

GRIFFIN GAZETTE

Vol. 40 | Issue 2 | 2023



NO GARDEN,
NO PROBLEM
Kitchen Mini Collection

Increase your sales by the
CART LOAD

Optimize your
GROWING
ENVIRONMENT
for Fall and Winter

Caring for your
EQUIPMENT





GRIFFIN GAZETTE

VOL. 40 • ISSUE 2 | 2023

GROWER-SUPPLIES LOCATIONS

1.800.888.0054

Denver, CO	Bridgeton, NJ
Cheshire, CT	Auburn, NY
Stafford Springs, CT	Brookhaven, NY
Ball Ground, GA	Schenectady, NY
Woodridge, IL	Salem, OR
Tewksbury, MA	Morgantown, PA
Gray, ME	Richmond, VA

PLANT & SEED LOCATIONS

General Inquiries

1.800.888.0054

Woodridge, IL
Morgantown, PA

*Articles and material
featured in this Gazette cannot
be duplicated without written
permission. Copyright © 2023
Griffin Greenhouse Supplies, Inc.*

COVER PHOTO:

Pan American Seed, Kitchen Minis Pepper

Savings

on these great retail items!

CART SPECIAL

Buy 7 TDI brand carts,
get the 8th cart 1/2 off!

Order by February 29, 2024,
Net 90 Terms. Take delivery
by December 31, 2023 -
2% early take discount.

Details | Orders must be packaged for and shipped to one location. Dating terms are subject to credit approval. Promotion does not include greenhouse wagons. Pricing subject to change without notice. Subject to global freight surcharge. One Pre-Season Order permitted per customer location. Credit card payments will be charged a 3.5% processing fee. Eligible only for Dealers buying at 2023/2024 Wholesale Pricing. Program is in lieu of any other discount programs.

Order by: 02/29/2024
**Contact your Griffin Sales
Representative for pricing!**

GRIFFIN EXPO



"We believe that nurturing a community of like-minded individuals and businesses is important to both our industry's growth and your success."



Greetings,

Another successful Griffin Expo is behind us, and we want to take a moment to express our sincere gratitude for your participation in our recent Expo held last month in New Jersey. Your presence truly made it an exceptional and memorable event.

The Expo was a great success, and it was your active involvement that added to its significance. We are delighted that you could join us to explore the wide range of offerings and participate in the educational seminars. Your engagement and enthusiasm were truly appreciated.

The event showcased the latest products and services in our industry, and it was a fantastic opportunity for everyone to take advantage of some amazing deals.

The educational seminars, featuring industry experts, provided invaluable insights and knowledge that we trust will prove beneficial to your business.

We believe that nurturing a community of like-minded individuals and businesses is important to both our industry's growth and your success. Your presence at our Expo is a testament to your commitment to this shared goal, and we are grateful for the opportunity to connect with you.

Once again, thank you for your support and participation. We look forward to seeing you at future events and continuing our journey of growth and partnership.

Warm regards,
The Griffin Team





PASSION GROWS PROGRESS

We share a common passion with growers: to cultivate stronger plants, lasting beauty and real results. For more than a decade, that passion has been the driving force behind the Intrinsic[®] brand fungicide portfolio — the first fungicide solutions recognized by the EPA for their plant health benefits. It's why we always push the scientific envelope and our industry forward. So let's put down our roots, watch them grow, and together we'll be Pioneers of Plant Health.

 **BASF**

We create chemistry

 **Intrinsic[®]**
Brand Fungicides

betterplants.basf.us

Always read and follow label directions.
Intrinsic is a registered trademark of BASF.
© 2023 BASF Corporation. All rights reserved.



No Garden? No Problem!

Kitchen Minis

is a collection of naturally compact potted vegetable plants ideal for tabletop use. For consumers without outdoor garden space, who still want to enjoy fresh vegetables with that just-picked taste, Kitchen Minis are an instant solution!



Kitchen Minis are selected for success and bred in lower light conditions, making them ideal for indoor use on a sunny counter or windowsill, as well as outside on a patio table. Shoppers purchase their plants with ready-grown fruit. No need to replant – they just add sunlight and a little water.

Buy. Eat. Repeat!



**THERE ARE SEVERAL
ADVANTAGES TO
GROWING THE
KITCHEN MINIS
COLLECTION:**

- They can be produced almost all-year-round with the right conditions. (See “smarter scheduling” on p.11.)
- Sell them during main vegetable season, as well as extend into shoulder season sales.
- Growers ship and sell plants ready-to-pick with a few ripe fruit.
- Consumers harvest for 4-6 weeks as the rest of the fruit ripens – and are encouraged to shop for more!

Growers should position Kitchen Minis where consumers buy fresh produce and clam-shell culinary herb plants in a grocery store or at garden retailers. They also make a creative gift when dropped into a décor pot or wrap to sell in the indoor floral area of your store or garden center.



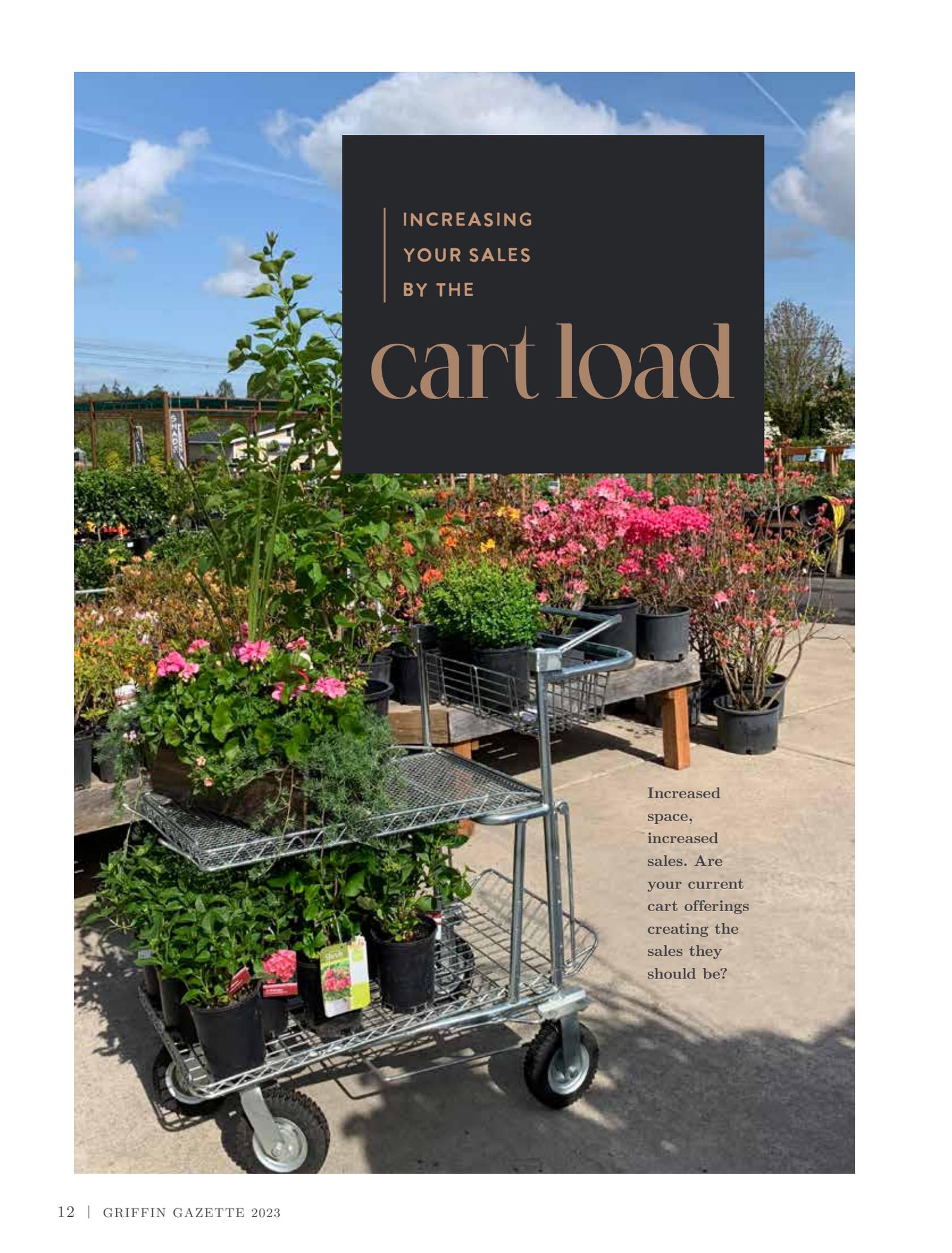
Greenhouses can take advantage of free and print-on-demand posters, bench cards and banners, as well as a consumer website, videos, and social media materials to get the word out on Kitchen Minis® in a big way.

Your greenhouse temperatures and light levels are key factors in predicting high fruiting. To simplify the guesswork, and meet tight market shipping windows, PanAmerican Seed has partnered with university floriculture teams on a new Smart Scheduling Tool. The online tool can be found at www.panamseed.com/smartschedule-km. Use Smart Scheduling tool to plan your Kitchen Minis program today.

In addition to the Smart Scheduling tool, and to provide further consumer awareness, and help greenhouse and retail customers sell the award-winning Kitchen Minis® collection of edible potted vegetable plants, PanAmerican Seed has launched a shopper-

friendly website www.kitchenminis.com. The mobile-optimized site lets consumers browse the full assortment of Kitchen Minis: Tomatoes, Sweet & Hot Peppers, and the NEW Cucumber Quick Snack. Visitors will be inspired to harvest fresh food in a whole new way – whether indoors on a sunny windowsill or outside on a patio tabletop. The website includes plant and fruit details to help shoppers make a buying decision and exposes them to the full assortment. A “Where to Buy” page helps them find product. Retailers can contact PanAmerican Seed to have their store added to the list of locations selling Kitchen Minis. An area for recipes inspires visitors to learn how to use their harvested vegetables.

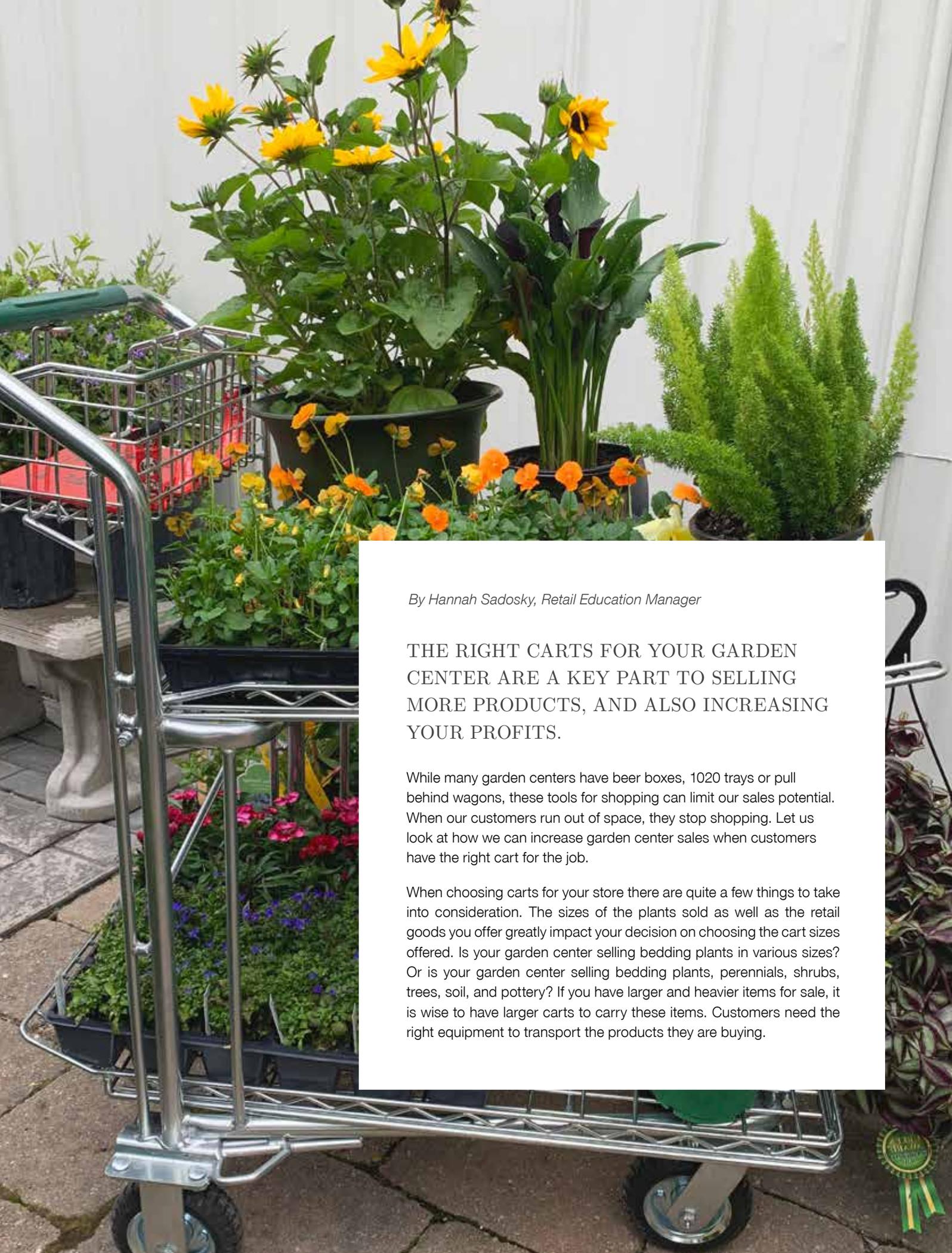
Contact your Griffin sales representative to order seeds or plugs for the entire Kitchen Minis® program!



INCREASING
YOUR SALES
BY THE

cart load

Increased space, increased sales. Are your current cart offerings creating the sales they should be?



By Hannah Sadosky, Retail Education Manager

THE RIGHT CARTS FOR YOUR GARDEN CENTER ARE A KEY PART TO SELLING MORE PRODUCTS, AND ALSO INCREASING YOUR PROFITS.

While many garden centers have beer boxes, 1020 trays or pull behind wagons, these tools for shopping can limit our sales potential. When our customers run out of space, they stop shopping. Let us look at how we can increase garden center sales when customers have the right cart for the job.

When choosing carts for your store there are quite a few things to take into consideration. The sizes of the plants sold as well as the retail goods you offer greatly impact your decision on choosing the cart sizes offered. Is your garden center selling bedding plants in various sizes? Or is your garden center selling bedding plants, perennials, shrubs, trees, soil, and pottery? If you have larger and heavier items for sale, it is wise to have larger carts to carry these items. Customers need the right equipment to transport the products they are buying.



**REMEMBER,
INCREASED
SPACE,
INCREASED
PURCHASE
POTENTIAL**

As business owners we should provide our consumers with the tools to source everything they need for their plantings. Profitable garden centers have both larger and smaller shopping carts to service all consumer shopping styles. Remember, increased space, increased purchase potential. Some gardeners make large purchases at the beginning of the season and then may come back here and there for fill ins. Another purchasing style involves instant gratification. Millennials, Gen X, and Gen Y have grown up in the culture of instant gratification and we are seeing their gardening purchases reflect that. Lastly, we have our budget friendly gardeners that come in once a year for a few items.

Push carts for shopping make gardening accessible to the elderly, disabled and even young families, when carts have the child seat option. The sizes between your benching both in- and outdoors is an important factor when choosing carts for your garden center. Smaller aisles or spaces may require a cart with a sharper turn radius. Making sure your shopping carts have good maneuverability, the ability to ride smoothly over gravel or rough terrain is equally important. The larger the wheel size, the easier the cart glides over gravel and the occasional hose.

Location, location, location. Where do you have your carts staged? Are they easily visible? The front entrance to your garden center not only invites your customer inside, but it is where shopping carts should be. When a customer must spend time searching for a shopping cart, they become instantly distracted from the buying experience they came to do. Where we place additional carts around the garden center also impacts sales. For example, we can also stage shopping carts in additional areas through the journey of your store, like pottery, soils, or shrub area. If a cart is readily available, customers are apt to start a cart instead of walking away from the purchase.



Millside Cart



LOAD CAPACITY & NESTING

- 20" x 38" poly deck load space
- 300 lb load capacity (when evenly distributed)
- Does not nest

ABOUT

- More options available
- 4" x 10" pneumatic tires for gentle, quiet ride
- Anti-tip, auto-type steering
- Extra-length D shape handle for effortless pulling

SHIPPING

- Ships boxed must assemble wheels and handle
- Select styles available in Griffin warehouses, shop "carts" on Griffins.com

TDI



LOAD CAPACITY & NESTING

- 9 sqft of load space
- 800 lb weight capacity
- Nests every 9.25"

ABOUT

- Zinc plated frames with protective clear coat finish ensures a long-lasting appearance
- Wheels and casters have been adapted to suit every type of surface and weather condition
- Wheels and casters are not welded to the frame - which means if they should wear out they can easily be replaced
- Easy to maneuver, great for tight turns
- Many styles and options available (examples: add brakes, change wheel sizes, child seat upgrade)
- Child Seat is bolted to frame

SHIPPING

- Ships fully assembled on a pallet
- Preferred minimum order quantity 8 carts
- Ships direct, FOB shipping (contact your Griffin Sales Representative for a quote)

Wellmaster



LOAD CAPACITY & NESTING

- 8.34 sqft of load space
- Per Cart Rated at 300 lbs
- Per Shelf Rated at 250 lbs
- Nests every 15"

ABOUT

- Hot dip galvanized steel with powder coated black finish on baskets
- Wheels and casters are directly attached to the aluminum frame this connection creates more stability and less bounce
- Many styles and options available (examples: change wheel sizes, child seat upgrade)
- Child seat is NOT bolted to the frame

SHIPPING

- Ships boxed and must be assembled.
- Feature easy assemble bolt together design)
- Select styles available in stock
- OR Ships Direct FOB (contact your Griffin Sales Representative for a quote)



OPTIMIZING YOUR GROWING ENVIRONMENT

FOR FALL AND WINTER
PRODUCTION

By Allie Allgeyer and George Grant, GGSPRO

Cost savings in fall and winter production have always been a consideration and many growers attempt to reduce heating and ventilation efforts to meet financial goals. As the age-old saying goes, “save now, pay later.” Understanding how relative humidity, heating and ventilation, and air flow can prevent nutrient deficiencies, disease outbreaks, and various postharvest problems will ultimately support your most cost-efficient season by securing a healthy crop. This article will help you to understand common issues that are associated with improper environmental management during this time of the year include Pythium root rot, *Botrytis*, and calcium deficiency.

THE VALUE OF HEATING, VENTILATION, AND AIR FLOW

There are many cultural methods that can be used to modify the production environment and control humidity. Heating and venting are essential tools to help dry out the greenhouse during fall when fungal pathogens can thrive. Growers might be tempted to think they are saving money by avoiding the use of heat, but with improper atmospheric control, growers will feel more costs long term in increased fungicide inputs, longer production times, and greater crop losses. Reliable heating and venting systems can be actively used on cold and overcast days to ensure proper air exchange within the greenhouse. For poinsettia producers, this becomes especially important during the bract development stage to ensure adequate expansion. Moreover, when plant canopies become denser with foliage, leaves can easily trap moisture. Maintaining proper air flow with adequate horizontal air flow (HAF) and vertical air flow (VAF) fans reduce the chances of disease proliferation. Both types of circulation fans have different functions. HAF fans work best during the day to circulate air while the house is benefitting from solar gain, while VAF fans mix the layers of air that form in the greenhouse at night when cool air stays low in the crop canopy and the hot air rises into the gable. These valuable tools are complementary as HAF and VAF fans can be utilized to remove humidity from the plant canopy, while exhaust systems expel humid air from the greenhouse. Cracking a roof vent or flipping on an exhaust fan in the gable peak are both effective methods for humidity control. It is also worth noting that although growing within a “buttoned up” greenhouse environment helps trap in heat on cool sunny days, photosynthesizing plants can quickly deplete carbon dioxide levels within the growing space if active ventilation is not used to bring in ambient CO₂.

COOLER WEATHER IMPACTS MOISTURE MANAGEMENT

Relative humidity affects plant transpiration and gas exchange, and allows for plants to photosynthesize, so managing the moisture content in the greenhouse is essential to maintain plant health. As the temperature falls, air can hold less and less moisture, so cold air will have a higher relative humidity than warm air at the same absolute humidity. Higher relative humidity environments coupled with cloudy cool weather reduces both transpiration and growing media dry down rates. Media staying saturated for extended periods of time can lead to root borne pathogens like Pythium. The use of radiant heat in the floor or bottom heat on the bench will also help dry out the media and help prevent root rot diseases. Segway O (MOA 21), Fenstop (11), Banrot (I/14), Truban (14), Terrazole (14) and biological-based fungicides such as Cease (BM02), Stargus (BM02), Triathlon BA (BM02), RootShield Plus WP/G (BM02), and Obtego (BM02) are all effective options for Pythium management. See Figure 1 for an example of roots affected by Pythium.

THE RELATIONSHIP BETWEEN RELATIVE HUMIDITY, BOTRYTIS, AND CALCIUM

Relative humidity over 94% and continuous leaf wetness for 12 hours promotes *Botrytis* spore germination, however, *Botrytis* can begin sporulating within as quickly as 2-3 hours under the right conditions! This problem might sneak up on growers who do not take proactive measures to control latent conditions, which might not be recognizable as an issue until it's too late.

Culturally, air movement with HAF fans, proper plant spacing, and irrigation practices that allow foliage to dry before nightfall are important tactics used to reduce condensation, and thus, *Botrytis*. Maintaining nightly greenhouse temperatures above 60 degrees F will reduce the possibility of condensation forming on leaf surfaces. Removing and disposing of diseased plant material properly from the greenhouse is key in eradicating the spread of diseases. To do this, scouting will be necessary to identify the first signs of damage. *Figure 2* shows early *Botrytis* damage to poinsettia leaves.

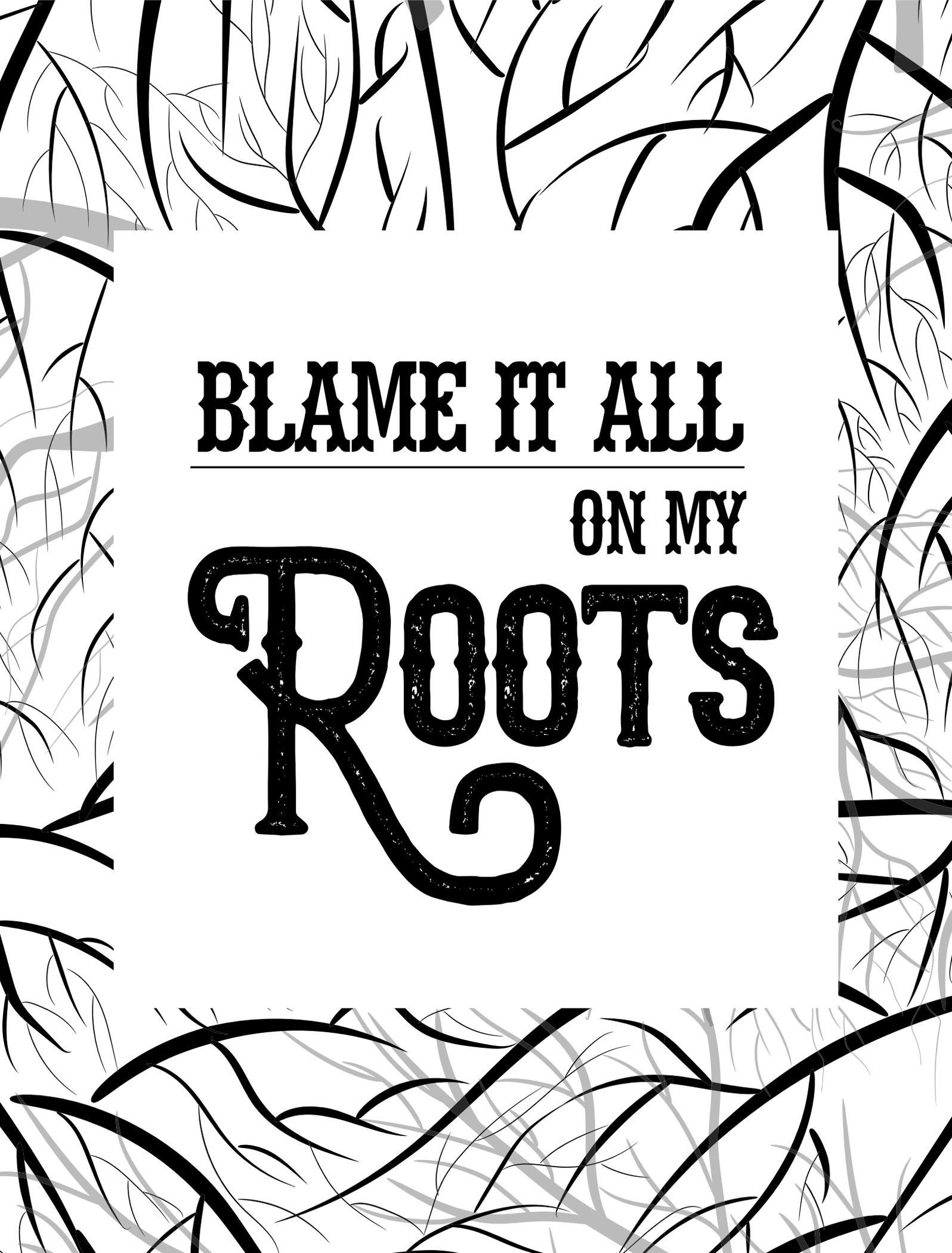
With cooler growing conditions, plant transpiration and overall nutrient uptake rates decrease. Calcium is a secondary macronutrient that relies on plant transpiration to be translocated to newly developing foliage and flowers/bracts. Calcium chloride dihydrate can be foliar applied (e.g., 0.5 oz per 3 gal or 1 lb per 100 gal) with CapSil (1/2 tsp per gal or 8 oz per 100 gal; 1/4 tsp per gal or 4 oz per 100 gal on poinsettia bracts) to address calcium deficiencies, help strengthen plants to hold up in shipping, as well as provide additional support in preventing *Botrytis* infections. Even with these cultural methods in place, *Botrytis* can still be a resilient pathogen. Proper rotation between effective fungicides such as Affirm (MOA 19), Astun (7), Postiva (3/7), Mural (7/11), Pageant (7/11), Medallion (12), Palladium (9/12), and BotryStop (NC) are important from a preventative and curative standpoint.



Figure 1.
Pythium on Poinsettia
Root System
Distinguished by Brown
and Disintegrating Roots



Figure 2.
Early Stages
of *Botrytis* on
Poinsettia



BLAME IT ALL

ON MY

Roots

Build a strong foundation to help your plants achieve peak performance

Producing high-quality plants is not for the faint of heart and most growers face their fair share of challenges throughout the growing season. Even in a so-called “controlled environment,” plants are often subject to a wide array of external stressors—and most are not so easy to control. From abiotic stress caused by fertility issues, drought, cold, heat, and mechanical injury to biotic stress caused by insects and diseases, we push plants to their physical extremes. In an effort to help your plants get through the stressful bits, set them up for success with a strong foundation. And when it comes to plants, the best foundation is a healthy, well-established root system.

BASF fungicides are powerful by design — to deliver proven plant health benefits including superior disease control. Our **Intrinsic® brand fungicides**, including **Pageant® Intrinsic brand fungicide** and **Empress® Intrinsic brand fungicide**, prime plants for resilience and prepare the whole plant, particularly roots, for difficult conditions. These plant health benefits help plants overcome stressful events through enhanced root system retention. And what that means to you is a stronger, healthier root system that powers plants to weather the “Stress Storms.”

Apply **Pageant Intrinsic brand fungicide** to unrooted cuttings and seedlings during propagation to control disease, speed up callous formation and enhance root development. Drench rooted plugs and transplants with **Empress Intrinsic brand fungicide** to prevent major root diseases and grow dramatically longer, denser root systems.

Pythium, Phytophthora, Rhizoctonia, Fusarium, and Berkeleyomyces (formerly *Thielaviopsis*) are the key players when it comes to root diseases. Diseases caused by these pathogens are easily overlooked or mistaken for other issues (think nutritional deficiencies and irrigation woes) until it's too late. There is no “cure” for root rot, so prevent disease before it starts with preventive fungicide applications.

Let Intrinsic brand fungicides serve as the foundation of your spray program. Pair with broad-spectrum fungicides like **Avelyo® fungicide**, a next generation demethylation inhibitor, with exceptional plant safety, or specialist products like **Orvego® fungicide**, a *Phytophthora* specialist with dual-active, anti-sporulant activity, to boost a spectrum of disease control. Start strong with a healthy and robust root system to avoid costly losses later in production.

Let's put down our roots and watch them grow. Together, we'll be **Pioneers of Plant Health**.

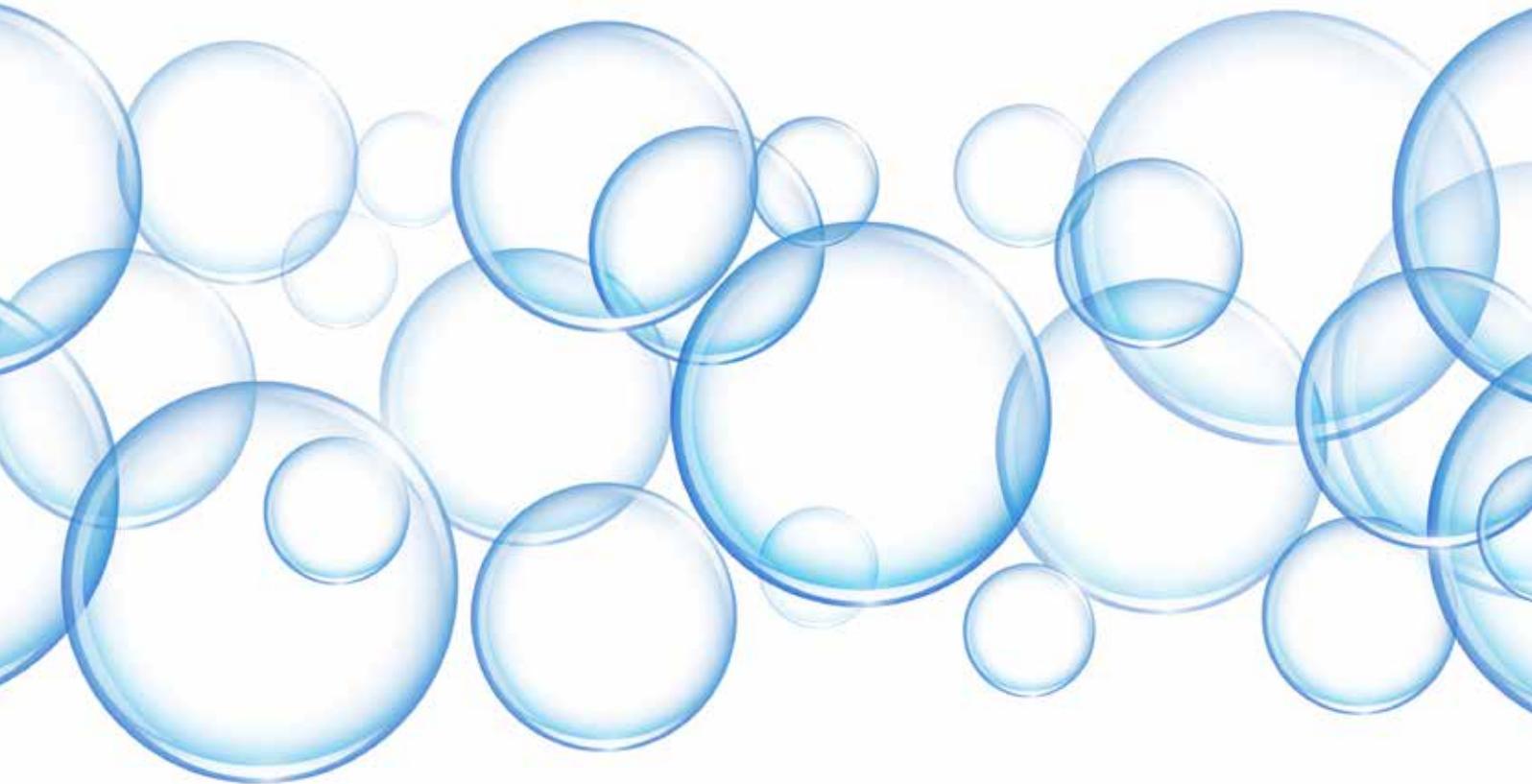
Article submitted by BASF

MANAGING DISEASE WITH CHEMICAL-FREE NANOBUBBLE TECHNOLOGY

Article submitted by Moleaer

Growers use Integrated Pest Management (IPM) regularly to prevent and control pests and diseases in their growing operations, applying a variety of tools, both preventative and reactive. IPM is key to reducing large onsets of any pest that could result in crop loss.

In horticulture, waterborne pathogens and fungi that cause diseases such as Fusarium, Pythium and Phytophthora are especially critical to prevent.



THE DISEASE TRIANGLE

- **Host:** The plant species that is susceptible to a particular disease and provides a habitat for the pathogen to grow and reproduce.
- **Pathogen:** A disease-causing microorganism that invades and damages the host plant.
- **Environment:** The external conditions, including abiotic and biotic factors, that influence the interaction between the host and pathogen, affecting disease development and spread.

All three must be present to elicit a disease to occur. Since it's often hard to remove the pathogen and impossible to remove the host plant, most IPM strategies focus on controlling the environment. Traditionally, controlling the environment for waterborne pathogens came from prevention tactics like water quality, reduced biofilm and cleaner growing medium.

HOW NANOBUBBLES REDUCE DISEASE

Nanobubble technology supports all three points of the Disease Triangle. Moleaer's nanobubble technology supersaturates irrigation water with dissolved oxygen and injects hundreds of millions of electrochemically charged nanobubbles that alter the properties of water to deliver multiple benefits.

Nanobubbles measure 70-120 nanometers in diameter, roughly 2500 times smaller than a grain of salt. They possess neutral buoyancy, hovering uniformly within a liquid and constantly providing natural oxidative effects.

ENVIRONMENT

High-quality irrigation water that's well-oxygenated and properly disinfected plays an important role in limiting root diseases. Nanobubble technology efficiently increases dissolved oxygen (DO) levels in water, promoting an aerobic environment less conducive to waterborne pathogens and that promotes beneficial bacteria.

Dissolved oxygen from 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.

Because of the nanobubble's hard surface, they also help to scour biofilm from irrigation systems and cover irrigation piping to reduce reformation. Biofilm is pervasive and harbors root pathogens.

PATHOGEN

Nanobubbles produce mild oxidation when they encounter contaminants in the water, directly reducing waterborne pathogens and lowering disease pressure.

NovaCropControl, a research facility in the Netherlands, tested Moleaer's generators on greenhouse tomatoes and found that nanobubbles reduced pathogens by 75%. At Delphy Research Institute similar results were achieved for greenhouse strawberries with 74% lower Pythium counts. Moleaer's customers have achieved up to 80% disease reduction and fewer cleaning and dosing chemicals.

HOST

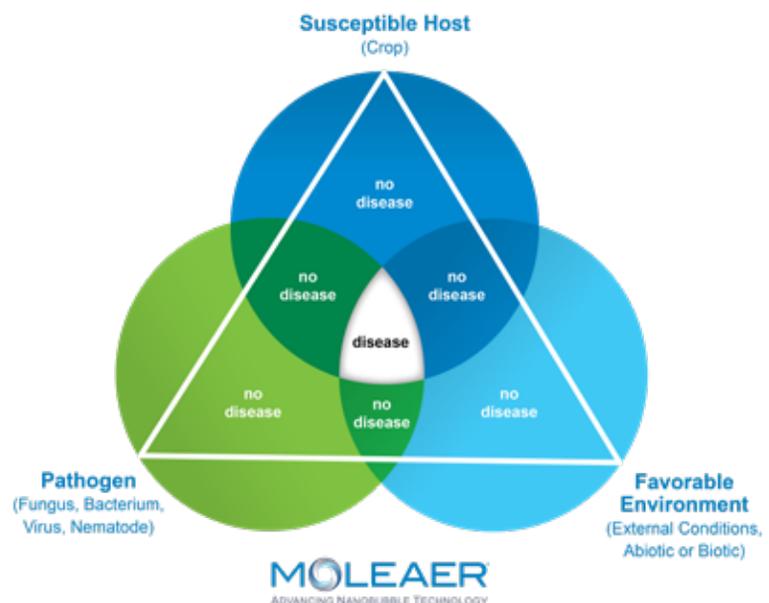
Increased dissolved oxygen levels maximize oxygen utilization by plants and beneficial microbes in the

rhizosphere, promoting healthy root development and improving plants' resilience to environmental stressors such as drought and heat. Healthier, less stressed crops are less susceptible to pests and disease.

Nanobubble technology from Moleaer can be installed on any stored water, including day and fertigation tanks, reservoirs or basins and drain tanks. Installation and integration are simple and growers see results soon after installation.

Overall, these benefits have allowed Moleaer's customers to achieve increased and better-quality crop yields, reduced crop cycles, lower fertilizer and chemical inputs and more.

To learn more about Moleaer's technology, visit our website at www.Moleaer.com. Griffin Greenhouses is an authorized distributor of Moleaer nanobubble generators.



A large greenhouse with rows of plants and overhead lighting systems. The structure is made of white plastic covering a metal frame. The plants are green and growing in rows. The lighting systems are mounted on the ceiling.

Caring For Your Equipment

BEST PRACTICES FOR BEST PERFORMANCE

By CEA Division Staff

Prevention is a common theme in horticulture. We scout our crops and use preventative sprays to avoid disease, insect, and mite outbreaks. We test our media pH and EC to understand if we are properly meeting crop needs. And we clean our production spaces to avoid carryover pests. Best practices call for us to apply the same mentality to our equipment.

Some of the equipment CEA growers rely on the most for daily needs in our production spaces include lights, injectors, and sprayers. Preventative maintenance is something that comes naturally to most and is often formalized with maintenance plans. As much as we try to capture everything, it's easy to overlook some common mistakes that can result in damage, down time, and disappointment. Let's review some issues that pop up regularly for sprayers, Dosatron injectors, and lights.

Avoid storing spray solution in your spray equipment

WHY? First off, pesticides should only be stored in properly labeled containers, and your spray tank just isn't one of those! Beyond that, leaving a chemical solution in a sprayer can lead to clogging, corrosion, and early wear of seals, gaskets, and other key componentry.

HOW? Mix only what is needed for the application and be sure to allocate enough time to complete the job, which includes cleaning the equipment.

Avoid using RO water to mix your solution and clean your equipment

WHY? Water is a universal solvent, and RO water is a really good solvent. Due to its purity, RO water can actually corrode brass parts, causing early failure and leaching metals out of brass componentry.

HOW? Use municipal tap water, tested well water (check for heavy metals and other contaminants before using on cannabis and food crops), or distilled water to mix your solutions.

Use sprayers with stainless steel componentry

WHY? A few of the key chemistries used for sanitation have corrosive action. Over time, use of these products can damage brass componentry for early wear and leach heavy metals into the spray solution. This isn't a factor for crop health for ornamental crops, but it's a problem for consumer health for cannabis crops.

HOW? Sprayer manufacturers, such as Dramm and Siebring, recognized this problem years ago and have stainless steel options for their equipment.

Release system pressure during any pauses in and after operation

WHY? Systems are not designed to stay under pressure for long when the sprayer is not in operation. High pressure without solution flow can force the spray solution into soft metals, causing premature wear.

HOW? Your sprayer manual will provide clear instructions on how to manage system pressure. If you have any questions, get in touch with your Griffin sales rep, your Griffin equipment rep, or the manufacturer.

Thoroughly clean and rinse the solution path after use

WHY? Not cleaning and rinsing spray equipment can have the same effect as storing a spray solution in the equipment: it can cause corrosion and premature wear on componentry. Residual chemistry is also a problem for the next chemistry used, as it can result in an incompatibility or an unintended chemical application.

HOW? Apply the entire volume of the spray solution to the crop. Rinse the sprayer with water, wash with a soapy solution, and rinse with clear water. Be sure to run the soapy solution and clear water through the entire spray path.

SPRAYER SUCCESS

Operators should read user manuals and follow all instructions for operation and routine maintenance of spray equipment. This list provides tips that cross all sprayer types.



DOSATRON DEPENDABILITY

Dosatron units are used to inject a range of products for different applications. Fertilizers, acids for pH management, fungicides and insecticides for root zone application, beneficial nematodes, and sanitation products can all be mixed with a Dosatron.



Keep the suction hose foot filter in place

WHY? The filter is your safety net to prevent particulates and debris from getting into the fluid path and causing premature wear of the injector.

HOW? Simply read the instruction manual and ensure the strainer/filter is installed properly.

EXCEPTION: The foot filter is often removed when applying nematodes as a safeguard for survivability and to prevent clogging.

Choose the right seals for the job

WHY? Products with high pH and products containing peroxyacetic acid (PAA) can cause standard seals to fail.

HOW? Use Viton (VF) seals for products with acid to neutral pH (pH 1-7), including most fertilizers, pesticides, supplements, and surfactants. Use Aflas (AF) seals for high pH products (pH 7-14), including calcium carbonate, potassium carbonate, and liquid lime. Use Kalrez (K) seals for PAA products, such as ZeroTol 2.0 and SaniDate products.

Perform maintenance every 6-9 months (Mini) and every 9-12 months (Injection Seal)

WHY? When seals and O-rings wear out, you lose accuracy. Wear is normal, so get ahead of it with simple maintenance.

HOW? Keep Dosatron Mini Maintenance Kits and Injection Seal Kits on hand. Kits include replacement seals, springs, and O-rings along with instructions and proper lubricant for your Dosatron.

Clean your reflectors and LED lenses regularly

WHY? Light output can be reduced up to 10% due to the buildup of dust and dirt on the LED lens and/or reflector.

HOW? For LED fixtures, lightly dampen a clean, soft cloth with a vinegar and water solution (1:100 ratio) and use it to gently wipe down the lens. Avoid using abrasive cleaners.

SPECIAL NOTE: While fixtures are designed for use in a greenhouse environment and will tolerate humidity and drips, they should not be cleaned with a high velocity water stream or a pressure washer.

Relamp your HPS fixtures every 10,000 hours

WHY? HPS bulbs normally lose 1% output for every 1000 hours of operation. Decreased light intensity will eventually cause a reduction in crop growth and yield.

HOW? Reach out to your Griffin sales rep and share the model of your HPS fixture. We'll get you options.

Replace your LED fixtures based on their rated lifetime

WHY? The diodes in your LED fixtures will wear out over time, reducing light output. A 1% reduction in intensity results in a 1% reduction in yield. The fixture's PAR maintenance value indicates the amount of light output deterioration expected after a period of time. For example, if a fixture has a lifespan value of L90 at 50,000 hours, this means that 90% of the light output is expected to still be available after 50,000 burning hours. The L90 is usually the replacement point.

HOW? Reach out to your Griffin sales rep to get the process started. We'll work with you to understand your needs and goals, then connect with one of our trusted suppliers to get you the best solution for your unique needs.

Manage your electrical service

WHY? LEDs are sophisticated pieces of equipment with advanced electronics. These components can be sensitive to power surges and other inconsistencies in electrical supply. Ensure that supply to your facility is stable, take steps to reduce interference in your lines, and put equipment in place to protect your lights from power surges caused by internal and external sources.

HOW? Talk to a licensed electrician with experience installing advanced LED lighting, preferably in horticultural applications. Follow all manufacturer installation instructions and consult with the Griffin and manufacturer's support team as needed.

LIGHTING LESSONS

Lights are a long-term investment, so it makes sense that they are maintained carefully in a way that extends their life as much as possible.





LOOKING FOR MORE WAYS TO SAVE?

No need to think outside the box.

GreenTrust® 365 has you covered.

The same great program, now with even more ways to save:



ENHANCED Double Up Bonus:

Now double your rebate on Palladium®, Postiva™ and Mural® fungicides plus Mainspring® GNL insecticide during EOP.



NEW Multipak:

Save 15% with the new Postiva and Mural fungicides Multipak.

Order between Oct. 1 – Dec. 8 for the best savings of the year!



See how to maximize your savings, especially in OCTOBER, at GreenTrust365.com/Calculators



@SyngentaOrnamentals



All photos are either the property of Syngenta or are used with permission.

© 2023 Syngenta. **Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties and/or may have state-specific use requirements. Please check with your local extension service to ensure registration and proper use.** GreenTrust®, Mainspring®, Mural®, Palladium®, Postiva™, the Alliance Frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. All other trademarks are the property of their respective third-party owners.



PERFECT YOUR PROGRAM WITH POSTIVA

Complete your disease management strategy with the unique formulation in Postiva™ fungicide.



Powered by two active ingredients (FRAC groups 3+7), making it an excellent addition to disease management programs.



Rapidly absorbed into plant tissue creating a rainfast barrier of protection to prevent infection and disease progression.



Provides long-lasting control of Fusarium, powdery mildew, Botrytis, leaf spots, black spot and rust, as well as suppression of certain bacterial diseases.

Learn more at [GreenCastOnline.com/Postiva](https://www.GreenCastOnline.com/Postiva)

 @SyngentaOrnamentalsUS  @SyngentaOrnamentals



Postiva™
Fungicide

syngenta®

All photos are either the property of Syngenta or are used with permission.

© 2022 Syngenta. **Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties and/or may have state-specific use requirements. Please check with your local extension service to ensure registration and proper use.** GreenCast®, Postiva™, the Purpose Icon, the Alliance Frame and the Syngenta logo are trademarks of a Syngenta Group Company.



Premium products.
Superior results.

Csmocote[®]

ICL

growwithosmocote.com
Success is in the bag.



Trialed
and true.

Osmocote[®]

The most trusted name in fertilizer.

In today's ever-evolving marketplace, it's good to know there are some products you can absolutely rely on. That's why generations of professional greenhouse and nursery growers have depended on Osmocote. 50+ years of trials, testing, and development have resulted in the world's most advanced line of controlled release fertilizer.



growwithosmocote.com

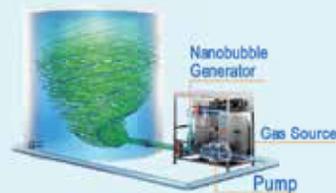
DISCOVER WHY OVER 500 GROWERS ARE USING NANOBUBBLE TECHNOLOGY IN THEIR IRRIGATION SYSTEMS



One Tool for Healthier, More Resilient Crops:

- ✔ Improve water quality and dissolved oxygen levels
- ✔ Reduce algae and biofilm
- ✔ Suppress water-borne pathogens
- ✔ Increase nutrient uptake efficiency
- ✔ Reduce crop cycles
- ✔ Reduce inputs like fertilizer and chemicals

Easily Integrates Where You Need it Most:



- ✔ Day tank
- ✔ Drain tank
- ✔ Drip system
- ✔ Reservoir
- ✔ Hydroponics

NEON NANOBUBBLE GENERATOR

- ✔ Simple to install and maintain
- ✔ Oxygen and standard versions
- ✔ Programmable automation controls
- ✔ Operating sensors and alarms
- ✔ Integrated real-time DO monitoring



Scan the QR code to learn more about Moleaer's nanobubble generators

OVER 2200 CUSTOMERS IN 50+ COUNTRIES USE OUR PRODUCTS



PROMIX®

LESS WORKING MORE GROWING

TAKE IT EASY



FOLLOW @PROMIX_CANNABIS



VISIT TRY.PTHORTICULTURE.COM/OTGB

The information in this document was up-to-date at the time of printing. Because of its continuous improvement policy, Premier Horticulture reserves the right to halt manufacturing, change products, or revise technical data and prices without further warning or liability. Product availability may vary depending on the territory. Premier Horticulture is not responsible for the use of its products in territories where cannabis is prohibited. © 2023 Premier Horticulture Ltd. All rights reserved. PRO-MIX® is a registered trademark of Premier Horticulture Ltd.



PROMIX®

LESS WORKING MORE GROWING

GOOD TO THE COIR



FOLLOW @PROMIX_CANNABIS



VISIT TRY.PTHORTICULTURE.COM/OTGB

The information in this document was up-to-date at the time of printing. Because of its continuous improvement policy, Premier Horticulture reserves the right to halt manufacturing, change products, or revise technical data and prices without further warning or liability. Product availability may vary depending on the territory. Premier Horticulture is not responsible for the use of its products in territories where cannabis is prohibited. © 2023 Premier Horticulture Ltd. All rights reserved. PRO-MIX® is a registered trademark of Premier Horticulture Ltd.



GRIFFIN