

USE OF YELLOW STICKY TRAPS IN GREENHOUSES¹

During the past few years, there has been a great deal of "noise" concerning the use of yellow sticky traps to monitor and/or reduce populations of certain insect pests. Apparently this information has generated some confusion about the best way to use these traps in the greenhouse, what the traps will "trap", where to get them (or how to make them), etc. Well, at the risk of adding to the confusion, this is an attempt to summarize the current status of yellow trap use.

1. What will the traps catch?

Yellow traps will catch winged aphids, leafminer adults, thrips, white flies, fungus gnats, and shore flies (among others, but these are the main pests). Recognition of these pests may take some training and a hand lens for magnification, but it is very important to learn the general outlines and colors of the different pest groups.

2. Why should they be used?

The best reason to use yellow traps is to keep track of insect population trends (those mentioned above) in your greenhouse. The traps will not totally replace plant inspection, but they can be valuable additions to a pest scouting program. They will not only provide information on when to apply pesticides, they let you know how the control program is going.

3. How often should traps be checked?

In most cases, traps should be looked at weekly. Many growers/managers will collect old traps and make actual counts of insects for future reference. Traps can then be cleaned or replaced (see below). Some system of numbering should be used to keep records of trap locations.

4. Where should traps be placed?

Place traps at or just above plant height. This is where most of the "action" is in insect flight activity. We have found that fungus gnats, shore flies, thrips, and leafminers can also be trapped quite well just above the "soil". Be sure and place some traps near side vents, doors, and known susceptible plant varieties. In some California greenhouses, traps placed near top vents caught large numbers of flying western flower thrips adults. However, traps at lower levels also caught them at about the same number.

5. How many traps should be used?

There are a number of opinions on this, and much seems to depend upon the pest(s) of most concern. A minimum number is somewhere around 4 to 5/acre, but more are certainly useful (up to 40 to 50/acre).

6. What about trap size? Should traps be placed vertically or horizontally?

Within limits, trap size is not that important. It seems that smaller traps are more efficient, perhaps because there is more edge to surface area (i.e., there are greater numbers of insects trapped/square inch on smaller traps, compared with larger traps.) However, large traps are also effective. They can be square, rectangular, cylindrical, etc.

7. Is it best to purchase traps or make them "in house?"

Another difficult question. The answer depends on how much your time is worth. Traps can be made quite effectively out of almost anything that either is or can be painted bright yellow. Rustoleum comes in bright yellow, and works quite well. The sticky material can be as simple as a thin layer of cooking oil (Dr. Jim Price of the Gulf Coast Research Center, Florida, says this works very well.), other oils, a mixture of mineral oil and petroleum jelly, or commercially-prepared materials such as Sticky Stuff (Olson Products Inc., P O Box 1043, Medina, OH 44256). Some "trappers" have placed the sticky material on clear plastic wrap and covered the yellow surface with the wrap for easier removal and trap changing. This brings us to sources of prepared traps. Traps should be available through most greenhouse supply outlets. Some local greenhouse supply companies sell them, or if not, they should be able to obtain them for you. Olson products, mentioned above, also sells traps. They can be ordered also through Trece, Inc., 635 South Sanborn, Suite 17, Salinas, CA 93901 (408) 758-0205

To summarize, the keys to all of this are: (1) Use yellow traps as a pest management tool; (2) learn to identify what you catch; and (3) check, record, and/or change traps weekly. Remember that traps will not replace plant inspection, but are to be used along with it.

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