

Pheromone Traps, Monitoring Supplies, and Pest Alerts

One way insects communicate with individuals of the same species is with pheromones. Pheromones are volatile chemicals released by an organism that usually can be detected only by individuals of the same species. There are a number of different types of pheromones that insect pests use, but the most common type is the sex pheromone. Usually the females will emit a tiny amount of a chemical that attracts the male to her and increases the likelihood of mating. Because the chemical is volatile, air currents carry it. The male detects the pheromone in the air with receptors on his antennae. He then flies upwind to find the source of the pheromone, a prospective mate. The chemical compositions of pheromones for a number of pest species have been identified and can be synthesized in the laboratory. These synthetic pheromones can be used in conjunction with traps to catch male insects. Pests that are often monitored using pheromone baited traps include corn earworm, European corn borer, squash vine borer, and many more.

To get the most from your pheromone traps, they must be used properly:

- Place the traps and the pheromones out before you would normally expect the adult insect to be active. That way you can be sure to catch the first adult flight and get an early warning that adults are present in your field, laying eggs that will soon hatch into larvae that cause crop damage. For example, corn earworm pheromone traps should go out about June 1 in MA. (*See below for more information on monitoring for pests of sweet corn*)
- Be careful how you store pheromones. Ideally, they should be frozen until ready for use. At the very least, they should be refrigerated. If you keep them on the dashboard of your truck, they won't work well when you place them in the trap.
- When handling pheromone lures, do not touch them with your hands. Use a pair of forceps or wear latex gloves. This is especially important when you are using pheromones for more than one pest. Contamination of a lure with another pheromone will likely reduce the effectiveness.
- Lures usually should be changed every 3-4 weeks, although this will vary for individual lures.
- Check traps regularly, at least weekly. Daily would be better.

There are two types of traps commonly used:

Scentry Heliiothis net traps can be used to monitor European corn borer, corn earworm, and squash vine borer. You will need two traps for monitoring European corn borer, as there are two strains of ECB common in New England—the Iowa (ECB I or ZI) and New York (ECB II or EII) strains—and you will need one trap for each strain, placed in a grassy location near the corn 50 ft. apart. You will need two traps for corn earworm, placed in sweet corn blocks that are in fresh silk. With two traps, you can leapfrog into freshly silking corn each week. For monitoring squash vine borer in cucurbits you will need one trap placed directly above plant canopy.

Universal Moth Trap is used for monitoring fall armyworm (one trap) among many other insects.

Pheromone lures are specific to the insect pest being trapped:

Trécé lures for European corn borer (Iowa strain =ZI, New York strain=EII)

Scentry lure for fall armyworm (type: two-component PSU lure)

Hercon lure tape for corn earworm

Hercon vapor tape for Universal Moth Trap

Scentry lure for squash vine borer



Here are some, but certainly not all, of the suppliers of pheromones and traps:

Alpha Scents, Inc.; 1089 Willamette Falls Dr, West Linn, OR 97068; 503-342-8611;

www.alphascents.com

Gempler's; P. O. Box 270, 100 Countryside Dr, Belleville, WI 53508; 800-382-8473;

www.gemplers.com

Great Lakes IPM; 10220 Church Rd, NE; Vestaburg, MI 48891; 517-268-5693;

www.greatlakesipm.com

Insects Limited Inc.; 16950 Westfield Park Rd, Westfield, IN 46074-9374; 317-896-9300;

www.insectslimited.com

Pacific Biocontrol Corporation; 620 E. Bird Lane, Litchfield Park, AZ 85340; 800-999-8805;

www.pacificbiocontrol.com

Scentry Biologicals Inc.; 610 Central Ave, Billings, MT 59102; 800-735-5323; www.scentry.com

Trece Incorporated; P. O. Box 129, Adair, OK 74330; 866-785-1313; www.trece.com

Other Monitoring Supplies:

While some pests are best monitored with pheromone traps, others can be easily monitored in the field with nothing more than a pencil, clipboard, scouting form, and 10x magnifying loupe, or handlens. A handlens is a great tool helpful in identifying small pests such as thrips and aphids or even identifying the fruiting bodies of some fungal pathogens. They are pretty inexpensive and can be purchased from one of the suppliers above. [Scouting forms](#) for Allium, Brassica, Cucurbit, Eggplant, Pepper, Potato, Strawberry, Sweet Corn and Tomato are available online on the UMass Vegetable Program website, [here](#). Using these scouting forms will enable you to get an accurate count of pest population size and/or damage, and can help you decide whether or not a pest has reached a critical level and control measures should be taken.



Yellow sticky traps (bright yellow plastic sheets coated on 2 sides with a specially formulated sticky glue) are used for monitoring many flying insects and can also be purchased from one of the suppliers above. We use 3"X5" cards to monitor flight of cabbage and onion maggot flies during early May.

Sign Up for Pest Alerts!

If you grow fruit, flowers, or vegetables on your farm, sign up for timely updates about pests and other issues through these notices from our partners in the UMass Extension Fruit and Greenhouse & Floriculture Teams.

[IPM Berry Blast](#)

For more information, contact: Sonia Schloemann, (413) 545-4347, sgs@umext.umass.edu

[Healthy Fruit](#)

For more information, contact: Jon Clements, (413)-478-7219, jon.clements@umass.edu

[New England Greenhouse Update](#)

For more information, contact: Tina Smith, (413) 545-5306, tsmith@umext.umass.edu

[UMass Fruit & Vegetable IPM Facebook Page](#)

One stop shopping for pest alerts and important updates for fruit AND vegetable crops!