



Troubleshooting and fine tuning your biologicals control program

An interview with Jen Browing and Paul Koole at BioBest about how to establish and maintain biological controls



Integrated Pest Management (IPM) programs that include a biological component are being adopted by more growers in greenhouses and nurseries. There are many resources available for those interested in working with biological control agents (BCAs); it's easier than ever to get started. What can be a challenge is fine tuning those programs when control starts to slip.

Today we're talking about where things can start to go wrong and what to do next.

Given our experiences with successful biological controls programs, what are some common problems new adopters face?

PK: It's common for people to not realize they need to start early in the crop cycle when using biocontrol: the best time to start is at the very beginning. Using biocontrols means you have to "start clean and keep it (the crop) clean." Particularly with ornamentals, you need to be preventive and not reactive. Remember there are always pests around, so knowing which pests are common on your crop is vital to make sure you are using the right BCA for your situation.

JB: It's much easier to manage low and moderate pest populations with biologicals than it is to clean up an active infestation. This is why many growers will respond to pest population spikes with targeted chemistry, to reduce pressure so the BCAs can work. Hot summer months are a common time for pest pressure to swell, and that's when I hear more reports of difficulty with control.

Take Aways:

- Start early to stay clean through the growing season.
- Match the right biological control agent to your growing situation.
- Be prepared to use integrated and varied approaches to changing pest pressure.

What challenges do established biocontrols programs face, for example, when an approach doesn't work as well as it used to?

PK: Knowing which pests you have is important; we have to rely on proper identification of the pest so we recommend the right BCA. Not every green aphid is a green peach aphid. Good monitoring programs ensure early pest detection, and knowledgeable scouts definitely help.

Always read and follow label directions.

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Take Aways:

- Train scouts on pest identification and stay on top of regular monitoring.
- Confirm identification of pests to choose the right BCA.
- Be ready to change up the BCAs you are introducing in response to changing pest populations.

What about sanitation? How important is this component of IPM to biological control programs?

PK: Sanitation between crops is important, as is knowing the history of the last crop that was in the area you are sanitizing. The clean-up process never gets rid of everything. Record keeping during and between crops can help growers anticipate problems in the next crop cycle. This includes knowing what chemicals were used to avoid products with long-term residuals that may hamper the startup of a biocontrol program.

JB: Sanitation is the unsung hero of every successful IPM program. Improper sanitation sets up programs for failure by providing places to hide, feed and reproduce for pest populations. It's not just insects, either: unmanaged areas of a nursery can harbor mites, insects, weeds and disease. It puts a lot of pressure on any pest management tactic growers choose. Sometimes it's because of labor shortages or new personnel who aren't up to speed on cultural methods. We always encourage growers to focus heavily on sanitation, and this is even more important when they are relying heavily on biologicals.

Take Aways:

- Implement and prioritize best practices for sanitation in every growing area, year round.
- Train new staff on the procedures and importance of sanitation.
- Keep records of all IPM activities to track the recent history of growing ranges: crops grown, BCAs and products used, efficacy, and pest populations.

Anything else for growers who might be struggling with their bios program?

PK: More knowledge is better and start early.

JB: Use your BCA vendor or distributor rep to help with common problems or get you back on track. There are also consultants who can troubleshoot programs and make custom recommendations, as well as experts at universities and in extension with the experience to help.

When control starts to falter where it used to work, it's common to ask, "What's changed?" Sometimes the things that have changed are environmental, and it can be harder to identify those shifts. This is where those outside resources can be useful, because they'll see patterns with the seasons or in the crop. One thing we know about IPM, and biologicals in particular: it's a lifelong process of learning.