GROWERTALKS

Features

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Planning for Pests

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Alexander Graham Bell once said, “Before anything else, preparation is the key to success.” This is especially important for ornamental production since preparation is an essential part of effective disease and insect management.

The presence of water on leaves, high humidity levels, temperature changes and decreased air flow can lead to favorable conditions for a variety of diseases. And even the most rigorous sanitation programs and careful scouting can't exclude all insects. By incorporating an agronomic program as part of your overall production plan, you can better prepare for the problems your operation may encounter in the season ahead.

What’s an agronomic program?

An agronomic program is a comprehensive plan that considers the primary and secondary insects and diseases a crop may encounter, and outlines treatment recommendations to proactively control them. Using a plan that’s put together before production starts can help prevent plant damage and stress, and build a framework for properly rotating products and modes of action.

By limiting pest outbreaks during production, you can help alleviate stress for you and your crop, with the end result of higher quality plants and improved sell-through. If insects or diseases are caught too late and have damaged plant foliage or roots, you can be at a disadvantage, spending additional time and resources trying to regain control.

How to build a program

A resistance management strategy and product rotation are two key components of an agronomic program. When building your own program, it’s important to:

- Identify the primary and secondary disease and insect problems the crop may face
- Select two to three products with different modes of action that have proven activity on each problem
- Position these products in a rotation program based on their strengths
- Rotate these products per the label recommendations

To position plant protection products correctly, you must have a good understanding of the special features of the

products and how they work. For example, it's important to know the type of activity, whether it be systemic or translaminar, the length of control, and regulatory requirements, such as restricted-entry intervals and use limits. Selecting products that overlap in their activity across different disease or pest problems can also help with efficiencies and simplify your program.

The template (Figure 1) shows what kind of information needs to be gathered to develop a comprehensive plan for your operation. It can be evaluated and updated as necessary, but it's important to confirm product compatibility when building the program. This example features a program for gerberas grown in 6-in. pots.

Figure 1. Agronomic program template

Crop: 6-in. Gerbera	Crop Time: 10 to 12 weeks
Primary Insects	Control Options (REI)
Thrips	Avid (12 hr.), Mainspring GNL (4 hr.), Conserve (12 hr.) insecticides
Secondary Insects	
Mites (TSSM, Broadmite)	Avid (12 hr.), Pylon (12 hr.) insecticides
Primary Diseases	
Powdery Mildew	Daconil Ultrex (12 hr.), Eagle 20EW (12 hr.), Mural (12 hr.), Palladium (12 hr.) fungicides
Root & Stem Rot *(Pythium & Rhizoctonia)*	Subdue Maxx (0 hr./48 hr.), Medallion WDG (12 hr.) fungicides
Botrytis	Palladium (12 hr.), Decree (12 hr.), Mural (12 hr.) fungicides

After compiling this information and determining the appropriate products to use, you can build and tailor a program to fit the needs of your operation. Based on what's known about gerbera crops, and with a focus on protection against powdery mildew and thrips, an example program recommendation is shown in Figure 2 for 6- to 10-in. gerbera pots being produced in a greenhouse.

Continue to monitor and scout

This comprehensive plan can serve as the framework for your plant protection program. It offers recommended fungicide and insecticide control options, and suggested application timing for your gerbera crop. However, even with an agronomic program, you should continuously scout your crops for problems in the event that your program needs to be modified.

For example, although Botrytis is a common problem in floral crops, if it hasn't historically been an issue in your operation, fungicide applications don't necessarily need to be made for that disease. Alternatively, applications can be made later in production, just prior to shipping when you know plants will be in a dark, moist environment that's conducive to Botrytis development.

Monitoring for diseases and scouting for insects are still critical during the production of a crop. Knowing the disfiguring damage that certain insects can cause on new growth and blooms, and keeping those populations low early in the production cycle, is critical to producing an unblemished, high-quality crop. The example agronomic program for gerbera includes recommended insecticides and application timing to prevent this from occurring.

At first signs of insects or when conditions are conducive to their development, applications are recommended so you can prevent further damage. In doing so, you can help stop insect infestations from building to damaging levels while saving time and resources. Curative applications aren't always successful and can require more product, leading to higher costs.

Preparing for this year can help you next year

Another benefit of using an agronomic program is keeping good records for future crops. If something worked well, document what product you applied, when and how much so you'll have that information available next season. Also, be sure to track your findings from scouting throughout the year to keep an accurate calendar of potential pest outbreaks.

While every operation is different, preparation is an essential part of effective disease and insect management. Scouting and implementing an agronomic program helps prepare you for both expected and unexpected challenges.

Several agronomic programs have been developed and are available for download at GreenCastOnline.com/Solutions. **GT**

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