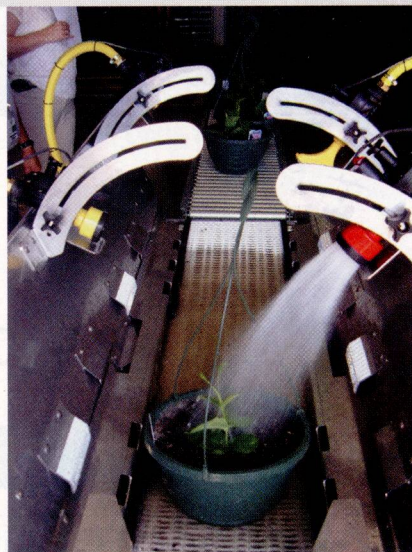


3 Steps To Better Biocontrol

Incorporating biopesticides in your greenhouse may seem like a confusing and risky proposition, but these simple tips will greatly improve your chances for success.



BIOCONTROLS are an intriguing alternative to traditional chemical pest control programs, but for many growers, they may seem unnecessarily expensive or confusing. Others have tried biocontrols, but abandoned them when they didn't clean up a problem as well as more familiar controls.

Often, it's a misunderstanding of how biologicals work or what they are capable of doing that makes them less successful. Here are three tips that can help make a biological controls program a success in your greenhouse production system.

1 Start Early

Biologicals are best used to prevent problems, not cure problems that have already flared up.

"One thing we hear from growers about biologicals is 'I tried that – it didn't work,'" says Ronald Valentin, Biological Control and IPM Specialist with Biobest Canada. "Usually that means they had a pest problem and they tried to fix it. A biological program doesn't work that way. It's a preventative."

It's the first line of defense, says Randy Martin, BioWorks' product development manager for insect and pest management.

"That has to be the mindset. Biocontrols generally work more slowly than traditional chemical controls. By the time a pest population has built up enough for you to notice it, it's often ready to explode. Biocontrols will not work then," Martin says.

2 Start Clean

Biocontrols can be very effective in preventing pest problems, but growers need to put them in a position to succeed. That means starting out with a clean greenhouse and plant material that's as clean as possible.

"IPM is more than rotation. It's cultural too," says Matthew Krause, product development manager for plant disease management with BioWorks. "It pays to have the greenhouse clean between growing cycles. For example, some *Xanthomonas* species can survive in the greenhouse in dried leaves for three or more years."

"Don't try to use a biocontrol unless your greenhouse is clean. It won't work," says Lloyd Traven, owner of Peace Tree Farm.

Traven also emphasizes the need to start as clean as possible with your plant material in terms of chemical treatments before you receive it. That means putting pressure on propagators not to heavily treat material in an effort to achieve a "zero tolerance" for pests.

"To achieve that they have probably applied a bunch of materials that handcuff me. I can't use biocontrols because of the residual material," Traven says.

Krause suggests growers interested in using a biological program can insist on plant material treated with biopesticides rather than conventional pesticides.

"Growers should ask questions of breeders and propagators," he says. "In Europe, growers are doing that and things are starting to change. For example, in The Netherlands they know the whole history of their plugs. Cultural, fertilizer and chemical. That gives those growers a much better opportunity for success with a biologicals program. They know what they're working with."

3 Use A Total System Approach

Trying to deal with one pest problem with biological control agents and another with a strictly conventional program is difficult and asking for trouble.

"The best results are achieved if key pest problems are all proactively dealt with using biological control agents as a first line of defense," Valentin says.

If hot spots arise in a biologicals program, consider other options before spraying a traditional pesticide. The chemical may clean up the problem, but it may cause other issues, as well.

"Many newer pesticides are compatible with biocontrol agents. However, they can be compatible for some and not others. You may do unintended damage to your program," Valentin says.

If no other option is possible, use the least harmful product you have available that can do the job. Also, consider spot treatments before full house treatments.

"Don't give up, even if several attempts are difficult," Traven says. "It takes determination, but believe the bugs. Stay after it. It does work!" **GG**

For More Information

To learn more about using biologicals in the greenhouse, please visit RiseOfBiopesticides.com.

This article was prepared by Greenhouse Grower staff on behalf of the Biopesticide Industry Alliance.