

GRIFFIN GAZETTE

Vol. 41 | Issue 1 | 2024



Embracing the Beauty of
NATIVE PLANTS

Planning for Retail
PROMOTIONS

**BENEFICIALS
& PESTICIDES**

Don't Let
DOWNY MILDEW
Get You Down





GRIFFIN GAZETTE

VOL. 41 • ISSUE 1 | 2024

Welcome to the Griffin Gazette, delivering industry tips and insights from notable partners and experts.

In each issue, we bring you valuable knowledge, innovative strategies, and expert advice to help you stay ahead in your business. As a family-owned nationwide leader and distributor for more than 77 years, Griffin Greenhouse Supplies offers resources, workshops, and training to help you build a thriving growing business with knowledge-sharing and caring.

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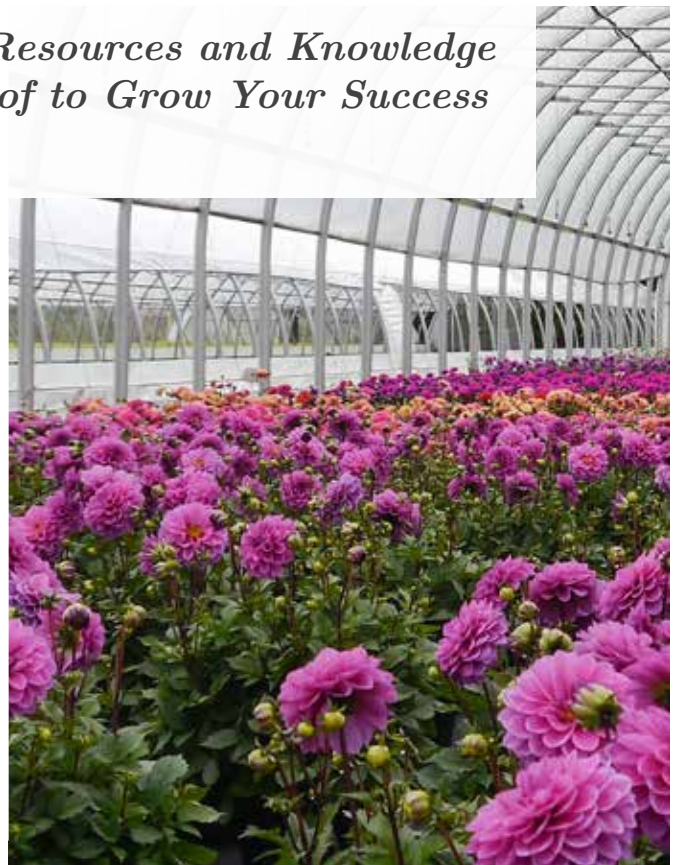
COVER PHOTO:

Allium Cernum Nodding Onion



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RENO, NV**
Grand Sierra Resort
August 28-29

**EXPO EAST
EDISON, NJ**
NJ Convention Center
September 25-26

Register: www.griffins.com or 866.307.8142



EMBRACING THE BEAUTY AND BENEFITS OF

Native
PLANTS

Allium Cernum Nodding Onion



Native plants are the unsung heroes of our landscapes, often overlooked in favor of exotic and ornamental species. However, these indigenous wonders are crucial in maintaining ecological balance, supporting biodiversity, and promoting a sustainable environment.

Native plants have evolved in a specific region over thousands of years, adapting to the local climate, soil, and other environmental factors. These plants are crucial for preserving biodiversity and providing essential food and habitat for native insects, birds, and other wildlife.

BENEFITS OF NATIVE PLANTS:

Biodiversity Enhancement: Native plants have evolved alongside local wildlife, creating a balanced and interconnected web of life. These plants provide essential food and habitat for native insects, birds, and other wildlife species. By supporting local biodiversity, native plants contribute to the health and resilience of ecosystems.

ADAPTATION TO LOCAL CONDITIONS:

Native plants are well-adapted to their region's specific climate, soil, and environmental conditions. Their deep-rooted history in local ecosystems allows them to thrive without excessive water, fertilizers, or pesticides. This adaptability makes them a sustainable choice for landscaping.

WATER CONSERVATION:

Many native plants have evolved to survive in regions with specific water availability patterns. Once established, they often require less supplemental watering compared to non-native species. This characteristic is particularly important in water-conscious areas and contributes to water conservation efforts.

SOIL HEALTH IMPROVEMENT:

Native plants are essential to soil health. Their deep root systems help prevent soil erosion, stabilize slopes, and improve soil structure.

POLLINATOR SUPPORT:

Native plants have co-evolved with local pollinators, including bees, butterflies, and hummingbirds. These plants often provide the necessary nectar and pollen for these pollinators, supporting the reproduction of both plants and pollinating species. This relationship is vital for maintaining healthy ecosystems.

REDUCED MAINTENANCE REQUIREMENTS:

Native plants typically require less maintenance than non-native species. Once established, they are more resistant to pests and diseases,

continued ►



Image: Aster Laevis Bluebird

reducing the need for chemical interventions. This low-maintenance aspect makes native landscapes both environmentally friendly and cost-effective.

CLIMATE CHANGE RESILIENCE:

Native plants have adapted to local climate conditions over time, making them more resilient to climate fluctuations.

SUPPORT FOR INDIGENOUS ECOSYSTEMS:

Native plants are integral to preserving and restoring indigenous ecosystems. By cultivating these species, individuals and communities contribute to the conservation of the unique and often endangered ecosystems that define a region's identity.

EDUCATIONAL AND RECREATIONAL OPPORTUNITIES:

Native plants offer opportunities for education and recreation. Learning about local flora promotes environmental awareness. Native plant gardens and nature reserves also provide spaces for recreational activities, fostering a sense of community and well-being.

ENHANCED AESTHETIC APPEAL:

Native plants can be aesthetically pleasing, showcasing a region's natural beauty. They can be used in landscaping to create visually appealing and diverse gardens, enhancing the overall aesthetic value of residential, commercial, or public spaces.

continued ►



Aster Divaricatus Eastern Star White Wood Aster



Monarda Didyma Jacob Cline Beebalm



Rocky Mountain Columbine Aquilegia Caerulea

Native plants are not just a beautiful addition to our landscapes; they are essential for maintaining the health and balance of ecosystems. Over 17,000 species of native plants are found in the US. Contact your Griffin sales reps to explore the native plant options for your region.

PLANNING FOR
retail
PROMOTIONS



By Hannah Sadosky, Griffin Retail
Education Manager

With another spring season in the books -- it's time to reflect and take a strategic approach for retail promotions as we look ahead to 2025.

GENERATING LOYALTY

By capitalizing on the fresh perspective of the season and the innovative ideas from your creative staff, now is the time to strategize promotions that will not only increase sales but also foster customer loyalty. This past season we were a bit spoiled with Easter being not only early, but with over a month between the Mother's Day weekend sales window. Looking ahead, 2025 is crunch time. Easter is April 20th 2025 and Mother's Day May 11th 2025. By strategically planning promotions, we can effectively reach our target audience and create opportunities for increased revenue and growth in the business.

SEASONAL EVENTS ATTRACT

Hosting a spring open house or garden party kick off weekend can be an effective strategy to generate early sales for your garden center. By offering special promotions, or events during this time, we can attract customers who are eager to start their spring gardening projects. Springtime is when consumers, dedicated to gardening or not, get the itch to plant. It is also a perfect time of year for kids to learn about the science of growing and gardening. Spring open house events can help increase foot traffic ahead of the season rush, and create buzz around your garden center as the go-to destination for all things garden-related. Hosting kids' workshops is another effective promotional strategy to attract families and boost revenue. These workshops can provide interactive and educational experiences for families that encourage them to visit more often. By strategically planning kids workshops during school vacation weeks is another great way to boost sales. We have seen garden centers host workshops led by a staff member or a guest speaker.

continued ►

WORKSHOP IDEAS

1. Plant & Paint a Clay Pot
2. Scavenger Hunt
3. Fairy/Dino Garden
4. Build a Birdhouse
5. Special Guest Local Nature Center
6. Make it for Mom Planter
7. Plant a Pollinator Pot Party!



We've also seen garden centers offer self-serve workshops. Self-serve workshops work best with printed directions or well worded signage. If you are able to, put everything needed for the workshop in a cardboard flat with instructions and pricing. Self-serve workshops are a great way to engage consumers with busy schedules. School vacation weeks are great for self-serve workshops as families look for things to do.

CREATING PHOTO OPPORTUNITIES

By diversifying our revenue streams based on consumer demand, we can capitalize on market openings. One form of early revenue for garden centers has been photo sales opportunities. I know, weird huh? Consumers these days love to post photos on social media, whether of themselves or their families. As garden centers, we have the perfect backdrop available, flowers and plants. We have seen garden centers work with local photographers to "rent" out photo sessions in the greenhouse, while its bursting with color. Another idea for boosting revenue and attracting families is to incorporate photos with the Easter Bunny into a spring weekend event or Santa during the holidays. This promotion can create a festive and memorable experience for families, who potentially make purchases while enjoying spring-inspired activities. Some garden centers take professional photos and then email them to customers, but that can suck up a bit of time. Some garden centers invest in printers for on-the-spot photo printing services. Customers are charged for these prints, which can serve as a memento, further adding value to their experience at the garden center.

Planning your store events and sales promotions in advance will reduce costs and maximize profitability. Explore our EXPO show through the lens of choosing items to build workshops around and increase cross-selling opportunities. Pick products priced for profit!



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August 19 - October 31

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SEAMLESS FIT
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STREAMLINED BRANDING
Incorporate UPCs, SKUs & QR codes with no separate labeling

PRODUCT FLEXIBILITY
Square containers are available in a palette of popular colors



The HC Companies continues to transform the horticultural industry through bold leadership, innovative manufacturing, and a comprehensive portfolio of products ideal for greenhouse and nursery growers. The HC Companies printed square pots are manufactured and printed locally in the USA with nationwide delivery.

The ability to print on square growing containers is revolutionary for the industry and is part of HC's commitment to the growers we serve.



THE HC COMPANIES INTRODUCES

Square Printed GROWING CONTAINERS

With more and more growers in today's competitive landscape looking for ways to differentiate themselves from the competition at garden centers and big box stores, printed growing containers have become a viable and highly customizable solution. The HC Companies continues to transform the horticultural industry through bold leadership, innovative manufacturing, and a comprehensive portfolio of products ideal for greenhouse and nursery growers. The ability to print on square growing containers is revolutionary for the industry and is part of HC's commitment to the growers we serve.

PROMOTE YOUR BRAND YOUR WAY!

While printed growing containers have become incredibly popular in the industry, making them a must-have marketing tool, the availability has been limited to growers utilizing round containers in their growing operations. This is because many commercial machines previously available on the market were optimized and engineered to print on cylindrical products, not flat.

Many growers successfully utilize square growing containers in their cultivations for propagating annuals such as seasonal flowers, herbs, and vegetables which are widely popular among home gardeners throughout North America.

Additionally, square growing containers provide incredible space efficiencies, feature tag slots for merchandising at retail, and easily de-nest. They can be used with a wide range of automated equipment, which has become necessary for many growers struggling with labor shortages.

However, until now, these growers could not capitalize on the features and benefits of printed growing containers and possibly lost market share to the competition in the process.

As demand for the ability to print on square growing containers amplified throughout the industry, The HC Companies understood that an investment in new printing technologies would be necessary to satisfy the legions of growers who rely on square growing containers in their operations.

THE HC COMPANIES' PRINTING CAPABILITIES

In addition to providing custom printing services on many of our round greenhouse and nursery growing containers, The HC Companies now has the exclusive capabilities and technologies to custom print on all the square greenhouse growing containers we offer.

- Four-color printing delivers crisp, clean colors to match any branding standards.
- Square growing containers have four flat sides – printed individually – allowing each side to feature unique artwork, expanding the potential for messaging and imagery. Note – the artwork cannot wrap around the entire container.
- Ideal for incorporating UPCs, SKU numbers, and QR codes directly onto the container – no separate labeling required for incremental cost savings.
- Containers can be manufactured in a variety of popular colors. Options and availability (based on quantities) should be discussed with an HC representative.
- Printed square growing containers will still be compatible with their appropriate trays and flats.

- Manufactured and printed locally for immediate deliveries across North America, preventing the frustration of overseas shipping delays.

DIFFERENTIATING YOURSELF FROM A COMMODITY

Brand loyalty often evokes memories and emotions which are directly tied to quality. When a customer trusts a brand, that trust undoubtedly builds loyalty – and when a customer is loyal, they buy more and recommend those products more. Custom branded planters are used at garden centers, big box stores, and retail nurseries across North America by promoting a brand while increasing sales. They are the most impactful marketing differentiator for a business.

Branded plant and container programs can have a colorful design that supports your branding standards and often influences customer purchasing with a perception that these products are far superior to others on the market for an increased value proposition.

HOW CUSTOM AND BRANDED CONTAINERS CAN HELP YOUR BUSINESS

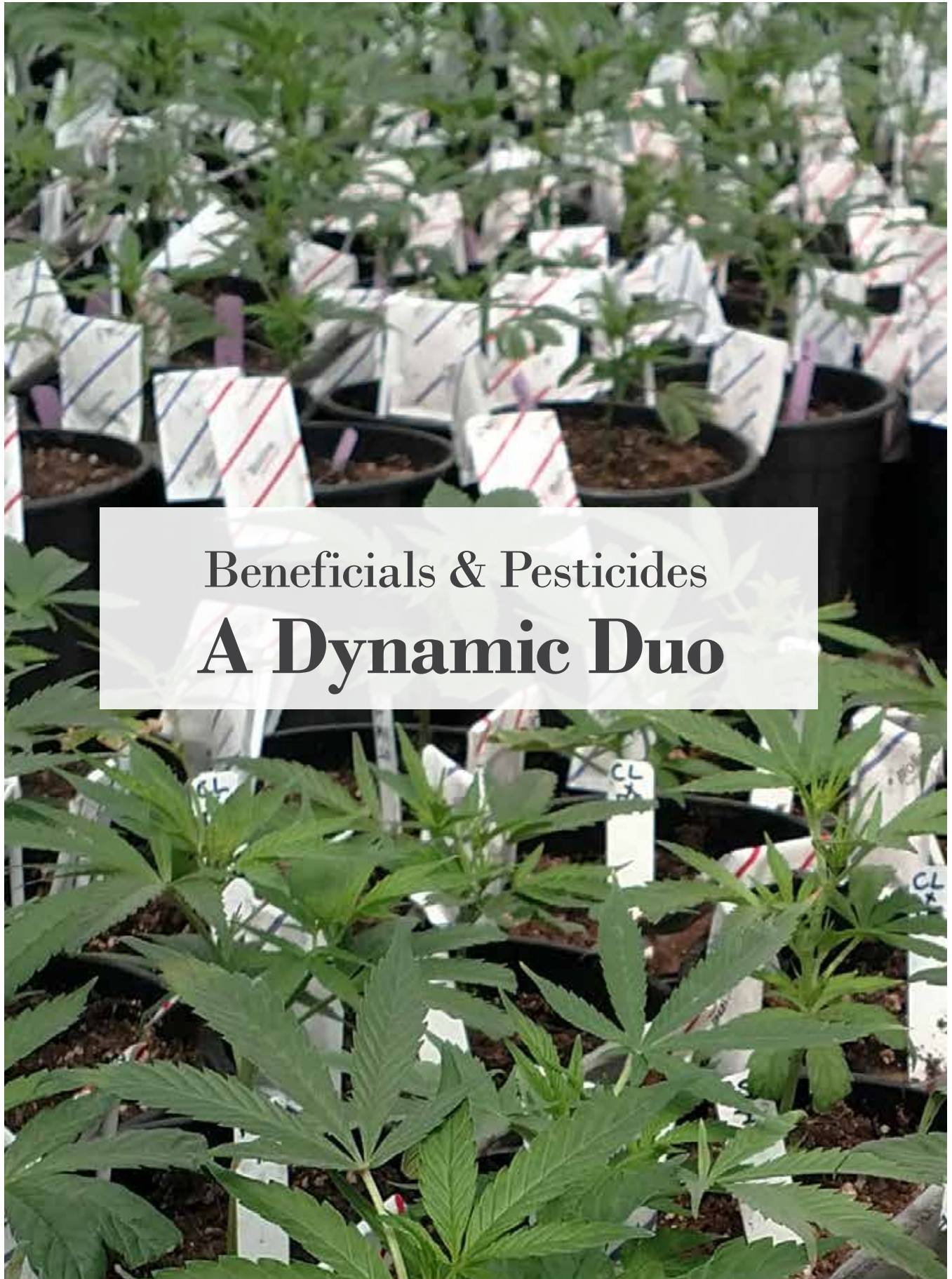
Custom and branded growing containers are the most impactful marketing differentiator for your business. They can have colorful designs that support your branding standards and often influence consumer purchasing with a perception that your products are far superior to others on the market for an increased perceived value.

They can further support and expand your brand's reach when seen out in the community, as residential homeowners adorn front yards and decorative planters or commercial properties line walkways and perimeters. Furthermore, they afford an opportunity to provide education and information directly on the container – solidifying your brand's stance as an industry expert.

Branding consultant and author Alina Wheeler says, "Brand identity fuels recognition, amplifies differentiation, and makes big ideas and meaning accessible. Brands are messengers of trust. Customers are reassured by brands that are recognizable and familiar. A great brand strategy is a basic building block of a good business strategy. We build industry-leading brands with coherent and authentic messages. We utilize cohesive branding tools, connecting with your customers in a clear and impactful way."

INTERESTED OR NEED MORE INFORMATION?

Contact The HC Companies at CustomerSupport@HC-Companies.com, or reach out directly to your Griffin or HC Sales Representative.



Beneficials & Pesticides **A Dynamic Duo**

By Tanner Bailey & George Grant, GGSPro Tech Specialists

In the realm of controlled environment agriculture (CEA) and cannabis production, a grower's tool kit of appropriately labeled and registered pesticides is inherently limited. A lack of options to rotate between and continued resistance issues have fueled the adoption of biological control agents (BCAs) such as predatory mites, parasitic wasps, beneficial nematodes, and more. Regardless of if you have been using BCAs for years or if you are just dipping your toes into this unique pest management strategy, Griffin and GGSPro experts are here to assist you in optimizing your program. Although the industry now has the BCA products to cover most of our major insect and mite pests, diseases are the other side of the coin that requires cultural and chemical control methods. Moreover, there are always going to be situations where our BCA program can be disrupted (e.g., delayed shipments, lack of labor) or losing the battle against an explosive increase in pest pressure. In these scenarios, it is important for the grower to have corrective pesticides on hand that can be used complementary to the BCA populations we have put resources toward developing. Using publicly available BCA compatibility data as well as our understanding of how BCAs can be used in various production schemes, this article will outline considerations for safely implementing pesticides into active beneficial programs.

BCA COMPATIBILITY CONSIDERATIONS

When deciding on pesticides to rotate within an established Biological Control Agent program or as part of pre-program clean-up, growers must meticulously assess how their choices will affect their specific BCA population. Essentially, certain active ingredients will vary in their relative impact on different BCA species. The first consideration in pesticide selection is its acute toxicity, which is evaluated based on the percentage of BCA mortality resulting from the pesticide application. This standardized toxicity scale ranges from Safe (<25% mortality), Slightly Toxic (25-50% mortality), Moderately Toxic (50-75% mortality), to Highly Toxic (>75% mortality). It's important to recognize that even pesticides deemed "safe" may still pose a risk of decline in BCA populations. Therefore, the decision ultimately revolves around a cost-benefit analysis, necessitating careful selection of sprays and timing of application.

A secondary consideration revolves around the residual toxicity of a pesticide on a BCA population. The crucial question is how long will this product continue to adversely affect

continued ►



specific BCAs after being applied? Furthermore, in the absence of BCAs during an application, when is it safe to introduce a new population without jeopardizing them? Residual toxicity varies depending on the type of pesticide used and how it is applied (i.e., spraying versus drenching). For instance, soap and oil-based pesticides may exhibit a high acute toxicity but minimal residual effects, lasting several days or less in some instances. Conversely, pesticides containing synthetic pyrethroids, organophosphates, and carbamates can impede BCAs for eight weeks or more. Microbial pesticides such as azadirachtin (e.g., Aza-Direct, Azatin O, AzaGuard EC, Molt-X), *Beauveria bassiana* (e.g., BotaniGard WP/ES, Velifer, BioCeres WP/EC, Mycotrol), *Bacillus*-based products (e.g., Cease, Triathlon BA, Stargus, Gnatrol, Dipel Pro), and Grandevo CG tend to be safer or have shorter residual toxicity on most BCA species.

Within CEA and cannabis production, drenching pesticides with systemic activity are not commonly approved for use currently, however it is important to think about where your BCAs are spending their time (i.e., in the foliage or growing media). Substrate drenches will have a more pronounced impact on soil-dwelling BCAs (such as nematodes or *Dalotia/ Atheta coriaria*) compared to species that primarily prey within the plant canopy (like *Aphidius* spp. or *Amblyseius* spp.). Similarly, foliar spray applications pose a risk to BCA

populations depending on where the application is directed. With this understanding, growers can tailor their pesticide applications based on the targeted pest and the habitat of the BCA to minimize unintended losses to specific BCA species.

PUTTING IT ALL TOGETHER

GGSPRO recognizes that integrating and managing Biological Control Agents is a complex process. Thus, it is prudent to ease your way into this pest management strategy by still relying on your pesticide cabinet to start clean and responding when an infestation occurs. On top of guiding you step by step in developing a BCA program, Griffin’s GGSPRO team can also produce a customized pesticide compatibility chart, so you know what chemistries rank in their acute and residual toxicity for each of your BCA species (Figure 1). Griffin’s partnership with chemical producers allows us to stay up to date on new data as more compatibility trials take place on existing and new products. Having compatible pesticides on hand can allow for quick responses to hot spots or outbreaks, which may be the difference between saving a BCA program or starting over. Before the season starts, consider which pesticides would be compatible with the anticipated BCAs, and use that to decide what to have on hand. Making an informed pesticide choice hinges on understanding the factors provided in this article, as neglecting them can easily lead to program failure.

GGSPRO BCA Compatibility Chart

ACTIVE INGREDIENT		PRODUCT		Adalia bipunctata		Amblyseius andersoni		Amblyseius californicus		Amblyseius cucumeris		Amblyseius swirskii		Anagyrus pseudococci		Aphelinus abdominalis		Aphidius colemani		Aphidius ervi		aphidoletes aphidimyza		Chrysoperla carnea	
				I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I	A
Chlorantraniliprole	Acelepryn	I																							
Acephate	Acephate 97UP	I						4		12		12				12		12		12		12		8	
Diflubenzuron	Adept	I	Drench																				2	2	
Fluopicolide	Adorn	F																							
Polyoxin D Zinc Salt	Affirm	F	Spray							1															
Fenpyroximate	Akari5SC	I					3				3							3		3					

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Don't let downy mildew GET YOU DOWN

By Allie Allgeyer & George Grant, GGSPro Tech Specialists

In 2023, downy mildew was fiercely present amongst many greenhouse crops, creating significant losses for growers across the country. Griffin is here to equip you with the tools and knowledge you need to be prepared for another potentially high-pressure season. Downy mildew (DM) presents a significant challenge to growers due to its rapid spread in favorable environmental conditions, especially in cool and humid climates. This presents an ongoing hazard throughout the season to numerous edible crops and ornamental plants, with coleus, impatiens, and basil being occasional targets. Most commonly identified by its characteristic fuzzy sporulation on the underside of foliage (Fig. 1 & 2), this fungal pathogen spreads quickly and can easily lead to substantial economic losses. Understanding the nuances of downy mildew, including its modes of transmission and effective control strategies, are foundational for mitigating its impact in your operation.

For impatiens growers specifically, you might first be alerted to the presence of downy mildew when overhead irrigation launches a visible white plume of spores into the air coming from the foliage. Additional indicators across other suspectable crops include chlorotic, yellow spots and stunted foliage as well as white, gray, or purple sporulation on leaf undersides.

A major difference between downy mildew and powdery mildew is where the spores can be seen. Powdery mildew sporulates on both sides of the foliage whereas, other than a few exceptions (e.g., *Rudbeckia*), downy mildew sporulates solely on the bottom of the foliage. However, sporulation may not always be visible, especially later in the day after leaf surfaces have dried. Early signs may manifest as discoloration or the appearance of yellow, brown, or black lesions on leaf surfaces. Further damage includes chlorotic foliage, necrotic spotting, and leaf senescence (Fig. 3 & 4). Confirmation of downy mildew can be achieved by placing infected leaves into a closed chamber (e.g., Ziploc bag, clamshell, or Tupperware) with a moist paper towel and observing for sporulation over a few days or sending in a sample to a plant diagnostic lab. It is important to note that the appearance of downy mildew can vary depending on the plant species and environmental factors, so careful observation is necessary for accurate diagnosis.

Downy mildew encompasses a variety of species and is recognized for its host-specific nature. Different crops may require different chemical options, while cultural controls remain the same for all crops. Given its high potential for resistance, taking a proactive approach is paramount in DM management. Both cultural and chemical interventions play crucial roles in prevention and control efforts. DM thrives particularly in cool (58-68°F) and humid environments, facilitating easy sporulation, with moisture on leaf surfaces exacerbating its spread. Cultural measures, such as optimizing ventilation to expel cool moist air during the transition into the evening and morning hours, enhancing air movement with horizontal airflow (HAF) fans, and employing heat are effective in reducing humidity levels in the greenhouse.

continued ►



FIGURE 1. | *Downy mildew sporulation on the underside of a coleus leaf*



FIGURE 2. | *Downy mildew sporulation on the underside of impatiens leaf*



FIGURE 3. | *Downy mildew infected basil plant*



FIGURE 4. | *Downy mildew infected coleus plant*

Growers should be cautious of reducing night temperatures to conserve energy, as this may prolong leaf wetness and heighten infection risk. Additionally, ensuring the purchase of clean, uncontaminated liners, plugs, and pre-finished material is beneficial to keeping your facility DM free. Incoming plant scouting followed by bagging and disposing of any infected plants off-site must be a part of every grower's protocol.

If growing any of "the big three" (i.e., coleus, impatiens, or basil), it is not "if" but "when" downy mildew strikes, so be prepared! When a grower encounters DM, various control options exist. Please reach out to GGSPro at ggsprotech@griffinmail.com to request preventative pesticide programs for each of these susceptible crops. We advocate for the immediate disposal of all infected materials off-site, exercising utmost caution to prevent further spread. Subsequently, application of Segovis (MOA 49), Subdue Maxx (MOA 4), or Segway O (MOA 21) for a two-week residual control is recommended. Segovis and Subdue Maxx can be drenched for even longer residual protection. Follow-up rotations with at least two other modes of action (MOAs) to help prevent resistance development may be necessary. Preferable options include Micora (MOA 40), Stature SC (MOA 40), Orvego (MOA 40+45), Mural (MOA 7+11), Pageant Intrinsic (MOA 7+11), Orkestra Intrinsic (MOA 7+11), Heritage (MOA 11), Fenstop (MOA 11), Fosphite (MOA P07), and Phostrol (MOA P07). Repeat applications should be made at 7-14 day intervals depending on the length of control provided by the fungicide selected. Use products from at least two and preferably three different modes of action in rotation according to the label requirements.

In summary, downy mildew detection may not always be straightforward, highlighting the importance of proactive management strategies and vigilant scouting practices. By implementing the measures described in this article, growers can minimize the impact of downy mildew and safeguard their crops. For further assistance with downy mildew identification, resistance management, and application rates, growers are encouraged to consult with a GGSPro tech specialist or your local Griffin sales representative.

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A close-up photograph of a large pile of spherical feed pellets. The pellets are primarily orange-brown, but some are light blue or white. They are scattered on a plain white surface. A black rectangular box is overlaid on the center of the image, containing white text.

**FEED 'EM
ONCE AND
DONE**

By Kaitlyn Sterner, Director of Technical Support, JR Peters

For over seven decades, Jack's Fertilizers has been a trusted friend in the world of plant nutrition for commercial growers and home gardeners alike. With three generations of Peters family ownership spanning 77 years, their legacy of crafting premium plant food in Allentown, Pennsylvania continues to thrive. At the heart of the Jack's Classic retail product line lies Jack's 15-8-23 ClassiCote with Crystal Green®, a time release fertilizer celebrated for its effectiveness and sustainability. Jack's 15-8-23 ClassiCote is a testament to Jack's Fertilizers pursuit of controlled release innovation, quality, and consistency in nutrient delivery.

The nutrient release technology in Jack's 15-8-23 ClassiCote with Crystal Green® feeds plants in a sustainable earth-friendly way utilizing a renewable, slowly available source of phosphorus and magnesium that would otherwise be lost as waste dumped into the Chesapeake Bay. This revolutionary ingredient not only enhances plant growth but also promotes environmental stewardship by repurposing waste into a valuable resource, embodying a commitment to both plant health and ecological responsibility.

Jack's 15-8-23 ClassiCote provides 4 months of long-lasting nourishment to finished plants, available in a 15-gram sample packet, 2lb, or 6lb shaker container. Reducing the need for frequent reapplication, ClassiCote makes plant fertilization less of a chore for the new and seasoned home gardener. This not only saves time and effort but also promotes sustainable gardening practices.

The sulfate coated prills of ClassiCote are designed to disperse nutrients evenly in small increments over time. This unique coating is what makes ClassiCote stand out from

other CRF's on the market. That along with the enhanced micronutrient package make it a complete nutrient blend, capable of supporting consistent healthy growth all summer long. This prolonged nutrient source ensures that plants receive a steady supply of essential nutrients, promoting robust growth and vibrant blooms of finished plants that are being sold direct to the consumer. Whether nurturing flowering ornamentals, container gardens, trees, or vegetables, gardeners can rely on Jack's ClassiCote to provide consistent nourishment throughout the growing season.

With an intentional 2:1:3 NPK ratio, Jack's 15-8-23 ClassiCote is specifically formulated for finished plants. The reduced phosphorus is proven to support compact uniform growth for a sturdier plant. Potassium is elevated to promote fruit development, enhance flower quality, and root development to improve drought resistance. To take a feeding program to the next level, Jack's 15-8-23 ClassiCote can be used alongside other Jack's Classic water-soluble feeds like 10-30-20 Blossom Booster or 20-6-22 Petunia FeED, offering gardeners flexibility in their feeding regimen.

In an ever-changing landscape of gardening products, Jack's Classic 15-8-23 ClassiCote stands as a testament to tradition, innovation, and sustainability. From its rich heritage rooted in three generations of expertise to its eco-friendly formulation and extended nutrient release, Jack's ClassiCote embodies Jack's Fertilizers unwavering dedication to nurturing gardens and fostering a greener, more vibrant world. As gardeners continue to cultivate beauty and abundance, Jack's Classic remains a trusted ally, in nourishing plants for future generations of home gardeners.





What do you need to
AUTOMATE?

SAVE TIME AND MONEY WITH REMOTE IRRIGATION
AND PUMP CONTROLLERS WITH IAS.

As growers we often find ourselves expanding our operations into the back forty acres or other remote locations with no access to internet or sometimes even electricity. Sometimes our transfer pumps are a good 30-minute truck ride from our regular operations. In the past our answer was to use labor to open and close the irrigation valves and send someone out to start and stop the pump. What if there is a way to control irrigation valves from your device without costly internet access?

Griffin's recent partnership with Irrigation Automation Systems (IAS) has made this possible. IAS makes irrigation controllers and remote pump start/stops that use cell technology to communicate with your controller from your device. Unlike internet service, cell service is ubiquitous. If you can answer calls at your location, all you need to do is plug in this controller and wire your valves to get started. Be connected to your irrigation system from your phone, tablet, or computer, with access to your irrigation valves 24/7, from anywhere in the world.

A REAL-LIFE SAVINGS STORY

In the fall of 2021, Neal Farnham, Griffin's New England Nursery Manager and Paul Oparowski, sales rep for IAS met with a large Connecticut nursery to discuss IAS's pump automation products. As the conversation progressed it became clear that this nursery's real pain point centered around irrigation valve control for their perennial crop. At that time a squad of folks were tasked with manually turning on and off valves. This created a Goldilocks dilemma: sometime the crop was getting too much or too little water. Rarely was the right amount applied. To further complicate matters the water team was often pulled away to load or unload trucks and work on other projects. On some days the crop might receive no water at all.

To address their need for more reliable water application, IAS's Irrilink™ controller was prescribed. In March of 2022 an 80-valve system was installed. Now this nursery operation can schedule start and run times according to the water needs of each species. As a result, they have reduced disease pressure due to overwatering. They have decreased water usage. And have reported labor savings of over \$30,000 in the first year! This amount of savings would pay for the system in the first year!

By the end of 2024, this customer will be controlling over 400 valves using Irrilink™ from Griffin and IAS. Overall, this system will produce estimated labor savings of over \$100,000 in 2024!

IAS: TRIED AND TRUE SOLUTIONS

Irrigation Automation Systems was established in 2004. Their initial focus was frost protection for cranberry growers in Massachusetts. Prior to automation, growers stayed awake all night to monitor temperatures in bogs and turn on the pumps once temperatures drop to freezing. This workflow required a small army of people and used a lot of water. IAS solved this problem with the introduction of their pump automation system, the XR3000™. IAS is a staple for cranberry growers throughout the Northeast and Mid-Atlantic states with their reputation for lowering production costs and overhead while increasing yields.

Over the years IAS has expanded its market and product range to offer growers throughout the agriculture sector. Be it automated center pivot pumps and motors for potato growers in Maine or a monitoring system for reel irrigation platforms to alert growers if a spray gun cart tips over or loses pressure. They have also developed soil moisture sensors that be used in conjunction with their valve controllers or as a handheld reader to provide growers a way to spot check water available in the root zone.

CURIOS ABOUT IRRIGATION AUTOMATION?

Together IAS and Griffin focus on consultive sales. Between your Griffin representative's familiarity with your business plan and IAS's innovative technical know-how: we will listen to your needs and concerns and build a system that is right for your business.

In summary, investing in remote irrigation and pump controllers can lead to significant time and cost savings while improving overall efficiency and productivity in agriculture.

**Contact your Griffin Sales Rep or email
Irrigationdept@griffinmail.com to get started.**

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67-2340	ICL Peters 15-0-15 Peat Lite Dark Weather Feed 25lbs.	\$59.20	\$40.46
67-2305	ICL Peters 15-5-15 Excel Cal Mag Special W/ Black Iron 25 Lbs.	\$53.17	\$40.46
67-2364	ICL Peters 20-3-19 Petunia Special W/Black Iron 25 Lbs.	\$55.46	\$40.46
67-2340	ICL Peters 15-0-15 Peat Lite Dark Weather Feed 25lbs.	\$59.20	\$40.46
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67-2316	ICL Peters 20-10-20 General Purpose 25 Lbs.	\$54.28	\$41.13

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IMPROVE WATER QUALITY & OPERATIONAL
EFFICIENCY IN PONDS AND TANKS WITH
NANOBUBBLE TECHNOLOGY

Storing water in irrigation ponds or tanks is common practice, but sustaining water quality in these stored water sources that support robust crops can be challenging.

IRRIGATION POND HEADACHES

Irrigation water in undertreated retention ponds can sometimes be a headache rather than an advantage. Irrigation ponds require regular maintenance and analysis to reduce common problems that impact water quality and cause emitter clogging.

GROWERS WHO USE IRRIGATION PONDS TO STORE WATER EXPERIENCE ISSUES WITH:

- Low levels of dissolved oxygen (DO)
- Algae blooms
- Pathogens and biofilm

These problems can make your pond feel like a liability, requiring more money and time to manage.

IRRIGATION TANK CONCERNS

While irrigation tank water tends to have fewer issues than ponds, water quality impacts crop health and operational efficiency. Issues like biofilm and pathogens are a concern and require regular dosing and cleaning to keep from taking over the greenhouse. Growers also face low DO in tanks, negatively impacting the development of root systems and crop yields.

NANOBUBBLE TECHNOLOGY: A SOLUTION TO GET MORE FROM YOUR IRRIGATION WATER

An emerging technology is helping over 1,000 growers get more from their irrigation water, helping solve common problems in ponds and greenhouses while supporting healthy, robust crops. Nanobubble technology from Moleaer can be applied to treat irrigation pond water to combat common water problems and to irrigation tanks and hydroponic ponds to support healthy crops.

HOW NANOBUBBLES TREAT IRRIGATION PONDS & TANKS WITHOUT CHEMICALS

Nanobubble technology does two things: dissolves oxygen very efficiently and injects high concentrations of nano-sized bubbles.

Most growers know that increased dissolved oxygen levels maximize oxygen utilization by plants and beneficial microbes in the rhizosphere, promoting healthy root development and improving plants' resilience to environmental stressors such as drought and heat. Dissolved oxygen produced by nanobubble technology is more stable than other forms of oxygenation, enabling growers to achieve longer and more consistent dissolved oxygen concentrations in their irrigation water.

In irrigation ponds, elevated DO levels and nanobubbles combat common problems like algae, muck and sediment, pathogens and biofilm, and help improve water quality. Less algae also reduces emitter clogging, a common concern when irrigating pond water. This allows growers to reduce their reliance on fungicides and dosing chemicals and reduces labor for treatment. *continued* ►



HIGH CONCENTRATIONS OF NANOBUBBLES HAVE THEIR SLEW OF BENEFITS AS WELL:

- Improve infiltration of soils and substrates
- Naturally reduce water-borne pathogens (like *Pythium* and *Phytophthora*) and algae
- Control biofilm on irrigation systems
- Enhance nutrient mobility and uptake efficiency
- Support healthier root systems and crops
- Improve crop yields

CASE STUDIES: BENEFITS WITH SWIFT ROI

These benefits have been proven time and again in a variety of crops and applications around the world.



Before Nanobubble Treatment:



After Nanobubble Treatment:

IRRIGATION POND TREATMENT: PROMINENT GREVELINGEN, TOMATOES

A greenhouse tomato grower in the Netherlands, Prominent Grevelingen deployed Moleaer's Clear nanobubble generator to treat their 2-million-gallon irrigation reservoir. Nanobubbles improved the water quality inside the reservoir resulting in a significant reduction in backflushing and a 50% reduction in hydrogen peroxide for cleaning.

IRRIGATION POND TREATMENT: FREEMAN HERBS, ORNAMENTALS & LEAFY GREENS

Freeman Herbs in Canada has a 6.1-million-gallon water basin that supplies irrigation water to their crops. After installing the Moleaer Clear nanobubble generator, they were able to reduce filter cleaning by 50% and saw reduced microbial counts. Also, they had a 50% higher hydrogen peroxide (H₂O₂) residual.

IRRIGATION TANK TREATMENT: HARSTER GREENHOUSES, ORNAMENTALS

Harster Greenhouses, an ornamental grower in Canada, was able to improve their crop cycle consistency while reducing it from 8 to 6 weeks. They were able to improve the quality of the crops, seeing reduced wilt after long transport periods to their customers. They also reduced fertilizer usage by 10%, allowing them to save on the bottom line and reduce environmental impact.

HYDROPONIC POND TREATMENT: LONE STAR LETTUCE, LEAFY GREENS

Lone Star Lettuce, a hydroponic leafy green grower in Texas, deployed Moleaer's Neo nanobubble generator achieving consistently higher DO concentrations at 13 ppm, reduced algae in their ponds and increased crop quality, uniformity, and yield.

In conclusion, Moleaer's chemical-free and cost-effective nanobubble technology empowers growers to maximize the potential of their irrigation water, from treating ponds and tanks to optimizing the root zone environment.

Griffin is a trusted distributor of Moleaer's nanobubble technology, enabling more growers to reap the benefits of this unique irrigation solution. To find out more about Moleaer's technology, visit Moleaer's product page:

<https://www.moleaer.com/products/#horticulture>.

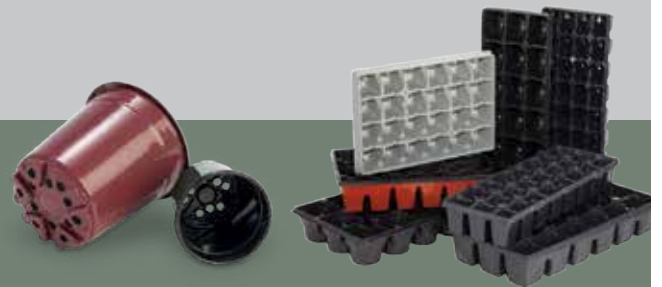


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