



Developing a Monitoring Program for Cannabis

Weekly monitoring is critical for any diligent grower, and crucial for implementation of a successful biocontrol program. One of the most critical aspects of monitoring is consistency concerning a number of factors: who is scouting, when they scout (consistent intervals), as well as consistent rating systems and observation techniques. Also, having the proper tools available as well as a notebook handy for recording. Rather than setting hardline parameters for scouting, we will offer helpful tips for developing a successful program that works for you.

Scouting Tools

- Hand lens (60x or greater)
- Proscope for your Smartphone or tablet
- Notebook or clipboard and paper
- Flagging Tape
- Sticky cards
- Stakes and/or clips for sticky cards
- Marking pens
- Plastic bags for plant samples
- PH meter (to diagnose and not confuse PH stress factors with pests stress factors)
- TDS/EC meter

Most Common Pests to Look For:

- Two Spotted Spider Mites
- Hemp Russet Mites
- Broad Mites
- Thrips
- Fungus Gnats
- Shore Fly
- Root Aphids
- Cannabis Aphid
- (Whiteflies)

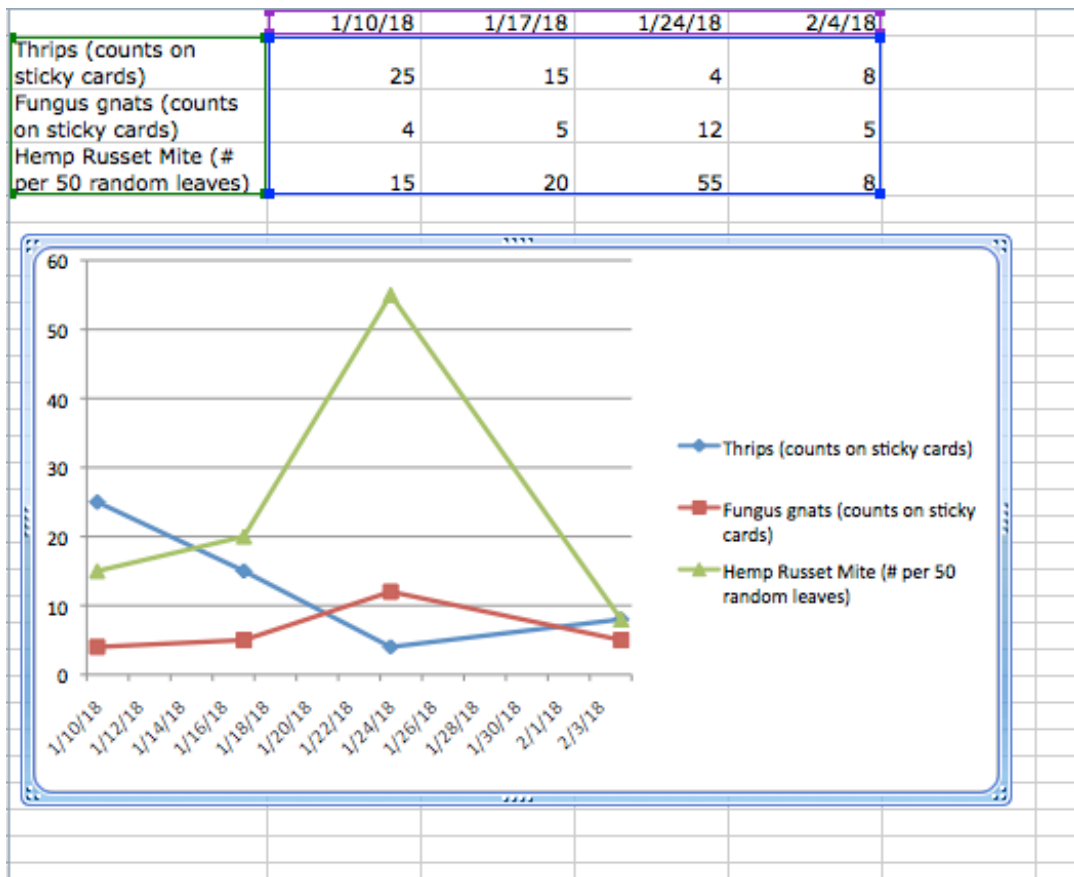
Developing Your Program

- Maintain a notebook and record weekly data from sticky cards and plant inspections.
- Scout weekly, preferably on the same day each week.
- Keep all spray records and biocontrol application records available to draw from in order to get a complete picture of your program. For instance, how are the pest populations following my last spray or biocontrol application?
- Scout least-infested areas first, and heavily infested last.

- Scout at a minimum of 10 locations per 1000 sf. (if russet mites are of concern, increase to 50).
- Always combine sticky card inspection with crop inspection/counts.
- Replace sticky cards weekly or on a consistent schedule. Place them 1-2 inches above canopy.

Monitoring for certain pests such as mites and aphids using a sticky card is not effective, however, sticky cards are very effective for monitoring other pests such as thrips and fungus gnats. Get into the habit of taking weekly counts and changing of sticky cards. This will help you detect if you have a new pest issue, note increased populations, monitor efficacy of treatments, and save you from headaches down the road. With time, you will develop “thresholds for action” in your program. For instance, “if I see 10 fungus gnats on my weekly sticky card count, I know it’s time to treat with nematodes”. It can be helpful to plug your weekly counts into an excel graph which can visually demonstrate if populations are increasing or decreasing, particularly when you are first developing your program. It is also a great way to track influxes of pest throughout the season to draw from in subsequent seasons so that you can treat preventatively.

Below is an example of a weekly monitoring chart. As you add to each weekly observation, you can easily note changes in pest populations:



If you have started using beneficial insects, become familiar with identifying both the pest and predator insects or mites. For instance, two spotted spider mite eggs are round, while predator eggs are generally oblong in shape. Begin to note the differences in appearance between your pests and predators. If you are treating for aphids and have applied A. colemani, for instance, learn to scout for mummified aphids with visible exit holes. Also, be sure to track your beneficial insect applications accurately. Which predator did you apply, where, and how much?

Plant Inspection Counts

The way you quantify your pest problems allows for unique development of a system that works for you. The importance of consistency from week to week should not be underestimated. And again, count at a minimum of 10 locations per 1000 sf.

Develop a sampling system that makes sense for you: for instance, will you take “X” number of leaves per row? Per room? Per strain? Will you collect the leaves in sampling bags and count pests and predators in a different room? Or will you simply inspect the leaves (top and bottom) on the plant and record? Will you actually count the pests? Or will you quantify the problem by developing a rating system of, say, 1-5? Or will you quantify using % affected. Alternatively, will you use words to quantify the pest problem areas such as “none present, light, moderate, heavy, and very heavy?”

Education

Each person’s perception of pests using their eyes will be little different. For this reason, having a designated scout is important. Despite the need for designated scouts, educating other employees concerning monitoring and scouting is important so that everyone can assist in accurately detecting when there is an issue. Additionally, when working with a biocontrol supplier, accurately communicating the issue helps everyone achieve best management and determine appropriate rates. Pictures are a great tool for identifying pests, sharing information, and communicating potential problems. Using a “Proscope” or clip-on microscope can also be helpful monitoring tool for documentation, communication, and proper identification. Ask us which model will work best for your device. Also inquire with us about sticky cards and hand lenses.