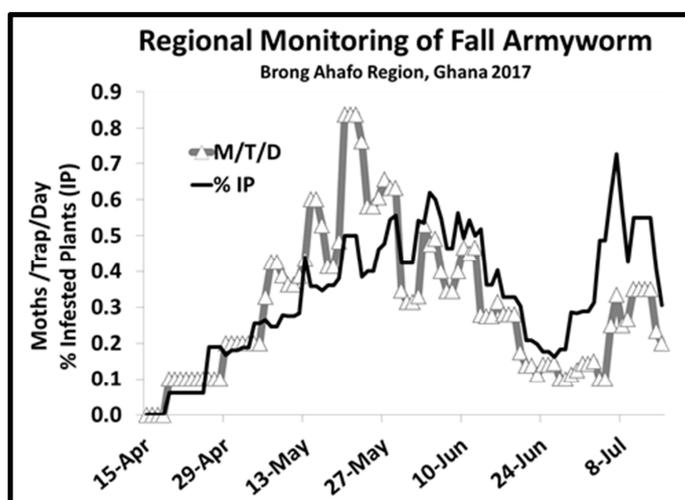
### Arrive at the field:

- Check pheromone trap
- Scout the field
- Check the field margins

✓ **Yes-Spray Decision:** Come back in 7-10 days. Repeat the five steps.

✓ **No-Spray Decision:** Come back in 4-7 days. Repeat the five steps.

If regional and local moth counts are low, rain is forecast, and you find very little evidence of FAW infestation in the maize planting, you may choose to make a “double-safe” **no-spray** decision. (No worms. No egg-laying.) Before you do so, check the field margins. Come back a few days later. Check your work.



**Figure Four – Moth Counts versus Percent Infested Plants**