BUILDING BLOCKS to Better Plants

Rotation by Design: BASF Building Blocks for Smarter IPM Programs

By Jen Browning, PCA, BASF Senior Technical Specialist

Entering 2026 without the power to predict future pest pressure, integrated pest management (IPM) planning becomes even more important for the season ahead. There is a simple way to build programs for a wide range of pests, and that begins with BASF Building Blocks to Better Plants. Using piercing and sucking insects as a model pest complex, let's consider the coming spring, summer and fall and look at a range of crops, from transplants to gallons.

1 Building a Program with a New Approach

When designing robust IPM programs, multiple and unique mode of action (MOA) groups are needed. However, careful rotation and product stewardship are critical to protecting the efficacy of today's active ingredients. Thoughtful planning for how each MOA group is rotated through the season matters. This approach simplifies product selection so rotations are intentionally distributed across the most functional MOA groups.

Each functional group serves as a building block within the overall program. By choosing two to five products within each block or functional group, each with a different MOA, IPM programs are simple to build and manage.

Not every operation will use all five functional groups. For example, some prefer to skip broad-spectrum conventional chemistry or biological control agents (BCAs).

Lower pest pressure and fewer applications per year typically require fewer blocks. IPM is dynamic by design, with some years calling for fewer blocks and applications than others.

2 A Smarter Way to Think About IPM Rotation

Using this model, consider our example pest complex, piercing and sucking insects, and build an example program. Piercing and sucking pests include aphids, whiteflies, mealybugs and scale insects.

In recent years, these pests have caused regionally variable pressure and damage. Severe winters tend to reduce their numbers in the growing seasons that follow, and dormant applications to overwintering stock can reduce the numbers of at least some species.

The program in the table below includes options to manage armored scale at a western greenhouse-nursery operation, though as we know, solid IPM programs address multiple pests. IPM programs need to resolve the problem of the moment while preparing for what may come next, including spider mites, red-headed flea beetles, thrips and more.

3 Anchor Your Program with Ventigra Insecticide

Ventigra® insecticide is a foundational building block in IPM programs as a targeted conventional chemistry for piercing and sucking insect pests. Ventigra works by quickly paralyzing insects to stop feeding and virus transmission, followed by death of aphids, whiteflies, mealybugs and scale insects, as well as psyllids, lygus bugs and leafhoppers.

The next-generation active ingredient in Ventigra insecticide precisely targets piercing and sucking insects and belongs to MOA group [9D]. This makes Ventigra compatible with biological controls and pollinator-compatible with bees, butterflies and their caterpillars, and other non-targets.

Other targeted chemistries may have more or less narrow spectrums of activity, so reading product labels is always important. **Sultan® miticide,** for example, is a highly targeted miticide that is active only on spider mites and not on Eriophyid, broad or even predatory mites.

FUNCTIONAL GROUP	TARGET	EXAMPLES
Targeted Conventionals	Targeted	Ventigra® Insecticide
Biological Control Agents (BCAs)	Host-specific	*Cryptolaemus montrouzieri*, *Chrysoperla* sp.
Growth Regulators (IGRs/MGRs)	Targeted	Talus® 70DF, Enstar AQ® IGR
Formulated Biologicals	Targeted	Velifer® Bioinsecticide/Miticide
Oils and Soaps	Broad-spectrum and short-lived	Ultra-Pure® Oil, M-Pede®
Broad Spectrum Conventionals	Broad-spectrum rescue	Safari® Insecticide, XXpire® Insecticide, or pyrethroids [group 3A]

Broad spectrum and all product category choices are optional and may be used on an as-needed, emergency basis, or not at all in your operation.

Precision Targeted. Efficient.
Compatible with Beneficials.

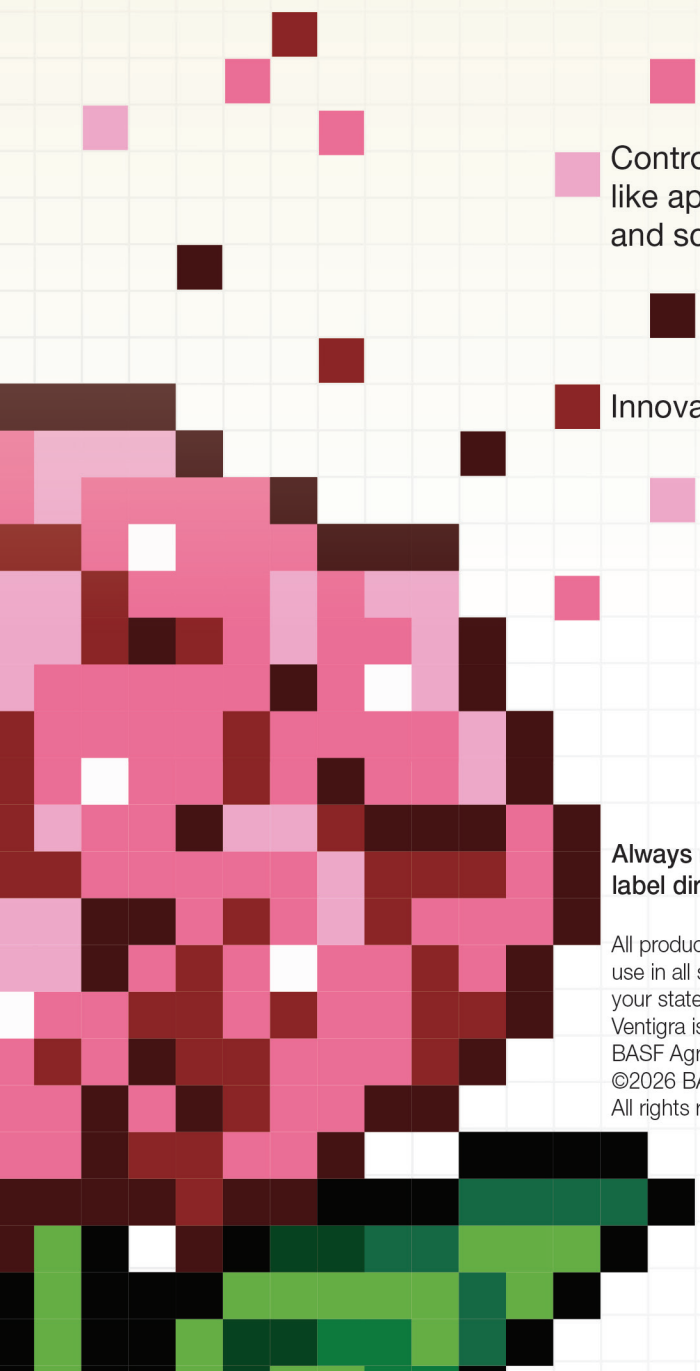
Building Blocks to Better Plants

BASF
We create chemistry

Ventigra®

Insecticide

- Fast-acting, long-lasting residual control
- Controls notorious pests like aphids, whiteflies, mealybugs and scale insects
- Low usage rate
- Innovative rainfast formula
- Non-neonic that is compatible with beneficial insects



Always read and follow label directions.

All products may not be registered for use in all states. Please check with your state or local extension service. Ventigra is a registered trademark of BASF Agricultural Solutions US LLC.

When Ventigra is part of a greenhouse IPM program, applications typically go out early in the season for aphids and at very low rates. Plan for whitefly applications a few weeks later, with mealybug and scale applications mid- to late season, depending on the species and region of the country.

For whiteflies, mealybugs and scale insects, the use of an adjuvant enhances control with Ventigra insecticide applications. The plant-safe adjuvant of choice, added to the insecticide to control these types of pests, helps to adhere to the insects that are already present and helps the spray materials adhere to leaf surfaces, particularly waxy tissues, such as on ivy, roses or *Camellia* sp.

For aphids, no adjuvant is required or needed, and there is no need to drench. Ventigra is foliar-applied with translaminar activity.

4 BASF Building Blocks to Better Plants

With a wide variety of crops to manage, the many products on the market and new pest problems to solve every season, this simple approach to planning can help streamline one part of the job. This is how we at BASF work with growers to quickly evaluate and fine-tune a program. The feedback is consistent: it works.

Ventigra insecticide serves as a key building block in successful IPM programs for piercing and sucking insects across nurseries, greenhouses, propagation and landscapes. Build IPM around this next-generation targeted chemistry for Better Plants with BASF.

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Preparing for Top Pests in 2026

Like all targeted insecticides and IPM practices in general, Ventigra insecticide is most effective when used preventively. However, growing ornamentals doesn't always work that way. How can you prepare for 2026?

Aphids

The spring species are often easier to manage, with later populations proving more difficult to control. Treat with Ventigra insecticide and circle back a few days later. Because aphids reproduce through live birth, missing a few individuals can deliver big dividends in new offspring and rebounding populations, even after what appear to be successful treatments.

Rotational options: Azatin® O biological insecticide [UN-IGR], Mainspring® GNL insecticide [28], Pradia® insecticide [28+29]

- Prioritize good spray coverage.
- Don't skip the insect growth regulator (IGR).

Whiteflies

Scout frequently to catch populations while they are small, since it is harder to make good contact with these pests, particularly species with wax filaments. Use a quality, plant-safe adjuvant to ensure adherence to eggs, pupae and leaf tissue. Ventigra insecticide and regularly rotated applications may be necessary when growing crops that are highly attractive to whiteflies.

Rotational options: Mainspring GNL insecticide [28], Aria® insecticide [29], Talus® IGR [16]

- Move that canopy: Spray all the plant surfaces to be protected.
- Don't forget the IGR.

Mealybugs and Scale Insects

These insects are often grouped together because there are so many species, and they are all related. Dormant oil applications with high-quality oil like Ultra-Pure® Oil can reduce populations in the cooler seasons. Ventigra insecticide plus an insect growth regulator (IGR) and additional insecticide groups are recommended for better control of more difficult species or heavy infestations.

Rotational options: Pradia insecticide [28+29], Fulcrum® IGR [7C] or Talus IGR [16]

- Prioritize the IGR: Insect growth regulators can reduce these pests by 85%.
- Oils are an excellent dormancy and resistance management tool.

← Cycad treated with Ventigra insecticide [4 weeks after initial treatment] 2020, Dale UF

Untreated Cycad with Aulacaspis scale, 2020, Dale UF →

PHOTOS COURTESY OF BASF