

Blacklight Trapping to Monitor European Corn Borer & Hornworm Moths

Parts of a blacklight trap:

1. top section: main trap body (where light bulb held)
rain shunt (fits into underside of top part)
2. bottom section: metal bucket
metal basket (fits inside bottom of bucket)
funnel section (fits inside top of bucket)
3. three legs

Supplies needed:

1. blacklight bulb
2. fumigant strip (a.i. = DDVP) on wire hanger, plus replacement strips
3. Jar to dump caught insects into, or, if samples to be mailed:
 - 3a. cardboard mailing tubes with address labels attached
 - 3b. date labels (pad of paper with one date written per page)
 - 3c. box of Kleenex (to loosely fill up tube)
 - 3d. scale (to weigh mailing tube)
 - 3e. postage stamps (for one ounce and for additional ounces)
 - 3f. reclosable plastic sandwich bags (for small batches with more than one per tube)

Directions to set up trap:

1. ideal location: by a west-facing light-colored wall
2. attach legs
3. put rain shunt in place underneath the main trap body
4. make sure that there are no cobwebs blocking entry into trap
5. unwrap fumigant strip, place in wire basket inside bucket
6. place funnel at top of bucket, and attach bucket to main trap body
7. plug in to electrical outlet

Directions for maintenance:

1. to empty the trap:
 - remove bucket (unclamp)
 - lift out the funnel section from top of bucket
 - shake any insects caught in funnel section into the bucket
 - place funnel section on top of an open jar or mailing tube (to help guide insects into the tube)
 - temporarily remove fumigant strip from basket
 - pull out basket which will probably contain some moths
 - dump basket over funnel section so that moths fall into mailing tube
 - pick up main bucket section and dump it over funnel section so that moths fall into mailing tube.
 - reassemble trap: basket and fumigant strip in bottom, funnel section on top, re-clamp basket.
2. to prepare tube for mailing
 - if moths fill only part of the mailing tube, add piece or 2 of Kleenex to top of tube.
 - add date label(s) to tube. If you are emptying the trap every day, then there will be only one date label per sample; for example, if you empty it on Thursday morning (5/17) then add the label that says "Thur 5/17". If emptying it less often, then add more date labels; for example, if you emptied the trap on Friday and not again until Monday, then add labels for Sat., Sun., and Mon. to the tube so that we can tell that there is 3-nights worth of moths in the tube.
 - screw lid on mailing tube
 - weigh tube on postage scale (typical range is 4 to 6 ounces per tube)
 - add appropriate postage (x ¢ for 1st ounce; y ¢ for each additional ounce).
3. empty the trap *5 days per week* (Monday through Friday) during most of the summer, when weather is hot. Empty trap *3 days per week* when weather is cool. During periods of cool weather, there may be only a few moths in the trap, which does not justify sending the mailing tube. In this case, put the moths in a sandwich bag with the date label inside the bag, put bag in freezer, and wait until the next catch to mail the tube. If there are three or four low catches in a row, then several bags can be sent in the same mailing tube.
4. replace fumigant strip when you notice that trapped insects are slow to die; about every 4 weeks.

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