



- 2021 -

CONTROLLED ENVIRONMENT AGRICULTURE
CATALOG

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Plant-Prod MJ™

ABOUT GRIFFIN

Griffin is a partner to horticulture professionals. Family owned and operated since 1947, we apply our knowledge, experience and resources to enhance customer success from production to retail.

End-to-end solutions are our specialty. We represent the industry's leading flower breeders and producers, spanning seed and vegetative, bedding and potted crops, ornamentals and edibles. Our grower supplies offering includes reliable inputs and equipment to help your crops thrive through all production stages. Our equipment expertise includes greenhouses and all the equipment needed for crop production. Finally, our quality retail products drive add-on sales for you, while enhancing consumer success and enjoyment.

Our Controlled Environment Agriculture (CEA) Division brings this mind-set to food, hemp and cannabis. Our team incorporates proven and new horticultural products to help producers and cultivators achieve quality goals with efficiency and profitability. We also bring commercial grade supplies to retailers supporting the rapidly expanding consumer and hobbyist interest in these crops. The CEA team draws from Griffin's vast resources, experience and supplier partners. From structures and equipment to crop inputs, we support all aspects of production and cultivation.

Learn more about our company and our full assortment of products serving CEA, ornamental growers, nursery operations and retailers by visiting our website at www.griffins.com. Fans of social media can stay in touch with us on LinkedIn, Instagram and Facebook.

A LEGACY OF QUALITY AND SERVICE

Charlie Griffin founded his namesake company in 1947 with a simple vision: to maximize products and service for his customers. Originally headquartered in Reading, Mass., his was a one-man operation with a limited offering, delivering supplies to growers in the local community.

Ken Hyslip, Sr., first became an employee of Griffin Greenhouse Supplies in 1952, as a truck driver at the age of 17. At the time, Griffin operated from a single location with no more than 5 employees. He went on to buy the business from the Griffin family in 1968. Under his leadership, Griffin grew steadily across the East Coast.

Today, Griffin thrives among horticulture's premier distributors, serving growers and retailers nationwide. Under the leadership of the Hyslip family, the business has earned a reputation for operational excellence, quality products and first-class customer service.

We know you have many choices among supplier partners, and we sincerely thank you for your business. We look forward to serving you in the months and years ahead.

GRIFFIN CUSTOMER SERVICE

Our goal is simple: to meet your needs and exceed your expectations. From the time you place your order until it's delivered to your location, our team works to treat you with the utmost care every step of the way.

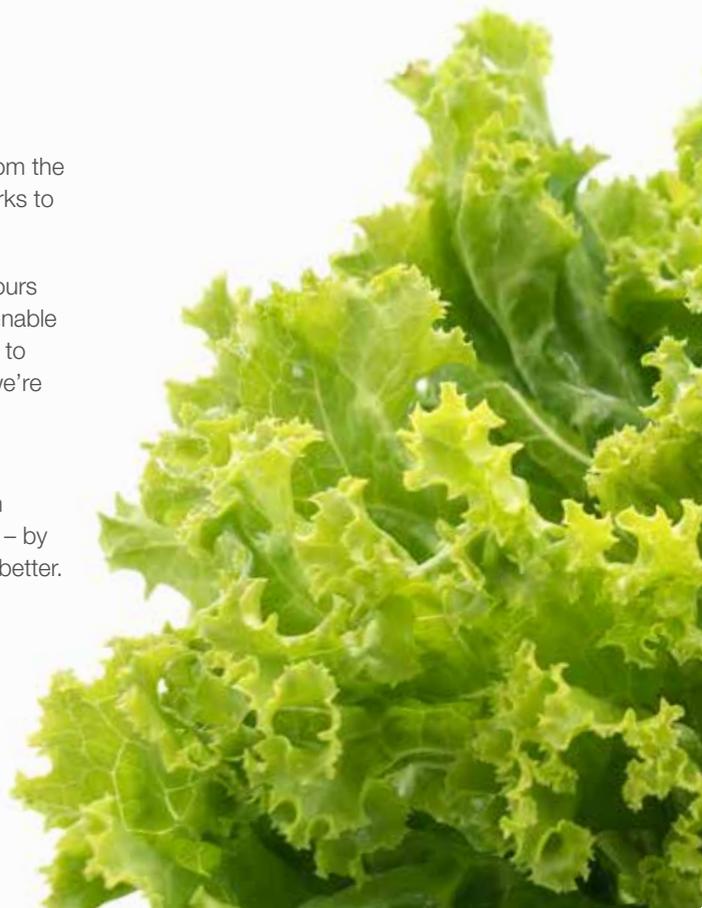
We strive to deliver every order on time and in full. We'll contact you 24 hours before your delivery date to ensure you're ready for the product. If we're unable to honor a delivery date, we'll notify you in advance and make every effort to reschedule at a time that's convenient for you. In the event of any issue, we're dedicated to working with you and our suppliers as needed to find a swift resolution.

Your opinion matters to us! Customer feedback is key to helping our team deliver on our service pledge. Please don't hesitate to contact me directly – by phone or e-mail – with any questions or input that may help us serve you better.

On behalf of the entire Griffin team, we thank you sincerely for your business and look forward to growing with you in the season ahead.

Chris Layne, Corporate Customer Service Manager 978.513.7023 | clayne@griffinmail.com

FRONT COVER IMAGE: Belle, Photo Courtesy of and Bred by The Hemp Mine.







CULTIVATION/PRODUCTION SUPPLIES

Griffin's roots are in production supplies, and they remain the backbone of our company today. We're proud to offer reliable inputs and equipment to help your crops thrive through all growing stages. Look to us for containers, growing media, crop protection products, nutrients and more from the manufacturers known to horticulture professionals. Whether you grow hydroponic lettuce or warehouse cannabis, our top quality, highly consistent inputs are used by experienced growers and cultivators across the country. These are professional products for large-scale, commercial operations, proven by years of use by our ornamental and nursery customers. Our 16 branch locations service customers nationwide with convenience and efficiency. Shop all of our grower products and place your order with your Griffin sales representative or on www.griffins.com.

STRUCTURES AND EQUIPMENT

From greenhouses and production spaces and cultivation infrastructure to labor saving equipment, our equipment specialists will recommend the best solution based on your needs. We don't do "one-size fits all". Instead, each solution is uniquely tailored to you with an eye towards efficiency, because efficiency is at the core of your profitability.

RETAILER SUPPORT

Griffin is the independent retailer's best source for consumer-facing and hobbyist products with decades of experience working with independent garden centers. We make it easy for retailers, with low order minimums, efficient shipping solutions and our GreenBack Rewards program. Place your order with your Griffin sales representative, our CEA customer service team, or on www.griffins.com. Count on us for seasonal promotion ideas, merchandising best practices and space-planning tips to maximize your display areas and drive sales. With increasing consumer interest in home-grown food and cannabis, you can expand your offering into new areas, such as pottery and other consumer-centric gardening tools that appeal to a wide audience. Shop all of our retail products and place your order with your Griffin sales representative or on www.griffins.com.

GREEN GOODS

Griffin is a full-service broker of live goods to professional growers. Our CEA assortment includes hemp, vegetable and herb seed and vegetative material, seedlings and liners from producers that meet our high expectations for professionalism and horticultural practices. We're uniquely committed to the seed business, with a state-of-the-art seed operations facility filled with ornamental, vegetable and herb seeds, and now hemp. Ask your Griffin sales representative how we can help you.

TECHNICAL SUPPORT

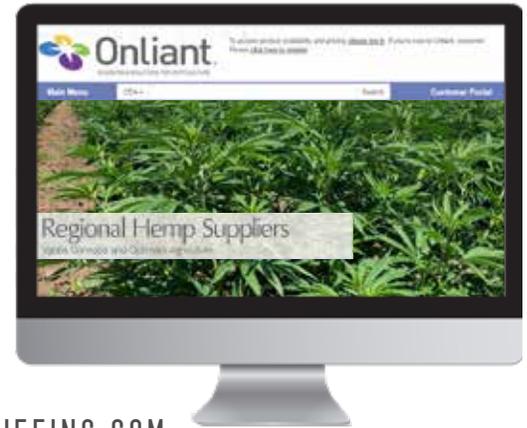
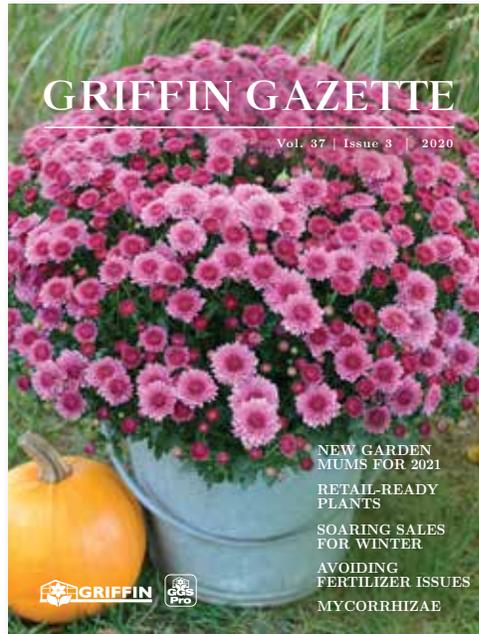
GGSPRO is our industry-leading, in-house technical services team. With more than a century of combined experience, GGSPRO delivers prompt, practical and accurate support to Griffin customers nationwide. The team's areas of expertise include: crop culture, sanitation protocols, plant physiology and pathology, chemical controls, biological control agents (BCAs) and crop nutrition. GGSPRO endorses a holistic approach to plant protection, utilizing a mix of cultural practices alongside chemical and biological controls to manage pests and diseases. Visit www.griffins.com/ggspro or Contact GGSPRO at **800-888-0054 ext 89200**.

CONNECT WITH US

GRIFFIN GAZETTE

Published especially for our customers, the Griffin Gazette is loaded with news you can really use. Our team serves up timely production advice, retail inspiration, and product and variety information to help you bring your best crop to market.

Check out the digital Gazette for exclusive bonus content not available in print! Visit www.griffins.com/publications to browse the Gazette archives.



GRIFFINS.COM

Procurement has never been this simple. One login connects you to the industry's broadest selection of products for cultivators, producers, and store operators:

- Crop protection products, including biological control agents, biopesticides and other soft chemistry.
- Production supplies including containers and growing media.
- Irrigation parts, tubing, and drippers of all shapes and sizes.
- Retail ready items, including potting soil, nutrients and tools.

LUNCH AND LEARN

Active customers can access our training videos from our Lunch & Learn series. These 20-30 minute, education-packed recordings will keep you and your cultivation/production staff thinking about ways to grow a better crop.

SOCIAL MEDIA



Add us to your social network! Find us on Instagram and [griffin_cannabis](https://www.instagram.com/griffin_cannabis). For news on products, events and more, follow us on LinkedIn and like us on Facebook. In both cases, simply log on and search "Griffin Greenhouse Supplies."



GRIFFIN CATALOGS

From production to point-of-sale! Our Grower Supplies catalog expands on our CEA catalog with even more equipment and inputs from quality manufacturers. For our retailers, our Retail catalog includes great consumer and hobbyist-friendly items. We also publish a Seed and Plant catalog full of ornamentals, veggies and herbs from leading breeders and producers.

SOLUTION SPOTLIGHTS

Have a problem you need to solve? Check our Solution Spotlights video series to see how we bring our supplier partners together to create solutions that work.

E-MAIL PROGRAMS

We offer several topical e-mail programs for growers and retailers. Tailor your subscriptions to meet your unique needs and interests, from technical tips to product specials and much more. Visit www.griffins.com to subscribe or update your preferences.



GRIFFIN LOCATIONS

SIXTEEN DISTRIBUTION CENTERS THROUGHOUT THE UNITED STATES

TO PLACE AN ORDER

Tel: 1.800.659.4346
E-mail: orders@griffinmail.com

GENERAL QUESTIONS

1.800.888.0054

CEA CUSTOMER SERVICE

Tel: 1.800.888.0054 ext 89199

OFFICE HOURS

Our office is open for normal business and telephone service from 8:00 AM ET to 5:00 PM PT, Monday through Friday.

WAREHOUSES

Hours for pick-up orders and counter sales are 8:00AM to 5:00PM local time, Monday through Friday.

From February through May, we're also open on Saturday from 8:00 AM to noon local time (except for Stafford Springs, CT, Aurora, CO, Ball Ground, GA and Knoxville, TN locations).

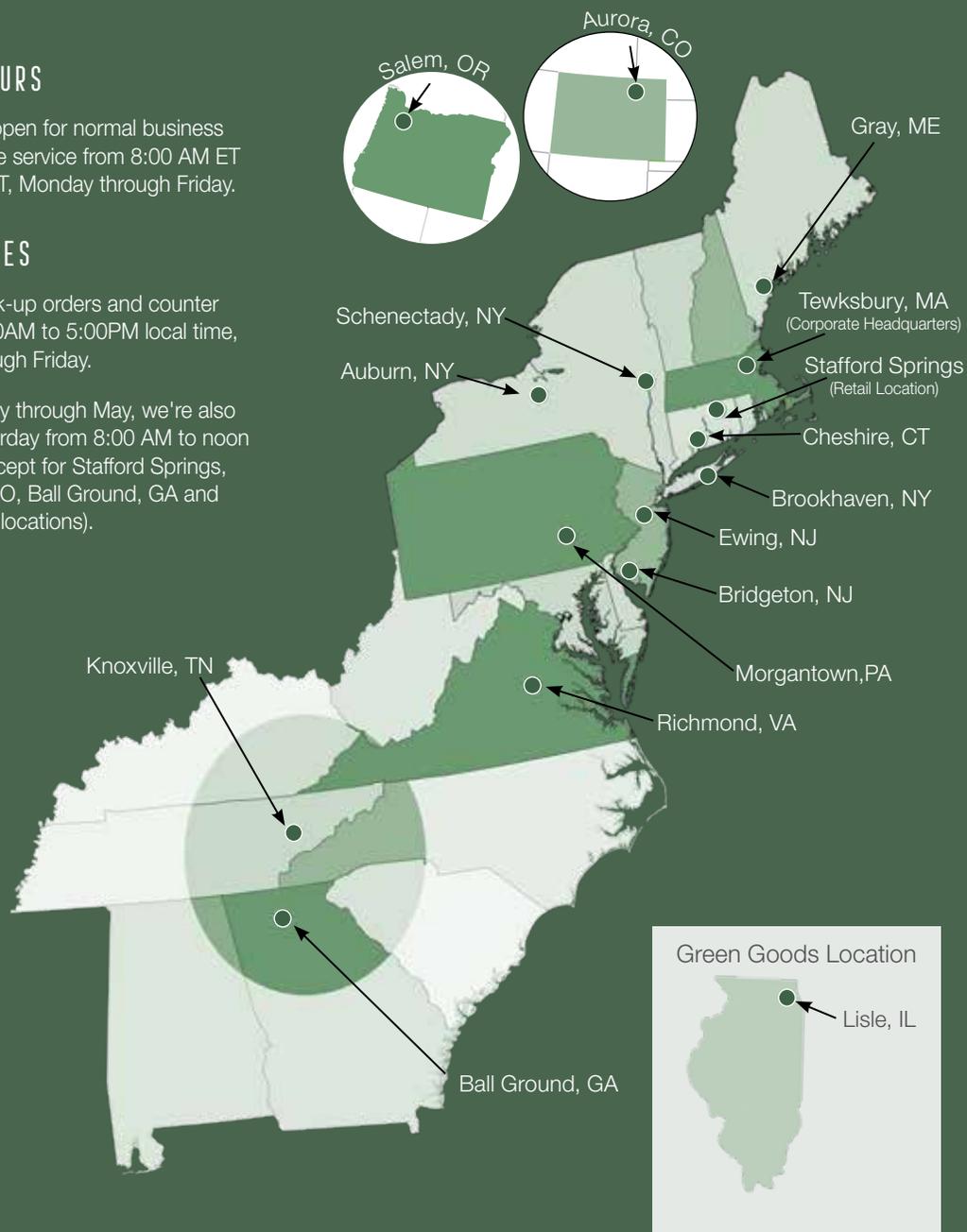


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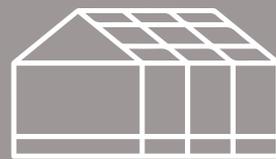
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INFRASTRUCTURE



GREENHOUSES

From sophisticated, gutter-connected structures to simple high tunnels, we can help you plan the greenhouse structure that will help you grow a great, naturally lit crop. Whether lettuce or basil, tomatoes or microgreens, or cannabis or hemp, we understand crop needs and will help you create the right environment. We work with a wide assortment of greenhouse manufacturers and will guide you to the best choice for your project and budget.

GUTTER CONNECTED GREENHOUSES

- Large span, tall houses allow for better climate control at crop level and support production of taller crops (tomatoes, peppers, cucumbers, cannabis, and hemp)
- Narrower, single bay structures allow compartmentalization for different crop environments in a single structure

GROUND TO GROUND GREENHOUSES

- Allows flexible positioning on site and maximum light transmission
- Completely isolates crops and minimizes traffic/air flow between crops

HIGH TUNNELS

- Supports early and late markets by extending seasons for in-ground crops
- Low cost, unheated structures for seasonal production and protection from weather



STAR STEEL STRUCTURES

Gothic or Quonset style houses. Sturdy and dependable with 50,000 PSI load bearing pipe and simple construction.

CONLEY ARCH AND GABLE SERIES

Stand-alone and gutter-connected options with gabled or arched profiles. Single roll formed arch/truss pieces with condensate control features. 2-foot cantilevered gutters for strength and stability.

HARNOIS OVALTECH

Ground-to-ground greenhouses offer versatility in use and ventilation while meeting international building codes. Ovaltech III or IV recommended for CEA crops. 420 model available for cannabis and hemp.

HARNOIS LUMINOSA

High tech, gutter-connected structures with specific design features for high wire crops, cannabis and hemp (ask about the Luminosa 420). Designed for better luminosity, medium to highly automated facilities, and certified for international building codes. Cover with double poly or polycarbonate.

HARNOIS TUNNEL PRO

Three season greenhouses for CEA crop production. Durable structural steel and oval tubing. Poly film secured with UV-stabilized, nylon straps. 28', 30' and 31' foot widths.

Greenhouse structures drop-ship to the site from the manufacturer.



POLYETHYLENE FILM

Recent advances in poly film mean that your poly brings far more than protection from the weather; your choice can improve light penetration to the crop. Griffin stocks a wide assortment of poly for all types of structures and needs. See the various lengths, widths, and folds available by scanning the QR code on the following page to take you to our poly film resources.

BERRY TUFFLIGHT IV

High quality PAR film with high clarity, outstanding durability, and easy installation. Available in six-fold styles and tubes. Workhorse, value poly film. 16-56' widths. 6 mil.

BERRY TUFFLITE BLACK & WHITE

Perfect for light dep applications. Black, inner layer blocks light. White, outer layer reflects light to reduce heat load. 5 mil.

BERRY INFRARED

Drip-Less™ anti-condensation coating and retention of infrared waves for nighttime heat retention and energy savings. Improved light diffusion for reduction in shadows. Tip: For a double layer system, use Tufflight IV on the outer layer and Tufflight Infrared on the inner layer. Up to four-years life. Available in two folds and tubes. 20-50' widths. 6 mil.

BERRY SUPER 4

Durable, value, UV open film (good for insect pollinators). Outstanding light transmission (91.5%) and tear strength. UV stabilized. 55% opacity also available. Four-year life. 6 mil.

BERRY THERMAX

Thermal and anti-condensate properties with light diffusing qualities. 91.3% transmission. UV open for pollinator activity. Four-year life. 6 mil.

BERRY LUMINANCE

Perfect for high tunnels and especially popular in berry production. 90% PAR transmission with diffusing properties for improved temperature reduction compared to other films. Three-year life as outer layer. 6 mil.

SUN MASTER IV

Superior strength, 90% PAR transmission with UV stabilization for long life. Three-layer, co-extruded film. UV stabilized for long life. Up to four years life. Four-fold options and tubes. 14-50' widths. 6 mil.

SUN MASTER THERMAL

Infrared retention film for reduced nighttime heat loss. Condensation control. Premium performance. 87% PAR transmission and 56% diffusion. Available in five folds and tubes, with widths of 24-50'. 6 mil.

SUN MASTER EVO AC

High transmission, durable film with EVO AC anti-condensate technology. Eight-layer film. Highly effective AC activity – even at very low temperatures and on smaller roof slopes. Lifetime AC activity may achieve greater than four-year life. 6 mil.

SUN MASTER EVO² AND EVO AC

Innovative, patented solution for double poly installations. 12 mil EVO² separates into two 6 mil films after installation. Outer film is extremely durable, very clear and UV open for maximum transmission. Inner film diffuses light, provides thermal properties, and is UV open. Inner film also treated with EVO AC anti-condensate technology to reduce condensation, drips and mist. Four-year life. Widths 24-42' and two-fold options.

Poly may be supplied out of warehouse or as a drop-ship. Ask your sales rep for more information.

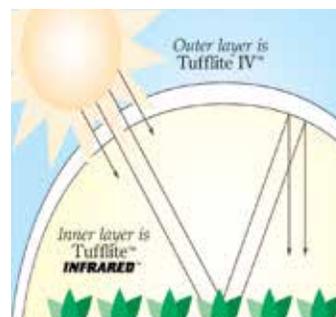




Classic AC after 24 months



EVO AC after 4 years



Infrared retains thermal energy



Mist under Classic AC



EVO AC anti-mist effect

CLICK FOR MORE INFORMATION

POLYCARBONATE

Green.tek

THERMAGLAS POLYCARBONATE SHEET

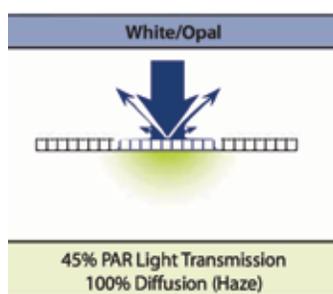
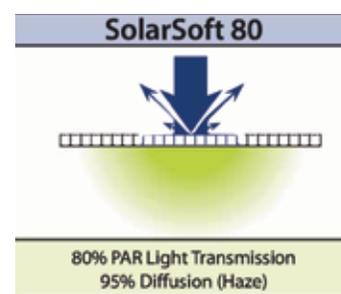
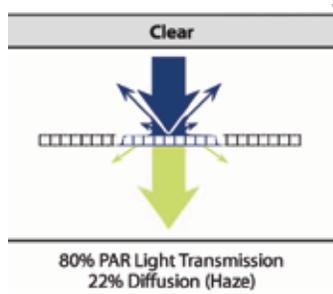
Multi-Wall Structured Polycarbonate Sheets

American made ThermoGlas is available in a variety of tints and special pigments, providing solutions for applications such as production, propagation, holding areas, and retail garden centers. ThermoGlas Plus products feature built-in condensation control so durable and effective it is warranted for 10 years. The result is higher light transmission and reduced moisture-related disease. Light deprivation products available.

- Superb thermal insulation and impact resistance
- Low flammability, weather, and UV resistant
- Available in custom lengths (available in four widths)

Item	Description
08-3027	8 mm Twin Wall ThermoGlas Clear 48" x 12'
08-3037	8 mm Twin Wall ThermoGlas Clear 48" x 16'
08-3047	8 mm Twin Wall ThermoGlas Clear 6' x 12'
08-3057	8 mm Twin Wall ThermoGlas Clear 6' x 16'

SolarSoft 80



Light deprivation polycarbonate

Please contact our construction department for more information.

WAREHOUSES



As commercial construction projects, warehouse and vertical farm projects have special needs. Griffin's CEA team serves as horticultural equipment experts, working with your architects and engineers to specify the right equipment for the job and keep horticultural crop needs front and center. Ask your Griffin salesperson for a complimentary discussion with our team about your warehouse or vertical production plans.

OUR AREAS OF EXPERTISE:

Build materials - aiding product selection to balance envelope needs, sanitation needs, and budget

Room design and layout - ensuring that the cultivation space meets the needs of your intended style of grow and your staff

Water use and dehumidification - correlating your style of grow with the water load on the space

Lights and heat - ensuring that your crop gets the light it needs and that your engineers understand what the heat load is and how it varies

Air flow - guiding how in-room airflow will best serve your crop needs



NORTH AMERICAN MADE FOR NORTH AMERICAN GROWERS

Delivering professional grow light systems,
local service and local support
to the North American horticultural industry for 40 years.



Proud partner of Griffin Greenhouse Supplies



P.L. LIGHT SYSTEMS

THE LIGHTING KNOWLEDGE COMPANY

4800 Hinan Drive | Beamsville, ON | Canada L0R 1B1

Toll Free: 1.800.263.0213 | T: 905.563.4133 | F: 905.563.0445 | E: info@pllight.com | www.pllight.com



PL Light Systems develops and manufactures advanced reflectors, LED and HID (HPS & MH) fixtures for the horticultural market. **Talk to Griffin's Construction Department about customized light plans from PL Light for your next project.**



HIGH PRESSURE SODIUM LAMPS

Lighting options to increase intensity for increased growth and day length extension for photoperiod control. Higher percentage of red light than from metal halide fixtures.

HSE NXT2 | Electronic ballast for quiet operation and extended lifetime. Cooling ribs for more efficient heat dispersal. Double ended lamps. Use with Alpha/Beta or Asymmetric reflectors. Cross compatibility with HPS and MH lamps (1000W only). **600W:** 277V or 347V. 1450 umol/s. HPS lamps only. **1000W:** 277V, 347V or 400V. 2100 umol/s for HPS. Also accommodates MH lamps.

HSE NXT-LP | Designed especially for low profile mounting for low ceiling height applications. Double ended lamps. Dimmable, electronic ballasts. Use with Alpha, Beta or Asymmetric reflectors. New cross compatibility with HPS and MH lamps (1000W only). **600W:** 120V, 208V or 240V. 1450 umol/s. HPS lamps only. **1000W:** 208V, 240V, 277V or 347V. 2100 umol/s for HPS. Also accommodates MH lamps.

LED FIXTURES

Options for sole source lighting, supplemental lighting for increased intensity and photoperiod control or tiered production. Customizable to crop specific spectra (fixed spectrum). Passively cooled.

HortiLED Top 2.0

Top lighting solution for greenhouse and warehouse. Use in standalone LED applications or in combination with HID fixtures for hybrid application. Impressive efficiency, true daisy-chain capability and DLC listed. 120° distribution. Dimmable.

Two spectrums: RW(MB) for supplemental or Daylight (full spectrum, white light) for sole source needs. ≤ 1100 $\mu\text{mol/s}$ and ≤ 3.3 $\mu\text{mol/J}$. 38" length.

HortiLED Multi | Designed for tiered production in 47" or 58.5" lengths with 80° or 150° distribution patterns and intensity options. Available spectrums: Red/Blue (MB); Red/Blue/Far Red (HBFR) and Full Spectrum. ≤ 180 $\mu\text{mol/s}$. ≤ 5 $\mu\text{mol/J}$.

METAL HALIDE LAMPS

Good for increased DLI and extending daylength for increased productivity and photoperiod control. Higher percentage of blue light than high pressure sodium lights.

HSE NXT2 | Electronic ballasts for quiet operation and extended lifetime. Cooling ribs for more efficient heat dispersal. Double ended lamps. Use with Alpha/Beta or Asymmetric reflectors. Cross compatibility with MH and HPS lamps. **1000W:** 277V, 347V, or 400V. 1800 umol/s for MH. Also accommodates HPS lamps.

HSE NXT-LP | Designed especially for low profile mounting for low ceiling height applications. Double ended lamps. Dimmable, electronic ballasts. Use with Alpha, Beta or Asymmetric reflectors. Cross compatibility with MH and HPS lamps. **1000W:** 208V, 240V, 277V or 347V. 1800 umol/s for MH. Also accommodates HPS lamps.

CERAMIC METAL HALIDE LAMP

CMH lamps deliver a highly stable, well balanced light spectrum similar to natural daylight providing a broad spectrum of wavelengths (including UV), so the plant can absorb exactly what it needs. The spectrum is ideal for vegetative growth and as a supplement for flowering crops.

HSE NXT-LP (CMH) | Designed for low profile mounting in vertical applications. Single ended lamp. Use with Delta reflector. 315W: 240V, 277V or 347V. 550umol/s.

CHOOSING REFLECTORS

Superior reflector technology from PL Light Systems can reduce fixture count by up to 15%, saving on cap ex and operating costs.

Choose **Alpha / Delta** for strongest uniformity; good choice when vertical space is limited.

Choose **Beta** for deeper light penetration; good choice for high mounting heights in very tall greenhouses, such as over tomatoes.

Choose **Asymmetric** along outside walls and walkways.



Alpha

Beta

Asymmetric

Delta

PL LIGHT CONTROLLER

The P.L. Light iQ controller provides centralized control of up to 512 fixtures in four zones.

heliospectra

Working with commercial growers across six continents, Heliospectra integrates customized light strategies with real-time data to create predictable yields and harvest results for greenhouses, vertical farms and indoor cultivation.

MITRA

Designed by Growers for Growers

MITRA is a powerful LED for light hungry crops. Featuring a modular design, 3 customized spectral options and an innovative cooling solution. Designed to work both indoors and in greenhouses, MITRA is available in a host of different modules and is fully dimmable, making it the most versatile LED grow light on the market.

650W. Up to 1820 $\mu\text{mol/s}$. 180-480V. Up to 2.8 umol/J . Dimmable. IP67 rating.

ELIXIA

Unparalleled Flexible Spectrum Control

Featuring up to four tuneable wavelengths, variable light intensities, and exceptional build quality, ELIXIA allows you to apply crop-specific lighting strategies. Designed to work both indoors and in greenhouses. The compatibility with our helioCORE™ control system transforms ELIXIA with access to a suite of automation tools such as DLI and On Target control modules as well as full spectral control.

500 to 600W. Up to 1200 $\mu\text{mol/s}$. 120, 240, 277, 480V. Up to 2.0 umol/J . Dimmable and adjustable spectrum. IP24 rating.

SIERA

The Perfect Vertical Solution

With its astonishingly light weight (1 kg /2.2 lbs), IP67 rating, and simple mounting solution SIERA light bar redefines the ways in which growers can approach their vertical farming installations. SIERA comes in 2 different spectral variants. The highly flexible design allows for growers to set up new installations or optimize existing ones in record time. Daisy chain capable.

43W per light bar. 600W power supply. 120, 240, 277V. Up to 120 umol/s . Up to 2.8 umol/J . Dimmable. IP67 Rating.



Most lighting fixtures drop-ship to the site from the manufacturer.

Complete Lighting Solutions for Professional Greenhouse Growers

PARsource has developed some of the best available horticultural lighting products and has some of the most efficient light fixtures in the industry.



PHANTOM PHOTOBIO LED FIXTURES

Phantom PHOTOBIO fixtures offer high efficiency LEDs designed for horticultural professionals looking to increase performance and yields while maximizing ROI. Robust commercial designs combine with high efficiency S4 spectrum to provide more red, far-red, and blue wavelengths that deliver vigorous vegetative growth and optimal flower development.

Phantom PHOTOBIOT* and TX** | The PHOTOBIO T Series offers 2.55 umol/joule efficacy, controlled dimming, and advanced heat dissipation technology in a tight form factor to reduce shading in your greenhouse. Both the T and the TX operate in a range of 100-277V. The T system uses 330W and has a PPF output of 840 umol/s. The TX system uses 680W and has a PPF output of 1700 umol/s.

Phantom PHOTOBIOMX*** | The PHOTOBIO MX offers 2.55 umol/joule efficacy, controlled dimming, and advanced heat dissipation technology in a slim form factor. The remote driver option is perfect for limited clearance in indoor cultivation situations. The MX operates in a range of 100-277V. It uses 680W and has a PPF output of 1700 umol/s.



PHANTOM COMMERCIAL DOUBLE-ENDED ATTACHED LIGHT SYSTEM

The Phantom Commercial Double-Ended Attached Light Systems offer a powerful horticultural lighting option with multiple reflector designs to meet the specific dimensions of your greenhouse. This system features the premium dimmable Phantom 1000W ballast and a 1000W HPS lamp. MH lamp optional. 2100 umol/s. 120, 208, 240, 277 and 480V. Dimmable.



REPLACEMENT LAMPS

HPS and MH lamps have a lifespan of 10,000 hours. The reduction in output after 10,000 hours will impact production and yield. Lamps in use 16 hours a day should be replaced after 1.75 years. Lamps used 12 hours/day should be replaced after 2.25 years.

Item #	Description	Item #	Description
93-2500	ParSource AgroSun DE HPS 1000W bulb	93-2504	Hortilux DE HPS 1000W bulb
93-2501	ParSource Phantom Pro DE HPS 1000W bulb	93-2505	Ushio HiLux GRO DE MH 1000W bulb
93-2502	Ushio HiLux GRO Pro Plus DE 1000W bulb	93-2506	Hortilux e-Start SE MH 1000W bulb
93-2503	Philips AGRO DE HPS Bulb 1000W bulb	93-2507	Hortilux Super HPS SE 1000W bulb



Most lighting fixtures drop-ship to the site from the manufacturer.

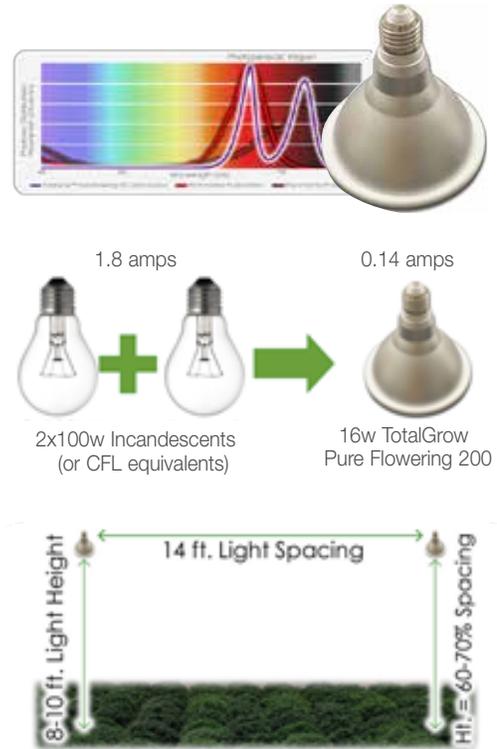


PURE FLOWERING 200 LAMP

The Science of Photoperiodic Lighting

- Use for night interruption lighting to achieve long-day conditions to promote or prevent flowering in ornamental and medicinal crops.
- Effective - Ideal spectrum for photoperiodic flowering control
- Efficient - Save over 90% compared to incandescent bulb use
- Easy - Simple installation, screw-in LED replacements (E26 socket) with excellent coverage and uniformity (200 sq ft/bulb)
- Safe - No toxic heavy metals or thin glass breakage risk
- Durable - Waterproof, dust-proof, long-lived (50,000 hrs, IP65)

Item #	Description
93-2950	TotalGrow Pure Flowering 200 Lamp
93-2960	Pure Flowering Socketed Cord



DEHUMIDIFICATION

While greenhouse cultivators can often manage humidity through heating and venting, warehouse production of cannabis and hemp must address humidity control. We can help with solutions ranging from simple, stand-alone dehumidifiers to fully engineered solutions. *Dehumidification products drop-ship to the site from the manufacturer.*

Quest – Popular stand-alone units for room by room needs or supplemental dehumidification.

Anden - Designed with cannabis cultivation in mind. Easy installation to remove moisture and circulate air. Stand alone units.

Desert Aire – Sophisticated systems that control humidity while heating or cooling. These advanced systems are custom engineered and require professional MEP partners.

CLICK FOR MORE INFORMATION



LIGHT DEPRIVATION SYSTEMS

DO YOU NEED A LIGHT DEP SYSTEM?

- Required for year-round product of cannabis and hemp
- Prevents light pollution from your greenhouse to your neighbors
- Fully automated systems for interior or exterior installation
- Custom designed solutions for all types of structures

ROLL TO PEAK LIGHT DEP SYSTEM

This light dep system from Advancing Alternatives is designed uniquely to roll on the outside of your greenhouse structure so they take up less valuable crop space inside. This allows room for additional crops and supplemental lighting/growing systems on the INSIDE of your greenhouse! Features include 2" diameter, internally spliced roll bars, reliable 24V DC motors, wind control system, and a two layer, inflated perimeter to prevent light leaks. Automate with a CLD2-MO timed controller or an AegisTec controller.

GROUND TO GROUND LIGHT DEP

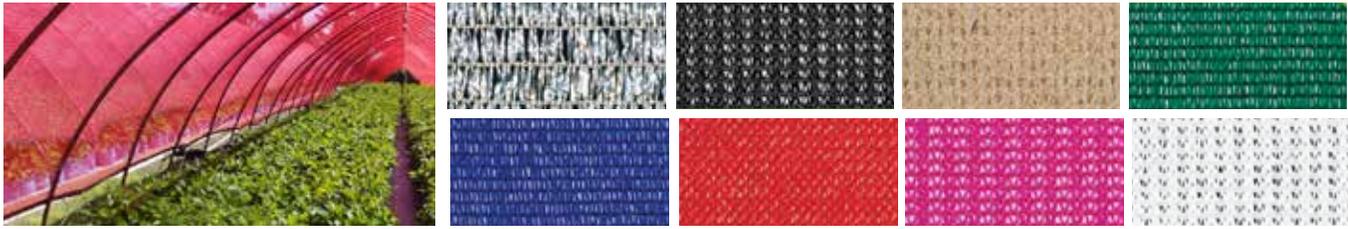
With over 40 years, Wadsworth Control Systems is a leader in internal light deprivation systems. Custom designed, turnkey solutions for a light-tight fit. Three-layer fabric, humidity control prevents condensation on fabric, flame retardant fabric or integrated firebreak, positive drive rack and pinion drive, and option for reflective upper surface. Suitable for new structures or retrofits.

These custom products drop-ship to the site from the manufacturer.



SHADING

SHADE-RITE COLOR TAPE KNIT SHADE CLOTH **Green.tek**



ChromatiNet Light Spectrum Management

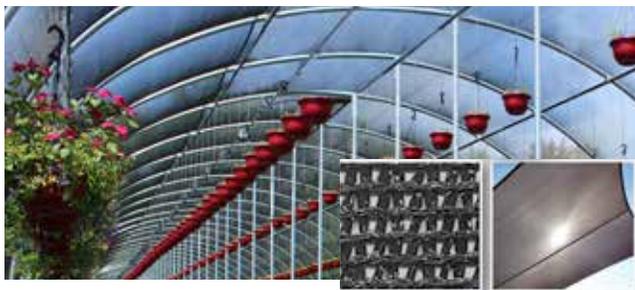
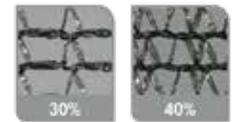
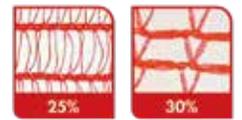
ChromatiNet® is a series of colored shade nets with special optical properties which improve the utilization of solar radiation by agricultural crops. The technology promotes differential stimulation of desirable physiological responses, which determine the commercial value of each crop. Using ChromatiNet is an economical and environmentally friendly alternative to current labor-consuming methods (such as pruning and thinning) and intensive use of growth regulators and other chemicals.

Other Percentages Available
Call for more information.

ChromatiNet Pearl | The light which passes through the threads is diffused and covers many parts of the plant, especially the lower stems and leaves. This results in increased photosynthesis efficiency, leading to accelerated and abundant growth and improved product quality. The diffused light increases the number of secondary branches in many plants and is especially beneficial in stem and leaf products, such as herbs, leaf vegetables and nursery crops.

ChromatiNet Red | The net changes the light spectrum transmitted to the plants, reduces the spectrum of blue, green and yellow light and increases the red and far-red light spectrum. Thus, the rhythm of plant development under red light is increased, the leaf surface is larger, stems are longer and thicker, and the total foliage volume is higher resulting in early flowering without decreasing flower quality.

ChromatiNet Silver | Light distribution is caused by refraction of direct light radiation through the special crystalloid structure of the silver net filament. This net type is perfect for vineyards, orchards, deciduous and subtropical trees.



TRADITION SHADE CLOTH

Lumite DeWitt –

30-80% shade cloth in custom widths, grommets available

Green.Tek Shade-Rite Tape Knit – best seller, great value

Green.Tek Shade-Rite Woven- high tension, southern favorite

Green.Tek Shade-Rite Mono-Knit – premium construction, excellent strength and durability, 50% and 70%

LIQUID SHADE

Kool Ray – Apply via spray, wears off without active removal. 1:8 dilution provides 30% reduction for 1575 sq ft per gal of Kool Ray.



ReduSystems - ReduSol provides season long durability, with manual removal with ReduClean. ReduHeat reflects infrared for high transmission with less heat load.

Item	Description
16-3160	Kool-Ray 1 gal. Classic White
16-3162	Kool-Ray 5 gal. Classic White
16-3150	Kool-Ray 1 qt. X-tra Stick Binder
16-3155	Kool-Ray 1 gal. X-tra Stick Binder
16-3230.	ReduSystems ReduSol 15 L White Shading Compound
16-3240	ReduSystems ReduHeat 15 L
16-3285	ReduSystems ReduClean 25 L Glass Shade Remover

Shading products may be supplied out of warehouse or as a drop-ship. Ask your sales rep for more information.

VENTILATION FANS, HOUSINGS & SHUTTERS



WINDMASTER EXHAUST FANS

- Slant arrangement protects motor and drives from weather
- High air flow capacity- shutter directs air to fan
- Select fan at 0.5" sp. instead of .10"
- Constructed of heavy gauge galvanized or aluminum
- Includes guard on outlet side
- Wiring knockout allows wiring connections inside building



In Slant Wall Housing with Guards - Stocked in 115 Volt

Item	Size	Speed	HP
23-1121	24"	1	1/3 HP
23-1126	24"	2	1/3 HP
23-1131	30"	1	1/2 HP
23-1136	30"	2	1/2 HP
23-1141	36"	1	1/2 HP
23-1146	36"	2	1/2 HP
23-1150	42"	1	1/2 HP
23-1155	42"	2	1/2 HP
23-1165	48"	2	1/2 HP

All Guards for wall housings have 1" x 1/2" welded galvanized wire in aluminum frame for inlet side of wall housing. Outlet guards are included on WS wall housings as standard equipment. Inlet guards are mounted with quick release clips.

Item	Fan Size	Wall Housing Model	Shutter Model
23-1240	24"	WS24DC	WAA2727
23-1245	30"	WS30DC	WAA3333
23-1250	36"	WS36DC	WAA3939
23-1255	42"	WS42DC	WAA4545
23-1260	48"	WS48DC	WAA5454
23-1265	54"	WS54DC	WAA6060

Fan sizes 24" - 42" are stocked.
Automatic Aluminum Shutter is ordered and shipped as a separate item from fan.

2021

FLOMASTER MOTORIZED SHUTTERS

- Precision counterbalanced aluminum blades open easier, wider to permit higher fan capacity
- Corrosion-proof nylon bearings throughout to help prevent sticking
- Suitable for dusty or humid applications
- Stainless hinge pins will not rust, ensure easy positive blade action
- All shutter blades are reinforced with polished galvanized steel rods, and equipped with double tie-rods
- Automatic: Used with exhaust fans; opens automatically when fan is on, closes automatically when fan is off
- Corrosion resistant heavy gauge aluminum frame
- Keeps out wind, rain, and back drafts when fan is not in operation (See fan selection for shutter sizes)
- Motors available in 24v, 115v, 230v, 460v (specify voltage required (Stock 115v))
- Replacement: Motors, motor and cam linkage or cam linkage only can be purchased separately.



Shutter

Item	Shutter Model	Overall	Opening	Sq. Ft. Opening	Wt.
23-1325	WAAC1818MT	18" x 18"	15" x 15"	1.56	10
23-1330	WAAC2626MT	26" x 26"	23" x 23"	3.67	14
23-1335	WAAC3333MT	33" x 33"	30" x 30"	6.25	18
23-1340	WAAC4040MT	40" x 40"	37" x 37"	9.50	22
23-1345	WAAC6318MT	63" x 18"	60" x 15"	6.25	19
23-1350	WAAC6340MT	63" x 40"	60" x 37"	15.42	35
23-1355	WAAC6362MT	63" x 62"	60" x 59"	24.58	52

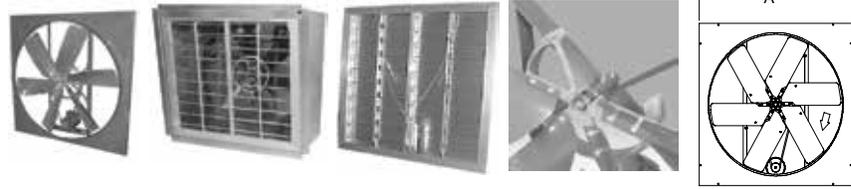
Motor

Item	Description
23-1362	Damper Motor with Spring (Motor Only) 115v
23-1375	Motor and Linkage 115v



ECONOMICAL, PRACTICAL, EFFECTIVE

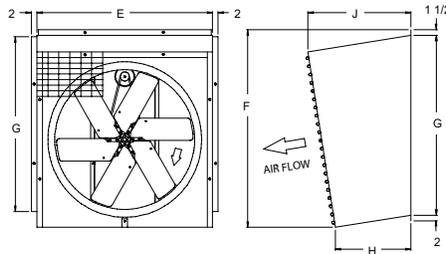
American Coolair's Type NBF/AL fan provides the solution to fresh air ventilation in most types of farm buildings. Type **NBF fans** are built to give you years of heavy-duty trouble-free service. The rugged, belt driven construction operates in any position, has permanently lubricated ball bearings, and is available with single or two speed totally enclosed motors. Coolair has developed a complete ventilation system for farm use combining the Type NBF fan with all aluminum shutter (Type LRW) and heavy gauge galvanized steel wall housing (square box or slope) for exterior mounting, allowing a maximum of unobstructed interior space. American Coolair's **AL all-aluminum fans** are the answer to concerns about rust and corrosion in today's damp greenhouse environment. Combined with an aluminum wall housing, an aluminum shutter, and a vinyl coated wire guard, the AL fan will provide years of trouble-free and corrosion-free service.



TYPE NBF FAN

Performance and Efficiency

When economy is measured in terms of cubic feet of air per minute per dollar invested, the Type NBF wall fan exhaust unit is unsurpassed. American Coolair's Type NBF fan is today's best investment, Coolair uses only the most efficient ball bearing motors available. They are totally enclosed resilient base motor.



TYPE GSWH (SLOPE) WALL HOUSING

The SLOPE wall housing allows the shutter to be placed on the intake side of the fan and eliminates air turbulence that occurs with the shutter on the down-wind side of the fan. It prevents the warm air from being lost through the metal wall housing to the outside cold air in cold climate conditions. The GSWH housing is constructed of galvanized steel for long, durable wear and low maintenance.

EXCLUSIVE DRIVE ASSEMBLY

Our engineering department has developed an innovative drive assembly for the Type NBF fan. Our use of quality materials and precise engineering techniques in constructing wheel assemblies assure you of years of quiet, trouble-free service. Power is applied through V-belts directly to the propeller with blade load concentrated directly over the bearings to eliminate overhang bearing load. The exclusive, time tested design has been widely acclaimed by engineers.

COOLAIR® MOTORIZED LRW AIR INLET SHUTTER

The LRW Air Inlet Shutter is designed to be opposite side or end of buildings. It features a sturdy aluminum frame, aluminum blades, aluminum reinforcing brackets and nylon bearings on all movable linkage. The LRW Air Inlet Shutter is fully automatic and comes standard with a motor to automatically open and close shutters.

[CLICK FOR MORE INFORMATION](#)

EVAPORATIVE COOLING SYSTEMS

Evaporative Cooling in Concept: To counter periods of extreme temperature that affect in-house environments and therefore production, Coolair Evaporative Cooling Pad Systems are used with outstanding success. When large quantities of air are pulled through Evaporative Cooling Pads that are saturated with water, a substantial cooling effect is realized due to the evaporation of that water. Used in conjunction with Coolair fans, a temperature reduction of 10-25 degrees is commonplace. Suited for virtually all geographic locations, the Coolair Evaporative Cooling System delivers the greatest economic benefits to areas where higher temperatures during longer periods of time are normal. Coolair has created a brown out housing accessory for their current evaporative cooling systems and is an easy retrofit if needed. The brown out housing attached to their evaporative cooling system in conjunction with light traps is the perfect system for all of your light deprivation needs.



HORIZONTAL AIR FLOW

A properly engineered HAF system will circulate the air above the crop, creating a gentle turbulence that prevents microclimates and stagnant air. This improves crop uniformity and reduces the incidence of disease.

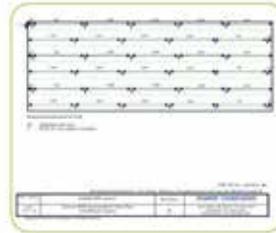
DRAMM AME FANS

- Shrouded design
- Sealed motor with quiet, cool operation and long life
- Variable speed control
- Engineered installation plans

350 mm HAF fan, 208-240V Single Phase, 1850 cfm
Item: 41-350MM

400 mm HAF fan, 208-240V Single Phase, 2860 cfm
Item: 41-400MM

These fans drop-ship to the site from the manufacturer.



2021

H.A.F. BASKET SERIES FAN

- Best Warranty in the Industry
- Standard OSHA safety guards on intake and exhaust
- Polyester powder coated guards for corrosion resistance
- Versatile wall and ceiling mount pivots 180 degrees
- Motors are totally enclosed, maintenance free, high efficiency
- Variable speed operation
- Well balanced and strong blade design for years of trouble free service
- Easy to clean | Complete with 9' cord

12" Fan: HVB12110C: 1/10 HP, 115v, 1.0 amps, 1725 RPM, 2500 CFM
Item: 23-5040

20" Fan: HAF20110C: 1/10 HP, 115v, 1.2 amps, 1725 RPM, 2600 CFM
Item: 23-5050



Green.tek

12" PATENTED PLANT AIR® H.A.F. FANS

- Significantly more efficient air-to-energy usage than other fans
- Wider guards with less restrictive wire spacing allow for twice the air flow
- Variable speed capability (with optional control) allows for air flow control to accommodate temperature and crop changes
- No-maintenance, completely enclosed motor never needs oiling
- Model VT12PA: 1/10 HP, 115/230 volts, 1.3/.65 amps, 1725 RPM, 1649 CFM

Item: 23-5025



SCHAEFER

CIRCULATION/HAF FANS

Multifan circulation fans are well-known for consistent high quality, durability and longevity. Motors are produced in-house, and optimal motor-impeller combination ensures energy efficient and high-performance fans.

Why choose this fan:

- Considerable increase in energy efficiency compared to previous versions
- Complies with upcoming ErP energy regulation
- Easy to mount/remove wire guards
- Easy to maintain motor/impeller construction
- 3-year warranty

Features:

- Aerodynamic inlet radius for optimized air distribution
- High insulation class F / IP55
- Built-in thermal protection for single phase
- Housing suitable for suspension with profiles or chains
- Wire guards in accordance with CE-standards
- Serial- or parallel ventilation systems
- Reflecting white color for usage in greenhouses
- Compact design for less shadow

Options:

- Motors for different voltages and 50Hz or 60Hz.
- Three phase motor adapted for frequency control
- Cable + Plug
- Built-in thermal protection for three phase
- Nozzle system set for 20" cm Recirculation fan
 - 8 Nozzles with hoses
 - Wire guard
 - Easy to install
 - Requested 4 bar water pressure

V-FLO FAN FOR GREENHOUSES

In modern greenhouses, ventilation plays a vital role. Through circulation of air, heat distribution in the greenhouses is optimized, which enhances a uniform development of the crops. The V-FloFan, Multifan offers the grower the opportunity to reduce the negative impacts, due to humidity, in a simple and energy efficient way. The vertical airflow results in an optimal uniform microclimate on plant level.

Why choose this fan:

- Creates an active microclimate on crop level
- Results an uniform climate in greenhouses
- Controls the humidity level
- Constant low airspeed at crop level
- Reduces the energy costs through vertical airflow
- 3-year warranty

Features:

- Special aerodynamic shaped conical outlet for optimal vertical airflow
- The V-FloFan is applicable for several cultivation systems and crops
- Reflecting white color for usage in greenhouses
- IP55 motor (water and dust resistant)
- Low noise (45/47 dB at 7 meters)

Item #	Description
23-10300	Vostermans 28.0 Multifan V-Flo , 120V with 9' plugged cord
23-10310	Vostermans Multifan V-Flo 230V (no cord)
23-10311	Vostermans Multifan V-Flo 265-460V (no cord)
23-10312	Vostermans Multifan HAF 16" 3-phase 265/460V (no cord)
23-10313	Vostermans Multifan HAF 20" 3-phase 265/460V (no cord)
23-10314	Vostermans Multifan HAF 16" 240V (no cord)
23-10315	Vostermans Multifan HAF 16" 120V, with 9' plugged cord
23-10316	Vostermans Multifan HAF 20" 240V (no cord)

These fans drop-ship to the site from the manufacturer.



HEATERS



**Your Extended Forecast:
Up to 97% Efficiency with 100% Chance of Savings.**

HIGH-EFFICIENCY CONDENSING GAS-FIRED SEPARATED COMBUSTION UNIT HEATERS

In Comparison, There's No Comparison. Modine's Effinity (model PTC) condensing unit heater line is the most efficient gas-fired, condensing unit heater in North America.

With six models available — from 135,000 to 310,000 BTU/hr — all operating at up to 97% efficiency, the Effinity will dramatically lower energy costs through decreased fuel consumption.

Effinity Propeller Unit Heater Model PTC General Performance Data



2021



GAS-FIRED, POWER-EXHAUSTED HIGH-EFFICIENCY UNIT HEATERS

(Also available in Separated-Combustion)

- 80% Thermal efficiency
- Rotating power exhaust
- Horizontal or vertical venting
- Field-convertible to propane
- Field-adjustable level hanging
- Intermittent pilot ignition, 100% shut-off with continuous retry



HORIZONTAL POWER VENTED UNIT HEATER

Introducing the new horizontal power vented, PTP unit heater line. The PTP delivers 80% thermal efficiency in a small business-friendly package. This unit features a stainless steel tubular heat exchanger as standard on all units with a 10-year heat exchanger warranty that provides customers with a peace of mind. The PTP is available in 7 models sizes - 150,000 to 400,000 BTU/hr.





EFFICIENT GREENHOUSE HEATING SYSTEMS

Water can carry 3,500 times the energy that air can carry per volume, making hot water heating the best choice for your greenhouse.

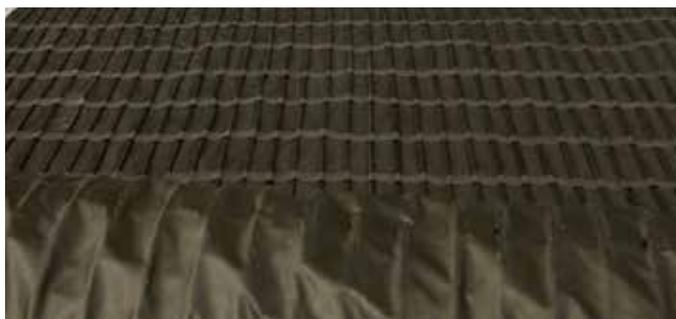


Innovative Energy-Saving Heating Solutions for Commercial Plant Growers

BioTherm has been at the forefront of developing highly efficient heating solutions for rugged environments since 1980. Agriculture, flowers, vegetables; each greenhouse heating system is tailored to specific climate and growing conditions. Whether through new construction, major upgrades, or retrofits, their systems are durable and efficient—resulting in high success rates and peak crops.

A full spectrum of solutions are available, each one precision engineered for your specific needs.

Custom BioTherm solutions drop-ship to the site from the manufacturer.



2021



Griffin Construction Department

We are ready, willing and able to assist you with all aspects of greenhouse construction and maintenance. Call 1.800.888.0054 then press 3.

ULTRA VIOLET VENTILATION TUBING

Engineered to your specifications

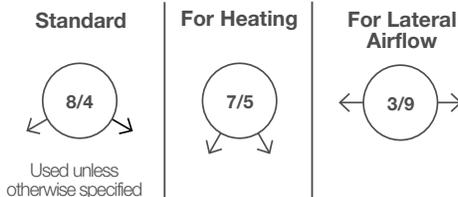
For greenhouse use, Ultra Violet Tubing is used where the sun is most intense, or wherever a longer lasting tube is desired. If handled properly, it should last for two seasons of service, thus requiring less frequent replacement.

Custom length ordering notes:

- All tubing is custom cut and punched
- All orders under 50' in length are subject to an up-charge
- Shipped direct from factory; allow shipping time (FOB factory)

Punch Positions

Numbers in circle are as positions on a clock.



Item	Diameter	Lay Flat Measurement
23-3030	UV 12"	19"
23-3035	UV 18"	28½"
23-3045	UV 24"	38"
23-3050	UV 30"	47½"



CONTROLLERS

Controllers allow automation of actions for climate (lighting, light dep, fans) and irrigation. Griffin offers basic to cloud-based controllers. Many systems can expand as you grow and some can integrate with your building management or data management systems. Advanced systems are custom designed. Ask your Griffin sales rep for help to get started. *Controllers drop-ship to the site from the manufacturer.*

IRRIGATION CONTROLLERS

Hunter Pro HC and **HCC8-STN** – Multi-zone, wi-fi enabled controllers. Each supports eight programs with cycle times in minutes. HCC8 is cloud-based for remote access.

Dramm ii ir Controller – Wi-fi enabled in line solenoid controller. Cycle times in seconds to minutes. Battery powered for use in power-limited applications. Wi-fi enabled, cloud-based controller.

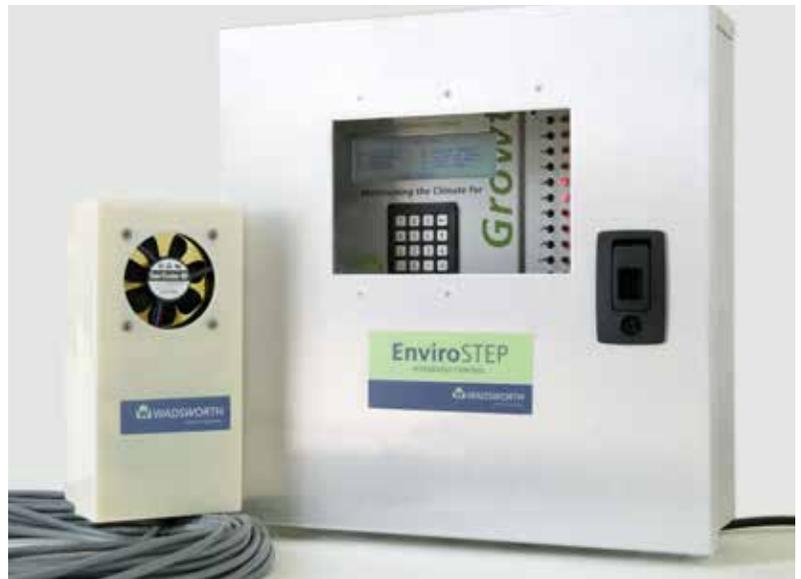
Rainbird ESP-ME3 – Multi-zone irrigation controller. Supports cycle time in minutes, up to eight programs, expandable up to 54 zones. Cloud-based for remote access and control.

WADSWORTH CONTROLLERS

STEP Up – Six stage controller for heating and cooling control. Menu driven screens, data logging, alarm capable. At panel control.

EnviroSTEP – Super combination of performance and value. Single zone control with data recording, programmable alarms and STEPSaver software. Controls climate and irrigation via VPD.

Seed and Seed 16 – Fully cloud based for remote programming and data retrieval. Compatible with Anderson Injectors. Seed expandable up to 110 zones and supports cycle times in minutes and seconds. Seed 16 supports up to 16 functions. Simple, intuitive touchscreen operation.





Link4 – Commercial environmental, irrigation and fertigation controllers.

A controller solution for any grower's needs.

Link4 offers a full line of commercial controllers that will solve any size or complex environmental or irrigation application. Cloud based controls allow you to monitor and control your situation from a remote device and develop reports from the stored data.



L4 RO SYSTEM | Produces high purity water by reducing contaminants such as dissolved minerals, particulates, and organic impurities using a reverse osmosis membrane system. Complete, skid mounted, pre-plumbed, pre-wired reverse osmosis (RO) system for quick installation and start-up.

INDOOR CONTROLLERS

iPonic 614/624

For warehouse facilities for CO₂, lights, temperature, humidity, recycle timers, vent fans, high temperature shut-off, irrigation, central air conditioning, heating and more. 8 120v outlets to control Fuzzy Logic. Digital integrated sensor included (2 with the 624). Alarm capabilities. Single zone with 614, dual zone with 624 (8 outputs each).

iPonic 614/624 Commercial

Like the iPonic 614 and 624 but includes a pre-wired integrated, UL listed contactor or lighting panel. Suitable for 120v, 240v, 277v, 480v; up to 18 amps per circuit.

ADVANCED CONTROLLERS

iGrow 800

For mid-size warehouse or greenhouse facilities. Controls fans, heaters, vents, pad systems, irrigation, shade curtains (blackout curtains), and more with Cloud and alarm access. 8 outputs expandable to 32.

iGrow 1800

For advanced warehouse or greenhouse facilities. Controls fans, heaters, vents, pad systems, smart irrigation, shade curtains (blackout curtains), smart (DLI) lighting, VPD, alarming and more. The auxiliary controls are flexible, and user defined to control conditions to fit your unique growing requirements. The LinkConn software allows you to control, monitor and report from one location. Up to 144 outputs.

IRRIGATION/FERTIGATION

Sapphire

Commercial irrigation controller that is ideal for applications requiring misting, flood, drip or standard irrigation. Integrated with the Cloud to monitor or change settings along with the new Grower Journal. 8 independent outlets with irrigation, mist, pulse or drip control for each output.

iDoser

A complete plug-and-play fertigation system for your growing operation. Automatic recipe switching and delivery scheduling with EC and pH monitoring for accurate plant nutrition. Additional control options – add functionality to enhance control or send alerts.

ADDITIONAL CONTROL OPTIONS

iDrive

Communicates and controls vents, curtains, and wall vent AC or DC motors with 5 position manual override switch, motor reverse delay and high quality components.

iOptimizer

Regulate the output of fans and pumps for energy savings and optimization of air flow patterns.

iAlert

Provides primary or backup alarming via Cloud based monitoring and alarm system. Receive email or texts to your phone.

Contactors Panels

Operates the on/off signal between the controller and equipment. Saves electrical installation costs. UL Listed.

CUSTOM PRODUCTION SYSTEMS



The premier benching supplier to commercial growers throughout North America. Helping clients succeed by customizing innovative solutions for demanding markets.

- Custom-made to order, drop-ship to site.
- US-made, UV-resistant, polystyrene ebb and flow trays with molded drain channels
- Fixed, rolling and Max Roll options
- Single-level, multi-tier, and archive racking systems
- Heavy-duty galvanized steel legs, headers and framework
- Extruded marine-grade aluminum side rails with rounded, snag-free corners
- Euro-style NFT systems - simple to automated

EXPANDED METAL BENCHES

All benches can be outfitted with expanded metal tops. Expanded metal benching is hot dip galvanized after expanded for superior durability and long service life.

EBB & FLOW BENCHES

Reduce your water and fertilizer use by up to 90%! Galvanized steel and vacuum formed plastics for long life. Available in stationary or rolling models. Standard widths: 4',5',6'. Additional custom sizes available. Pre-drilled for easy assembly.

MAX ROLL BENCHES

Extended cantilever reach for maximum use of floor space. Extend the roll distance by 2-4 feet, depending on bench size. Install over concrete for proper anchoring. No floor drill installation.

PLANT SUPPORT SYSTEMS

Plant supports designed to fit Innovative benches for use with trellis netting to support tall crops.

TROUGH BENCHES

Wide troughs over standard benching encourage airflow in the crop without sacrificing stability and drainage.



GROW RACKS



Warehouse production calls for efficient use of every square foot of production space. Grow Racks from IGE are designed and manufactured in the US and built to order.

STATIONARY RACKING

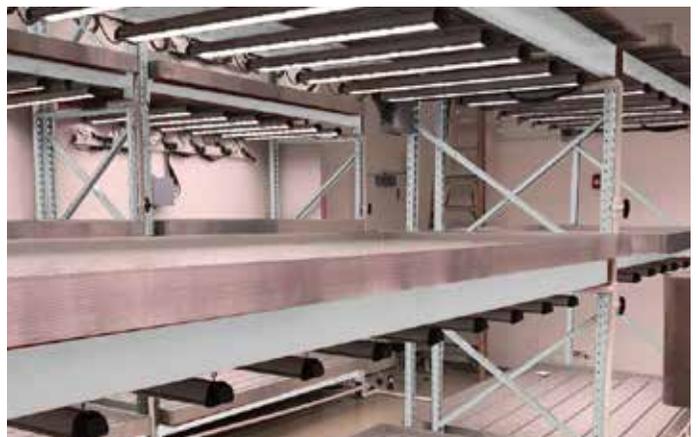
Stationary, vertical benching for warehouse production. Custom height in 2' increments from 8 to 24 feet. Custom lengths in increments of 8, 10 or 12 feet. White powder coated with adjustable bench placement. Stationary Racks utilize IGE's Ebb and Flow tray inserts for clean production space that is easily sanitized.

ARCHIVE RACKING

Space-saving, rolling, tiered racking for warehouse crop production. Lengths up to 60' in 8, 10 and 12 foot increments. Height up to 24' tall in 2' increments. Direct, chain-driven, aluminum carriages on corrosion-resistant channels. Stainless steel drive rods, wheels and fasteners for long life in horticultural production spaces. Channels mount to level, concrete floors with anti-tip protection at every track. System supports 1500 pounds per linear foot. Custom designed.

AIR FLOW SYSTEMS

Production on tiered Grow Racks presents unique air flow needs. IGE's Airflow Systems are designed to integrate with their rack systems and utilize duct socks to ensure airflow across all tiers.



GROUND COVER & MULCH FILM

GROUND COVER

Ground cover inhibits weed growth and keeps outdoor and indoor production spaces clean. Woven fabric, constructed of UV stabilized polypropylene yarn is permeable to air and water for reduced puddling. Chemical resistant, will not rot, mildew or become brittle in cold weather. Marked with blue stripes every 12" for pot alignment. Most are in stock and ready to ship.

Black: Prevents weeds

White: Reflects light back to the crop



MULCH FILM

Designed to control weeds and conserve water, use of mulch films help growers reduce labor costs and improve yields. Our offering includes a range of film types.

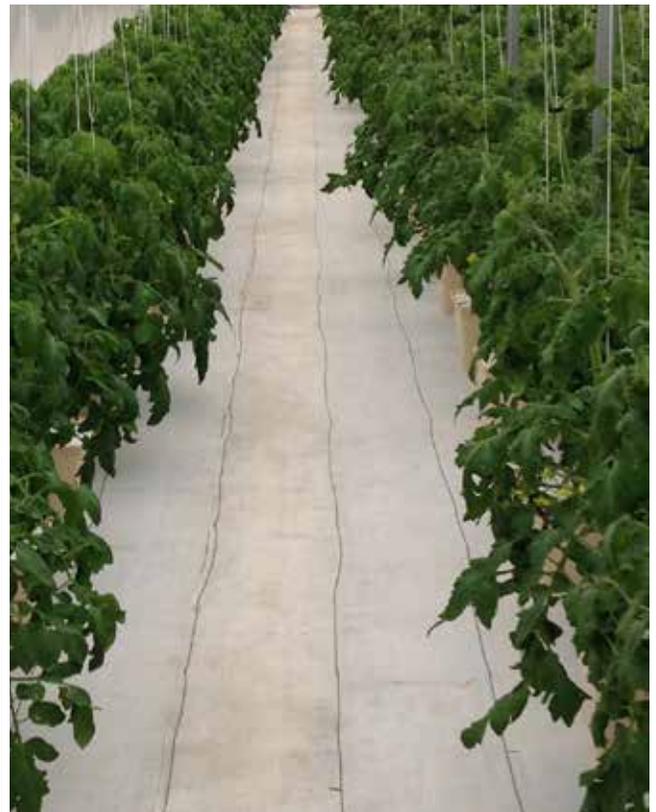
Black: Ideal for weed control, opacity, and UV blocking. Warms soil temperature.

Panda: White over black. Reflects light to crop while blocking light to prevent weeds. Request info regarding availability.

White: Brighter, reflective, typically 12°F cooler than conventional black films, and 4-8°F cooler than white over black film. Ideal for Hemp Production.

Item	»	Description
78-2423		Lumite Ground Cover 10' x 100' Black
78-2420		Lumite Ground Cover 3' x 300' Black
78-2422		Lumite Ground Cover 4' x 300' Black
78-2424		Lumite Ground Cover 6' x 300' Black
78-2425		Lumite Ground Cover 10' x 300' Black
78-2430		Lumite Ground Cover 12' x 300' Black
78-2440		Lumite Ground Cover 15'6" x 300' Black
78-2445		Lumite Ground Cover 20' x 300' Black
78-2450		Lumite Ground Cover 24' x 300' Black
78-2530	•	Lumite Ground Cover 12'x300' White
78-2540	•	Lumite Ground Cover 15'x300' White
78-2510		Ground staples, 6-8 lb gauge, 100/bag
78-2515		Ground staples, 6-11 lb gauge, 100/bag
78-1025		Berry Mulch film, black, 1.25 mil, 3'x2000'
78-1030		Berry Mulch film, black, 1.25 mil, 4'x2000'
78-1031		Berry Mulch Film, black, 1.25 mil, 4'x4000'
78-1032		Berry Mulch Film, panda (black/white), 1.25 mil, 4'x4000'

» = Drop Ship Item



GREENHOUSE ACCESSORIES

WIRE-LOCK POLY ATTACHMENT

Secure single and double layer poly or use with seasonal shade cloth. System requires aluminum bases and stainless steel wire. Use Double Wire-Lock for roll-up side walls.

Item	Description
81-500150	Wire-Lock (12' Sections) Alum. Base
09-16251	Wire-Lock (6' Sections) Alum. Base
09-16501	Wire 6' (2 per 12' Base)
81-500160	Gable Rafter Trim 12' Alum.
81-500170	Double Wire-Lock 12' Alum.



Gable Rafter Trim



Single Wire-Lock (09-16501 wire not included.)



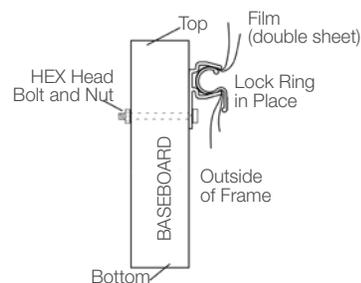
Double Wire-Lock (09-16501 wire not included.)

2021

POLY GRIP

Cam-type locking system designed for use with air-inflated double poly.

Item	Description	Length
09-1525	Alum. Base Channel	12'
09-1535	Alum. Locking Ring	5' 11 3/4"



FASTENERS, SEALERS AND TAPES

Item	Description
09-3026	SunSeal Silicone - use with polycarbonate
09-1404	White felt adhesive tape - protect poly from wearing thin against structure
09-6025	#394 Vent Tape - use at the bottom of PCSS
09-6030	Aluminum Foil Duct Tape - use at the top of PCSS
09-6035	Foam Spacer Sue on perlin for spacer with PCSS
09-2255	Self Drilling Plated Screws #12 Hex head, self tapping for metal
09-2251	Self Drilling Plated Screws #10, Hex head, self drilling for wood

WASHERS

Perma-Seal Sealing Washer

Item	Description	Qty
09-5020	#10 x 1 1/8" Neo/Bonded Washer	100/bag
09-6020	#10 x 5/8" Neo/Bonded Washer	100/bag
09-6023	#12 x 5/8" Neo/Bonded Washer	100/bag
09-5026	#12 x 1 1/8" Neo/Bonded Washer	100/bag

Multifan



Premium Greenhouse Fans



Vertical V-FloFan

- Developed for 'Next Generation Growing'
- Constant airflow close to the ground
- Savings on energy costs

Horizontal Circulation Fan

- Powerfull air distribution
- High throw, up to 68 meter
- Extreme reliable circulation solutions



Why Vostermans Ventilation:

- Family owned company since 1952
- In house motor and impeller production
- Suitable for applications in harsh environments
- Wash-down capable fans
- Extremely reliable
- 3-year warranty



VOSTERMANS
VENTILATION

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ventilation@vostermansusa.com



WATER DELIVERY





GriffinExpo

2021 brings two ways to enjoy a great Griffin event. Join us at our in-person live Expo in PA or attend our virtual Expo online. Take advantage of the savings to boost your bottom line; the Expos include exclusive promotions and booking specials you can't get anywhere else!

See big ideas and product innovations to help your business thrive. Stock up on technical advice and product knowledge to make confident purchasing decisions for your business.

Both versions will feature suppliers and educational sessions representing all facets of Griffin's business – hard goods, green goods, retail supplies and products for controlled-environment agriculture.

GRIFFIN VIRTUAL EXPO
September 13-24, 2021

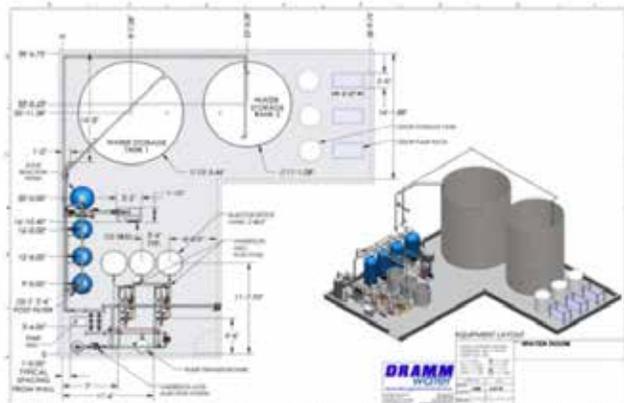
**LANCASTER, PA -
IN-PERSON EXPO**
September 22-23, 2021
Lancaster, PA

WATER DELIVERY



Water delivery systems can be broken down into four pieces, including water treatment, nutrient injection, irrigation, and sanitation. Proper design of each piece, and the complete system, rests on one thing: How much water needs to be delivered to the plants over the course of a day? This figure is dependent on the number of plants to be grown and both the maximum and minimum amount of water to be applied each day. Our team will work with your cultivation staff to understand and define these needs so that we can bring in the right partners to get you the water system that helps you meet your goals.

2021



WATER TREATMENT

Design of your water treatment system starts with a horticultural water test. From there, decisions can be made regarding equipment to mitigate any water quality problems. This is also the stage where consideration for crop health and sanitation starts. *These custom solutions drop-ship to the site.*

Common Filter Options

- Screen filters – removes particulates, debris and microorganisms
- Sand or glass media – removes inorganics and some metals
- Charcoal – removes organics
- Membrane (reverse osmosis) – removes dissolved salts and many metals

Other Water Room Components

- Water conditioning – lightens load on downstream filtration equipment
- Storage tanks – accumulate and hold large volumes of water to serve daily needs
- Pumps – increase pressure and flow to meet downstream needs
- Tempering systems – used to heat or cool water

Water treatment options for sanitation and/or plant health

- Ozone systems
- UV systems

CLICK FOR MORE INFORMATION

NUTRIENT INJECTION



The Nutrient Delivery System (NDS) is an assembly of high-quality dosers connected with easy-to-configure kits. The NDS thrives anywhere, from greenhouse environments to outdoors, allowing installation in any application. The NDS features both Water-Powered Dosatron Dosers, and Electric Etatron Dosing Pumps, whose proven technology of reliability and accuracy has been upheld for over 40 years.

- Customize solutions based on your nutrient program
- Automate the Nutrient Delivery process to reduce error
- Decrease labor cost and increase profits
- Achieve repeatable performance with a simple interface
- Water powered, piston-based Dosatron Doser technology
- Solenoid-driven, electric Etatron Pumps
- Modular kit concept for customized systems
- Outstanding customer service and technical support

Choose from three NDS Series options, based on flow needs

Lo-Flo Series, 3/4" system kits

- Water powered system kits (2-10 GPM)
- Electric system kits (0.5-20 GPM)
- Micro-Doser system kits (0.5-20 GPM)

Hi-Flo Series, 1 1/2" system kits

- Water powered system kits (5-40 GPM)
- Electric system kits (5-60 GPM)
- Micro-Doser System (5-60 GPM)

Mega-Flo Series, 2" system kits

- Dosatron D205 (100 GPM)
- Dosatron D132 (132 GPM)
- Dosatron D400 (400 GPM)

2021



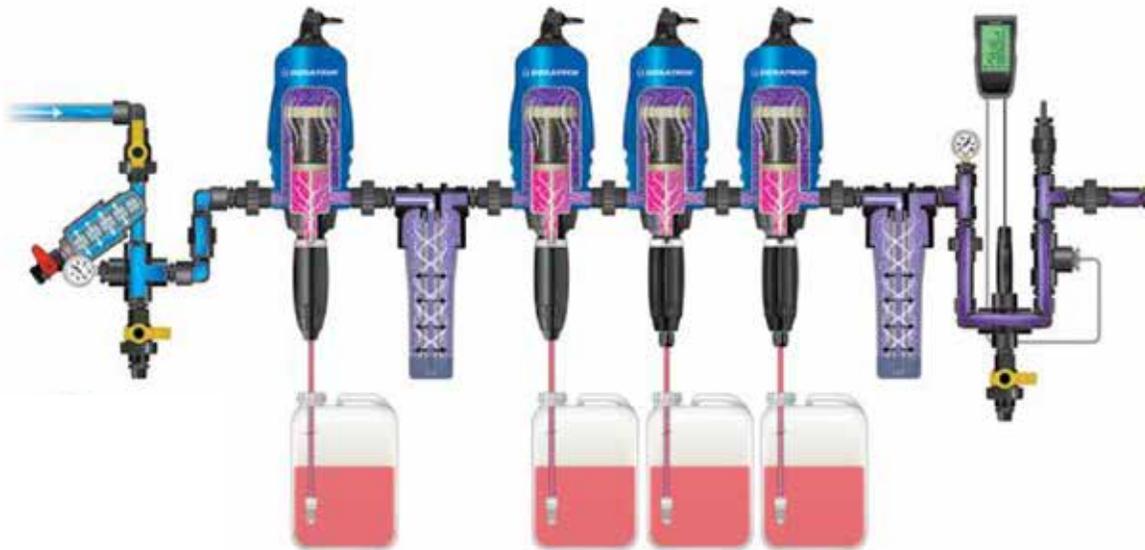
Item #	Description
33-2450	Dosatron NDS Lo 11 GPM 4-34 ml
33-24451	Dosatron NDS Lo 14 GPM 1-11 ml
33-2452	Dosatron NDS Lo 14 GPM 7-75 ml
33-2453	Dosatron NDS Lo 14 GPM 37-375
33-2454	Dosatron NDS Hi 40 GPM 1-7 ml
33-2455	Dosatron NDS Hi 40 GPM 7-75 ml
33-2456	Dosatron NDS Hi 40 GPM 37-190
33-2440	Dosatron 40 GPM Injector, Bypass, Kalrez
33-2428	Dosatron D132 Mega-Flo Injector w/Kalrez
33-2442	NDS Starter Kit Hi
33-2441	NDS Starter Kit Lo
33-2448	NDS Mixing Chamber Kit Hi
219-007	NDS Mixing Chamber Kit Lo
33-218-901	NDS Water Hammer Kit Hi
218-916	NDS Water Hammer Kit Lo
218-902	NDS Monitor Kit Hi
33-2445	NDS Monitor Kit Lo
33-2444	NDS Mixing Chamber Sleeve
33-2443	NDS Booster Pump
33-2449	NDS End Kit Hi
33-2447	NDS End Kit Lo

Most NDS components drop-ship to the site.

CLICK FOR MORE
INFORMATION

WATER-POWERED NDS

Applications: Drip Irrigation, Vertical Farming, Overhead Irrigation, Grow Towers, Octo-Bubbler, System Batch, Tank Fill



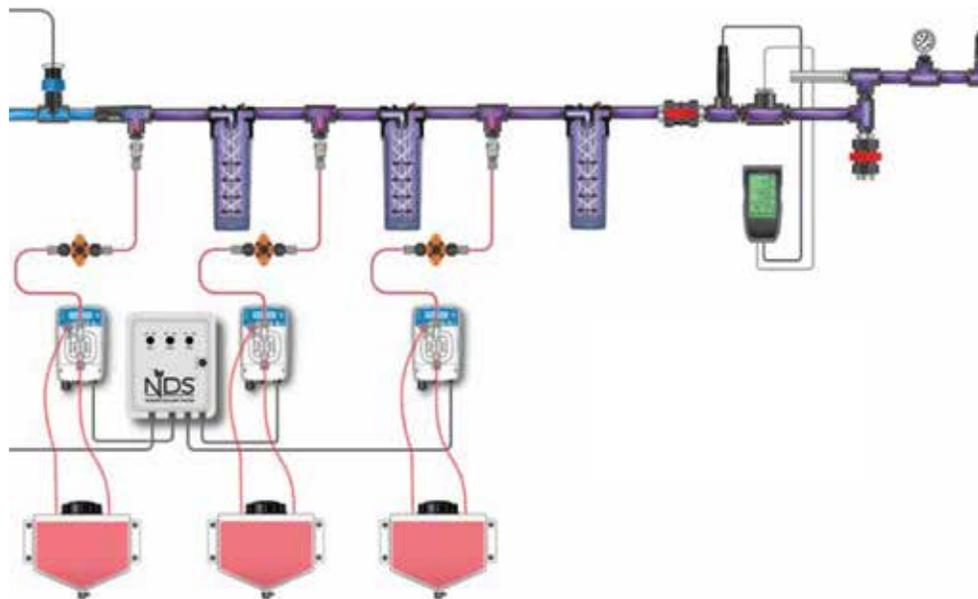
2021

ELECTRIC NDS

Applications: Drip Irrigation, Vertical Racking Systems, Ebb and Flow, Batch Tank Management, Pulse Irrigation, Method Controlled Dosing

Turnkey fertigation system

Includes flow control, pre-wired components and all necessary installation hardware. Wide selection of dosing pumps capable of dosing high-concentrate chemistries. Can achieve lower dilution rates. Expandable up to 12 dosing pumps. Ideal for pulse irrigation.





Anderson Injector products provide unmatched quality, accuracy and flexibility. Double diaphragm, positive displacement pumps do not use any sliding seals and are powered by water pressure from the water line or compressed air. Water flow is measured with a high accuracy, low resistance flow meter, and the controller manages the injection rate to achieve desired settings. Injector systems include multiple pumpers sized for nutrients, additives, sanitizers or acids. EC and pH monitors are available. Controllers vary from simple to high-tech and web enabled. *Anderson injectors drop-ship to the site from the manufacturer.*

Anderson Aqua

Inline injection system for dosing nutrients, acids, sanitizers and more based on user-programed recipes. Innovative combination of Anderson’s proven double diaphragm positive, displacement pumps and a sophisticated web enabled controller. Remote login, data logging, graphs, alarms and more. Ask your Griffin sales rep for more information on these customized systems.

J Series Ratio:Feeder Injection Systems

Multi-channel injection for fertigation, pH adjustment, sanitation, wetting agents, and other chemicals. All J Series systems incorporate a blend tank. Available pre-assembled or ready to assemble.

JA160S and JA160D

Both the base model JA160D and the deluxe JA160D ship as preassembled J-Series injectors. JA160D ships preconfigured.

JA160D Features:

- Legendary quality
- 1:200 fertilizer injection rate up to 160 GPM
- EC and pH monitors to confirm proper chemical levels
- Minimal pressure loss due to unique design
- Accuracy does not degrade over time
- Unit is expandable to grow with operation
- Blend tank ensures uniform chemical mixture



Item	Model	Description
33-11392	JA160S	Assembled J Plus Injector System
33-11393	JA160D	Assembled J Plus Deluxe Injector System



STORAGE & STOCK TANKS

When storing concentrated or ready to use nutrient solution, tanks should be sized to meet the need without excessive holding time. We can help you choose from flat and cone-bottomed tanks, recommending the best option to fit your needs.

Things to consider to limit microbial growth:

- Size tanks so they will drain completely in 3-5 days
- Use opaque tanks and shield from direct sunlight and heat sources
- Choose tanks with large openings, which will make cleaning and sanitizing easier
- Tank size for concentrated stock can vary, but most popular sizes are 5-30 gallons
- Minimize errors in stock tank prep by clearly labeling tanks and indicating the fill line

Stock tanks drop-ship to the site from the manufacturer.



SUCCESS STORY

CEA on cost savings by switching to drip irrigation

Making the change from hand watering to drip irrigation transforms cultivation. Automating irrigation improves outcomes by avoiding cycles of drought and oversaturation, reducing runoff, and drastically reducing labor. The labor savings is dramatic and increases if your staff grows dry. Why is this? When a crop is allowed to dry out too much, the media should be moistened prior to applying nutrients. Nutrient application to dry media brings a tremendous risk of damaging sensitive root hairs and causing tip burn of foliage, regardless of the type of fertilizer used. This means your dry grower needs to put the hose to each pot twice per irrigation cycle. Multiply this out over the lifetime of the crop, and you can easily spend \$10-12 per pot just in irrigation labor. Compare this to the average cost of a drip system being \$1.50-2.50 per pot. Then, consider that the drip system can serve more than one crop and that your team is no longer flushing fertilizer down the drain. Putting the crop on a drip system with a simple controller allows you to virtually eliminate associated labor costs while keeping the crop on an even, non-stressing moisture regime. Ask your Griffin sales rep to help you get your crop on drip.

CLICK
FOR MORE
INFORMATION

EMITTERS, DRIPPERS, STAKES, RINGS & ASSEMBLIES



A properly designed drip irrigation system will deliver an equal amount of solution to every pot on the line for more uniform growth. Drip irrigation easily represents the biggest labor-saving tool in cultivation.

EMITTERS

Pressure compensated valves that open/close based on water pressure and ensure even irrigation along the entire drip line.

DRIPPERS, SPRAY STAKES, OR RINGS

Point of termination in the pot; positions and directs the flow.

DRIPPER ASSEMBLIES

Save on labor by purchasing pre-assembled drip lines (include the emitter, spaghetti tube and stake or weight)



Item	★	»	Description
5010007	•		Netafim Woodpecker Junior 0.5 gph PC emitter
WPCJL8	•		Netafim 2 gph PC Jr Emitter
5013232			Netafim Short Angled Arrow Dripper (3 3/8")
5013231			Netafim Angled Arrow Dripper (6 3/8")
632301	•		Netafim Woodpecker Jr 1 gph PC Dripper w/nipple
63235			Netafim Woodpecker JR 1 gph OC Dripper Barb Outlet
5010013	•		Netafim 2 gph WPC Jr PC Woodpecker Dripper
5010008	•		Netafim Plum/Black 3.2 gph Dripper
50161051			Netafim Grey 6" Angled Barb Stake
5010081	•		Netafim Plum PCNL Spray Stake, single pattern
5010092	•		Netafim Grey PCNL Spray Stake, double pattern
07DR648	•		Dramm DR6-48 Dribble Ring (for 8-10" pots)
07DR1048	•		Dramm DR10-48 Dribble Ring (for 16" pots)
5010093	•		Netafim Netbow 10" irrigation ring, 60/ctn
44-800024	•		Netafim 24" PC dripper Stake Assembly
44-800036	•		Netafim 36" PC Dripper Stake Assembly
44-5557	•		Dramm 36" 2 lph PC Dripper Stake Assembly
44-5562	•		Dramm 48" 2 lph PC Dripper Stake Assembly, microvalve
509-112			Netafim 36" 3.2 gph Plum PC Spray Stake Assembly
509-107			Netafim 36" Grey/Orange 6.6 gph PC Spray Stake Assembly
5015212			Netafim Stackable 4 Way 36" Arrow Stake Assembly
44-5579	•		Dramm 24" PC 4" Dribble Ring Assembly, microvalve
44-5589	•		Dramm 36" PC 6" Dribble Ring Assembly, microvalve
5014214	•		Netafim Flat 4-Way (24"&24") MOD Assembly
5014212			Netafim Flat 4-Way (24"&36") MOD Assembly
5014215			Netafim Flat 4-Way (30"&30") MOD Assembly

★ = Retail Store Best Seller » = Drop-Ship Item

[CLICK FOR MORE INFORMATION](#)

FILTERS, VALVES, REGULATORS & TUBING



Item	★	»	Description
66110			Arkal 3/4" Disc Filter 140 Mesh/115 micron
5012130			Arkal 1" Disc Filter 120 Mesh/130 micron, 0-26 gpm
5011005	•		Netafim 16mm Insert Elbow
06D31HE55			Power-Loc 1/2" Elbow of 1/2" ID tubing
06D31HE88			PSI 3/4" Easy Loc Elbow for 0.8" ID
5013078			Antelco Greenback Valve for 1/2" ID tubing
5013079	•		Antelco Greenback Valve for 3/4" ID tubing
5013076			Antelco Vari-Flow Valve Barb x Barb
33-3025			Irritec 3/4" MPT x 500 Series P Valve
5014247			Netafim 1" 24V Dorot 2-Way Solenoid Valve
5012023			Netafim 3/4" 20 psi Low Flow Pressure Regulator
5011040			Netafim Brown Shut-Off Caps
5011035			Netafim Nipple Model #1 (Barb x Barb)
5014225			Netafim Flat 4-Way Manifold (fitting only)
632211			Netafim Flat 2-Way Manifold (fitting only)
44-800391	•		Netafim Pre-cut White 5/3 P/E Tubing, 36", 100/bdl
44-5605		•	Dramm Sunblock PE Tubing, 16 mm, 1000'
65401	•		Netafim White 20 mm Tubing, 100', 0.82-0.94
65402	•		Netafim White 16 mm Tubing, 100', 0.52-0.62
5011032			Netafim Bright White UV Tubing, 500', 0.52-0.62
653811			Netafim 500 Bright White 20 mm Tubing (0.82-0.94)
5010047	•		Netafim Super Flex UV White 5/3 Tubing, 1000'
5010050			Netafim Super Flex UV White 4/7 Tubing, 1000'
5010031			Netafim Black 16 mm Tubing, 100', 0.52-0.62
5010035			Netafim Black 20 mm Tubing, 100', 0.82-0.94
5010036			Netafim Black 20 mm Tubing, 500', 0.82-0.94
5011030			Netafim Dual Goof Plug (for 3 and 7 mm holes)
30-12910			Jain 3 mm Punch 0.128 Tube wt

★ = Retail Store Best Seller » = Drop-Ship Item

FILTERS

Protect downstream components by filtering emitter clogging solids.

SOLENOID VALVES

Low voltage, electric valves wired to a controller to control irrigation events

PRESSURE REGULATORS

Moderates the pressure to appropriate levels for downstream components

IRRIGATION TUBING

Carries irrigation solution to the emitters

SPAGHETTI TUBE

Delivers solution from the irrigation tubing to the pot. Emitter attaches to one end, dripper/stake/ring attaches to the other end.



WATERING TOOLS



WATER BREAKERS

Light weight, high quality water breakers from Dramm control and soften water flow. Different models target different hand watering needs.

[CLICK FOR MORE INFORMATION](#)

Item	★	Description	Notes
33-5234		750 Lemonhead	Ultra-soft flow, 7 GPM at 40 PSI. Use for young plants.
33-5233	•	1000PL Red	Ultra-soft flow, perfect for seedlings, 1000 micro holes, 7 GPM at 40 PSI
33-5225		170 Aluminum	Good for low water pressure or low volume supply, 7 GPM at 40 PSI
33-5230		400 Aluminum	The original full-flow model, grower must have. 11.1 GPM at 40 PSI
33-5231	•	400 PL	High impact, ABS plastic with full-flow. 11.1 GPM at 40 PSI
33-3251		400 PL with ring	400 PL with a protective ring. 11.1 GPM at 40 PSI
33-5235		Seedling Nozzle	Brass, generates hollow cone mist, 0.5 GPM at 40 PSI
33-350PLC		350PL Screen-Aire	High flow, aerated stream. Quick irrigation of large pots. 18 GPM at 40 PSI

2021



WATERING WANDS

Professional quality Handi-Reach Handles from Dramm are constructed from lightweight aluminum to reduce worker strain. A must have for all irrigation staff.

Item	★	Description
33-5120		16" Aluminum Extension Rod
33-5122		24" Aluminum Extension Rod
33-5123	•	30" Aluminum Extension Rod
33-5124	•	36" Aluminum Extension Rod
33-5125		36" Extra Curve Aluminum Extension Rod
33-5126		48" Aluminum Extension Rod
33-5128		48" Extra Curve Aluminum



HOSES

ColorStorm professional rubber hoses from Dramm are flexible while resisting kinks, abrasion and weather damage. Made from EPDM rubber. Make your own hose lengths with Custom Hose Kits (include 2 330' spools of hose, Dramm Press frame, jaws and 12 each of male and female fittings/ferrules.)

Item	»	Description
33-2150		5/8" ColorStorm hose, 50'
33-2250		3/4" ColorStorm hose, 50'
33-2175	•	5/8" ColorStorm hose, 75'
33-2275	•	3/4" ColorStorm hose, 75'
33-2100		5/8" ColorStorm hose, 100'
33-22100		3/4" ColorStorm hose, 100'
33-2266		5/8" Custom hose kit
33-2267	•	3/4" Custom hose kit
33-20343		3/4" ColorStorm hose, 330' master roll (no fitting)
33-20583		5/8" ColorStorm hose, 330' master roll (no fitting)

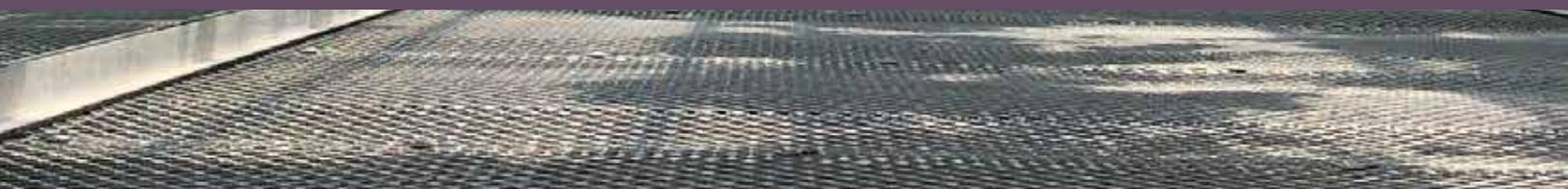
Additional fitting/ferrule sets available.

OTHER WATERING NECESSITIES

Item	Description	Item	Description
80170199-1145	Dramm Brass Hose Swivel	33-5365	Dramm OneTouch High Flow Valve, 16 GPM at 40 PSI
44-5607	Dramm QAV Shut-off Valve	33-14700	Dramm OneTouch Valve, 8 GPM at 40 PSI
41-400300	Dramm 300 Brass Shut-off Valve		



EQUIPMENT



No Matter the Crop or Situation Dramm has You Covered

Apply Insecticides, Fungicides, Disinfectants, Biopesticides. Spray, Foam, Fog, Drench.



Over 50 ways to spray and a team of experts to help you make the most of your pesticide applications.

Call Dramm to help improve your pest management program.

DRAMM[®]
Integrated Plant Health

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Want help?
Download our **Whitepaper**.



GGSPRO EQUIPMENT TIPS

- Choose corrosion resistant fittings – when offered, choose stainless steel components to avoid damage to brass componentry from corrosive products, like sanitizers
- Mix with “regular” water - Never use RO water to mix chemistry used in spray equipment
- Check the pH – adjust the pH of your spray water to match the product requirements for best efficacy. See Indicate 5 on pg. 100
- Clean your equipment - always thoroughly clean your equipment after use
- Store solution properly – do not use your spray equipment to store solution
- Keep herbicides separate – if herbicides are used, maintain clearly marked, separate backpack sprayers for these chemicals
- Stay safe – wear appropriate PPE (pg. 56)
- Stay legal and compliant – always follow label instructions, state and federal regulations; the label is the law!

2021

Every CEA operation should have five basic pieces of spray equipment on hand: A large volume hydraulic sprayer, a backpack sprayer, a portable injector, a fogger, and a foamer.

LARGE VOLUME HYDRAULIC SPRAYER

- Universal sprayer – works with everything
- Use for large-scale applications
- Many options, including tank size, hose length and wheel type
- Think about ease of use; choose equipment that matches your doorway and aisle widths

BACKPACK SPRAYER

- Universal sprayer – works with everything
- Perfect for spot treatment
- Good choice for products used in smaller amounts or for very specific needs (herbicides)
- Choose units with agitation and rechargeable batteries for efficient work

PORTABLE INJECTOR

- Primarily used for drench applications
- Highly mobile for ease of use
- Use for nematodes and other products that shouldn't run thru the facility-level nutrient injector
- Can also be used to mix liquid products with less contact

FOGGER

- Treats large areas quickly
- Tiny droplets move easily through the canopy and increase contact with target pests
- May be used with most, but not all chemistries
- Choose Autofoggers for unattended application, choose pulsFOG, Coldfogger or Turbo ULV for speed

FOAMER

- Essential tool for chemical cleaners and sanitizers
- Foam application increases efficacy by increasing contact time
- Allows application to vertical services
- Choose cart-based units when sanitation is frequent or involves large areas



2021

DRAMM FOAMERS

Create a thick, lasting foam to penetrate nooks and cracks for complete coverage. Increases efficacy of sanitation products. Cart mounted foamers come in various tank sizes to match facility needs. Cart units require a separately purchased compressor.

Item	»	Description
74-2688		Foam 8L Compression Foamer – hand held unit
74-2689	•	FM20-25 Cart mounted foamer – 20 gal tank on wheeled cart with 25' hose
74-2690	•	FM50-50 Cart mounted foamer – 50 gal tank and 25' hose, optional hose lengths available
74-2691	•	FMST50-50 SprayTrax Foamer – 50 gal tank on highly maneuverable cart with tracking axels that both turn independently. 50' hose, optional hose lengths available
74-2692	•	FMST100 SparyTrax Foamer – 1000 gal tank on SprayTrax cart. 50' hose, options for additional hose lengths

DRAMM AUTOFOGS

Industry-leading fogger. Ultra-low volume application with 0.05-10 µm droplets. Automatic, unattended, timer-based operation that dramatically reduces labor costs.

Item	»	Description
41-1205	•	MLVH Mini AutoFog – 8 L tank and stainless steel nozzle, treats up to 3000 sq ft alone or up to 5000 sq ft with HAF fans in operation
62-6003251	•	SLVH20A Medium AutoFog – 7L tank treats up to 12,000 sq ft alone or up to 28,000 sq ft with HAF fans in operation
41-1272		LVH20A Large AutoFog – 14L tank and stainless steel nozzle, treats up to 30,000 sq ft alone or up to 70,000 sq ft with HAF fans in operation

DRAMM FOGGERS

Low volume sprayers create finer droplets than hydraulic sprayers, for directed spray application and better canopy penetration. Labor savings due to extremely fast treatment. 30-60 µm droplets. Chemistry compatibility varies with model. Handheld and carted options.

Item	»	Description
62-6003261	•	Turbo ULV Fogger – hand-held cold fogger for targeted treatment of smaller areas. 5 L tank, 10-100 µm droplets, 110V
41-1488	•	ColdFogger AR – carted fogger with 20 gal tank and 150' hose
41-1489	•	ColdFogger AR – carted fogger with 20 gal tank, 150' hose, and pneumatic wheels
41-1121	•	Standard K-30 PulsFOG, 10 L tank, 100 HP motor, blue frame
41-1330	•	Portable K-10 PulsFOG, 10 L tank, 25 HP motor, red frame
41-1332	•	Portable K-22 BIO PulsFOG, two 5 L tanks, 50 HP motor, yellow frame



CLICK FOR MORE
INFORMATION

DRAMM HYDRAULIC SPRAY EQUIPMENT

Three hydraulic options, ranging from a backpack to the larger volume MSO and the more flexible Hydra. The MSO is a great entry level sprayer with adjustable pressure for stream and mist options. The Hydra sprayer brings a larger tank with agitation, more powerful pump and additional options for droplet size and spray distance.

Item	★	»	Description
62-70056	•		BP-4Li Backpack Sprayer, rechargeable Li battery, tank agitation
41-1210		•	MSO Sprayer with 33' hose and gun
41-12101		•	MSO Sprayer 100' Package: 100' hose, 20 gal tank, cart and gun
41-1210150		•	MSO Sprayer 150' Package: 150' hose, 20 gal tank, cart and gun
41-12101PW		•	MSO Sprayer 100' BF Package: 100' hose, 20 gal tank, cart, gun, Big Foot tires
41-1284		•	Hydra Sprayer with 50 gal tank, 250' hose, corrosion resistant fittings, 115V
41-1255		•	Hydra Sprayer with 50 gal tank, 150' hose and corrosion resistant fittings, 120V
41-1258		•	Hydra Sprayer with 50 gal tank, 150' hose and Big Foot tire package, 120V
41-1254		•	Hydra SprayTrax 50 gal tank, 150' hose on highly maneuverable cart with tracking axels that both turn independently, 5.5 hp Honda

DRAMM DRENCHING EQUIPMENT

Apply root zone treatments with ease. Keep nematodes active and healthy, meter your drench applications, and discover why a portable injector is indispensable.

Item	»	Description
74-2686	•	Agitation/Aeration bucket, 100-120V AC
74-2687	•	Agitation/Aeration bucket, 12V DC
41-1235	•	FertiCart with 20 gal tank (purchase Dosatron injector separately)
41-1237	•	FertiCart complete with 20 gal tank, D14 Dosatron w/Bypass and Kalrez
41-1238	•	FertiCart complete with 50 gal tank, 50 gpm Dosatron w/ByPass and Kalrez
41-1195	•	ChemDose - cart mounted 20 gal tank, rechargeable battery, 3 wand lengths
41-1196	•	ChemDose 2 - portable, hose-end dosing unit for use with injector or sprayer

DRAMM ACCESSORIES AND CARRIER SOLUTION

Item	»	Description
41-1273	•	MS-TG-SS Trigger Gun, corrosion resistant
41-1246	•	MS40-TG Hydra Trigger Gun
41-1240	•	L-5 Extension lance
41-1261	•	L-5E Extension lance with 5 nozzle ring
41-1262	•	L-5QC Extension lance with quick connect
41-1276	•	Quick connect Drench adaptor (incl fittings and wand)
41-1227	•	MS-R 150' Hose reel for MSO cart

Item	»	Description
41-1264		BlueFlex 100' ¼" spray hose
41-1265		BlueFlex 150' ¼" spray hose,
41-1266		BlueFlex 33' ¼" spray hose, ¼" ID for MSO
41-12104	•	Stainless steel nozzle for MLVH, SLVH
41-1263	•	Stainless steel nozzle for LVH
62-700512		Quick Change replacement lithium battery for BP-4Li
74-2675		Nutri-Fog carrier, 5 gal pail (for use with Coldfoggers)



Siebring Sprayers

Durable, commercial quality sprayers for years of service. Gas engines available via special order.



MIST'R DRENCH

- 800 PSI, 3.0 GPM
- High-low pressure for mist, spray and drench
- 100' Wire braid hose
- Constant agitation
- Towing tongue
- 2 guns, quick coupled
- Available in 100 and 200 gal.

Item	»	Description
41-2025*	•	Electric Mister Drench with hose reel
41-38100*	•	100', 3/8" Replacement Sprayhose

» = Drop-Ship Item



FOX SPRAYER

- 800 PSI , 3 GPM
- 2 guns and wands (18" and 12")
- 100' hose (high pressure)
- 35 gallon, complete drain tank
- 10" balloon tires
- Highly maneuverable. Four wheels and a narrow front steering mechanism which allows 90° aisle turns
- Drench feature

Item	»	Description
41-2120*	•	Siebring Fox 120V Sprayer with STD Reel/35 gal. Tank/100' Hose
41-38100*	•	100', 3/8" Replacement Sprayhose

2021



Portable Dosatron Injector Carts

Perfect solutions for drench applications, especially nematodes. Compact design is easy to maneuver through tight spaces.

DOSACART

- 15-gallon tank
- Transparent polyethylene tank construction
- Crash bar helps protect Dosatron unit from damage
- 10" no-flat tires
- Drain valve at bottom for easy clean-out
- Comes with 14 GPM injector, filter and check valve
- Fully assembled
- Dimensions: 45½"h x 16"w x 20"d

Item: 33-2630



LI'L BUD-D

Perfect for Spot Treatments

- Polyethylene construction
- 10" no flat tires for maximum mobility
- Versatile 5-gallon capability
- Narrow base - fits easily through aisles
- Designed for maximum stability
- Dimensions: 44½"h x 19"w (wheel to wheel) x 22"d
- Includes: cart, 5-gallon bucket and lid

Li'l Bud-D
Item: 33-2624

Quick Hook-Up Kit
Item: 33-2623

(Dosatron unit & Quick Hook-Up kit sold separately)



SOLO BACKPACK SPRAYERS

Easy to use, economical backpack sprayers for general use. Choose the 400 for a basic, economic option. Choose the 405/406 for a large pump handle, adjustable nozzle and longer wand. Choose the 425 for commercial features, including locking shut-off valve, Viton seals, filtration and additional nozzles.

Item	★	Description
81140016	•	400-1G – 1 Gallon Economy Sprayer
81140002		405 – 1 Gallon Multi-Purpose Sprayer
81140003		406 – 2 Gallon Multi-Purpose Sprayer
81140025	•	425 – 4 Gallon Professional Piston Sprayer

★ = Retail Store Best Seller



TRANSPORTATION CARTS

Wellmaster transportation carts are the industry standard for in house transportation and shipping.

- 1 base, 3 shelves, 4 posts, 1 drawbar, and 4 tires (2 swivel, 2 rigid)
- Shelves are adjustable in 2" intervals
- Shelves are galvanized wire mesh
- Overall height of assembled units - 87"
- Carts constructed with drawbar and pin for train make-up with one cart following another around corners when in tow.
- Hot dip galvanized to resist rusting
- Can be collapsed to 20% of original size for storage

Item: 39-7025

Desc: 22" x 59" Wellmaster Rectan. Trans. Cart

Item: 39-7030

Desc: 22" x 59" Wellmaster Wire Mesh Shelf

GRIZZLEY CART

The Wellmaster Grizzly is a "bear" of a cart. It's easy-to-assemble design and versatility make it ideal for moving products throughout your environment. 15" flat-free tires at the back and 10" flat-free tires at the front will glide over rough terrains with great ease while the push handle offers both comfort and leverage. Offers a hot dip galvanized finish with the deck being 18" from the ground. This product is a boxed shipment which saves on freight.

Item: 39-7090

Size: 24" Wide x 48" Long x 37" Height

360° CART

Wellmaster's 360° Cart features a dynamic design with zero turn radius for close tight turns. Handles on each end of the cart provide ease when maneuvering sharp turns over various terrains whether you are pushing or pulling the unit. 10" swivel tires are placed at each end for load stability while 15" tires are placed at the center to act as a pivot point. This unit is completely compatible with the industry standard 22" x 59" shelves. Two fork guides occupy the underside of the unit for transport via lift truck. This unit also features a hot-dip galvanized finish.

Item: 39-053304 **Size:** 22"x 59"

MIXERS, SHAVERS, POT FILLERS & CONVEYORS

Commercial Horticulture Equipment

Another great way to reduce labor is to implement automation for media handling and pot filling. As your operation grows, this equipment can even help you reduce your input costs for peat-based media. Use of soil mixers and pot fillers also ensures that compressed bales are properly fluffed, and pots are filled at the perfect density for optimum root growth. Ask your Griffin sales rep for help for your immediate or future needs for affordable, customized equipment from Pack Manufacturing. *Custom built equipment drop-ship to the site from the manufacturer.*



BATCH MIXER

Pack Manufacturing offers standard Batch Mixers in sizes designed to accommodate everyone from beginning grow operations to the largest nursery. The Pack Mfg. ½ Cu. Yd. and 1 Cu. Yd. are perfect for lower volume operations. The Pack Mfg. 2 Cu. Yd. and 3 Cu. Yd. Batch Mixers offer the capability to mix grow media for medium and high-volume growers, while the 4 Cu. Yd., 6 Cu. Yd. and above Batch Mixers offer extreme amounts of volume. All Pack Mfg. Batch Mixers are dependable, low maintenance, made to last and constructed from solid steel, and equipped with sealed gearboxes. Numerous options are available to customize your mixer to fit your needs.

Item: PM20 Pack 1 cubic yard soil mixer

BALE SHAVER

Compressed peat towers offer plenty of advantages for shipping and storage, but the towers require proper processing prior to use. Pack Mfg. Bale Shavers allow you to enjoy the benefits of compressed media without hindering your plants. Pack Mfg. has three models of Bale Shaver to meet any situation. Each Bale Shaver will finely shave your compressed or frozen bales into light, fluffy material perfect for root growth. The PM1200 Vertical and PM1210 Horizontal Bale Shavers accommodate bales up to 113" tall, and our 3.8 Peat Fluffer is designed just for 3.8 Cubic Feet bales.

PM1002 DOUBLE POTTER

Made with the largest operations in mind, the PM1002 comes complete with a 4 cubic yard hopper, variable speed control, adjustable hopper gate, independent feed control, excess soil recycling, media vibrator, powered take-off, all sealed bearings, direct drive gearboxes, and 10' filling conveyor. Perfect for transplanting lines. The PM1002 adds a layer of media to the bottom of the container and allows for a plant to be inserted before filling the remainder of the container with media - all accomplished in a single efficient production line capable of filling 750 15-gallon pots an hour. Additional options include extended conveyor and custom hopper sizes.



Additional options for processing, mixing, conveying and filling, with high quality design and fabrication. Soil handling and conveyors.



CUSTOMER TESTIMONIAL

"On a good day, we are able to do upwards of 10,000 to 12,000 pots in a day, a task that if done manually would only be able to have an output of 1,000 pots per day."

Brady Cullen, General Manager, Zino Nursery



SEEDERS



Seeder needle seeders to suit the small grower and the larger growers. Our needle seeders enjoy exceptional customer satisfaction with growers in the bedding, vegetable and forestry industries. Manufactured of the highest quality materials to withstand the rigors of a greenhouse environment and designed with simplicity of use in mind. *Custom built equipment drop-ship to the site from the manufacturer.*



THE PACK SEEDER

The Pack Seeder™ is a fully-automated seeding solution for trays. Using only pneumatic controls, the Pack Seeder™ dibbles, inserts the seed, and covers each cell. It is the precision solution for any seeding line- capable of handling most size seeds. Each Pack Seeder™ can be customized to work with your tray and seed size directly from the factory. It includes a vibrating slide bed, pneumatic indexing to ensure proper placement, a mini-hopper for topping, seed collecting vacuum line, adjustable guiderails, and interchangeable manifold bars and seed needles.

GS3 NEEDLE SEEDER

The GS3 automatic Needle Seeder was developed with the medium greenhouse operation in mind, but we have found it to work well with larger operations as well. It is constructed of quality material and parts easy to operate and can be mastered in less than a day.

GS3-HD NEEDLE SEEDER

The GS3-HD automatic Needle Seeder was developed with the larger greenhouse operation in mind. It is constructed of the same quality material and parts as our other machines. Our GS3-HD machine is so easy to operate it can be mastered in less than a day. The GS3-HD is capable of direct seeding into bedding flats and pots up to 4" square.

HEMP BUCKER & CARTS

Harvest Equipment

PACK BLACK PM420 – BUCKING AND TRIMMING MACHINE

- Capable of wet or dry trimming
- Triple bag system to clean separate trim and kief
- One PM420 replaces eight hand trimmers, processing up to 6 lbs/hr dry
- Durable, stainless steel die plate
- 120V/15A circuit
- Variable speed control
- Drop-ship from the manufacturer



METERS & MONITORS

Bluelab



A

B



C



D



E

F

Bluelab equipment is designed to enable the world's growers to create the optimum environment to grow the best plants and food. Griffin's GGSPRO team views reliable pH and EC meters as essential equipment; avoiding nutritional problems requires active, in-house monitoring of the root. Solidly built and easy to use, Bluelab's pH, conductivity, moisture and temperature meters will provide years of service. Their monitors, controllers, wireless data and automated dosing systems further enable growers to meet production targets.

COMMERCIAL TRUNCHEON METER (A) ★

The indestructible Truncheon measures conductivity, in EC, CF, PPM 500 (TDS) and PPM 700. Fully waterproof: splash, submerge or sink. No calibration needed. This one will last a lifetime!

PH AND CONDUCTIVITY PENS (B/C) ★

These hand held pens provide compact, quick and easy ways to monitor crop status. The conductivity pen reads EC, PPM (total solids) and temperature. Both pens for use with solutions.

PULSE 3-IN-1 MULTIMEDIA METER (D)

Direct stick meter for root zone measurement of moisture, conductivity and temperature. Wireless smartphone syncing meter.

COMBO METER AND COMBO METER PLUS (E) ★

Measures pH, conductivity and temperature in one portable, handheld meter. Brilliantly simple, rugged design for years of service. Easy calibration. Backlit display for easy read. Original Combo Meter comes with a pH Probe and a Conductivity probe for use with solutions. The Combo Meter Plus includes a Conductivity Probe for solutions and the new Bluelab Leap pH Probe for direct stick pH measurement in media. Battery powered.

GUARDIAN MONITOR AND GUARDIAN INLINE CONNECT MONITOR (F) ★

24/7 monitoring of pH, EC and temperature solution or directly in irrigation and feed lines. Connect capability allows data to be viewed on a mobile device from anywhere. Large, backlit display for at-a-glance viewing on site. High and low alarms alert when parameters are out of range.

CARE KITS AND CALIBRATION SOLUTIONS ★

With just a little bit of maintenance, your equipment will last longer and be ready for you at every use. Keep pens and probe tips clean and properly stored so they don't dry out. Calibrate pH meters with both 4.0 and 7.0 standards for accurate reads within the target range. Remember to use tap water for cleaning – never RO water. Scan QR code at left for details and item numbers for Bluelab solutions.

CLICK FOR MORE
INFORMATION

EC and pH Pens



HI98130 COMBO TESTER (A)

Pen style tester for pH, EC/TDS and temperature measurements. Replaceable pH electrode cartridge. Graphite electrode for EC/TDS. Use with Hanna solutions 74-2535, 74-2540, 74-2536, 74-2525, 74-2530.

HI98312 DIST 6 EC TESTER (B)

Measures EC, TDS and temperature. Replaceable graphite electrode, adjustable TDS ratio, and waterproof casing. Floats. Use with Hanna solution 74-2536.

HI98127 PHEP 4 PH TESTER (C)

Replaceable pH electrode cartridge, auto shut-off and simple calibration. Waterproof casing. Floats. Use with Hanna solutions 74-2525, 74-2530, 74-3235, 74-2540.



All meters and testers operate on 3 LR44 or equivalent button cell batteries (included).

PRO HM DIGITAL EC METER (D)

Easy to use pen measures conductivity, TDS and temperature. Digital calibration, auto-off, and data hold functions. Easy to read LCD display. Replaceable sensor. IP-67 waterproof (submersible), floats.

PRO HM DIGITAL PH METER (E)

Simple use pen measures pH and temperature. Data hold function with auto-off feature. Replaceable sensor and rewettable tip. IP-67 waterproof (submersible), floats. Operates on 3 LR44 or equivalent button cell batteries (included).

ECO HM DIGITAL EC TESTER (F)

Measures EC and TDS. Auto-off and data hold functions. Fixed probe. Water resistant housing.

ECO HM DIGITAL PH TESTER (G)

Measures pH and temperature. Auto-off and data hold functions. Rewettable tip. Water resistant housing.

Item	»	Description
83-2701		Bluelab pH Pen
83-2702		Bluelab Conductivity Pen
83-2706		Bluelab Commercial Truncheon Meter
83-2778		Bluelab Pulse Meter
83-2709		Bluelab Combo Meter
83-2777		Bluelab Combo Meter Plus
83-2739		Bluelab Combo Meter Carry Case
83-2776		Bluelab Leap Spear-Tip Probe
83-2711		Bluelab Guardian Connect Monitor
83-2770		Bluelab Guardian Monitor Inline Connect
83-2772		Bluelab Guardian Inline pH Probe
83-2737		Bluelab Connect Stick
83-2738	•	Bluelab Connect Range Extender
83-1779		HI98130 Combo Tester
83-1729		Replacement pH electrode for HI98130 /HI98130
83-1778		DiST 6 Waterproff EC/TDS Tester
83-1749		Replacement graphite electrod for DIST 6
83-1724		HI98127 pHep 4 pH Tester
33-2700	•	Eco HM Digital EC/TDS Tester
33-2705	•	Pro HM Digital EC/TDS Meter
33-2710	•	Eco HM Digital pH Tester
33-2715	•	Pro HM Digital pH Meter

» = Drop-Ship Item

PROTECTIVE EQUIPMENT & SIGNAGE

KLEENGUARD A20 BREATHABLE PARTICLE PROTECTION COVERALLS

Strong and breathable, three-layer SMS fabric designed to reduce heat stress and enhance worker comfort. Offers protection against many fine dusts, fibers, and low surface tension liquid splashes. California's Department of Pesticide Regulation, a division of the state EPA, has approved KLEENGUARD coveralls for pesticide application. Denim blue.



KLEENGUARD A70 CHEMICAL SPRAY PROTECTION COVERALLS

Polyethylene-coated fabric is lightweight and resistant to many water-based liquids, liquid chemical splashes, and sprays. REPEL® coveralls pass ASTM F903 penetration testing for the wide range of liquid chemicals represented by ASTM F1001. California's Department of Pesticide Regulation, a division of the state EPA, has approved REPEL® coveralls as chemical protection in pesticide applications. Meets chemical resistant category.

GLOVES – NITRILE, LATEX AND VINYL

From light duty crop work and sanitation to medium duty chemical PPE, Griffin offers an assortment of gloves in a range of sizes.

EPA APPROVED WARNING SIGNS



14" x 16" Signs

This EPA-approved reusable sign has correct legend and size.

Item: 41-1124



Small Signs

Approved for individual potted plants, greenhouse benches and certain nursery situations. These reusable 5" x 5" signs come with 16" PVC stake. Place no more than 25' apart.

Item: 41-1123



14" Pesticide Storage Sign

Mount this sign where pesticides are being stored

- UV resistant ink
- 0.030-gauge polyethylene

Item: 41-5026

Item	Description
80-2171	Kleengrow A20, Medium (36-40)
80-2172	Kleengrow A20, Large (37-43)
80-2173	Kleengrow A20, X-Large (44-45)
80-2174	Kleengrow A20, XX-Large (46-54)
80-2372	Kleengrow A70 Medium (36-40)
80-2373	Kleengrow A70 Large (37-43)
80-2374	Kleengrow A70 X-Large (44-45)
80-2375	Kleengrow A70 XX-Large (45-54)
80-5236	A Disposable Nitrile Gloves, Powdered, Medium
80-5237	A Disposable Nitrile Gloves, Powdered, Large
80-5376	A Disposable Nitrile Gloves, Powder Free, Medium
80-5378	A Disposable Nitrile Gloves, Powder Free, Large
80-5258	B Green Nitrile Pesticide Spray Gloves, 15 mil, flock lined, med
80-5259	B Green Nitrile Pesticide Spray Gloves, 15 mil, flock lined, large
80-5371	B Green Nitrile Pesticide Spray Gloves, 22 mil, unlined, large
80-5250	C Disposable Latex Gloves, 4 mil, powdered, small
80-5251	C Disposable Latex Gloves, 4 mil, powdered, medium
80-5255	C Disposable Latex Gloves, 4 mil, powdered, large
80-5380	Disposable Vinyl Gloves, 4 mil, small powder free, 100/box
80-5382	Disposable Vinyl Gloves, 4 mil, medium, powder free, 100/box
80-5384	Disposable Vinyl Gloves, 4 mil, large, powder free, 100/box

CENTRAL POSTING KIT

Handy for fulfilling WPS central posting requirements. Kit contains one of each of the following:

- Emergency Medical Facility Sign 10"x12" 0.050 Plastic
- Pesticide Safety Poster 23"x35" Full Color
- Pesticide Application Posting Tablet - 50 Sheets, 8½" x 11"
- EPA How to Comply booklet



Item: 41-5025



SEEDS AND PLANTS

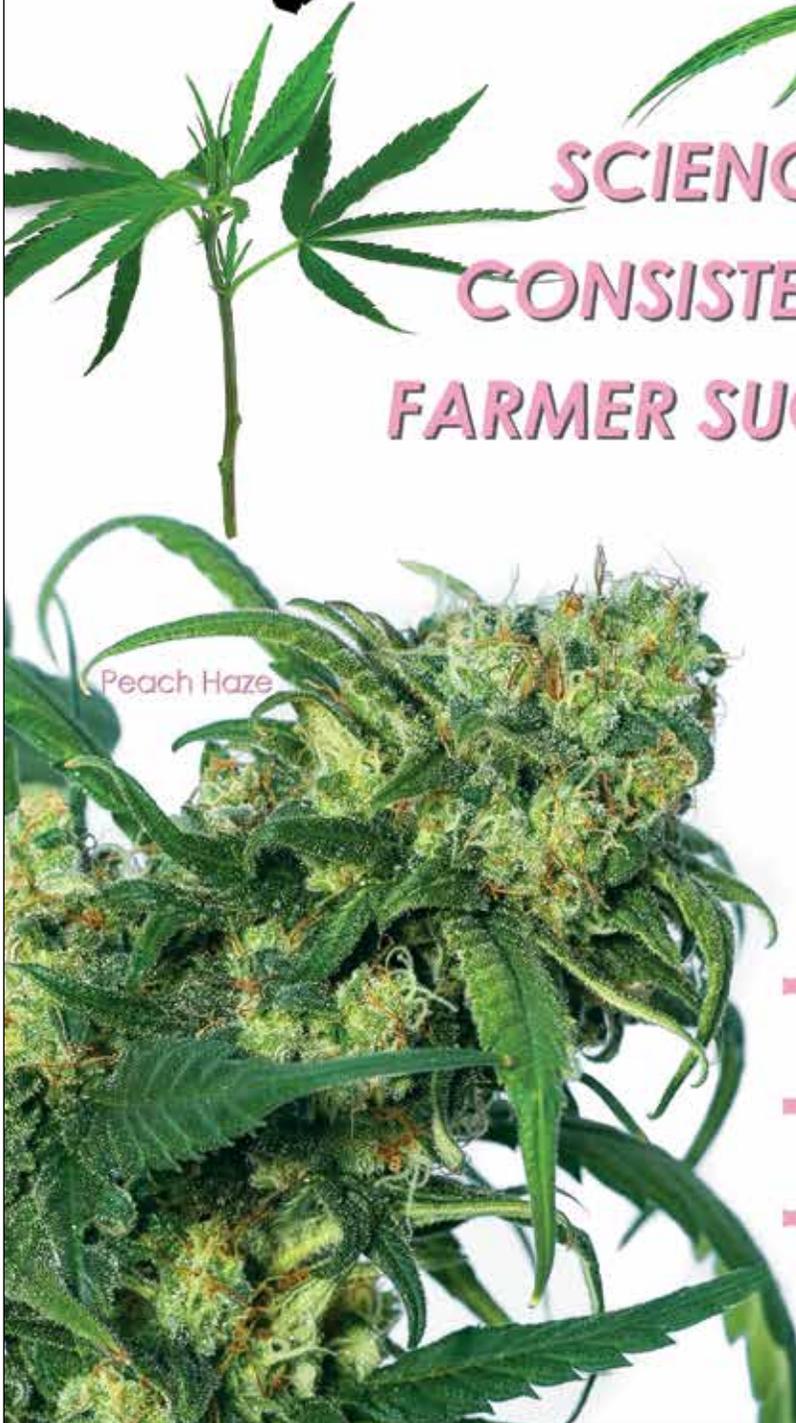


BELLE - THE HEMP MINE

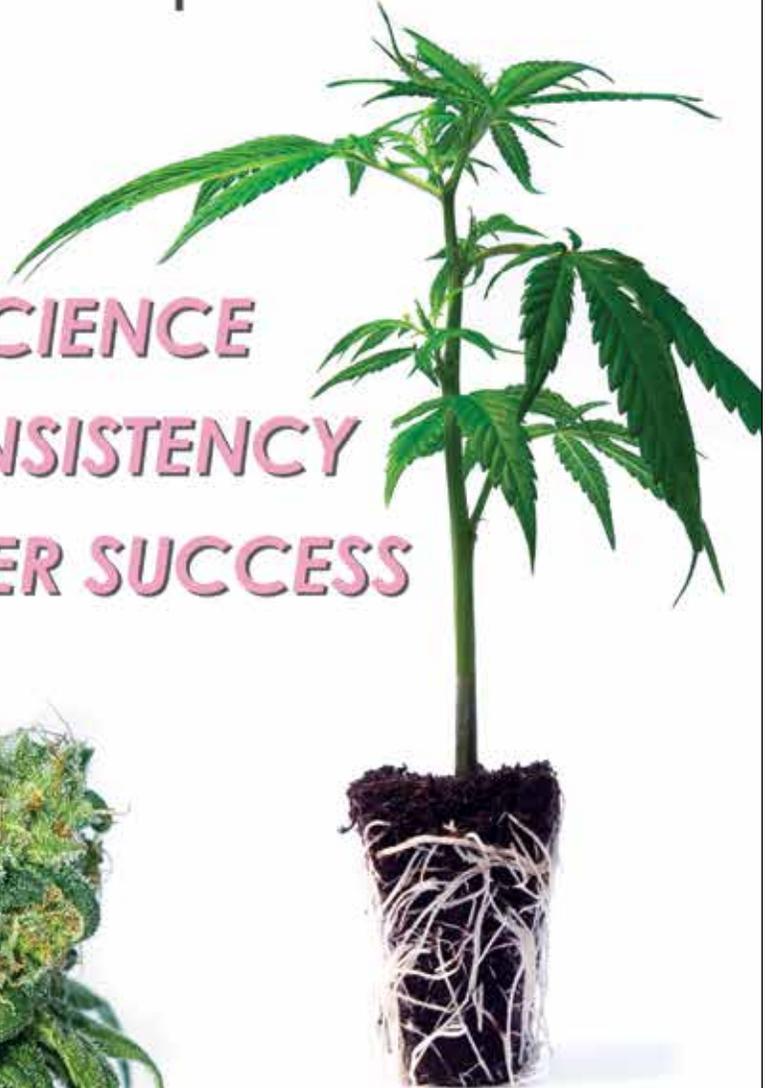


SUPERIOR Hemp Genetics

SCIENCE
CONSISTENCY
FARMER SUCCESS



Peach Haze



- *YEAR ROUND* Production of URCs
- Proven Nationwide Shipping
- Healthy & clean stock

www.thehempmine.com
sales@thehempmine.com



BELLE - THE HEMP MINE

Hemp - a new frontier for horticulture

New markets are energizing, dynamic and bring opportunities for greenhouse growers to diversify their business. At the same time, emerging markets bring their own set of challenges. When it comes to hemp, nobody is better suited to leverage their knowledge and experience to produce high quality crops with efficient and cost-effective tools than experienced, greenhouse growers. By starting slow and mastering the production requirements, growers can be well positioned as the market develops. When you are ready for hemp, Griffin's CEA team is here to share our experience in cannabis. We understand this crop and have the tools, technical knowledge and resources to help you get started.

Hemp-focused producers and ornamental growers diversifying into hemp can all trust Griffin for their genetics. We have chosen our hemp partners very carefully, and each brings something special to the table. From industry-leading breeders like The Hemp Mine, we have done our research so you can trust your supply chain. Each of our partners also brings technical knowledge. Some, like Optimara Agriculture, have years of experience supporting hemp production.

Others are newer to the arena, like Yabba Cannaba and Front Range Bio, and have accumulated hands-on experience with the crops. All are professional horticulturalists and meet our stringent standards for service and reliability.

GGSPPro and Cannabis

GGSPPro technical support is greatly valued by all Griffin customers. When it comes to cannabis and hemp, our technical expertise is even more valuable. Our GGSPPro team prepares customized fertility plans that address the different needs of the different crop stages. GGSPPro also develops IPM and BCA plans with consideration for state regulations for chemical use, which can vary greatly by state. And, our GGSPPro team helps growers and cultivators understand how to produce these crops at scale with professional inputs. All of our programs represent a starting point, and GGSPPro remains available to guide our customers to evolve nutrient and crop protection programs as the situation changes. It comes down to this: We know what works, and we've proven it in over 30 states and with hundreds of customers.

2021

SUCCESS STORY

As a company with over 100 years in Florida agriculture, and working with Cannabis in the state since 2018, we know how important it is to have the right genetics. We trailed over a dozen different cultivars last season, several of which were The Hemp Mine genetics. These cultivars performed great here in Florida and we have chosen to continue with The Hemp Mine genetics for this upcoming season. Having the proper genetics for the environment in which you are growing is one of the most important keys to success, and The Hemp Mine has the right cultivars for our growing conditions here in the South.

--Dr. Javier Garces, Treadwell Farms, Umatilla, Florida



THE HEMP MINE

The Hemp Mine breeds market-driven, regulatory-compliant varieties with CBD and CBG varieties suitable for different regions and applications, including extraction, smokable flower and terpene production, with varieties for greenhouse and field production. Available as unrooted cuttings and liners.

Ask your Griffin salesperson about our Trial Pack program, in two curated variety collections with structured GGSPRO tech support.

PEACH HAZE | 10-13% CBD

High yielding sativa hybrid producing loads of resin. Distinctive terpene profile which dances between a very sweet peach aroma and dank Diesel.

Use: Smokable **Site:** Indoor
Critical photoperiod: >18 hrs.

THM JACK | 10-12% CBD

High yielding sativa with a distinctive terpene profile. Could be compared to the legendary 'Jack Herer' with pine and turpentine overtones.

Use: Smokable **Site:** Indoor
Critical photoperiod: >18 hrs.

TIGER | 11-15% CBD

Medium yielding hybrid. Terpene aroma of incense, lemon and bitter-sweet. Very frosty flower, coloring deep purple when temperatures drop below 60°F.

Use: Smokable **Site:** Indoor
Critical photoperiod: >18 hrs.

WHITE TIGER | 9-12% CBD

Medium yielding sister to Tiger. Terpene aroma of incense, lemon and bitter-sweet. Flower is very frosty, denser than Tiger without the purple coloration.

Use: Smokable **Site:** Indoor
Critical photoperiod: >18 hrs.

CAT DADDY | 8-10% CBD

Excellent indoor performance with eight weeks to flower from initiation. Extremely dense and frosty flower. Very pungent terpene profile. Trichome integrity best maintained when grown indoors.

Use: Smokable **Site:** Indoor or field
Critical photoperiod: 14:18

LUCK IMPROVED | ~9% CBD

High yielding hybrid boasting 2 lbs dry weight/plant. Low risk: THC compliant at full maturity. Bred for low terpene production, late flower initiation and field production in the south. Avoid in north due to late harvest dates. Use at or south of the 45th parallel.

Use: Oil **Site:** Field
Critical photoperiod: 13:31

BELLE | 9-12% CBD

THM's showstopper variety! Extremely high yields and disease resistance. Unique, juicy-fruit terpene profile that persists under poor curing conditions. Bright pink pistils, early stacking and late THC spike.

Use: Oil or smokable **Site:** Indoor or field
Critical photoperiod: 14:18

SUNSET | 8-12% CBD

Very late flowering. 3-4 weeks later than most varieties when grown under natural days. Dense flowers with high terpenes (> 2%) and musky lemon aroma. Avoid in north due to late harvest dates. Use at or south of the 45th parallel.

Use: Oil or smokable **Site:** Indoor or field
Critical photoperiod: 13:18

JANET'S G | ~13% CBG

Medium-yielding CBG variety with strong disease resistance. Large trichomes stay snow white, extremely frosty when dried. Resists splitting. THC <0.15% at maturity.

Use: Oil or smokable **Site:** Field
Critical photoperiod: 14:18

EVE 66 | 8-12% CBD

The look and terpene profile sought for smokable flower! Frosty, dense flower with terpenes over 2.25%. Strong in Terpinolene, α -Phellandrene, and Eucalyptol. Flowers develop pink/purple hue in cooler temperatures.

Use: Smokable **Site:** Indoor or field
Critical photoperiod: 14:18



IMAGE: CAT DADDY - HEMP MINE

SEEDLESS SOUR LIFTER
CBD RATIO: 25:1

Sterile triploid. Heavy flowering and potent cannabinoids. Complex, Terpinolene forward sour flower. Matures in late September. Bred by Oregon CBD and produced by Optimara Agriculture.

Use: Smokable or oil **Site:** Field and indoor

SEEDLESS SOUR SUVER HAZE
CBD RATIO: 25:1

Sterile triploid. Breeder favorite. Sweet aroma with sour flavor. Heavy terpene producer. Disease resistance. Matures in late September. Bred by Oregon CBD and produced by Optimara Agriculture.

Use: Smokable or oil **Site:** Field and indoor

SEEDLESS WHITE CBG
CBG RATIO: 100:1

Sterile triploid. High yields, diesel aroma. Frosty flowers. Dense colas suitable for dry climates. Bred by Oregon CBD and produced by Optimara Agriculture.

Use: Smokable or oil **Site:** Field or indoor

SOUR G CBG | ~20% CBG

Large, dominant flower, stocky form with unique subtle sour aroma. Crystal covered flowers. Bred by Oregon CBD and produced by Optimara Agriculture.

Use: Smokable or oil **Site:** Field or indoor

SOUR LIFTER | **CBD RATIO: 25:1**

Strong flower and biomass producer. Sweet forward aroma followed by sour diesel finish. Strong cannabinoid producer. Matures late September. Bred by Oregon CBD and produced by Optimara Agriculture.

Use: Smokable and oil **Site:** Field or indoor

SOUR SUVER HAZE
CBD RATIO: 25:1

Popular variety with strong flowering and sour apple aroma. Disease resistance. Heavy terpene. Matures in late September. Bred by Oregon CBD and produced by Optimara Agriculture.

Use: Smokable or oil **Site:** Field or indoor

LATE SUE | **CBD RATIO: 34:1**

High yielding. Hardy, large plants with some disease resistance. Best for southern production, not recommended for field production north of 37°. Bred by High Plains Crop Production and produced by Optimara Agriculture.

Use: Oil **Site:** Field or indoor

STRAY KAT SK1 | **CBD RATIO: 37:1**

Early season, fast grower, and high yields. Good drought, pest and disease resistance. Suitable for northern and southern production. Bred by High Plains Crop Production and produced by Optimara Agriculture.

Use: Oil **Site:** Field or indoor

ADDITIONAL VARIETIES FROM OPTIMARA AGRICULTURE

- **Bayarose** (CBD, smokable, indoor)
- **CBD Hash** (CBD, oil, field or indoor)
- **Citrajito** (CBD, smokable, indoor)
- **Double Bubble** (CBD, smokable or oil, field or indoor)
- **Paloma** (CBD, smokable, indoor)

SUPERFIT TRIFECTA
15-17% CBD

Stress tolerant, squat bush with fast growth. Pine-citrus aroma with good terpenes. Mid-season maturity. Indica hybrid. Bred and produced by Front Range Biosciences.

Use: Smokable and oil **Site:** Field

PURE CBG | **7-12% CBG**

Fast growing, high yielding. Dense flower with mellow, earthy-hoppy flavor. Tall, upright habit. Early to mid season maturity. Bred by PureGene AG and produced by Front Range Biosciences.

Use: Smokable **Site:** Field

CLICK FOR MORE
INFORMATION

SUPERFIT HYBRID #5 | 12-14% CBD

Sturdy and vigorous with compact habit. Fruity-aroma with hints of saffron and pepper. Mid season maturity. Bred and produced by Front Range Biosciences.

Use: Smokable and oil **Site:** Indoor or field

SUPERFIT ANGIE | 13-16% CBD

Reliable performance. Pine, floral, herbal and citrus with strong retention of pine fragrance. Terpinolene-dominant terpenes. Vertical-habit with long colas. Early to mid season maturity. Bred and produced by Front Range Biosciences.

Use: Smokable **Site:** Field

EARLY REMEDY | 15-20% CBD

Citrus, cardamom, sandalwood aroma. Strong terpene profile. Early maturity. Suitable for use nationwide. Bred by Beacon Hemp and produced by Front Range Biosciences.

Use: Smokable **Site:** Indoor

EARLY SPECTRUM | 15-20% CBD

Blueberry haze aroma. Fast grower, dense flowers. Upright habit. Ideal for southern states with late season maturity. Bred by Beacon Hemp and produced by Front Range Biosciences.

Use: Smokable **Site:** Indoor

AUTO TSUNAMI | 12-15% CBD

Day neutral, auto-flowering. Haze aroma with-hints of lemon and skunky undertones. 75-90 day crop from germination. Bred and produced by Front Range Biosciences.

Use: Oil **Site:** Field or indoor

AUTO PILOT | 12-15% CBD

Day neutral, auto-flowering. Musky favor with tang of pepper and parsley. Low leaf to flower ratio, small stature. Matures in 75-85 days from germination. Bred by Beacon Hemp and produced by Front Range Biosciences.

Use: Oil **Site:** Field or indoor



ADDITIONAL VARIETIES PRODUCED BY FRONT RANGE BIOSCIENCES

- Super Cinco (CBD)
- Fruity Petals (CBD)

CHERRY BLOSSOM | CBD RATIO 27:1

A Colorado original. High yielding with a bushy, compact form. Good tolerance to disease and pests. Early finish. Produced by Yabba Cannaba.

Use: Smokable **Site:** Field or indoor

CHERRY WINE | CBD RATIO: 25:1

Popular variety with strong terpenes and rustic cherry aroma. Produced by Yabba Cannaba.

Use: Smokable **Site:** Field or indoor

HOT BLONDE | CBD RATIO: 25:1

Berry Blossom parentage. Strong yields of heavily stacked, resinous colas. Uniform plants. Fruit forward aroma. Produced by Yabba Cannaba.

Use: Smokable **Site:** Field or indoor

QUEEN DREAM | CBD RATIO 25:1

Bred from Wife and R5. Uniform growth and later maturity. Strong yields due to larger plant size. Strong terpenes with citrus, sweet candy and hops. Produced by Yabba Cannaba.

Use: Smokable **Site:** Field or indoor



GROWING MEDIA
AND CONTAINERS





Start to finish containers for cannabis growers

- Our resin containers are beneficial to root systems
- Suitable for low- or high-density plantings both indoors and outdoors
- Cost-effective
- Available for immediate shipment throughout North America



Ask your Griffin representative about HC's full line of cannabis growing containers or browse our inventory in this catalog!



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hc-companies.com/newsletter

CREATE THE UNDERGROUND CONNECTION



WITH MYCORRHIZAE

- ✓ HIGHER TERPENES PROFILE
- ✓ INCREASE CANNABINOIDS
- ✓ REDUCE VEGETATIVE TIME

**FULLY INTEGRATES
WITHIN PRO-MIX®
GROWING SOLUTIONS**



 LEARN MORE AND CONNECT WITH US @**PROMIX_CANNABIS**

VISIT PTHORTICULTURE.COM/EN/CONNECT



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GROWING MEDIA



2021

PRO-MIX BX ★

General purpose, workhorse blend. Vermiculite for moisture retention, perlite for drainage. Light weight and low bulk density with high water holding capacity. Good choice for small pots (up to 1 gal).

PRO-MIX MP

General purpose, organic mix. Peat/coir/perlite and organic wetting agent. Best for small containers (up to 1 gal).

PRO-MIX HPCC ★

High porosity, chunk coir blend. Short-fiber peat, vermiculite and coir create a well-drained blend with good air porosity and additional good moisture retention. Lower nutrient retention than BX, dries down more quickly than HP. Great choice for longer term crops due to long lasting chunk coir. For all size containers, especially > 1 gal.

PRO-MIX HP ★

High porosity, well drained mix for larger containers. Coarse perlite and fibrous peat bring lower water retention and higher air porosity than BX. Vermiculite free. Use for larger pots (> 1 gal). Especially helpful for dark, humid conditions or "wet" growers.

PRO-MIX PGX

Plug and germination mix. Fine texture with vermiculite for water retention. Slightly higher starter charge compared to FPX. Top choice for seedling production. Use in plug and liner trays.

PRO-MIX FPX

Plug and germination mix for moisture sensitive crops. Vermiculite free, peat and perlite blend. Holds less water than PGX and has a lower starter charge. Good choice for veggie seedlings.

PRO-MIX PG ORGANIK

OMRI listed plug and germination mix. Peat/coir/vermiculite blend for good air porosity and organic wetting agent. Use in plug and liner trays. Excellent choice for veggie seedlings.

PRO-MIX CONNECT

Extremely concentrated form of Premier's proprietary endomycorrhizae. Powdered product for use as a pre-transplant, slurry-dip for cannabis and hemp. Provides quick start, strong growth and increased yields.

★ = Retail Store Best Seller

ProMix professional peat-based growing mixes from Premier Tech are market leaders in the CEA arena due to their reputation for performance, quality and consistency. Best value in CEA crops is achieved when using blends that include Premier Tech's proprietary, in-house cultured mycorrhizae and biofungicide active ingredients.

Mycorrhizae: Endomycorrhizae PTB297

Premier Tech's fungal mycorrhizae (*Glomus intraradices* PTB297) serves to aid plant uptake of nutrients and water. Tiny threads penetrate the media, increasing the reach of the root system, and are especially beneficial to crops with longer production times. Growers report reduced transplant shock, improved crop health and benefits for cannabinoids and yields, and research provides hard evidence for these observations.

Biofungicide: *Bacillus amyloliquefaciens* MBI 600 or *B. pumilus* PTB180

Premier Tech's biofungicides are proprietary *Bacillus* products cultured in-house under strict process control. *Bacillus* protects the root system by colonizing the root surfaces to prevent pathogens from penetrating, and *Bacillus* produces an antibiotic that actively fights root pathogens. For cannabis and hemp, *Bacillus* is one of the few, effective, preventative fungicides allowed for use by many states.

Professional Grower Products

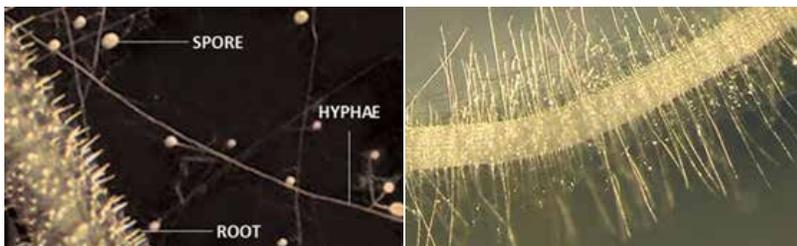
Item #	Description	Size	Qty/plt
65-2005	PRO-MIX BX	3.8 cu. ft. Comp	30
94-1152	PRO-MIX BX MYCORRHIZAE™	2.8 cu. ft. Loose	57
65-2015	PRO-MIX BX MYCORRHIZAE™	3.8 cu. ft. Comp	30
94-1140	PRO-MIX BX BIOFUNGICIDE™ + MYCORRHIZAE™	2.8 cu. ft. Loose	57
65-2017	PRO-MIX BX BIOFUNGICIDE™ + MYCORRHIZAE™	3.8 cu. ft. Comp	30
65-2035	PRO-MIX HP	3.8 cu. ft. Comp	30
94-1154	PRO-MIX HP MYCORRHIZAE™	2.8 cu. ft. Loose	57
65-2040	PRO-MIX HP MYCORRHIZAE™	3.8 cu. ft. Comp	30
94-1170	PRO-MIX HP BIOFUNGICIDE™ + MYCORRHIZAE™	2.8 cu. ft. Loose	57
65-2044	PRO-MIX HP BIOFUNGICIDE™ + MYCORRHIZAE™	3.8 cu. ft. Comp	30
94-1160	PRO-MIX HPCC MYCORRHIZAE™	2.8 cu. ft. Loose	57
65-2050	PRO-MIX HPCC MYCORRHIZAE™	3.8 cu. ft. Comp	30
94-1165	PRO-MIX HPCC BIOFUNGICIDE™ + MYCORRHIZAE™	2.8 cu. ft. Loose	57
65-2080	PRO-MIX HPCC BIOFUNGICIDE™ + MYCORRHIZAE™	3.8 cu. ft. Comp	30
94-1185	PRO-MIX MP MYCORRHIZAE™ Organik™ Mix - Organic Growing	2.8 cu. ft. Loose	57
65-2060	PRO-MIX MP MYCORRHIZAE™ Organik™ Mix - Organic Growing	3.8 cu. ft. Comp	30
20-200400	PRO-MIX PGX BIOFUNGICIDE™	2.8 cu. ft. Loose	57
65-2020	PGX BIOFUNGICIDE™	3.8 cu. ft. Comp	30

Retail-Ready Products

Item #	★	Description	Size	CS/UOS	MSRP
80310030		PRO-MIX Premium Organic Seed Starting Mix	8 qt	216/6	\$8.99
80310031		PRO-MIX Premium Organic Seed Starting Mix	16 qt	210/6	\$10.99
80310035		PRO-MIX Premium Cactus Mix	8 qt	216/6	\$7.99
80310033		PRO-MIX Premium Orchid Mix	8 qt	216/6	\$9.99
80310036		PRO-MIX Perlite	8 qt	210/6	\$9.49
80310037		PRO-MIX Vermiculite	8 qt	210/6	\$11.49
80310019		PRO-MIX All Purpose Mix	2 cu ft	50/5	\$31.49
80310032		Premium Organic Vegetable and Herb Mix	16 qt	210/6	\$9.99
80310013	●	Premium Organic Vegetable and Herb Mix	1 cu ft	120/10	\$11.99
80310014		Premium Organic Vegetable and Herb Mix	2 cu ft	54/5	\$20.99
80310054		Premium Organic Vegetable and Herb Mix	2 cu ft	54/5	\$37.99
80310007		Sphagnum Peat Moss	1 cu ft	100/10	\$9.99
80310001		Sphagnum Peat Moss	2 cu ft	50/50	\$14.49
80310010	●	Sphagnum Peat Moss	3.8 cu ft	30/30	\$21.99

Most PRO-MIX professional products are also available in Mini-bulk and Mega-bale options.

★ = Retail Store Best Seller



Left: Mycorrhizae growth in root zone | Right: Bacillus colonization on root

SUCCESS STORY

Mycorrhizae in Cannabis Cultivation

Mark Davidson, Co-owner Heritage Farmacy

As part of a pilot program in Indiana, Heritage Farmacy (Crawfordsville, IN) grew organic medicinal hemp, mainly dedicated to CBD oil extraction.

In what he describes as an “easy-breezy” process, Co-owner Mark Davidson dipped clones’ roots into PRO-MIX CONNECT right before transplantation in the field. Observed results throughout the process and after harvest were simply stunning:

- 20% decrease in plant mortality
- 68% yield increase in dried flower weight
- 3.9% increase in total CBD

The grower also observed a real difference in plant size, leaf color and overall quality and vigor of the treated plants. A difference that just became more and more evident as weeks went by. “A child could have seen the difference”, says Mark.

Mark is satisfied with the increased yield, but also on the improved quality of his crop. He can now focus on bringing the best possible product on the market. Heritage Farmacy took home three 2020 Indiana Cannabis Awards.



Lambert Media



2021

Lambert Peat blends high quality peat-based media from their Canadian facility. With a carefully managed network of bogs, the Lambert team maintains a consistent supply of strongly structured, long grain peat. Lambert consciously invests to serve emerging market needs and welcomes custom blending opportunities.

In addition to their high quality peat, Lambert also harvests and processes EcoPeat. EcoPeat is an exclusive bog-aged, natural, wood fiber. Sustainable, compressible, and essentially inert. EcoPeat acts as an aggregate for drainage, replacing perlite and other coarse materials.

LM-111 ALL PURPOSE MIX

Composed of Canadian sphagnum peat moss, chunks, and perlite. Highly drained, with medium moisture retention. Well-suited for pots of all sizes, including large cell veggie transplants. Also available in an organic version. 80-90% peat.

EPM-20 ALL PURPOSE MIX

Composed of Canadian sphagnum peat moss, EcoPeat, and perlite. Medium drained, with medium moisture retention. Well-suited for small pots of all sizes. 80-90% peat.

PC-7 ALL PURPOSE MIX

From the Green Formula Mix (GFM) family. Long fibered peat, coir and perlite. Slightly higher moisture retention than LM-111. Medium drainage and moisture retention. Good for pots of all sizes, including outdoor production. 70-80% peat.

PC-15 ALL PURPOSE MIX

From the Green Formula Mix (GFM) family. Long fibered peat, coir, and coarse perlite. Most similar to LM-111 with addition of coir. Medium drainage and water retention. Good for containers of all sizes, including large veggie transplants. 60-70% peat.

LM-6 HIGH POROSITY MIX

Long-fibered peat, peat chunks and coarse perlite. Highly drained with low moisture retention. Great choice for larger pots (> 1 gal) and a helpful mitigator for "wet" growers. Also available in an organic version. 75-85% peat.

EPM 50 HIGH POROSITY MIX

High porosity mix with coarse peat, EcoPeat, and perlite. Highly drained with low moisture retention. Best for large containers (> 1 gal). 45-55% peat.

NURSERY MIX

High porosity, extra course mix for longer-term crops in large containers. Nice option for outdoor hemp and cannabis. Peat and EcoPeat. Use for containers > 3 gal.

LM-18 GERMINATION MIX

Fine textured peat and perlite for propagation. Medium drainage and water retention. Use in plug and liner trays. 80-90% peat.

LM-19 GERMINATION MIX

Germination mix, slightly more coarse than LM-18 for greater air space and drainage. A good choice for moisture sensitive crops. Peat and coarse perlite blend. Medium drainage and water retention. 75-80% peat.

LM-1

Perlite-free germination mix. Fine sphagnum peat and vermiculite. Holds a bit more moisture than LM-18. Use in plug and liner trays. 80-90% peat.

Professional Grower Products

Item #	Description	Size	Qty
149-0036	LM-111 - All Purpose Mix	3.0 cu ft Loose	48
149-0038	LM-111 - All Purpose Mix	3.8 cu ft Comp.	30
149-0104	LM-111 - Organic All Purpose Mix	3.0 cu ft Loose	48
149-0106	LM-111 - Organic All Purpose Mix	3.8 cu ft Comp.	30
149-0046	EPM-20 - All Purpose Mix	3.0 cu ft Loose	48
149-0048	EPM-20 - All Purpose Mix	3.8 cu ft Comp.	30
149-0113	GFM - PC-7 All Purpose Peat-Coir Mix	2.8 cu ft Loose	48
149-0118	GFM - PC-15 All Purpose Peat-Coir Mix	2.8 cu ft Loose	48
149-0006	LM-1 - Germination Mix	3.8 cu ft Comp.	30
149-0016	LM-18 - Germination Mix	3.0 cu ft Loose	48
149-0018	LM-18 - Germination Mix	3.8 cu ft Comp.	30
149-0021	LM-19 - Germination Mix	3.0 cu ft Loose	48
149-0056	LM-6 - High Porosity Mix	3.0 cu ft Loose	48
149-0058	LM-6 - High Porosity Mix	3.8 cu ft Comp.	30
149-0091	LM-6 - Organic High Porosity Mix	3.8 cu ft Comp.	30
149-0069	EPM-50 - High Porosity	3.0 cu ft	48
149-0071	EPM-50 - High Porosity	3.8 cu ft.	30

Retail-Ready Products

Item #	Description	Size	CS/UOS	MSRP
81940019	Seed & Cutting Mix	8 qt	6/6	\$6.99
81940042	Seed & Cutting Mix	16 qt	120/6	\$9.49
81940021	Cactus & Succulents Mix	4 qt	12/12	\$4.49
81940024	Sphagnum Moss	8 qt	6/6	\$7.99
81940023	Horticultural Wood Charcoal	4 qt	12/12	\$5.99
81940026	Horticultural Vermiculite	8 qt	6/6	\$9.99
81940025	Horticultural Perlite	8 qt	6/6	\$8.49
81940015	All Purpose Potting Mix	1.0 cu ft	91/10	\$10.49
81940016	All Purpose Potting Mix	2.0 cu ft	65/10	\$15.49
81940002	Organic All Purpose Mix (Black Bag)	1.0 cu ft	91/10	\$12.49
81940003	Organic All Purpose Mix (Black Bag)	2.0 cu ft	50/10	\$32.99
81940032	Peat Moss	3.8 cu ft	30/30	\$23.49
81940030	Peat Moss	2.2 cu ft	50/50	\$15.99
81940029	Peat Moss	1.0 cu ft	100/10	\$9.99

CLICK FOR MORE INFORMATION





STARTERS

Starters are used for propagation, both seed starting and vegetative propagation. UW are more economical, while W are suitable for retail and/or provide an extra layer of protection against contamination in dusty storage areas.

Item	★	Description	Qty/case
51-9022		Starters AOK 1" UW	6000
51-9002	●	Starters AOK 1.5" W	2940
51-9101		Pro AOK 1.5" UW	2940
51-9023		Starters AOK 2" W	1500
51-9035		Starters AOK 2" UW	1500
51-9013		Mini Blocks W	2250
51-9036		Pro Mini-Blocks 1.5" UW	2250
51-9026		Mini Blocks 2" W	1440
51-9024		Macroplugs	50 bag / 35 bags/cs
51-9025		Macroplugs, loose	2000

★ = Retail Store Best Seller

INNOVATIVE GROWING MEDIA SOLUTIONS

Grodan stone wool media products enable precision growing. Made from natural rock - basalt and limestone - Grodan products are favorites for propagation and production for CEA. Grodan products are fully inert and truly hydroponic in nature.

GRO-BLOCKS

Blocks are used as self-contained production systems for hemp and cannabis. Best practices call for irrigation by drip. Wrapped options are packaged in cellophane for additional protection against dust during storage. Unwrapped products are more economical, but lack the cellophane protection. Several popular items are available as bulk-pack pallets (without cases and/or cellophane wrapping).

Item	★	Description	Qty/case
51-9003		Delta 4 with hole W	384
51-9004		Delta 4 no hole W	384
51-9037		Pro Delta 4 UW	384
51-9028		Delta 5.6 W	256
51-9029		Delta 6.5 W	216
51-9012		Pro Delta 6.5 UW	216
51-9103		Delta 8 W	192
51-9008	●	Pro Delta 10 W	144
51-9038		Pro Delta 10 UW	144
51-9018	●	Hugo UW	64
51-9041		Pargro Jumbo UW	64
51-9042		Pargro Biggie UW	64
51-9007		Big Mama UW	18

2021

SUCCESS STORY

Solving Facility Issues Through Team Collaboration

A customer asked Jonathan Prime (Griffin salesperson, MA) about air flow issues in their medicinal cannabis flower rooms. Within a week, Jonathan visited with a light meter to document environmental conditions and lighting capabilities. He also brought additional CEA team members in for a site visit. The team collaborated and recommended raising the lights and lowering the fans. These changes resulted in a considerable positive environmental change in mere days.

In another situation, an established operator purchased a cultivation facility and discovered significant pesticides contamination on various hard surfaces. Their Griffin salesperson contacted CEA's GGSPRO Technical Specialist. Erica then researched the pesticide and suggested a product for cleanup. The salesperson delivered the product to the facility later that week and ensured understanding of product use. Successful clean up followed.



GRODAN IMPROVED GRO-BLOCKS

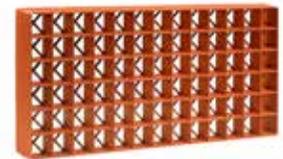
Optimized for cannabis and hemp, this new line brings optimal density and an Advanced Wetting Agent for superior moisture management to support these fast-growing crops. Improved water distribution in the blocks results in more even root distribution with more branched roots and better water/nutrient uptake.

Item	★	»	Description	Qty
51-9160			White GR 10 Loose 1, 4x4x4	1584/plt
51-9161			White Jumbo, GR 22, 6x6x4	64/cs
51-9162	•		White Hugo, GR 32, 6x6x6	64/cs
51-9163			White Hugo Loose, GR 32, 6x6x6	512/plt
51-9165		•	Gro-Block Imp GR4 3" UW Sm 3x3x2.6 w/Hole, 8/strip	384/cs
51-9166		•	Gro-Block Imp GR4 3" W Sm 3x3x2.6 w/Hole, 8/strip	384/cs
51-9167		•	Gro-Block Imp GR5.6 UW Lg 3x3x4 w/Hole, 8/Strip	256/cs
51-9168		•	Gro-Block Imp GR6.5 UW Sm 4x4x2.6 w/Hole, 6/Strip	216/cs
51-9169		•	Gro-Block Imp GR6.5 W Sm 4x4x2.6 w/Hole, 6/Strip	216/cs
51-9170			Gro-Block Imp GR7.5 W Med 4x4x3 w/ Hole, 6/Strip	216/cs
51-9171		•	Gro-Block Imp GR10 UW Lg 4x4x4 w/Hole, 6/Strip	144/cs
51-9172		•	Gro-Block Imp GR10 W Lg 4x4x4 w/Hole, 6/Strip	144/cs
51-9173			Gro-Block Imp Uni-Block 8x8x4	36/cs

LOOSE

Loose rockwool products are used with pots. Get the same great water holding capacity and air porosity as in blocks, but for use with any size container.

Item	Description	Qty/cs
51-9031	Grow Cubes L	2 cf
51-9032	Grow Cubes M	1 cf
51-9033	Grow Cubes	5 cf
51-9034	Grow Chunks	2 cf
51-9030	Gro-Wool bag	45 lb bag



GRO-SMART TRAY

Heavy-duty, double-sided, reusable tray holds starters during propagation. Perfectly fits in any standard 10x20 flat. Elevates starters from bottom of tray for better moisture management.

Item	★	Description	Qty/cs
51-9017	•	Gro-Smart Tray - 9.25" x 20"x 2"	5

SLABS

Slabs are the final step in a slab production system, most commonly used for greenhouse tomatoes, cucumbers, peppers and cut flowers. Start with A-OK cubes, then set rooted cubes into Gro-Blocks. When plants are fully rooted in the Gro-Blocks, simply set on top of the slabs for the remainder of production. Utilize drip irrigation (inserted into the Gro-Block).

Item	★	»	Description	Qty/cs
51-9011	•		Grodan Gro-Slab Expert 36"x6"x3"	12
51-9009		•	Grodan Gro-Slab 20/75 Expert Slab - 36" x 8" x 3"	12
51-9015	•		Grodan Uni-SLAB 16/cs W Vital 9.5" x 8" x 4"; W	16

2021

GROSENS MULTISENSOR SYSTEM

Real-time monitoring system measures EC, temperature and moisture level of Grodan blocks. Cloud based system is accessible via wireless devices. Special order.





FibreDust Coco Coir Growing Medium

Coir - Coco coir is a natural, sustainable media derived from coconuts. It is popular as a primary growing medium or as a component of blended media. Used extensively for tomatoes, cucumbers, eggplant, strawberries, hemp and cannabis.

Wood thermal fiber - The new Coir WTF 70/30 combines FiberDust coco coir and Profile's HydraFiber (wood thermal fiber) in a well drained, moisture retaining blend. This sustainable media produces great crops and is fully compostable.

GROW SLABS

Compressed coir in layflat bags for production without pots. Grower cuts openings to fit need. Commonly used with tomatoes, cucumbers, peppers, strawberries and long lived cut flowers. Wet to fluff. White poly.



Item	Description	Qty
58-19014	1 meter Grow Slab, True Blend (green), 70/30 blend (pith/chips), 3'x 5"x 6" (OMRI listed)	1
58-19013	1 meter Grow Slab, Action Blend (brown), 50/50 blend (pith/chips) for tomatoes, peppers and more, 3'x 5"x 6" (OMRI listed)	1
58-19044	• 1 meter Grow Slab, Berry Blend (red), 80/20 blend (pith/fiber) optimized for berry production. 3' x 5" x 6" (OMRI listed)	1
58-19065	• 1 meter Grow Slab, Coir WF 70/30 blend, 36"x6"x4"	1
58-19064	• 0.5 m Grow Slab, Coir WF 70/30 blend, 19"x8"x4"	1

GROW CUBES

For use with lay-flat grow bags for an integrated system. Sow seed or transplant to grow cubes. When transplant is rooted to edge of the grow cubes, place cubes on the openings in Grow Slabs with good contact with coir media in grow bag. Roots will quickly penetrate the lay-flat bag with minimal stress for reduce loss and uninterrupted, vigorous growth.



Item	Description	Qty
58-19058	• Coir WF 70/30 Grow Cube, 4x4x4	130/case
58-19059	• Coir WF 70/30 Grow Cube, 6x6x6	30/case

GROW BAGS

Compressed media ships as bagged slabs in upright, open topped grow bags for production without pots. Popular for all types of crops. Wet to fluff to perfect level for planting.



Item	Description	Qty
58-19016	• Upright Grow Bag, 3 gal size, 8" x 7"x 12", white poly (OMRI listed)	1
58-19017	• Upright Grow Bag, 5 gal size, 9" x 8"x 12", black poly (OMRI listed)	1
58-19030	• Upright Grow Bags, 3 gal size, 8"x7"x12", Root Kandy, Buffered Coir, white poly	1
58-19061	• Grow Bag, Coir WF 70/30, 1 gal, 6"x6"x7.5"	1
58-19062	• Grow Bag, Coir WF 70/30, 3 gal, 8"x7"x10", white poly	1
58-19063	• Grow Bag, Coir WF 70/30, 5 gal, 9"x8"x12"	1

SUPER SACK, STANDARD, FLUFFED COCO COIR

Pre-fluffed coco coir, 2 cubic yards per bag. Custom mixes available.

Item	Description	Qty
58-19019*	• FibreDust Super Sack, Standard Bag, 100% Fluffed Coco Coir (OMRI listed)	1
58-19027	• FibreDust Super Sack, Standard Bag, 50/50 Coir/Perlite (OMRI listed)	1
58-19028	• FibreDust Super Sack, Standard Bag, 70/30 Coir/Perlite (OMRI listed)	1
58-19026	• FibreDust Super Sack, Standard Bag, 70/30 Coir/Perlite with Gypsum (OMRI listed)	1
58-19029	• FibreDust Super Sack, Standard Bag, 100% Buffered Coir	1

SUPER SACK, FLUFFED COCO COIR BAFFLED

Pre-fluffed coco coir. 2 cubic yards per bag. Custom mixes available.

Item	Description	Qty
58-19039	FibreDust Super Sack, Baffled Bag, 50/50 Coir/Perlite (OMRI listed)	1

AMERICOCO BAGGED, FLUFFED COCO COIR

Pre-fluffed coco coir, 1.5 cubic feet per bag. Custom mixes available.

Item	Description	Qty
81460005	FibreDust AmeriCoco Colombo Jumbo 100% Coir (OMRI listed)	70
81460007	FibreDust AmeriCoco Brown Pearl 70/30 Coir/Perlite (OMRI listed)	70
81460009	FibreDust AmeriCoco Root Kandy, 100% Buffered Coir	70

COMPRESSED BLOCKS AND BALES

Supplied either individually wrapped for resale or unwrapped for horticultural use. Blocks are compressed 5:1 and fluff when rehydrated. Three convenient sizes: 8" bricks fluff to 2-2.5 gallons, 5 kg (11 lb) blocks fluff to 2.5 cubic feet, 25 kg bales fluff to 1/2 cubic yard.



Item	★	Description	Qty
58-19001	•	Pith Block, 12"x 12"x 6", 5 kg (11 lbs), wrapped (OMRI listed)	1
58-19002		Pith Block, 12"x 12"x 6" Pith Block, 5 kg (11 lbs), unwrapped (OMRI listed)	1
58-19056		Coir WF 70/30 Block, 12"x12"x6" 5 kg (11 lbs), unwrapped	1

★ = Retail Store Best Seller

MICROGREEN PADS



Organic microgreen pads made from jute. Available in two standard sizes. 300 grams/square meter. OMRI listed.



Item	★	Description	Qty
58-19020	•	Jute Microgreen Pad for 10 x 20 trays	10/pack
58-19025		Jute Microgreen Pad for 10 x 10 trays	10/pack

COIR MULCH

Coir mulch wets instantly and doesn't float, so it doesn't wash away in landscapes like other mulch products can do. Works well on slopes. OMRI listed.



Item	Description	Qty
58-19004	5 kg (11 lb) compressed block expands to 2.5 cubic feet	1



FABRIC SMART POTS

Soft sided fabric container with good durability for multi-year use. Multi purpose, aeration container for growing great plants. Provides root pruning. Excellent drainage & releases excess heat in hot weather for superb, fibrous root systems. Available in professional and retail ready packaging.

Retail-Ready Products

Item #	★	Description	UPC	Vendor	CS/UOS
81110042	•	1 Gal	674344100018	10001	100/100
81110046	•	3 Gal	674344100032	10003	50/50
81110047		3 Gal w/ Handles	674344140038	14003	50/50
81110049	•	5 Gal	674344100056	10005	50/50
81110051		7 Gal	674344100070	10007	50/50
81110053		10 Gal	674344100100	10010	50/50
81110055		15 Gal	674344100155	10015	50/50
81110059		25 Gal	674344100254	10025	50/50

★ = Retail Store Best Seller

Professional Products

Ask about Smart Pot's Pro Line: The same great pots in bulk cases for commercial growers. Available in sizes from 1 to 400 gallons. Popular sizes of 3-45 gallons also available with cut handles.



2021



CLICK FOR MORE INFORMATION

OASIS HORTICUBE

Top choice for hydroponic lettuce and herb production. Engineered, sterile, inert foam with low CEC. Sow into full sheets and break cubes off to place in gutters or rafts. Hortcube XL holds more water, Hortcube eS is biodegradable.

OASIS ROOTCUBE

Engineered, sterile inert foam for rooting cuttings. Simply water in for optimum air/water balance for rooting. Stick into sheets and break off cubes for transplant.

OASIS TERRA PLUG

Bonded media with uniform density from top to bottom for uniform and consistent rooting. Standard and customized sizes. Choose deep plugs for hemp destined for field planting.

OASIS FERTISS

Loose density media in an ultra-thin, non-woven cellulose wrap. Enables early handling/transplant to avoid root bound plants. Wrap also promotes air pruning for reduced root spiraling.

JIFFY PREFORMA

This bonded media is a preferred choice for field production of hemp and cannabis. Prefilled trays, including deep-celled trays from TO Plastics. Custom made to order. Ask your Griffin salesperson for more details.

JIFFY PELLET

Another popular choice for lettuce and herbs in hydroponics. Compressed discs fluff to loose density, wrapped plugs ready for sowing. Wrap keeps media intact in gutter and raft applications.

IHORT GROW CUBES ★

Retail-ready, preformed, bonded media perfectly sized for rooting, used in cannabis cultivation. Especially nice for consumer and hobbyist cultivators. Easily rewets if dried.

ROOT RIOT STARTER CUBES ★

Retail-ready, stabilized peat cubes. Popular in the cannabis arena, both in commercial and for retail consumers. 1.3" square, tapering to 1" square. 1.9" tall. Best used within six months of purchase.

Professional Grower Products	Item #	»	Description
	16-200250		
54-1125			Oasis Rootcube, 1"x1.25"x1.5", 104 cubes/sheet, 20 sheets/cs
54-1130			Oasis Rootcube, 1.5"x1.5"x1.5", 50 cubes/sheet, 20 sheets/cs
16-210200			Oasis Hortcube, 1.25", 104 cubes/sheet, 20 sheets/cs
54-1141			Oasis Hortcube, 1", 162 cubes/sheet, 20 sheets/cs
54-1202			Oasis Hortcube XL, multiseed, ¾", 276 cubes/sheet, 20 sheets/cs
54-1145			Oasis Hortcube eS, single seed, 1.25", 104 cubes/sheet, 20 sheets/cs
S5350C	•		Oasis Fertiss, 40x50 mm, round cells, 50 count tray, 10 trays/cs
S5372C2	•		Oasis Fertiss, 32x35 mm, round cells, 72 count tray, 16 trays/cs
54-1215	•		Oasis Terra Plug, 2.38"x1.88", 50 count tray, 224 trays/pl
54-1219	•		Oasis Terra Plug, 2.38"x1.5", 72 count tray, 224 trays/pl
60-2528	•		Jiffy J7 Hort Peat Pellet, 36x41mm, 2000/cs
60-2524	•		Jiffy J7 Organic Peat Pellet, 30x65x105 mm, 1470/cs
60-2525	•		Jiffy J7 Organic Peat Pellet, 36x41x72 mm, 1440/cs

Retail-Ready Mixes	Item #	»	Description	Size	CS/UOS	MSRP
	61-9013			iHort Q Plug, 40/40 mm square	100/bag	24/1
61-9014			iHort Q Plug, 40/40 mm square	50/bag	24/1	\$19.99
81860089			Root Riot Plant Starter Cubes,	100/bag	12/12	\$31.49
81860090	•		Root Riot Plant Starter Cubes	50/bag	20/20	\$20.99
81860092			Root Riot Plant Starter Cubes	1500/cs	1/1	\$401.49



Oregon-based producer dedicated to high quality, organic products for cannabis cultivation and consumer gardening. Bags double as growing containers – cut off the top and plant!



ROOTS ORGANICS ORIGINAL ★

Ready to use mix for fast growing, heavy feeding crops. Supports frequent feeding with balanced air to water ratio of porosity. Peat, coco, perlite, compost, pumice, worm castings, bat guano, meal (soybean, alfalfa, fishbone, kelp), greensand and mycorrhizae.

ROOTS ORGANICS FORMULA 707 ★

Good for large pots. Lower nutrient load than Organics Original while affording a higher water holding capacity. Coarse peat, compost, perlite, coco fiber, pumice, earthworm castings, meal (feather, soybean, fishbone, kelp), bat guano, greensand, volcanic rock dust, and mycorrhizae.

ROOTS ORGANICS GREENFIELDS

Ocean nutrient-based mix designed for outdoor use. Strong water holding capacity, but also well drained. Compost, peat, perlite, coco fiber, pumice, worm castings, meal (crab, feather, fish, soybean, fishbone, kelp), bat guano, and mycorrhizae.

ROOTS ORGANICS EMERALD MOUNTAIN

High quality inputs in an economical mix. Good for large containers indoors and out. Compost, coarse peat, perlite, coco fiber, pumice, earthworm castings, bat guano, meal (soybean, fish, feather, fishbone, kelp), greensand, volcanic rock dust, and mycorrhizae. Requires ongoing fertilizer applications.

ROOTS ORGANICS GREEN LITE

Extremely well drained mix for indoor and outdoor cultivation. Highly porous with increased perlite and pumice. Perlite, peat, compost, coco fiber, pumice, worm castings, bat guano, meal (soybean, fish, kelp), and mycorrhizae.

ROOTS ORGANICS LUSH

Loaded with nutrition for water-only or low nutrient input cultivation. Achieve up to eight weeks without additional nutrient application. Peat moss, earthworm castings, pumice, perlite, coco fiber, limestone, phosphate rock, bat guano, meal (feather, fishbone, soybean, fish, blood, crab, alfalfa, kelp), humic acids, Bacillus, mycorrhizae and more.

ROOTS ORGANICS MICRO-GREENS

A starter and seedling mix, especially nice for direct sow microgreens. Peat moss, perlite, coco fiber, leonardite, limestone, meal (feather, soybean, fish, kelp), volcanic rock dust, bat guano, volcanic ash, greensand, yucca powder, and mycorrhizae.

Item #	»	Description	Size	CS/UOS	MSRP
81270002		Aurora Roots Organics Original Potting Soil	1.5 cu ft	70/70	\$20.49
81270184	•	Aurora Roots Organics Original Potting Soil	.75 cu ft	140/140	\$13.49
81270194		Aurora Roots Organics Original Potting Soil	3 cu ft	70/70	\$20.49
81270001		Aurora Roots Organics Formula 707 Potting Soil	3 cu ft	36/36	\$38.49
81270173		Aurora Roots Organics Formula 707 Potting Soil	1.5 cu ft	70/60	\$19.99
81270174	•	Aurora Roots Organics Formula 707 Tote	2 cu yd	2/2	\$679.49
81270188		Aurora Roots Organics Greenfields Potting Soil	1.5 cu ft	70/60	\$21.49
81270189	•	Aurora Roots Organics Greenfields Potting Soil	2 cu yd	2/2	\$687.49
281270190	•	Aurora Roots Organics Greenlite Growing Mix	1.5 cu ft	70/60	\$21.99
81270191	•	Aurora Roots Organics Greenlite Growing Mix	2 cu yd	2/2	\$755.99
81270186	•	Aurora Roots Organics Emerald Mountain Mix	1.5 cu ft	70/60	\$19.99
81270187	•	Aurora Roots Organics Emerald Mountain Tote	2 cu yd	2/2	\$664.49
81270201	•	Aurora Roots Organics Micro-Greens	1.5 cu ft	75/75	\$25.49



Fox Farm is passionate about producing the finest soil mixes, fertilizers, and micro-brewed liquid plant foods since 1984. Their formulas are greenhouse tested to ensure quality and consistency.

LUCKY DOG K9 KUBE GROWERS BLEND

Compressed bale of peat and perlite with soil microbes. Restricted in IN.

LIGHT WARRIOR

Seed starter mix for indoor and outdoor cultivation. Restricted in IN.

BUSH DOCTOR COCO LOCO POTTING MIX ★

Less frequent watering than with other mixes. Suitable for hanging baskets, vertical gardens, containers and seeding trays. Restricted in IN.

HAPPY FROG POTTING SOIL ★

Peat based mix with soil microbes to improve root efficiency and encourage nutrient uptake.

OCEAN FOREST POTTING SOIL ★

Extremely popular blend of aged forest products, sphagnum peat moss, earthworm castings, bat guano, fish emulsion and crab meal. Restricted in IN.

ORIGINAL PLANTING MIX

Blend of aged forest products, sphagnum peat moss and earthworm castings. Restricted in IN.

SALAMANDER SOIL POTTING MIX

Enhanced water holding capacity for less frequent watering.

STRAWBERRY FIELDS POTTING SOIL

Soil is brought to you directly from the Flower Children of the Sixties and Seventies - the Old School generation. Designed to pump up your blooms, fruits and berries with no hang-ups. Out-A-Sight!

CULTIVATION NATION 70/30 ★

Cultivators' favorite blend of buffered coco coir and perlite for exceptional drainage. Great for use with customized feeding schedules in containers indoors and outdoors.

Item #	Description	Size	CS/UOS	MSRP
82000159	Lucky Dog K-9 Kube Growers Blend	2.2 cu ft	35/5	\$43.99
82000169	Light Warrior Potting Soil	1.0 cu ft	75/5	\$22.49
82000156	Coco Loco Potting Mix	2 cu ft	48/6	\$23.49
82000153	Happy Frog Potting Soil	2 cu ft	60/6	\$21.49
82000152	Happy Frog Potting Soil	12 qt	120/10	\$9.49
82000154	Happy Frog Soil Conditioner	3 cu ft	35/5	\$26.99
82000174	Happy Frog Soil Conditioner	1.5 cu ft	75/5	\$13.49
82000168	Ocean Forest Potting Soil	1.5 cu ft	75/5	\$20.49
82000167	Ocean Forest Potting Soil	12 qt	120/10	\$8.99
82000164	Ocean Forest Potting Soil	3 cu ft	36/6	\$38.99
82000166	Original Planting Mix	1 cu ft	75/5	\$17.99
82000158	Strawberry Fields Potting Soil	1.5 cu ft	75/5	\$19.99
82000160	Salamander Soil Potting Mix	1.5 cu ft	75/5	\$18.49
82000220	Cultivation Nation 70/30	2.0 cu ft	48/1	\$27.49

Coast of Maine™



Stonington Blend™ Organic Grower's Mix ★



Complex "super soil" designed for high performance growing in containers and large pots. Developed for professional growers, incorporates mycorrhizal fungi, kelp, fish bone and alfalfa meal, worm castings, peat, coir and lobster compost.

Bar Harbor Blend™ Organic Potting Soil ★



Premium all-purpose potting soil is enriched with salmon, blueberry and other composts, lobster meal, kelp meal, sphagnum peat, and perlite. Compost based dark brown, nutrient rich, potting soil.

Castine Blend™ Organic Raised Bed Mix ★



Ready to use blend for raised beds to provide a rich and diverse soil for big & healthy vegetables, herbs and more. It has everything your garden bed needs right in the bag; no recipe, no mixing of components and no tilling needed!

Frey Group Leaf Compost

Composted leaves and grass clippings. Easily crumbled, partially decomposed substance, similar to natural organic matter found in the soil.

Frey Group Mushroom Compost

Premium compost sourced in PA, produced by mushroom growers using organic materials such as horse manure, bedding and straw, hay, cocoa hulls, poultry manure, gypsum, and corn cobs. Dark, nutrient infused, organic compost.

Sprout Island Blend™ Organic Seed Starter ★



Designed for seed germination & rooting plant cuttings. Ready to use with a nutrient starter charge that includes worm castings, kelp and fully-cured compost.

Mount Desert Island Blend™ Cactus & Succulent Mix

Ready-to-use, pH balanced soil for cactus, succulent, tropical palms & citrus plants. Made from sphagnum peat, compost, sand, aged bark, biochar, lime, fishbone & kelp meals. Excellent drainage and sufficient water retention.

Fundy Blend™ Organic Enriching Mulch with Seaweed

Use as a top dressing for field plantings. Humified birch and maple bark with partially humified hemlock bark and a very rich blend of kelp solids and sphagnum moss peat. Almost black humus that is rich in organic matter with all the added benefits of both compost and kelp.

Penobscot Blend™ Complete Planting Mix

An all-in-one blend; rich, smooth blend of salmon and blueberry compost, tiny mussel shell fragments and peat. The shell fragments help aerate the soil and add texture to your soil.

Quoddy Blend™ Organic Lobster Compost Top Seller Star



Best-selling soil, made with chitin and calcium-rich lobster shells, compost and peat humus. The result is a dark-brown, complex soil that drains well.

Schoodic Blend™ Organic Cow Manure Compost



Dark, rich soil made from carefully composted cow manure blended with peat and peat humus. All-natural, easy-to-use, all-purpose organic soil amendment.

Dark Harbor Blend™ Organic Enriching Mulch

Exceptionally rich, naturally dark, fine-textured blend of self-composted barks. Retain moisture, without robbing the soil of nitrogen (as raw barks will) and helps insulate the surface soil against excessive cold and heat that can damage plant root systems.

Wicasset Blend™ Earthworm Castings ★

Made of 100% earthworm castings. Rich, odorless, coffee ground-like particles, teeming with microbial life. A soil conditioner that naturally encourages root growth & strong stem structure while helping to convert soil nutrients into plant-available forms. Use to top-dress or brew into a quick tea!

Monhegan Blend™ Black Earth



A rich blend of naturally composted barks and compost. Easy-to-use, all-purpose organic soil ideal for top dressing or as a general purpose soil amendment.

Item #	Description	Size	CSUCS	MSRP
81600012	Stonington Blend™ Organic Grower's Mix	1.5 cu ft.	60/6	34.49
81600011	Bar Harbor Blend™ Organic Potting Soil	8 qt	6/6	\$6.99
81600008	Bar Harbor Blend™ Organic Potting Soil	1 cu ft	80/8	\$12.49
81600007	Bar Harbor Blend™ Organic Potting Soil	2 cu ft	48/4	\$20.49
81600084	Castine Blend™ Organic Raised Bed Mix	1 cu ft	80/8	\$13.49
81600061	Castine Blend™ Organic Raised Bed Mix	2 cu ft	48/4	\$20.49
81600064	Frey Group Leaf Compost	40 lb	60/60	\$7.49
81600065	Frey Group Mushroom Compost	40 lb	60/60	\$7.49
81600029	Sprout Island Blend™ Organic Seed Starter	16 qt	4/4	\$12.99
81600045	Sprout Island Blend™ Organic Seed Starter	2 cu ft	48/4	\$27.49
81600086	Mount Desert Island Blend™ Cactus & Succulent Mix	8 qt	4/4	\$11.49
81600023	Fundy Blend™ Organic Enriching Mulch w/Seaweed	1 cu ft	80/8	\$9.99
81600022	Fundy Blend™ Organic Enriching Mulch w/Seaweed	2 cu ft	40/4	\$16.99
81600002	Penobscot Blend™ Complete Planting Mix	1 cu ft	70/10	\$12.49
81600001	Quoddy Blend™ Organic Lobster Compost	1 cu ft	80/8	\$12.99
81600005	Schoodic Blend™ Organic Cow Manure Compost	1 cu ft	80/8	\$10.49
81600020	Dark Harbor Blend™ Organic Enriching Mulch	2 cu ft	40/4	\$15.99
81600021	Dark Harbor Blend™ Organic Enriching Mulch	1 cu ft	80/8	\$10.49
81600014	Wicasset Blend™ Earthworm Castings	8 qt	6/6	\$17.49
81600006	Monhegan Blend™ Black Earth	1 cu ft	80/8	\$10.49

★ = Retail Store Best Seller

CONTAINERS



The HC Companies produce high quality, plastic pots using different manufacturing methods to meet the needs of cannabis and hemp growers. With options for outdoor production to full-scale automation, your Griffin salesperson can help you choose the perfect pot to bring you the features to keep your team moving and maintain your profitability. Choose from injection molded, thermoformed, co-extruded, or blow molded options in sizes ranging from 4" to 20 gallons.

2021



INJECTION MOLDED

Injection molded pots are considered a premium container, generally providing more strength and durability. Injection containers are manufactured with thick walls and heavy bottom construction, featuring large bottom or side drain holes ideal for outdoor irrigation. Injection containers are automation friendly for pot filling and pot handling equipment. These pots are durable enough for reuse.

BLOW MOLDED

Blow mold pots are more economical than injection molded pots and present an easy way to reduce input costs. Many feature ribbed sides for additional strength, sturdy corners to avoid cracking, and a wide base for additional stability when relocating plants in your operation. They feature bottom or high/low side drainage, – depending on your irrigation practices. Blow molded are not suited for automated equipment because they don't de-nest well. One big advantage of blow molded pots over injection molded pots is size options – these are available in sizes up to 65 gallons. Blow molded pots may be reused.

THERMOFORMED AND CO-EXTRUDED

Thermoformed and co-extruded pots are single use containers and the most economical choice. Best suited for shorter crop cycles, these pots do offer adequate strength for crops that do not require frequent handling. These pots are automation friendly and available in different colors. Co-extruded pots can be produced with black on the inside and a different color on the outside. White/black pots are a popular choice to reduce heat load on the root zone, while still protecting the root zone from heat. These are smaller pots, generally from 3-6 inch.



Item #	Description	★	»	Type	Vendor #	Volume	Top diameter (in)	Height (in)	Qty
51-10120	ITML 1001 2.00 G Trade			BM	AMK10010	1.90 g	9.50	8.62	50/slv 5,400/plt
51-10116	ITML 1200 3 G True			BM	AMK12000	3.00 gal	11.00	9.62	50/slv 8,400/plt
51-10092	ITML Elite 300 1.0 G Trade			BM	BM.03000	3.00 qt	6.50	7.00	65/slv 10,920/plt
51-10090	ITML Elite 400 1 G True			BM	BM.04000	1.00 gal	7.50	7.25	75/slv 10,125/plt
51-10117	ITML Elite 20000 4 G True			BM	BM.20000	3.90 gal	11.87	11.00	50 sleeve 8,400
51-10087B	ITML Elite 300 1 G Trade		•	BM	BM.0300	3.00 qt	6.50	7.00	10,808/plt
51-10119	ITML Whiteridge 7 G Trade			BM	BW.00075	6.49 gal	13.75	12.00	28/sleeve 1,008/plt
IBW008	ITML Whiteridge 7 G Trade		•	BM	BW.00075	6.49 gal	13.75	12.00	1,008/plt
51-10118	ITML Whiteridge 5.0 G True Whiteridge Squat, Side drain			BM	BWS00055	5.01 gal	14.00	9.30	28/sleeve 1,008/plt
45-8619TB	Dillen 19CM Tall Euro Black			COEX	EU190T51	1.00 gal	7.50	7.37	7,560/plt
51-10127	HC 1.0 G Trade Squat, Bottom drain			INJ	NRS0T1G0	2.50 qt	6.13	6.38	8,850
51-10128	HC 1.0 G Trade, Bottom drain			INJ	NRT0T1G3	2.88 qt	6.50	7.00	8,000
51-10122	HC 2.0 G Trade, Bottom drain			INJ	NSB002G0	1.72 gal	9.00	8.56	50/sleeve 2,700/plt
51-10121	HC 1.0 G Trade, Side drain			INJ	NSR001G0	2.90 qt	6.50	7.00	25/sleeve 1475/plt
51-10131	HC 1.0 G Trade Side Drain			INJ	NSR001G0	2.90 qt	6.50	7.00	6,500/plt
51-10133	HC 3.0 G Trade, Side Drain			INJ	NSR003G0	2.62 gal	10.50	9.00	1,400/plt
51-10123	HC 3.0 G Trade, Side drain		•	INJ	NSR003G0	2.62 gal	10.5	9.00	25/sleeve 2700/plt
51-10134	HC 3.0 G Trade Squat, Side Drain			INJ	NSS003G0	2.14 gal	10.00	8.00	1,400
51-10125	HC 5.0 G Squat, Side drain		•	INJ	NSS005G2	3.75 gal	12.50	9.00	30/sleeve 960/plt
51-10135	HC 5.0 G Squat, Side Drain			INJ	NSS005G2	3.75 gal	12.50	9.00	960/plt
51-10126	HC 7.0 G Trade Squat, Side Drain			INJ	NSS007G0	7.28 gal	15.00	11.75	50/sleeve 8400/plt
51-10136	HC 7.0 G Squat, Side Drain			INJ	NSS007G0	7.28 gal	15.00	11.75	540
51-10102	HC 1.0 G True Thermo		•	TF	TFT001G0	1.00 gal	7.87	7.25	5,250
51-10105	HC 2.0 G True Thermo		•	TF	TFT002G0	2.00 gal	9.50	9.25	3,500
53-2012	Dillen 3.25" Square Deep			VF	SVP03250	1.0 pt	3.25	3.6	1,200/cs
53-2018	Dillen 4.5 Square Deep			VF	SVP0450D	1.2 qt	4.1	5.0	375/cs

BM = blow molded, COEX = coextruded, INJ = injection molded, TF = thermoformed, VF = vacuum formed

★ = Retail Store Best Seller » = Drop-Ship Item



Nursery Supplies – Leading manufacturer of large containers used for larger crops with longer crop times (perennials, shrubs and trees) with products extremely well suited to cannabis and hemp. Full assortment of pot sizes (up to 260 gal) and styles (blow molded, injection molded, thermoformed) with features that make handling large pots easier (Grip-Lip, Econo-Grip, rope handles). Pot-in-Pot and Above-Ground-Systems prevent pots from tipping when grown in the field.

T.O. Plastics – Master manufacturer of thermoformed and vacuum formed growing containers, including sheet pots and Press-Fill pots for smaller and early stage crops. Assortment includes round and square pots up to 2 quart size with matching carry trays.

TRUE, TRADE OR SQUAT?

Nursery pots use a language all their own. Over time, growers have become more effective and efficient, learning that slightly smaller pots will still provide the support plants need, but afford a higher density of production when crops are pot tight, and pot volumes evolved to fit the market needs.

True – the pot volume matches the description, i.e., a 3-gal true pot holds 3 gallons of media

Trade – these pots hold smaller volumes of media compared to true counterparts

Squat – these pots are shorter than true counterparts and are less likely to tip. They often hold a smaller volume of media than a true style pot.

Always ask for the pot volume and dimensions of nursery containers so that you understand the pot you are purchasing.

CARRY TRAYS

Efficiency is key when it comes to being profitable. Any crop grown in a pot will eventually need to be moved. Carry trays speed handing, generally allowing six or more pots to be handled at once. Carry trays can also help staff properly space pots in production, and they are essential for cultivators selling hemp or cannabis teens.

PRESS-FILL

Streamline loading smaller pots into trays with the Press-Fill system. Specially designed trays are simply inverted over the cased pots. Apply pressure to lock pots in place. Saves up to 75% in labor time and costs.

ABOVE-GROUND-SYSTEM

Dual pot system for above ground growing. AGS pot provides a stable base to hold the potted plant to prevent tipping in the field.

POT-IN-POT

For in ground growing, pair up an NSI Grip-Lip pot for the outside, socket pot with an NSI Econo-Grip pot as a liner pot. Dual pot use saves time, saves money, and prevents blow downs. Since the pots are in the ground, the temperature of the root system is moderated, while the fertility and moisture levels are managed by the grower.

CLICK FOR MORE
INFORMATION



Item #	Type	★	»	Description
Square pots				
59-2031	VF			TOP SVD-350, Square, 3.5"x3.5", 1 pt, 450/cs
59-2050	VF			TOP SVD-355, Deep Square, 3.5"x5", 1.5 pt, 450/cs
59-2165	VF	•		TOP SVT-400, Square, 3.7"x3.1", 1.1 pt, 500/cs
59-2130	VF			TOP SVD-450, Square, 4.5"x5", 1.1 qt, 300/cs
59-20401	VF			TOP SVD-550, Square, 5.4"x6", 2 qt, 200/cs
59-4090	VF			TOP SPT-550-8 Press Fill Tray, 25/cs (use with SVD-550)
59-4075	VF			TOP SPT-450-15 Press Fill Tray, 50/cs (use with SVD-450)
Round pots				
41PT300C	BM			NSI 300C Trade 1 gal, 6.5"x7.25", 0.75 gal, 100/stk
41PT300SCN2	BM			NSI 300SC Trade 1 gal squat, 6.5"x6.5", 0.63 gal, 106/stk
41PT400CN2	BM	•		NSI 400C True 1 gal, 7.75"x7", 1 gal, 92/stk
41600CN2	BM			NSI 600C Trade 2 gal, 9"x8.5", 1.5 gal, 105/stk
52-3565	PF			NSI PF600 Trade 2 gal, 8.5"x8.5", 1.5 gal, 90/stk
41PT900CN2	BM			NSI 900C Trade 2 gal, 9.5"x9.1", 1.94 gal, 83/stk
52-1577	BM			NSI 1000C Trade 2 gal squat, 10.1"x7.5", 1.95 gal, 75/stk
52-2102S	IM			NSI PC-2 Trade 2 gal, 8.4"x8.4", 1.8 gal, 61/stk
52-2102T	IM	•		NSI PC-2 Trade 2 gal, 8.4"x8.4", 1.8 gal, 3660/tower
41PT1200CN3	BM	•		NSI 1200C True 3 gal, 11"x9.5", 3 gal, 56/stk
41PT1200CTN2	BM			NSI 1200C True 3 gal, 11"x9.5", 3 gal, 1792/tower
41PT1200GL	BM			NSI GL1200 Trade 3 gal Grip Lip, 9.6"x9.5", 2.7 gal, 44/stk
41PT1200EG	BM			NSI EG1200 Trade 3 gal Econo Grip, 9/6"x9.5", 2.7 gal, 44/stk
52-11651	IM			NSI Polytainer Trade 5 gal squat, 11"x9.9", 3.6 gal, 35/stk
52-35810	IM	•		NSI NS 5S Trade 5 gal squat, 11.25"x9.9", 3.6 gal, 41/stk
412000C	BM	•		NSI 2000C Trade 5 gal, 11.9"x11", 3.8 gal, 44/stk
41PT2100CN	BM			NSI 2100C Trade 5 gal squat, 14"x9.9", 5.2 gal, 31/stk
52-2106T	IM	•		NSI PC-5S Trade 5 gal squat, 10.75"x10.5", 4.1 gal, 1536/tower
52-2106S	IM			NSI PC-5S Trade 5 gal squat, 10.75"x10.5", 4.1 gal, 42/stk
41PT2800CN	BM			NSI 2800C Trade 7 gal, 14"x11.5", 6.1 gal, 31/stk
52-1290	BM			NSI GL2800 Trade 7 gal Grip Lip, 13.75"x12", 6.1 gal, 40/stk
52-1689	BM			NSI EG2800 Trade 7 gal Econo Grip, 13.75"x12", 6.1 gal, 20/stk
41PT6900BN2	BM			NSI GL6900 Trade 15 gal Grip Lip, 17.25"x15.1", 13.2 gal, 17/stk
41PT6900EGN2	BM			NSI EG6900 Trade 15 gal Econo Grip, 17.25"x15.1", 13.2 gal, 17/stk
41PT10000BT	BM			NIS GL10000 Trade 25 gal Grip Lip, 22.75"x18.1", 27.6 gal, 150/tower
41PT10000EGT	BM			NSI EG10000 Trade 25 gal Econo Grip, 22.75"x18.1", 27.6 gal, 150/tower
52-1010	BM			NSI Above Ground System AGS2800, for Trade 7 gal, 9/stk
52-1015	BM			NSI Above Ground System AGS6900, for Trade 15 gal, 6/stk

VF = vacuum formed, BM = blow molded, PF = pressure formed, IM = injection molded



CHOOSING A PROPAGATION TRAY

Many factors influence the choice of a propagation tray. Three important considerations are the propagation method being used (seed vs. cutting), the type of root system (fibrous vs taproot), and where the transplant will go (greenhouse, warehouse, or field). Lettuce and herbs have more fibrous root systems and do well in smaller, shallower cells. On the other hand, hemp and cannabis grown from seed will produce a tap root that requires a deep cell for proper development. Young plants going into a 4" or smaller pot can start life in smaller cells, such as a 128-count tray. Field transplants will benefit from larger root volumes offered by deeper trays with smaller tray counts. 72 and 50 count trays are popular choices can also work for both applications, with deeper versions for field transplants. Consider a 38 or lower count tray for field transplants, too.

CHOOSING A FLAT

Tiered production without solid shelving or ebb-flo inserts calls for a no-hole flat to avoid drips onto the tier below. Whenever possible, choose a flat with drain holes to avoid keeping the media saturated during propagation. New roots need oxygen, which is not available to plants when media is saturated.

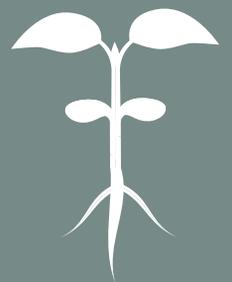


[CLICK FOR MORE INFORMATION](#)

Item #	★	»	Description
Propagation Trays			
59-50701			TO Plastics 200 cell plug tray, 2.1", 50/cs
59-5040			TO Plastics 128 cell plug tray, 2", 100/cs
59-5035			TO Plastics 98 cell plug tray, 2", 100/cs
59-5030	•		TO Plastics 72 cell plug tray, sq, 2.25", 100/cs
59-5010			TO Plastics 72 cell prop tray, 5.9", 100/cs
59-5087			TO Plastics 72 cell Star plug tray, 5.7", 100/cs
59-5088			TO Plastics 72 Star Deep Plug tray, 3", 50/cs
59-5025	•		TO Plastics 50 cell plug tray, sq, 6", 100/cs
59-720700			TO Plastics 50 cell Deep SureRoots plug tray, 12.7", 25/cs
59-720695			TO Plastics 50 cell SureRoots plug tray, 3", 25/cs
59-51451			TO Plastics 38 cell Star nursery tray, 7.6", 50/cs
59-5142			TO Plastics 21 Deep Star plug tray, 10.2", 50/cs
59-720720			TO Plastics 15 cell SureRoots plug tray, 11.66", 25/cs
59-720715			TO Plastics 15 cell heavy weight SureRoots tray, 11.66", 25/cs
Flats and Carry Trays			
59-3170			TO Plastics 1020 standard vacuum flat, 100/cs
59-3175	•		TO Plastics 1020 no hole vacuum flat, 100/cs
53-1310			ITML 1020 no hole flat, 100/cs
59-3195	•		TO Plastics 1020 no hole triple weight, 50/cs
53-3325			Dillen 1020 Light weight web flat, 50/cs
73S1020D	•		ITML Daisy 1020 Web flat, 50/bdl
53-3335			Dllen 1020 Heavy weight web flat, 50/cs
53-3277			Dillen 6.5" Carryall tray, 25/cs
Inserts			
59-3135			TO Plastics 1801 Deep Sheet pots, 3.5", 50/cs
53-9055	•		Dillen D801 microgreen insert, 7200/plt
Humidity Dome			
80880141			Mondi dome , 7" mini greenhouse



CROP
NUTRITION



TRUST THE INNOVATORS OF THE HIGHEST
QUALITY WATER SOLUBLE FERTILIZERS

JR PETERS INC



JR Peters Inc. makes the highest quality & truly soluble nutrient blends on the market. How can we say that? Because we are here watching over every step of the process. From research & formulation design in our small batch lab, through the intense qualifying of the purest raw materials, to our long-time employees watching over each handcrafted batch. The family at JR Peters ensures that the nutrients in our blends meet the strictest standards and will grow only top quality plant material.

Jack's
FERTILIZERS Soluble. Available. Consistent.

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SLOW RELEASE NUTRIENTS



SUSTÅNE 4-6-4 ALL-PURPOSE SLOW RELEASE FERTILIZER



All-purpose, non-coated slow release granular fertilizer. Suståne 4-6-4 is a natural organic starter and maintenance fertilizer that works by replenishing the soil with a rich supply of humus and the essential nutrients required for sound, long-term fertility programs.

SUSTÅNE 8-2-4 ALL NATURAL SLOW RELEASE NITROGEN FERTILIZER



All natural, non-coated, slow release granular nitrogen fertilizer. Suståne 8-2-4 provides 6 - 12 weeks of nitrogen in the organic slow release form. Suståne replenishes the soil with a rich supply of humus (stabilized organic matter) and all of the essential nutrients required for quality growth. Suståne 8-2-4 All Natural provides a combination of plant nutrients and organic substances derived from biologically stable compost plus natural sulfate of potash and feather meal.

SUSTÅNE 8-4-4 ALL NATURAL



All natural, non-coated slow release granular fertilizer Suståne 8-4-4 is ideal for the production of herbs and vegetables and is an effective foundation for cannabis and hemp. When used in containers, the nutrient release profile is 45 days. Suståne 8-4-4 is composed of aerobically composted turkey litter, hydrolyzed feather meal, and sulfate of potash.

SUSTÅNE 16-4-8

Suståne's 16-4-8 was developed as a combination of slow release and controlled release fertilizer to provide longer crops with a time released nutrient package. Suståne 16-4-8 is a good choice for production of cannabis and hemp. Suståne 16-4-8 Nursery Fertilizer is derived from aerobically composted turkey litter, polymer coated urea, polymer coated MAP, and polymer coated potassium nitrate.

SUSTÅNE ALL-ORGANIC 21-GRAM FEEDER PAKS & COMPOST TEA BAGS



Suståne 4-6-4 in water permeable sachets. Steep overnight, 1 sachet per gallon water, to create a compost tea to provide nutrition and beneficial microbes.

VERDANTA® ECOVITA 7-5-10



Homogenous - Granular - Compound Organic Fertilizer

EcoVita is a general purpose mix derived from 100% organic sources (7-5-10) including organic phosphorus to promote fast rooting. The MINIGRAN Technology creates a uniform composition in each granule, consisting of the same amount of N, P and K for precise nutrient distribution and availability to plants.

EcoVita provides long-lasting and continuous nutrient availability for up to 100 days. It is well suited for potting mixes, leafy vegetables, top dressing for fruiting vegetables, and as a component of a program for cannabis or hemp.

VERDANTA® K-VITA® 2-0-20



Homogeneous • Granular • Compound Organic Based Fertilizer

K-Vita is derived from 100% organic sources and provides extra potassium to assist in producing stockier, more robust plants with shorter internodes. K-Vita™ feeds for up to 100 days at soil temperature of 60°F.

K-Vita is an organic fertilizer with high potassium content (20% K₂O), providing slow, but continuous release of nutrition to crops. Nutrients are gradually released by microbial activity which produces humus for better rooting and less leaching. K-Vita is useful for increasing potassium levels with minimal addition of nitrogen.

Item	Description	Qty
67-30201	4-6-4 All-Purpose 50 lb. Granular Medium Grade OMRI	1
67-30565	8-2-4 All-Natural Organic 50 lb. Granular Medium Grade OMRI	1
67-50551	16-4-8, 120 Day, 50 lb. Granular Organic Fertilizer & CRF	1
80950005	Compost Tea Bag 4-6-4 (21 GM) OMRI	12
67-30569	8-4-4, 45 Day 50 lb. Container Grade, Med/Fine OMRI	1
67-9215	Verdanta EcoVita 7-5-10 40 lb bag - 100 day	1
67-9205	Verdanta K-Vita 2-0-20 40 lb bag - 100 day	1



CROP NUTRITION - WSF



Jack's Nutrients Line

Soluble. Available. Consistent. Since 1947, these are the three words that you have come to expect when you open a bag of fertilizer made by the Peters' Family — and now, the master-crafters at Jack's introduce our small batch blends, Jack's Nutrients: Formulated to deliver complete nutrition, including highly available micronutrients perfectly proportioned for CEA crops.



The Jack's FeED line is comprised of complete nutrient formulations. Everything your plants need for each stage, from start to finish.

PART A 5-12-26 ★

Improved "Part A" formula for general vegetative growing. Purely soluble and available nutrients to allow maximum flexibility. Specific balance of macro, secondary and micronutrients delivers an efficient combination of nutrients suitable for many different growing environments and crop types.

CLONE 15-6-17 ★

Like hitting the accelerator for your new plants - this formula will help promote strong and fast root growth and expansion. Best used for fertilizing young seedlings, transplants, clones and newly set rooted cuttings.

RO 12-4-16

For the Purest in you. One part blend designed for crops grown in very low alkalinity waters, including reverse osmosis (RO). Formulated utilizing innovative raw materials to reduce pH crash while delivering all the nutrients essential for vigorous plant growth.

TAP 15-5-20

Prefer Tap Water? Allow your plants to drink up this formula designed to provide all the macro, secondary and micro nutrients in a one-part system. Specifically formulated for tap, city or well water types with low to moderate alkalinity. Includes extra soluble calcium, magnesium and the right balance of micronutrients.

OUTDOOR 18-8-23

Yep that's right, a nutrient blend specifically tailored for outdoor production. Potentially acidic formulation is designed to keep your pH in the desired range for optimum nutrient uptake. Plus, we've perfected the N:K₂O ratio and added a kick on Mg and S to hit the right balance so that your plants can thrive in the outdoor, sunlight rich environment.

BLOOM 10-30-20

Need a Boost of Flower Power? Our 1:3:2 major nutrient ratio has been trusted by growers for over 70 years. This soluble and available nutrient combination stimulates blooming, resulting in heavy bud and fruit set.

ULTRAVIOLET 5-50-18

Get ready for a serious boost of available phosphorus. The primary goal of this formula is to assist in shutting down the strong vegetative growth stage of the plant and support a switch to the reproductive or flowering phase of plant and flower development.

FINISH 7-15-30 ★

You've always been told to finish strong. Formulated with very low nitrogen, high phosphorus and very high potassium to keep the whole plant happy to the end of its crop cycle.



The Jack's Boost line is all the little extras your plants may need. Do you need calcium, extra micros, or extra iron? These and more are found in the Jack's Boosted Line.

CAL NIT PART B 15-0-0 ★

An essential "Part B" provides a very soluble and available source of calcium in a two-part nutrient system. Contains very pure and completely available calcium and nitrate nitrogen nutrient sources.

CAL-TRATE 15-0-0

A great formula for providing a boost of potassium and nitrogen along with a balanced micronutrient package. This formula can be used on all crops and is especially good for finishing crops off by providing elevated levels of potassium while keeping micronutrients on target at the end of a crop cycle.

K-TRATE 14-5-38

A great formula for providing a boost of potassium and nitrogen along with a balanced micronutrient package. This formula can be used on all crops and is especially good for finishing crops off by providing elevated levels of potassium while keeping micronutrients on target at the end of a crop cycle.

MAG-TRATE 10-0-0

Jack's 10-0-0 Mag-Trate LX is formulated to provide an extra boost of magnesium while supplying a balanced supply of micronutrients to almost any crop or nutrition program. Using Jack's Mag-Trate as a booster or as part of a regular fertility plan will provide the highest quality most soluble magnesium available in water solubles.



High quality favorites for commercial growers. Blended with micronutrients and made in the USA.

ALL PURPOSE LX 21-5-20

Complete formula with calcium, magnesium and phosphorus. Can be tank mixed with other Jack's LX formulas, including 15-5-15, as well as calcium nitrate and/or magnesium nitrate. Acidic; for moderate to high alkalinity water.

BERRY SPECIAL 25-9-17

Acidic fertilizer with elevated magnesium and micronutrients. Originally formulated for blueberry bushes, can be used on all berry crops, including high tunnel crops.

CALCIUM + MAGNESIUM LX 15-5-15

Ideal for water low in Ca and Mg, with 4% Ca, 2% Mg, 80% nitrate nitrogen, and a full micronutrient package. Potentially basic, so best for low alkalinity water or balanced with an acid formulation.

DARK WEATHER PEAT-LITE 15-0-15

Ideal product for growers who want a non-phosphorus, high nitrate product with calcium. Formulated with elevated micronutrients for complete fertility.

DARK WEATHER PLUS MAG LX 15-0-14

Great product for growers who want a non-phosphorus, high nitrate product with calcium and magnesium. Similar to the 15-0-15 Dark Weather. Can be mixed into any LX tank mixing fertility program.

AQUA GOLD GROW & BLOOM 15-20-20

Designed for high tunnel use. The ideal fertilizer for encouraging overall healthy plant growth, a strong root system, and rapid development of all plants. Its high phosphorus content encourages rapid root generation which eliminates transplant shock when used as a transplanting solution.

AQUA GOLD FINISHER 7-15-30

This 1-2-4 finisher has been formulated especially for high tunnel tomato production. 30% potassium helps ripen tomatoes and fend off yellow shoulder.

Item	Description	Size
33-51226	Jacks Nutrients Part A 5-12-26	25 lb
33-15617	Jacks Nutrients Clone 15-6-17	25 lb
33-12416	Jacks Nutrients RO 12-4-16	25 lb
33-15520	Jacks Nutrients Tap 15-5-20	25 lb
33-18823	Jacks Nutrients Outdoor 18-8-23	25 lb
33-103020	Jacks Nutrients Bloom 10-30-20	25 lb
33-55018	Jacks Nutrients UltraViolet 5-50-18	25 lb
33-71530	Jacks Nutrients Finish 7-15-30	25 lb
33-79080	Jacks Nutrients Part B 15-0-0	25 lb
33-79170	Jack's Cal-Trate 15-0-0	25 lb
JP14538	Jack's K-Trate 14-5-38	25 lb
JP1000	Jack's Mag-Trate 10-0-0	25 lb

Item	Description	Size
33602	Jack's All Purpose LX 21-5-20	25 lb
33-150014	Jack's Dark Weather Peat Lite 15-0-15	25 lb
33601	Jack's Ca+Mg LX 15-5-15	25 lb
33-150014	Jack's Dark Weather Plus LX 15-0-14	25 lb
J77680	Jack's Berry Special 25-9-17	25 lb
J77004	Jacks AG Grow & Bloom 15-20-28	25 lb
J71110	Jacks AG Finisher 7-15-30	25 lb

Item	Description	Size	CSUOS	MSRP
80060046	Jacks Nutrients Part A 5-12-26	2.2 lb	6/6	\$21.49
80060050	Jacks Nutrients Clone 15-6-17	2.2 lb	6/6	\$22.99
80060047	Jacks Nutrients RO 12-4-16	2.2 lb	6/6	\$22.99
80060048	Jacks Nutrients Tap 15-5-20	2.2 lb	6/6	\$22.99
80060061	Jacks Nutrients Outdoor 18-8-23	2.2 lb	6/6	\$22.99
80060049	Jacks Nutrients Bloom 10-30-20	2.2 lb	6/6	\$22.99
80060051	Jacks Nutrients UltraViolet 5-50-18	2.2 lb	6/6	\$23.99
80060053	Jacks Nutrients Finish 7-15-30	2.2 lb	6/6	\$22.99
80060052	Jacks Nutrients Part B 15-0-0	2.2 lb	6/6	\$20.99

★ = Retail Store Best Seller

CLICK FOR MORE
INFORMATION



Plant-Prod MJ

The **Plant-Prod MJ™** line of fertilizers was designed to bring our 70 years of experience to the cannabis growers of today. Plant-Prod® by Plantex is excited to provide licensed growers of medical marijuana products that are scientifically optimized, consistent and completely soluble.

2021

PLANT-PROD MJ SPIKE (CAMG)

Fully chelated supplemental formulation that provides calcium and magnesium in a desirable 2:1 ratio. This has been specifically formulated to meet the high demands of cannabis plants throughout the entire production cycle with no additional nitrogen, phosphorus or potassium. Application should be limited to two times per week.

PLANT-PROD MJ BLOOM 10-30-20

An essential formulation to cannabis production. This high phosphorous, moderate potassium formulation encourages full bud set and improves bud filling.

PLANT-PROD MJ BOOST 15-30-15

High phosphorus formulation that supplies the necessary phosphorus for cannabis transplants and bud sizing.

PLANT-PROD MJ CAL KICK 15-0-14 ★

High calcium formulation used as the main calcium source throughout the production cycle. Calcium is vital to plant rigidity and bud formation.

PLANT-PROD MJ FINISHER 4-31-37

Cannabis specific finishing formulation with elevated phosphorus and potassium to encourage fullness and density of buds.

PLANT-PROD MJ GROW 12-8-26 ★

Formulated for the vegetative growth stage of cannabis plants. Ideal for use in a mother plant feeding program with Cal Kick.



Plantex water soluble fertilizers combine the highest quality ingredients with attentive manufacturing. Highly soluble, world class production and quality. Custom blends and package sizes available.

NO-STRETCH® 15-0-20

Works to harden plant structure and prevent leggy growth. Use toward the end of the crop cycle for compact sturdy growth and to keep internodes short. Part of the Plantex Solutions line.

COMPLETE 17-5-17

All-in-one advanced nutritional program containing all 5 macros and high levels of nitrate with no urea. It is effective over a wide pH range. Part of the Plantex Solutions line. **Comes in a duo bag for easy usage.**

FERTILITY PLUS 19-2-19

This high nitrate, urea-free fertilizer is balanced with enhanced micronutrient availability and performance, ideal for heavy feeding. Part of the Plantex Solutions line.

COMPLETE PLUS 19-8-13

Modification of the Complete formulation with more acidic potential. Growers with higher alkaline water can reduce or eliminate the use of acid. Part of the Plantex Solutions line. **Comes in a duo bag for easy usage.**

21-5-20 HIGH NITRATE LOW P

Effective in soilless media, High Nitrate Low P is a general feed formulation and is the base for many fertilizer programs.

15-0-15 CAL-PLUS

Completely water soluble prilled mixture of calcium nitrate, potassium nitrate and micronutrients.

15-15-30 HIGH K

Elevated level of potash, particularly well suited for finishing container grown plants.

12-2-14 CAL MAG + P

Designed for young plant production with 6% calcium and 3% magnesium as well as a complete micronutrient package.

Plant-Prod / Plantex / Plant Prod MJ

Commercial Products	Item	Description	Size
	31-M12279	Plant-Prod MJ Grow 12-8-26	25 lb
	31-M12206	Plant-Prod MJ Bloom 10-30-20	25 lb
	31-M12280	Plant-Prod Finisher 4-31-37	25 lb
	31-M12278	Plant-Prod Boost 15-30-15	25 lb
	31-M12305	Plant-Prod MJ Cal Kick 15-0-14	25 lb
	31-M12310	Plant-Prod MJ Spike (CaMg)	25 lb
	31-140145	Plantex Complete 17-5-17	25 lb
	31-140165	Plantex Complete Plus 19-8-13	25 lb
	31-140105	Plantex No Stretch 15-0-20	25 lb
	31-11078	Plantex Fertility Plus 19-2-19	25 lb
	31-140306	Plantex High Nitrate Low P 21-5-20	25 lb
	31-140125	Plantex High K 15-15-30	25 lb
	31-140100	Plantex Cal Plus 15-0-15	25 lb
	31-140075	Plantex Cal Mag + P 12-2-14	25 lb



CLICK
FOR MORE
INFORMATION

Retail Ready Products	Item	Description	Size	CS/UOS	MSRP
	81970001	Plant-Prod MJ Grow 12-8-26	4.4 lb	6/6	\$21.99
	81970002	Plant-Prod MJ Bloom 10-30-20	4.4 lb	6/6	\$16.99
	81970005	Plant-Prod Finisher 4-31-37	4.4 lb	6/6	\$22.99
	81970003	Plant-Prod Boost 15-30-15	4.4 lb	6/6	\$20.99
	81970004	Plant-Prod MJ Spike (CaMg)	12.3 oz	12/12	\$11.99

pH management

Item	★	»	Description	Manufacturer	Sold as
75-5030			Sulfuric acid	Riverside Chemical	1 gal, 4/cs
75-5035		•	Sulfuric acid, 93% Tech Grade	Riverside Chemical	55 gal
57-100239			Phosphoric acid 75% Tech Grade	Riverside Chemical	1 gal, 4/cs
57-100240		•	Phosphoric acid 85% Tech Grade	Riverside Chemical	1 gal, 4/cs
J74321			Citric acid	JR Peters	25 lb
91-2190			Jacks Potassium bicarbonate	JR Peters	1 lb
91-2191			Jacks Potassium bicarbonate	JR Peters	25 lb
675-0525			CalOx	BioSafe	2.5 gal
1652025GR			pH Reducer	Growth Products	2.5 gal
HGC722125	•		General Hydroponics pH Down	General Hydroponics	1 gal
HGC722095	•		General Hydroponics pH Up	General Hydroponics	1 gal
82000217	•		Cultivation Nation pH Up	Fox Farm	1 pint
82000218	•		Cultivation Nation pH Up	Fox Farm	1 quart

★ = Retail Store Best Seller » = Drop-Ship Item

GGSPRO TIP SAFE ACID HANDLING

Working with acids causes anxiety for many people. Several simple tips can help ease many growers' worries and keep them safe while handling acids:

1. Always add acid to water and NEVER add water to acid.
2. Always remember to wear proper (acid approved) eye and skin protection such as goggles, gloves, and aprons.
3. Work in well ventilated areas if handling a fuming acid such as nitric acid.
4. Use appropriate equipment when handling large volumes to avoid spills, such as Goat Throat pumps and acid tolerant plastics and glassware.



Additional professional water soluble fertilizers

PETERS PROFESSIONAL 5-11-26 HYDROPONIC SPECIAL

Part A formulation for use on crops such as lettuce, greens, cucumbers, tomatoes, and cannabis. Highly soluble, nitrate nitrogen and EDTA chelated micros.

HAIFA CAL PRIME 17-0-0

Concentrated source of nitrogen and calcium. Low ammoniacal nitrogen and an impressive 23.5% soluble calcium from calcium oxide. Delivers higher Ca:N ratio than other calcium nitrate formulations.

CALCIUM CHLORIDE DIHYDRATE

Apply via foliar spray as a supplement to deliver calcium to the leaves. Helps to prevent tip burn in lettuces and deficiencies in hemp and cannabis.

Item	★	»	Description	Manufacturer	Sold as
67-2320			Peters Professional 5-11-26 Hydroponic Special	ICL	25 lb
67-2305			Peters Excel 15-5-15 Cal Mag Special	ICL	25 lbs
67-2308			Peters Excel 21-5-20 Multi-purpose	ICL	25 lbs
J71750			Oasis Hydroponic 16-4-17	JR Peters	25 lb
67-8125			Cal Prime Calcium Nitrate 17-0-0	Haifa	50 lb
67-8130	•		Yaraliva Calcium Nitrate 15.5-0-0	Yara	50 lb
67-9000			Ultrasol K Plus Potassium Nitrate 13.7-0-46	SQM	50 lb
31-101BACK			Plantex Multi-K potassium nitrate 12-0-44	Master Plant-Prod	50 lb
31-10279			Plantex Mono Potassium Phosphate 0-52-34	Master Plant-Prod	55 lb
31-10290			Plantex Ammonium Nitrate 34-0-0	Master Plant-Prod	55 lb
67-6602			Mono-ammonium phosphate (MAP) 12-61-0	Kirby Agri	50 lb
14MPP50			Soluble monopotassium phosphate	MKP	50 lb
14POTSULS	•		Potassium sulfate 0-0-52	Kirby Agri	50 lb
J74761			Jacks Potassium sulfate 0-0-52	JR Peters	25 lb
31-10268		•	Plantex Magnesium nitrate 1-0-0	Master Plant-Prod	50 lb
67-7500GW			Magriculture Mag Sulfate Heptahydrate (west coast only)	Giles	50 lb
14MGSUL			Epsom Salts	Kirby Agri	50 lb
35315			Calcium chloride dihydrate	JR Peters	1 lb
35316			Calcium chloride dihydrate	JR Peters	4 lb
35317			Calcium chloride dihydrate	JR Peters	25 lb

★ = Retail Store Best Seller » = Drop-Ship Item



Micronutrients

Item	»	Description	Manufacturer	Sold as
33633		Mix of Soluble Trace Elements (MOST)	JR Peters	25 lb
67-2366		STEM trace element liquid	ICL	2.64 gal
31-11172		Plantex Nutritrace	Master Plant-Prod	25 lb
16-03081		BiomIn Booster	JH Biotech	1 gal
67-1625		Micromax Micronutrients	ICL	50lb
67-70371	•	Sprint 138 Fully chelated Iron (EDDHA)	BASF	5 lb
67-70361		Sprint 330 Chelated iron (DTPA)	BASF	5 lb
67-70365		Sprint 330 Chelated iron (DTPA)	BASF	50 lb
67-9230	•	Verdanta OFE	BioWorks	1 gal
67-9235		Verdanta OFE	BioWorks	2.5 gal
67-9240		Verdanta OFE	BioWorks	30 gal
16-03031		BiomIn Iron	JH Biotech	1 gal
91-2193		Manganese chelate	JR Peters	1 lb
BORON1		Solu-Bor	JR Peters	1 lb
67-1000		AgSil 16H (soluble potassium silicate)	Certis	50 lb



Supplements

Item	»	Description	Sold as	
67-0070		Nature's Source Plant Probiotic	Microbial blend, incl <i>Bacillus</i> spp, <i>Streptomyces</i> and more	1 gal
67-0071		Nature's Source Plant Biotik	OMRI microbial blend, incl <i>Bacillus</i> spp and more	5 lb
166072		Companion Maxx 2-0-1	<i>Bacillus subtilis</i>	2.5 gal
166080	•	Companion Maxx 2-0-1	<i>Bacillus subtilis</i>	30 gal
1660210GR		Essential Plus AG 1-0-1	Soil conditioner with humic acid, proteins, sugars and yucca-based wetting agent	1 gal
67-9510		MycoApply Endo	Granular mycorrhizae, 4 species blend	40 lb
67-9523		MycoApply Ultrafine Endo	Powdered mycorrhizae, 4 species blend	1 lb
67-9525		MycoApply Ultrafine Endo	Powdered mycorrhizae, 4 species blend	20 lb
67-9522		MycoApply Injector Endo	Injector-friendly mycorrhizae, 4 species blend	100 grams
67-9521		MycoApply Injector Endo Organic	Injector-friendly mycorrhizae, 4 species blend	100 grams
16-01112		Humax	12% humic acid from leonardite	2.5 gal
16-01182		Fulmax	3% fulvic acid from leonardite	1 gal
67-2998	•	TerraGrow	Blend of five <i>Bacillus</i> spp	4 lb
67-3000	•	TerraGrow	Blend of five <i>Bacillus</i> spp	10 lb
67-3002	•	TerraGrow	Blend of five <i>Bacillus</i> spp	25 lb
67-9535	•	PRO-MIX® CONNECT™	Single species mycorrhizae for hemp and cannabis	5.5 lb
67-9540	•	PRO-MIX® CONNECT™	Single species mycorrhizae for hemp and cannabis	5.5 lb, 4 cs

» = Drop-Ship Item





Retail Ready Liquid Nutrients

Coast of Maine™



2021

SEAWEED PLANT FOOD 0-0-1

Natural plant hormones enhance plant development, color and vigor. Increases hardiness and resistance to adverse conditions, such as frost, heat and drought. Improves germination and root development when used as a seed inoculant. Neptune's Harvest.

HYDROLYZED FISH 2-4-1

Organic, highly nutritional protein fertilizer. Nitrogen, derived from fish protein in the form of amino acids, slowly breaks down into basic compounds when added to soil. Supports the growth of beneficial bacteria. Neptune's Harvest.

TOMATO & VEG 2-4-2

Perfect, complete fertilizer for tomatoes, vegetables and more. Made from fresh fish, seaweed, molasses, yucca extract and humic acids. Designed for plants with intense growth or "vegging" stage. Neptune's Harvest.

FISH-SEAWEED BLEND 2-3-1

A perfect blend of fish hydrolysate and seaweed. Both are known to build the natural sugar in plants. Neptune's Harvest.

ROSE & FLOWERING 2-6-4

Formulated to increase vigor while increasing volume and density of buds leading to healthy flowers. Made with fresh fish, molasses, yucca extract, seaweed and humic acids. Ensures that crops maximize their flowering ability. Neptune's Harvest.

LIQUID CRAB 1-3-0

Highly concentrated liquid fertilizer intended to promote overall plant vigor. Ideal for vegetables and fruit, as well as most other plants. Made entirely of chitin-rich red crab shell and squid. Coast of Maine.

LIQUID SQUID INDOOR PLANTS CONCENTRATE 2-3-0

Remarkable fertilizer made entirely of squid. A highly concentrated liquid fertilizer intended to promote budding and blooming. Can be used for greenhouse and hydroponic systems and indoor outdoor applications. Coast of Maine.

LIQUID KELP ALL PURPOSE CONCENTRATE 0-0-2

Made from 100% Norwegian Kelp extract, a source of trace quantities of macro and micro-nutrients that help promote healthier plants, improved crop yields and drought tolerance. Coast of Maine.

TIGER BLOOM 2-8-4 ★

Tiger Bloom® is a phosphorus fertilizer that contains nitrogen to support vigorous growth. Tiger Bloom® is designed to encourage abundant fruit, flower and multiple bud development. Fox Farm.

GROW BIG ★

Liquid Concentrate Fertilizer with Micronutrients. Get your garden going with Grow Big®, a liquid plant food that supports lush, vegetative growth. Fox Farm.

BIG BLOOM 0-0.5-0.7 ★

Big Bloom® Liquid Plant Food is formulated for use on all plants and can be used every time you water. OMRI Listed® and Registered CDFA Organic Input Material. Coast of Maine.



Item	Description	Size	CS/UOS	MSRP
82000109	Fox Farm Grow Big 6-4-4 con	1 pt	12/12	\$14.49
82000110	Fox Farm Grow Big Hydro 3-2-6 con.	1 pt	12/12	\$14.49
82000069	Fox Farm Grow Big 6-4-4 con.	1 qt	12/12	\$27.99
82000075	Fox Farm Grow Big 6-4-4 con.	1 gal	4/4	\$85.99
82000108	Fox Farm Big Bloom 0-0.5-0.7 con	1 pt	12/12	\$11.99
82000068	Fox Farm Big Bloom 0-0.5-0.7 con	1 qt	12/12	\$19.99
82000095	Fox Farm Big Bloom 0-0.5-0.7 con	1 gal	4/4	\$70.49
82000111	Fox Farm Tiger Bloom 2-8-4 con	1 pt	12/12	\$14.49
82000071	Fox Farm Tiger Bloom 2-8-4 con	1 qt	12/12	\$26.99
82000077	Fox Farm Tiger Bloom 2-8-4 con	1 gal	4/4	\$86.99
81600040	Coast of Maine Liquid Crab 1-2-0	1 qt	12/12	\$21.99
81600043	Coast of Maine Liquid Kelp 0-0-2	1 qt	12/12	\$31.99
81600034	Coast of Maine Liquid Squid 2-3-0	1 qt	12/12	\$21.99
80120001	Neptune's Harvest Hydrolyzed Fish 2-4-1	18 oz	12/12	\$12.49
80120002	Neptune's Harvest Hydrolyzed Fish 2-4-1	32 oz	12/12	\$17.49
80120003	Neptune's Harvest Hydrolyzed Fish 2-4-1	1 gal	4/4	\$41.99
80120004	Neptune's Harvest Seaweed 0-0-1	16 oz	12/12	\$12.49
80120008	Neptune's Harvest Seaweed 0-0-1	32 oz	12/12	\$17.49
80120009	Neptune's Harvest Seaweed 0-0-1	1 gal	4/4	\$41.49
80120011	Neptune Harvest Fish-Seaweed 2-3-1	18 oz	12/12	\$13.49
80120012	Neptune's Harvest Fish-Seaweed 2-3-1	32 oz	12/12	\$19.49
80120013	Neptune's Harvest Fish-Seaweed 2-3-1	1 gal	4/4	\$48.49
80120014	Neptune's Harvest Fish-Seaweed 2-3-1	5 gal	1/1	\$201.99
80120043	Neptune's Harvest Tomato & Veg 2-4-2	36 oz	12/12	\$24.49
80120044	Neptune's Harvest Rose & Flowering 2-6-4	36 oz	12/12	\$24.49

CLICK
FOR MORE
INFORMATION



Liquid Nutrients

BIOMIN FERTILIZERS

Organic line of liquid fertilizers that gives professional growers the control and precision needed to manage crop fertility. Great option for surgical correction of specific deficiencies.

NATURE'S SOURCE PLANT FOODS

Derived from oilseed extract, a renewable source of plant nutrition. Organic and hybrid options to meet all crop needs. Low salt formulations with natural aminos, calcium and magnesium. Best when direct injected.

VERDANTA® OFE

Water Soluble Liquid - Foliar Iron Fertilizer with Seaweed Extract

Chelated iron foliar spray (3-0-0 + 3% iron) is derived from both organic and mineral sources. Contains urea to help move iron into leaf tissue and contributes to greening up leaves. OFE also contains 3% seaweed extract which is an excellent foliar feed producing better greening and growth of all plants. Corrects iron deficiency with both DTPA and iron citrate. Excellent when used as a preventative treatment.

VERDANTA® PL-2 2-0-6

Compound Organic Based Fertilizer

Derived from 100% organic ingredients to supplement potassium for any crop. Also stimulates microbial activity in the root zone. Low salt index means lower ECs in the growing medium. Use in greenhouse and nursery for veggies, herbs, fruits, cannabis, and hemp. Suitable for fertigation, but not labeled for recirculating hydroponic systems.

Item	»	Description	Manufacturer	Sold as
67-0050		Professional Plant Food 10-4-3	Nature's Source	4.7 gal
67-0055		Professional Plant Food 10-4-3	Nature's Source	55 gal
67-0065		Organic Plant Food 3-1-1	Nature's Source	4.7 gal
67-0085		Nursery & Landscape Special Plant Food 10-4-5	Nature's Source	2.5 gal (2 pack)
67-0086		Nursery & Landscape Special Plant Food 10-4-5	Nature's Source	4.7 gal
67-0087		Nursery & Landscape Special Plant Food 10-4-5	Nature's Source	55 gal
80610017	•	Nursery & Landscape Special Plant Food 10-4-5	Nature's Source	275 gal
16-03011		Biomin Calcium 5%	JH Biotech	1 gal
16-03041		Biomin Magnesium 3%	JH Biotech	1 gal
16-03422		Biomin Nitrogen	JH Biotech	2.5 gal
16-03482		Biomin Potassium	JH Biotech	2.5 gal
67-9187	•	ON-Gard Calcium 1-0-0-5 Ca	BioWorks	2.5 gal
67-9185	•	ON-Gard 5-0-0	BioWorks	2.5 gal
67-9190	•	ON-Gard 5-0-0	BioWorks	5 gal
67-9220	•	Verdanta PL2 2-0-6	BioWorks	1 gal
67-9225		Verdanta PL2 2-0-6	BioWorks	2.5 gal



CROP PROTECTION AND SANITATION





BIOLOGICAL SOLUTIONS

for Plant Health and Crop Protection



STARGUS® BIOFUNGICIDE
CONTROLS DISEASES

Provides broad spectrum disease control on challenging diseases such as downy mildew and *Botrytis*.

Common Crops: Leafy Greens, Grapes, Cucurbits, Apples, Strawberries, Blueberries, Fruiting Veggies, Cole Crops



GRANDEVO® CG BIOINSECTICIDE
FOR PEST MANAGEMENT

Repels, stops feeding, reduces reproduction and induces mortality to prevent damaging insects, flies and mites.

Common Crops: Artichokes, Asparagus, Bedding Plants, Cole Vegetables, Bulb Vegetables, Bushberries, Caneberries, Citrus Fruit, Cucurbit Vegetables, Fig, Fruiting Vegetables, Leafy Vegetables, Ornamental Plants, Pome Fruit, Pomegranate, Root & Tuber Vegetables, Stone Fruit, Strawberries, Tropical & Subtropical Fruit



VENERATE® CG BIOINSECTICIDE
IMPROVES INSECT CONTROL

Effective against a wide variety of chewing and sucking insects and mites and helps reduce chemical residue.

Common Crops: Berries, Bulb Vegetables, Bedding Plants, Citrus Fruit, Cole Crops, Cucurbit Vegetables, Flowering Plants, Fruiting Vegetables, Herbs, Spices, Mints, Leafy Vegetables, Ornamental Plants, Pome Fruits, Root & Tuber Vegetables, Shade & Ornamental Trees, Stone Fruits



REGALIA® BIOFUNGICIDE
CONTROLS BACTERIAL DISEASES

Increases crop performance by stimulating a plant's ability to fight diseases such as powdery mildew.

Common Crops: Bedding Plants, Bulb Vegetables, Blueberries & Caneberries, Citrus Crops, Cucurbits, Flowering Plants, Foliage Plants, Fruiting Vegetables, Herbs & Spices, Leafy Vegetables, Legume Vegetables, Pome Fruit, Stone Fruits, Strawberries, Tropical Fruits



NORTHEAST WEEKLY
IPM TELECONFERENCE

Learn about current vegetable and small fruit pest management pressures and how to deliver safe, effective solutions!

Wednesdays: 12:30-1pm

4/21/21 thru 9/8/21

515-604-9914

Use code: 832191

Recordings: 515-604-9875

Questions:

sbogash@marronebio.com

or 717-877-7105

FREE WEBINARS

Learn how to use biologicals for your crop on our website:

<https://marronebio.com/resources/webinars/>



CAN BE USED IN ORGANIC PRODUCTION



Learn more at [MarroneBio.com](https://marronebio.com)
or by contacting your Griffin salesperson

IMPORTANT CHEMICAL USAGE INFORMATION

Labels & Registration

Pesticide information in this catalog is believed to be correct but it is the responsibility of the applicator to read and follow all label directions!!! Labels do change without notice, including state registrations and restricted use status. Regulations for application to cannabis vary by state. Final responsibility for compliance rests with the applicator.

Storage

Your storage areas should be clean, well-ventilated, and maintained at temperatures between 45° - 90°F. The floor should be covered with a non-absorbent material. All pesticides should be stored in their original containers. Pesticides have shelf lives and should be marked with the date of purchase. Unsafe pesticide storage can lead to serious accidents. Be sure the storage area can be locked and is clearly marked with appropriate pesticide storage signage.

Griffin's Pesticide Permit Policy

Chemicals that have been designated by law as restricted use pesticides require Griffin to only sell to growers that have a current/valid Pesticide Applicators Permit. We are required to record your license to use these products and report that information on demand. No restricted products can or will be allowed out of our warehouse until that copy is on file.

Chemical Shipping

1. **No chemicals will be left without a customer's signature.** If there isn't anybody there at time of delivery, the chemical materials will NOT be delivered.
2. Transportation during extremely cold weather is not possible for many of our liquid chemicals.
3. There are certain chemicals that cannot be shipped via commercial carrier, (or there is an upcharge for handling) due to hazardous chemical shipping laws. Please plan ahead for our truck delivery.
4. MSDS/SDS - Material Safety Data Sheets for all the different pesticides we carry may often be obtained directly from the manufacturer's website or from our Customer Service Dept.

Restricted-Entry Interval (REI)

All EPA registered pesticides have a REI assigned to them. This is expressed in either hours or days and is included in the descriptions of all pesticides in the Griffin catalog except those labeled for retail purposes. Growers must abide by all re-entry restrictions and personal protection equipment (PPE) requirements as listed on the label for the duration of the REI.

Mode of Action Groups (MOA's)

The mechanism by which a pesticide controls a pest is known as its mode of action. In order to rotate pesticides to reduce the chance of resistance it is necessary to use pesticides that utilize different modes of action. Descriptions of insecticides, fungicides and herbicides in the Griffin catalog include the industry accepted mode of action group. Griffin's GGSPRO technical team is available to help create responsible pesticide rotation programs.

2021

LOOK FOR THIS SYMBOL FOR:
TOTAL + TIMED RELEASE



Chemicals with this icon are aerosol cans

Labels and SDS Documents

Ask your Griffin salesperson for product documentation.

Nationwide Poison Control Center
800-222-1222

CHEMICAL CONVERSION TABLE

Equivalent quantities of liquid materials (Emulsion concentrates, etc.) for various quantities of water based on volume per 100 gal

American Fluid Measure

80 drops = 1 teaspoon (tsp)
3 teaspoons = 1 tablespoon (Tbbs)
2 tablespoons = 1 fluid ounce (fl oz)
8 fluid ounces = 1 cup
2 cups = 1 pint (pt)
2 pints = 1 quart (qt)
4 quarts = 1 gallon (gal)

American Dry Measure

3 tsp = 1 Tbs
16 Tbs = 1 cup
28 gm = 1 oz
454 gm = 1 lb

Water	Liquid Chemicals, Smaller Volume Conversions					
100 gal	2 oz	4oz	8 fl oz	16 fl oz	1 qt	2 qt
25 gal	1 Tbs	1 oz	2 fl oz	4 fl oz	8 fl oz	1 pt
5 gal	0.6 tsp	1.25 tsp	2.5 tsp	5 tsp	1.66 fl oz	3.33 fl oz
1 gal	0.12 tsp	0.25 tsp	0.5 tsp	1 tsp	2 tsp	4 tsp

Understanding the GGSPro Bee Safety Codes



Responsible applicators consider bee safety when making their product choices. GGSPro is well versed in managing chemical use for minimizing impacts to biological control agents (BCAs) and now extends this knowledge to bees that can come in contact with pesticides both in greenhouses and outdoors. Our Bee Safety Codes will help you quickly determine which pesticide choices are most appropriate for your specific situation. From there, the GGSPro team can further help you narrow the options and develop strategies that will help you control your pests while minimizing risks to area bee populations.

The GGSPro Bee Safety Codes summarize existing EPA bee caution label content into a simple icon system in which a color and a number provide information on both toxicity and exposure routes. Please note that some application methods (ex. granular) and some product classes (ex. fungicides, surfactants) are not currently subject to bee hazard evaluation by the EPA. Therefore, the lack of a Bee Safety Code should not be considered an indication of complete lack of risk. The GGSPro team is available to discuss your specific concerns. Bee Safety Codes indicate the need to plan pesticide applications carefully to minimize the risk to bees. Products toxic to bees might still be part of a pest control program if the proper precautions are taken. It's all about wise and effective use of pesticides, and GGSPro is here to help you, every step of the way.

All Bee Safety information presented by Griffin Greenhouse Supplies is intended to serve as a reference for growers. It does not replace the need to read and follow the directions on entire pesticide labels or supersede any applicable law, rule, regulation or standard. While every effort has been made to ensure its accuracy, human error is possible and labels do change without notice. Pesticides other than those listed may be safe, legal and effective.

EXPOSURE KEY

1 Toxicity risk through direct exposure only:

avoid treatment when bees are actively visiting or actively foraging in the treatment area. Actively visiting the treatment area refers to bees you see on the plants and pertains to products that do not show residual effect. Bees are protected when bees are absent during treatment.



Highly Toxic

EPA describes as very highly toxic, highly toxic or very toxic to bees

2 Toxicity risk through residual exposure only:

avoid treatment when bees are visiting the treatment area. Visiting the treatment area refers to bees that may visit the plants after treatment. Bees are protected when bees are absent from the area following treatment. Avoid use of these products when crops and/or weeds are in bloom.



Toxic

EPA describes as toxic to bees

3 Toxicity risk through both direct exposure and residual exposure:

avoid treatment when bees are visiting the treatment area. Visiting the treatment area refers to bees that may visit the plants after treatment. Bees are protected when bees are absent from the treatment area both during and following treatment. Avoid use of these products when crops and/or weeds are in bloom.



Low Toxicity

EPA describes as a potential pathogen or with low toxicity to bees



Special case

Special use notes per label; contact GGSPro for more information.

THE NEW EPA BEE ADVISORY BOX

On EPA's new and strengthened pesticide label to protect pollinators

- Alerts users to separate restrictions on the label. These prohibit certain pesticide use when bees are present.
- The new bee icon helps signal the pesticide's potential hazard to bees.
- Makes clear that pesticide products can kill bees and pollinators.
- Bees are often present and foraging when plants and trees flower. EPA's new label makes it clear that pesticides cannot be applied until all petals have fallen.
- Warns users that direct contact and ingestion could harm pollinators. EPA is working with beekeepers, growers, pesticide companies, and others to advance pesticide management practices.
- Highlights the importance of avoiding drift. Sometimes, wind can cause pesticides to drift to new areas and can cause bee kills.

Read EPA's new and strengthened label requirements: <http://go.usa.gov/JHH4>

Wetting Agents and Spray Adjuvants

Aqua-Gro L

Active Ingredient: Alkoxylated Polyois

Overcomes water repellency in soilless mixes so they perform at full capacity until harvest. **Rates:** Inject 10 ppm (1/8 oz per 100 gal) in every irrigation or 100 ppm (1 ¼ oz per 100 gallons of water) weekly.

Item: 74-1348 **Size:** 2.5 gal
Item: 74-1343 **Size:** 30 gal

Capsil

Active Ingredient: Polyether modified polysiloxane

Organo-silicone surfactant increases spray droplet coverage by breaking surface tension. Improves performance of most pesticides and reduces residue from wettable powders. Do not use with strobiluron fungicides or with pesticides that already contain a surfactant. **Rate:** 1/4- 1/2 tsp per gal or 4-8 fl oz per 100 gal. **OMRI listed.**

Item: 74-1541 **Size:** 1 gal

Indicate 5

Colorimetric pH indicator. Easy to read color change makes it easy to adjust spray water to the optimum pH for maximum pesticide performance. Prevents alkaline hydrolysis, neutralizes dissolved salts, and adds a surfactant to improve spreading of the spray material while reducing visible residue.

Item: 31705 **Size:** 1 gal

Nu-Film P

Active Ingredient: Poly-1-p-menthene

Non-ionic spreader-sticker designed for use with most pesticides. Forms a sticky, elastic film holding pesticides on foliage. **Rate:** 1/4-1/3 tsp per gal or 4-6 fl oz per 100 gal. **OMRI listed.**

Item: 74-2960 **Size:** 1 gal

Organics Ag Aide

Active Ingredient: Yucca schidigera

Non-ionic, organic wetting agent that improves wetting in both soil-based and soilless media. **Drench rates:** Initial/one-time drench at 16 fl oz per 100 gal. or weekly at 1-1.5 fl oz per 100 gal. May also be used as a foliar spreader with most pesticides. **Surfactant spray rates:** 1/4-1 tsp per gal or 4-16 fl oz per 100 gal. **OMRI listed.**

Item: 74-1379 **Size:** 1 gal

Uptake

Active Ingredient: Didecyldimethylammonium chloride

Versatile formulation acts as penetrant, spreader sticker, and wetting agent. Increases performance of companion products, as well as penetration of water through growing media. **Foliar Spray Rates:** 1/8-1/2 tsp per gal or 6-25 fl oz per 100 gal as a spray adjuvant.

Drench Rates: 1-2 tsp. per gal, 50-100 fl oz/100 gal.

Item: 74-2127 **Size:** 30 gal

Rooting Hormones

Please verify state rules prior to using any rooting hormone on your crops.

Clonex Gel ★

Rooting hormone in a gel form. Seals cut surface and supplies hormones. Water-based, alcohol-free, 0.31% indole-3-butyric acid (IBA). Ready to use from package. Sold in case qty only.

Item	Description	Size	CS/UOS	MSRP
81860068	Clonex Gel	15 ml packet	108/108	\$6.49
81860067	Clonex Gel	100 ml bottle	12/12	\$20.49
81860069	Clonex Gel	250 ml bottle	12/12	\$44.49
81860074	Clonex Gel	Pint	6/1	\$80.49
81860075	Clonex Gel	Quart	4/1	\$147.99

★ = Retail Store Best Seller

Hormodin Powder

Indole-3-butyric acid (IBA) hormone powder for rooting cuttings available in three strengths.

#1 (0.1% IBA) for herbaceous crops

#2 (0.3% IBA) for semi-woody ornamentals

#3 (0.8% IBA) for evergreen trees and shrubs

Item	Description	Size
73-18601	Hormodin Powder #1	1 lb
73-18611	Hormodin Powder #2	0.5 lb
73-18621	Hormodin Powder #3	0.5 lb

Dip 'N Grow

Liquid concentrate that is diluted with water to any desired strength. Contains indole-3-butyric acid (IBA) and naphthaleneacetic acid. Test on soft wood cuttings for compatibility. Rate: Use a 1/20 ratio with a 5 second dip for most herbaceous cuttings. See label for additional rate details.

Item: 73-1430 **Size:** 16 oz.

Hortus IBA Water Soluble Salts

Dissolve IBA salts in water to make solution for foliar or basal applications to enhance rooting. May be applied to herbaceous or woody cuttings. Consult label for rates.

Item: 73-1904 **Size:** ¼ gal

Fungicides

As of April 2021, marijuana (cannabis) remains a Schedule 1 drug at the federal level. This means that no EPA product labels include cannabis as marijuana. States that allow cannabis production regulate chemistry use within their state. For these reasons, we do not list cannabis as a labeled crop in our descriptions for any EPA registered products even if a specific state does not prohibit its use. GGSPRO can help guide product selection for legal production of cannabis. The applicator holds all responsibility to follow state, local, and federal regulations.

Companion WP MOA
BM02 | REI
4**Active Ingredient: Bacillus amyloliquefaciens strain ENV503**

Preventative fungicide that can be applied as a foliar spray or a soil drench. Diseases prevented include but are not limited to: *Alternaria*, *Botrytis*, *Colletotrichum*, *Erwinia*, *Fusarium*, *Phytophthora*, powdery mildew, *Pseudomonas*, *Pythium*, *Rhizoctonia* and *Xanthomonas*. Labeled for use on edible crops in field, greenhouse, nursery and shadehouse applications. **Foliar spray and drench rates:** 1-1.5 tsp per gal or 0.5-1.5 lb per 100 gal. **OMRI listed**

Item: 71-1372A2

Size: 5 lb.

Item: 71-1375A2

Size: 20 lb.

Camelot O

MOA
M1 | REI
4**Active Ingredient: Copper Octanoate**

Copper based fungicide/bactericide. Controls anthracnose, *Alternaria*, *Cylindrocladium*, powdery mildew, certain bacterial leaf spots and more. Labeled for use under field conditions, greenhouses, nurseries, interiorscapes and landscapes. Many edible crops on the label. **Foliar spray rates:** 4 tsp-2 fl oz per gal or 0.5-2 gal per 100 gal. **OMRI listed.**

Item: 70-21202 Size: 1 gal.

EcoSwing MOA
BM01 | REI
4**Active Ingredient: Extract of *Swinglea glutinosa***

EcoSwing is a foliar fungicide based on a botanical extract from *Swinglea glutinosa*. EcoSwing is primarily a preventative fungicide with some curative activity for the control of *Alternaria*, basil downy mildew, *Botrytis*, powdery mildew and others. It can be used on food crops in greenhouses, nurseries and landscapes. Best results are achieved by using it as part of a regular program at 7-14 day intervals. **Foliar spray rates:** 1.5-2 tsp per gal, or 24-32 fl oz per 100 gal. EcoSwing leaves no visible residue and is compatible with BCAs. 0 day PHI and **OMRI listed.**

Item: 71-1455 Size: 1 qt.

Carb-O-Nator

MOA
NC | REI
4**Active Ingredient: Potassium bicarbonate**

Contact, curative action against foliar fungal diseases. Effective against *Botrytis*, powdery mildew and more. Labeled for use in greenhouses, nurseries and agricultural fields. Hemp and many food crops listed on the label, including berries, herbs, lettuce, peppers and tomatoes. **Foliar spray rates:** 2.5-5 lb per 100 gal. 0 day PHI.

Item: 71-1315 Size: 5 lb.

Additional Products for use on Edible Transplants (A-F)

Item	»	Description
71-1118		Actinovate SP 18 oz.
71-1130		Adorn SC - 1 qt.
71-1131		Affirm WDG - 2.4 lb.
71-1205		Badge SC - 2.5 gal.
71-1255	•	BotryStop - 6 lb
71-1260	•	BotryStop - 12 lb
71-1522		Fosphite EC- 2.5 gal.

» = Drop Ship Item

Other Popular Products for use on Edibles Grown to Harvest (A-F)

Item	Description
71-1133	Agri-Mycin 50 - 3 lb.
71-2550	3336 EG- 5 lb.
71-1440	Decree 50 WDG -2.5 lb.

CLICK
FOR INFO

on the full
selection
of CEA crop
protection
products

Cease

MOA
BM02 | REI
4**Active Ingredient: Bacillus subtilis QST 713 strain**

Mycofungicide that provides preventative control of certain fungal and bacterial diseases such as *Alternaria*, *Botrytis*, downy mildew, powdery mildew and bacterial diseases including *Erwinia*, *Pseudomonas* and *Xanthomonas*. Cease is labeled for use on several vegetable crops in greenhouses, fields and nurseries. **Foliar spray rates:** range from 1.25-2.5 fl oz per gal or 1-2 gal per 100 gal. Cease can be used as a soil drench to suppress root rots such as *Fusarium*, *Pythium*, *Phytophthora* and *Rhizoctonia*. **Drench rates:** 32-128 fl oz per 100 gal. **OMRI listed.**

Item: 71-13301 Size: 1 gal.

Item: 71-1335 Size: 2.5 gal.

Mildew Cure

MOA
NC | REI
0**Active Ingredient:** Cottonseed Oil, Clove Oil, Garlic Oil

Foliar spray for the control of powdery mildew on many edible crops. Active ingredients are essential oils and this product is a 25b product (no EPA registration required). **Foliar spray rates:** 1.25 fl oz per gal or 1 gal per 100 gal. **OMRI listed.**

Item: 16-11005 **Size/qty:** 2.5 gal. - 2 per cs.*These items drop-ship to the site from the manufacturer.*

MilStop SP

MOA
NC | REI
1**Active Ingredient:** Potassium bicarbonate

Fast acting broad-spectrum foliar fungicide. Especially effective as a quick knockdown of powdery mildew. Controls *Alternaria*, anthracnose, black spot, *Botrytis*, powdery mildew and others on hemp and certain edible crops. **Foliar spray rates:** 1-2 Tbls per gal or 2.5-5 lb per 100 gal. **OMRI listed.**

Item: 71-2878**Size:** 5 lb.**Item - CA Only:** 71-2879B-CA**Size:** 5 lb.**Item:** 71-2880**Size:** 25 lb.

Procidic 2

MOA
NC | REI
0**Active ingredient:** Citric acid

25b product for preventative control of powdery mildew and both preventative/curative control of *Botrytis*. Recommended for greenhouse and field crops, including hemp and cannabis. **Foliar spray rates:** 0.5-3.5 fl oz/gal. 0 day PHI.

Item: 71-2742**Item:** 71-2744*These items drop-ship to the site from the manufacturer.*

Regalia CG

MOA
P05 | REI
4**Active Ingredient:** *Reynoutria sachalinensis*

A botanical fungicide labeled for use on hemp and many edibles in greenhouses, shade-houses, outdoor nurseries, and landscape plantings. Utilizing Induced Systemic Resistance, Regalia CG contributes to helping plants defend themselves. Protects against foliar diseases, like *Alternaria*, *Colletotrichum*, *Botrytis*, *Cercospora*, downy mildew, *Myrothecium*, powdery mildew, rust and *Septoria*. Bacterial disease protection against *Erwinia*, *Pseudomonas* and *Xanthomonas*. Root and crown diseases include *Fusarium*, *Phytophthora*, *Pythium*, and *Rhizoctonia*. **Foliar spray rates:** 0.64-1.28 fl oz per gal or 64-128 oz per 100 gal. **Drench rates:** 0.64-1.28 fl oz per gal or 64-128 oz per 100 gal. **OMRI listed.**

Item: 70-2841 **Size:** 1 qt.**Item:** 70-2844 **Size:** 1 gal.**Item:** 70-2845 **Size:** 2.5 gal.

RootShield Granules

MOA
BM02 | REI
0**Active Ingredient:** *Trichoderma harzianum* Rifai strain T-22

Biological fungicide. Protects plants from root diseases caused by *Pythium*, *Fusarium*, *Rhizoctonia*. Apply as preventive granular incorporation into soil mix before potting or seeding. **Incorporation rates:** 1-1.5 lb per cu yd of soil. **OMRI listed.**

Item: 71-2781 **Size:** 40 lb.**Item:** 71-2783 **Size:** 500 lb.**Item:** 71-2785 **Size:** 1,000 lb.*These items drop-ship to the site from the manufacturer.*

RootShield Plus Granules

MOA
BM02 | REI
0**Active Ingredient:** *Trichoderma harzianum* Rifai strain T-22 and *Trichoderma virens* strain G-41

Naturally occurring fungus that grows along with the roots to protect plants from root and crown diseases such as *Cylindrocladium*, *Fusarium*, *Phytophthora*, *Pythium* and *Rhizoctonia*. Labeled for many edible crops in greenhouses and nurseries. **Incorporation rates:** 1-3 lb per cu yd of soil mix. **OMRI listed.**

Item: 71-27921 **Size:** 40 lb.**Item:** 71-27931 **Size:** 500 lb.**Item:** 71-27941 **Size:** 1,000 lb.*These items drop-ship to the site from the manufacturer.*

RootShield WP

MOA
BM02 | REI
0**Active Ingredient:** *Trichoderma harzianum* Rifai strain T-22

Fully compatible with injectors and drip irrigation systems. Biological fungicide for use as a soil drench on many edible crops. Proliferates in the root zone to protect plants from pathogens such as: *Pythium*, *Rhizoctonia*, and *Fusarium*. Must be used prior to disease onset. **Drench rates:** Soil drench at 1/2-3/4 tsp per gal or 3-5 oz per 100 gal. **OMRI listed.**

Item: 71-27901 **Size:** 3 lb.**Item:** 71-27903 **Size:** 30 lb.*These items drop-ship to the site from the manufacturer.*GGSPRO TIP
REGALIA CG
FUNGICIDE

On top of disease prevention, this biofungicide has demonstrated additional plant benefits such as growth stimulation as well as increased root initiation and development.



Active Ingredient: *Trichoderma harzianum* Rifai strain T-22 & *Trichoderma virens* strain G-41

Naturally occurring fungus that grows along with the roots to protect plants from root and crown diseases such as *Cylindrocladium*, *Fusarium*, *Phytophthora*, *Pythium* and *Rhizoctonia*. Improved formulation is fully compatible with injectors and drip irrigation systems. Labeled for many edible crops in greenhouses and nurseries. Approved for hydroponic applications.

Drench rates: 1/2-1 tsp per gal or 3-8 oz per 100 gal.

OMRI listed.

Item: 71-27961 **Size:** 3 lb.

Item: 71-27971 **Size:** 30 lb.

These items drop-ship to the site from the manufacturer.



Active Ingredient: Potassium silicate

Sil-Matrix is an aqueous liquid concentrate. This versatile product applied as a foliar spray for control of certain insects, mites and foliar diseases. For use on hemp, many edible crops including certain vegetables, berries, vines, and fruit trees. Controls aphids, spider mites, whiteflies, *Botrytis*, and powdery mildew. Flower caution on label. **Foliar spray rates:** 2 tsp-1.25 fl oz per gal or 32-128 oz per 100 gal. **OMRI listed.**

Item: 71-2940 **Size:** 2.5 gal.



Active Ingredient: *Bacillus amyloliquefaciens* strain D747

Biofungicide/bactericide for use on hemp, vegetables and herbs, berries and stone fruits for prevention of many foliar and root diseases. Foliar sprays for anthracnose, *Alternaria*, bacterial leaf spots (*Erwinia*, *Pseudomonas*, *Xanthomonas*), *Botrytis*, *Cercospora*, downy mildew, *Entomosporium*, *Myrothecium*, powdery mildew, rust, and scab. Soil drench application prevents *Fusarium*, *Pythium*, *Phytophthora*, and *Rhizoctonia*. Labeled for cutting and root dip.

Foliar spray rates: 2 tsp-2 Tbls per gal or 16-96 fl oz per 100 gal.

Drench rates: 2-4 1/2 tsp per gal or 16-72 fl oz per 100 gal. **OMRI listed.**

Item: 71-3040 **Size:** 1 gal.

GGSPRO TIP

SEGOVIS FUNGICIDE

Downy mildew control for basil transplants have been added to the label. Segovis continues to show industry leading length of control for downy mildew.

Additional Products for use on Edible Transplants (G-Z)

Item	»	Description
71-2030		Grotto - 1 lb.
71-2050		Kalmor - 2.5 lb.
71-1700		Nordox 75 WG - 12.5 lb.
71-2100	•	Obtego - 1 lb.
71-2105	•	Obtego - 5 lb.
71-2350		OxiPhos - 2.5 gal.
71-2350-CA		OxiPhos - 2.5 gal. - CA Only
71-2690		PERpose Plus - 5 gal.
71-2693	•	PERpose Plus - 30 gal.
71-2695	•	PERpose Plus - 55 gal.
71-2725		Phostrol - 2.5 gal.
71-2732		Phyton 35 - 1 ltr.
71-2737		Phyton 35 - 1 gal.
71-3100		Segovis - 1 pt
71-31102		Segway O - 16 oz.
71-3113		Segway O - 64 oz.
71-2948		Spirato GHN - 1 pt.
71-2950	•	Stargus - 2.5 gal.
71-2995		TerraClean 5.0 - 5 gal.
71-3018		Terraguard SC - 1 qt.

Other Popular Products for use on Edibles Grown to Harvest (G-Z)

Item	Description
71-1400	Heritage - 1 lb.
71-1405	Heritage - 6 lb.
71-1655	Micora - 1 qt.
71-26801	Pageant Intrinsic WG - 1 lb.
71-26821	Pageant Intrinsic WG - 12 lb.
71-1690	Mural WG - 1 lb.
71-2748	Protect DF - 6 lb.
71-27651	Ranman 400 SC - 1 qt.
71-3100	Segovis - 1 pt. - 1 qt.
71-2979	Subdue Maxx - 1 qt.
71-2978	Subdue Maxx - 1 gal.
71-29781	Subdue Maxx - 10 gal.

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on the full selection of CEA crop protection products

ZeroTol HC ★ **Active Ingredient: Hydrogen Dioxide and Peracetic Acid**

ZeroTol HC is a fungicide/bactericide to prevent or control plant diseases on vegetable, berry and fruit crops. It is also labeled for many hard surfaces to control odor causing bacteria, algae, fungi, moss, mold, and mildew. Packaging designed for smaller growers and hobby greenhouses. **Foliar spray rates:** 0.64-0.85 fl oz per gal. **OMRI listed.**

Item: 71-3545 **Size:** 1 gal.

ZeroTol 2.0 ★ **Active Ingredient: Hydrogen dioxide & Peracetic acid**

For use in greenhouses, landscapes, nurseries, and hydroponics. Kills algae, bacteria, fungi and their spores on contact. Can be used to treat irrigation water for pathogen control. Labeled for use on herbs, vegetables, small fruits, hemp, and hard surface applications. Can be applied as a spray, fog or drench. Leaves no residue and has 0 REI for drench treatments if label conditions are met. **Foliar spray rates:** 0.5-1.25 fl oz per gal or 50-128 fl oz per 100 gal. **Drench rates:** 0.25-1.25 fl oz per gal or 25-128 fl oz per 100 gal. **OMRI listed.**

Item: 71-35501 **Size:** 2.5 gal.
Item - CA only: 71-35501-CA **Size:** 2.5 gal.
Item: 71-35511 **Size:** 30 gal.
Item - CA only: 71-35511-CA **Size:** 30 gal.

Insecticides

As of April 2021, marijuana remains a Schedule 1 drug at the federal level. This means that no EPA product labels include cannabis as marijuana. States that allow cannabis production regulate chemistry use within their state.

For these reasons, we do not list cannabis as a labeled crop on any EPA registered item, even if a specific state does not prohibit its use. GGSPRO can help guide product selection, though the applicator holds all responsibility to follow state, local, and federal regulations.

GGSPRO TIP

ANCORA INSECTICIDE

Control of root aphids can be challenging. Ancora is a great choice for drench applications, especially when used in combination with a *Beauveria* product.

Ancora MOA | REI
UNF | 4**Active Ingredient: *Isaria fumosorosea* Apopka Strain 97**

Ancora is a wettable powder insecticide based on a naturally occurring fungus. From a foliar spray Ancora is labeled to control aphids, leafminers, mealybugs, plant bugs, spider mites, thrips, whiteflies and others. Soil applications can be made by drenching, soil surface sprays or soil injection for beetle grubs, caterpillars and larvae, symphylans (centipedes), rootworms, weevils (including black vine weevil), wireworms and the pupal stage of thrips. Ancora is labeled for hemp, many herbs, fruits and vegetables grown in containers in greenhouses, shade houses, hydroponics and field-grown nursery stock. Excellent plant safety. The fungus in this product is most effective when applied in a low UV light, 65-85°F, high humidity (80%) environment for 8-10 hours to allow for maximum spore germination. **Foliar spray and drench rates:** 1 oz per 5 gal or 14-28 oz per 100 gal. For labeled soil pests it can be drenched at the same rates. It must be stored between 40-50°F. **OMRI listed.**

Item: 70-1166 **Size:** 1 lb.

Aza-Direct MOA | REI
UN | 4**Active Ingredient: Azadirachtin**

A botanical (neem) insect growth regulator. Tank mix with other insecticides to increase control of a wide range of pests because of its ability to keep larval, pupal, and nymph stages from developing further. Labeled for vegetables, fruit trees, and herbs. Approved for use in greenhouses, nurseries, or outdoor field production. **Foliar spray rates:** 1 1/8-1 1/3 tsp per gal or 18-21 fl oz per 100 gal. **OMRI listed.**

Item: 70-1222 **Size:** 2.5 gal.

AzaGuard EC MOA | REI
UN | 4**Active Ingredient: Azadirachtin**

A botanical (neem) insect growth regulator and nematicide. Targets larval, pupal and nymph stages of many insects such as leafhoppers, mealybugs, soft scale, thrips, and whitefly. Labeled for use on many edible crops and hemp in greenhouses, interiorscapes and field crops. **Foliar spray rates:** 3/4-1 tsp per gal or 8-10 fl oz per 100 gal. For heavy infestations or dense foliage, use 2x these rates. **Drench rates:** 1/2 tsp per gal or 8 fl oz per 100 gal. **OMRI listed.**

Item: 70-1224 **Size:** 1 qt.
Item: 70-1225 **Size:** 1 gal.

Azera Pro MOA | REI
3A/UN | 12**Active Ingredient: Azadirachtin, Pyrethrins**

Azera Pro is a combination of an IGR with natural pyrethrins that provides a quick knockdown for many insect and mite pests. It is labeled for a wide range of edible crops in commercial greenhouse use only. **Foliar spray rates:** 0.5-1.0 fl oz per gal, 53-107 fl oz per 100 gal. Minimum re-application interval is 5 days. **OMRI listed.**

Item: 70-1232 **Qty:** 1 qt.
Item: 70-1233 **Qty:** 1 gal.

Azatin O



Active Ingredient: Azadirachtin

Botanical (neem) insect growth regulator with 4.5% active ingredient. Halts the growth process of instar and pupal stages of labeled insects. Controls whiteflies, thrips, mealybugs, leafminer, fungus gnats, soft scale, and more. Herbs and vegetables on the label.

Foliar spray rates: 2/3 tsp per gal or 10.66 fl oz per 100 gal.

Drench rate: 1/2-1 tsp per gal. **OMRI listed.**

Item: 70-12301 **Size:** 1 qt.



Active Ingredient: *Beauveria bassiana* strain ANT-03

Naturally occurring bioinsecticide as a wettable powder. Foliar sprays control or suppress aphids, thrips, whiteflies, plant bugs, beetles and weevils. Labeled for use on hemp, certain herbs, vegetables, berries, and fruits in greenhouses and fields. Spray thoroughly but not to runoff, repeat at 5-7 day intervals. Do not apply fungicides within 4 days of applying. **Foliar spray rates:** 1 tsp-1 Tbls per gal or 15-25 oz per 100 gal. **OMRI listed.**

Item: 70-1245 **Size:** 1 lb.

Item: 70-1245-CA **Size:** 1 lb.

These items drop-ship to the site from the manufacturer.



Active Ingredient: *Beauveria bassiana* strain GHA

Wettable powder insecticide. Naturally occurring fungus for use in controlling aphids, thrips and whiteflies on hemp, herbs, and vegetable crops in greenhouses and outdoor production. Greater compatibility with biological control agents than the ES formulation. **Foliar spray rates:** 1-4 tsp per gal; 0.5-2 lb per 100 gal. Safe for tomatoes.

Item: 70-12521 **Size:** 1 lb.



Active Ingredient: *Beauveria bassiana* strain GHA

Emulsifiable suspension mycoinsecticide. A naturally occurring fungus for use in controlling whitefly, aphids and thrips on greenhouse crops, hemp, herbs and vegetables. For indoor/outdoor nursery, greenhouse and landscape use. **Foliar spray rates:** 2-4 tsp per gal or 32-64 fl oz per 100 gal. May damage tomatoes.

Item: 70-12501 **Size:** 1 qt.

Item: 70-12511 **Size:** 1 gal.



GGSPRO TIP BOTANIGARD WP

Growers have trusted BotaniGard their go-to biopesticide for years. The active ingredient, *Beauveria bassiana*, is a naturally occurring fungus that infects many types of insects. Add BotaniGard WP or one of our other *Beauveria* products to your cabinet today!



Active Ingredient: Pyrethrins and *Beauveria bassiana* Strain GHA

Natural pyrethrum combined with a naturally occurring fungus. Foliar sprays control aphids, thrips, whitefly, mealybugs, leafhoppers, plants bugs and many more. Labeled for herbs, vegetables, fruits and nuts in greenhouses, shade houses, nursery, field, landscape, turf and interiorscapes. Check compatibility with fungicides prior to tank mix. **Foliar spray rates:** 1/2-2 tsp per gal water; 8-32 fl oz per 100 gal (higher rates on vegetables outside).

Item: 70-1253 **Size:** 1 qt.

Item: 70-1254 **Size:** 1 gal.

Item: 70-1255 **Size:** 2.5 gal.

These items drop-ship to the site from the manufacturer.



Active Ingredient: *Bacillus thuringiensis* ssp. *kurstaki* strain EVB-113-19

BT NOW is toxic to select species of Lepidopteran larvae when applied as a foliar spray. It is labeled for use on edible crops in greenhouses, nurseries, and agricultural sites. BT NOW must be ingested by susceptible larvae to be effective. Thorough coverage of target foliage where larvae are feeding is essential. **Foliar spray rates:** 1/2 - 3 1/2 tsp per gal or 8-56 fl oz per 100 gal. **OMRI listed.**

Item: 70-1290 **Size:** 1 gal.

Captiva Prime

MOA | REI
UN | 4

Active Ingredient: *Capsicum oleoresin* extract, garlic oil, & canola oil

Natural plant-based bioinsecticide, miticide, and insect repellent in an emulsifiable concentrate formulation. Tank mix with other insecticides and miticides to increase control of a wide range of pests because of its irritant effect. It is recommended to perform small-scale trials before applying to entire crop areas to identify any phytotoxicity issues. Labeled for a wide range of edibles grown in greenhouses, nurseries, or outdoors. **Foliar spray rates:** ½-1 tsp per gal or 8-16 fl oz per 100 gal. **OMRI listed.**

Item: 70-1307 **Size:** 1 qt.

DiPel Pro DF

MOA | REI
11A | 4

Active Ingredient: *Bacillus thuringiensis kurstaki* ABTS-351

Bacillus thuringiensis for the control of many caterpillars. **Foliar spray rates:** ½-4 tsp per gal or 0.25-2 lb per 100 gal. **OMRI listed.**

Item: 70-1450 **Size:** 1 lb.

Ecotec Plus

MOA | REI
NC | 0

Active Ingredient: Rosemary Oil, Geraniol, Peppermint Oil

Broad spectrum contact insecticide/miticide provides quick kill and control of all life stages of certain pests. Foliar sprays control: aphids, thrips, whiteflies, mites, cabbage loopers, armyworms and other pests. Labeled for use on edibles in greenhouses, nurseries, interiorscapes and residential use. **Foliar spray rates:** 1-4 tsp per gal or 16-64 fl oz per 100 gal. **OMRI listed.**

Item: 70-1507 **Qty:** 2.5 gal.

Gemstar

MOA | REI
UN | 4

Active Ingredient: polyhedral occlusion bodies of the nuclear polyhedrosis virus of *Helicoverpa zea*

Biological insecticide in an aqueous suspension. Very host-specific, naturally occurring virus that infects and kills the larvae of corn earworm, Old World bollworm, and tobacco budworm. Death typically occurs 3-10 days after ingestion. Labeled for use on hemp, tomatoes, peppers, lettuce, cucumber, strawberries and more in fields. **Foliar spray rates:** 1 tsp - 1 Tbls per gal or 4-10 fl oz per acre. 0 day PHI. **OMRI listed.**

Item: 70-1712 **Size:** 1 qt

Item: 70-1714 **Size:** 2.5 gal

Gnatrol WDG

MOA | REI
11A | 4

Active Ingredient: *Bacillus thuringiensis israelensis*

Gnatrol WDG is a biological larvacide, applied as a drench for fungus gnat larvae in greenhouses, interiorscapes and nurseries. It is labeled for vegetable crops as well as breeding areas on greenhouse floors. 2-year shelf life. **Drench rates:** preventative or light to moderate infestations, apply 3.2-6.4 oz per 100 gal. For heavier infestations apply 13-26 oz per 100 gal. Apply 3 times at weekly intervals. **OMRI listed.**

Item: 70-1716 **Size:** 16 lb.

Grandevo CG

MOA | REI
UN | 4

Active Ingredient: *Chromobacterium subtsugae* Strain PRAA4-1T

Biological insecticide/miticide for use against caterpillars, aphids, mealybugs, thrips, whiteflies and mites on hemp and edibles in greenhouses and nurseries. **Rates:** 2.5 tsp-2.5 Tbls per gal or 1-3 lb per 100 gal. **OMRI listed.**

Item: 70-1751 **Size:** 1 lb.

Item: 70-1754 **Size:** 4 lb.

Item: 70-1756 **Size:** 10 lb.

Additional Products for use on Edible Transplants (A-G)

Item	Description
70-1186	Benefit 60 WP – 5 x 20 gram packets
70-13501	Citation WSP – 6 x 2.66 oz pouches
70-14091	Discus L – 1 gal
70-1665	Endeavor WDG – 6 x 2.5 oz pouches
70-17002	Flagship 25WG – 2 lb

Other Popular Products for use on Edibles Grown to Harvest (A-G)

Item	Description
70-1161	Altus – 64 oz
70-1160	Akari 5SC – 1 qt
70-1365	Conserve SC – 1 qt
70-1465	Distance IGR – 1 qt
70-1538	Entrust SC – 1 qt
70-1653	Floramite SC – 1 qt
70-1504	Fulfill – 27.5 oz

Products for Snail and Slug Control

Item	Description
70-1295	Bug-N-Sluggo - 50 lb.
70-14301	Deadline Mini-Pellets - 10 lb.

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Kopa



Active Ingredient: Potassium salt of fatty acids

Kopa is an insecticidal soap applied as a foliar spray for the control of many insects, mites and powdery mildew. Kopa can be applied to many field and greenhouse grown vegetables and herbs. There are some plant safety concerns. Refer to the label for strategies to reduce the risk of phytotoxicity. **Rates:** 1.25 -2.5 fl oz per gal or 1-2 gal per 100 gal. 0 day PHI. **OMRI listed.**

Item: 70-1970 **Size:** 2.5 gal.

Molt-X



Active Ingredient: Azadirachtin

Botanical (neem) insect growth regulator and nematicide. Targets larval, pupal and nymph stages of many insects such as cutworms, caterpillars, leafhoppers, thrips, and whitefly. Labeled for use on many edible crops in greenhouses, nurseries, and interiorscapes. Excellent plant safety. For heavy infestations or dense foliage use the maximum rates. For tank mixing use the lowest rates. **Foliar spray rates:** 1/2-1 tsp per gal or 8-16 fl oz per 100 gal. **Drench rates:** 1/2 tsp per gal or 8 fl oz per 100 gal. **OMRI listed.**

Item: 70-2405 **Size:** 1 qt.

These items drop-ship to the site from the manufacturer.

M-Pede



Active Ingredient: Potassium salts of fatty acids

Concentrated insecticidal soap. A concentrated contact insecticide containing naturally occurring fatty acids effective on adult and immature stages of labeled insects on vegetables and greenhouse crops. Controls whitefly, aphids, mealybugs, thrips, spider mites and more. There are some plant safety concerns. Refer to the label for strategies to reduce the risk of phytotoxicity. **Foliar spray rates:** 1.25-2.5 fl oz per gal or 1-2 gal per 100 gal. **OMRI listed.**

Item: 75-10262 **Size:** 2.5 gal.

Mycotrol ESO



Active Ingredient: *Beauveria bassiana*, strain GHA spores

Emulsifiable suspension mycoinsecticide used in controlling aphids, borers, leaf-feeding insects, thrips, mealybugs, spider mites and whiteflies. Soil drenches add grub and weevil control. Labeled for hemp, many edible crops in greenhouses, field production, interiorscapes, and commercial landscapes. Additional surfactant is not recommended for the ESO formulation. **Foliar spray rates:** 1-4 tsp per gal; 16-64 fl oz per 100 gal. **Drench rates:** 2-8 fl oz per 1000 sq ft.

Item: 70-2416 **Size:** 1 qt.

Item: 70-2417 **Size:** 1 gal.

These items drop-ship to the site from the manufacturer.

Mycotrol WPO



Active Ingredient: *Beauveria bassiana*, strain GHA spores

Wettable powder mycoinsecticide used in controlling aphids, borers, leaf-feeding insects, thrips, mealybugs, spider mites and whiteflies. Soil drenches add grub and weevil control. Labeled for many edible crops in greenhouses, field production, and interiorscapes. **Foliar spray rates:** 1-4 tsp per gal or 1/2-2 lb per 100 gal. **Drench rates:** 1-4 oz per 1000 sq ft.

Item: 70-2420 **Size:** 1 lb.

These items drop-ship to the site from the manufacturer.

Pest Out



Active Ingredient: Cottonseed Oil, Clove Oil, Garlic Oil

Foliar spray for the control of aphids, mites and thrips on many edible crops. Active ingredients are essential oils and this product is a 25b product (no EPA registration required). **Foliar spray rates:** 1.25 fl oz per gal or 1 gal per 100 gal. **OMRI listed.**

Item: 16-11010 **Size/qty:** 1 gal. - 4 per cs.

Item: 16-11011 **Size/qty:** 2.5 gal. - 2 per cs.

Pycana



Active Ingredient: Pyrethrins and Canola Oil

Natural pyrethrums plus botanical oil labeled for a wide variety of edible crops in greenhouses and nurseries. Labeled pests include: aphids, earwigs, leafhoppers, tent caterpillars, plant bugs, mealybugs, thrips, spider mites, sawfly larvae and more. Some phyto concerns; see label. Do not apply within 21 days of a sulfur product. **Foliar spray rates:** 1.25-2.5 fl oz per gal or 1-2 gal per 100 gal. **OMRI listed.**

Item: 70-2655 **Size:** 1 gal.

GGSPRO

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PyGanic 5.0
SpecialtyMOA
3A | REI
12**Active Ingredient: Pyrethrins**

Natural pyrethrum insecticide labeled for a wide range of edible crops in greenhouses and outdoor crops. Labeled pests include: aphids, beetles, caterpillars, leafhoppers and many others. **Foliar spray rates:** 1-2 tsp per gal or 16-32 fl oz per 100 gal. **OMRI listed.**

Item: 70-2687 **Size:** 1 qt.
Item: 70-2688 **Size:** 1 gal.

Sil-Matrix

MOA
UN | REI
4**Active Ingredient: Potassium silicate**

Sil-Matrix is an aqueous liquid concentrate. This versatile product applied as a foliar spray for control of certain insects, mites, and foliar diseases. For use on hemp, many edible crops including certain vegetables, berries, vines, and fruit trees. Insects and mites controlled: aphids, spider mites, and whiteflies. Foliar diseases controlled: *Botrytis*, powdery mildew, and certain turf diseases. **Foliar spray rates:** 2 tsp-1.25 fl oz per gal or 32-128 oz per 100 gal. **OMRI listed.**

Item: 71-2940 **Size:** 2.5 gal.

SuffOil-X

MOA
UN | REI
4**Active Ingredient: Horticultural oil**

Labeled for mite, insect and disease control on many vegetables. Labeled insect pests include aphids, mealybugs, mites, scale, whiteflies and many others. Labeled diseases include powdery mildew and rust. **Foliar spray rates:** 1.25-2.5 fl oz per gal or 1-2 gal per 100 gal. **OMRI listed.**

Item: 70-4040 **Size:** 2.5 gal.
Item: 70-4043 **Size:** 30 gal.

Triact 70

MOA
NC | REI
0**Active Ingredient: Extract of neem oil**

Broad spectrum fungicide, miticide and insecticide in an emulsifiable concentrate. Thorough coverage required for efficacy. Best used early or when conditions favor disease vs. during a severe outbreak. **Spray rates:** 3.75-7.5 tsp/gal or 0.5-1 gal/100 gal. 0 day PHI.

Item: 70-3226 **Size:** 2.5 gal.

Ultra-Pure Oil

MOA
UN | REI
4**Active Ingredient: Horticultural oil**

Ultra-Pure oil is highly refined petroleum oil for control of eggs, immature and adult stages of mites and soft bodied insects including adelgids, aphids, mealybugs, plant bugs, thrips, and whiteflies. Labeled for certain vegetables grown in greenhouses and nurseries. Avoid application to plants under moisture or heat stress. See label for further precautions regarding specific crops. **Foliar spray rates:** 1.25-2.5 fl oz per gal or 1-2 gal per 100 gal. **OMRI listed.**

Item: 70-21401 **Size:** 2.5 gal.
Item: 70-21451 **Size:** 30 gal.

Velifer

MOA
UN | REI
12**Active Ingredient: *Beauveria bassiana* strain PPRI 5339**

Microbial insecticide/miticide delivered in an oil dispersion formulation for commercial greenhouse use only. Labeled pests include: aphids, mealybugs, mites, thrips, and whiteflies. Velifer can be used on fruits, vegetables, herbs, and spices. **Foliar spray rates:** ¼- ¾ tsp per gal or 3-13 fl oz per 100 gal.

Item: 70-9540 **Size:** 1 qt.

Venerate CG

MOA
UN | REI
4**Active Ingredient: Heat-killed *Burkholderia* spp. Strain A396**

Biological insecticide applied as a foliar spray provides control of wide variety of caterpillars and control or suppression of many soft bodied insects, such as aphids, caterpillars, fruit curculios, leafhoppers, mites, psyllids, stink bugs, thrips, true bugs, certain weevils, and whiteflies. Use as a foliar spray on hemp, edible crops outdoors, or in a greenhouse. Labeled for many food crops, including herbs and fruit-bearing trees. **Foliar spray rates:** 1 Tbls – 2.66 Tbls per gallon or 64-128 oz per 100 gal. **OMRI listed.**

Item: 70-9461 **Size:** 1qt.
Item: 70-9464 **Size:** 1 gal.
Item: 70-9465 **Size:** 2.5 gal.

GGSPRO TIP

SIL-MATRIX INSECTICIDE

A unique foliar applied insecticide/miticide/fungicide based on potassium silicate. Edible crops and hemp are on the label, and it is OMRI listed for organic growers.

Additional Products for use on Edible Transplants (H-Z)

Item	Description
70-19601	Kontos – 250 ml
70-3150	Lada 2F – 1 gal
70-23712	Marathon II – 250 ml
70-29501	Pedestal SC – 1 qt
70-29951	Safari 20 SG – 3 lb
70-2915	Sanmite SC – 1 qt
70-85221	TriStar 8.5 SL – 1 qt
70-85241	TriStar 8.5 SL – 1 gal
70-9550	Ventigra – 20 oz

Other Popular Products for use on Edibles Grown to Harvest (H-Z)

Item	Description
70-1868	Hexygon IQ – 1 qt
70-2675	Pylon – 1 pt
70-26751	Pylon – 0.5 gal
70-2660	Pylon TR – 12 x 2 oz cans
70-2693	Pyrethrum TR – 12 x 2 oz cans
70-2900	Rycar – 8 oz
70-3002	Sevin – 2.5 gal
70-30151	Shuttle O – 1 pt
70-3045	Sultan – 16 oz
70-1172	Talus 70 DF - 3 lb.
70-3130	TetraSan 5 WDG - 1 lb.

AXXE





Active Ingredient: Ammonium Nonanoate

Quick burn-down **post-emergent, non-selective**, contact herbicide labeled for use on many sites including interiorscapes, greenhouses, and landscapes. **Foliar spray rate:** 6–19 fl oz per gal. Control grasses and broadleaf weeds, mosses, liverworts, and lichens. Does not translocate to roots. Do not apply to plants wet with dew. No surfactant needed. **OMRI listed with restrictions** - Prior to use OMRI certification needs to be verified if applying inside the greenhouse.

Item: 72-1050 **Size:** 2.5 gal.

Fireworxx




Active Ingredient: Caprylic acid and Capric acid

Fast acting, **non-selective, post-emergent** broadleaf weed, grass, algae and moss killer. Results seen in hours to a few days. It can be used in and around hemp, edible crops, avoiding contact with desirable foliage. Can be used in greenhouses. Fireworxx can also be added at a 1% rate to improve the performance of other herbicides such as glyphosate and glufosinate. **Foliar spray rates** are based on the size and woodiness of the weeds: 4-12 fl oz per gal or 3-9 gal per 100 gal. **OMRI listed.**

Item: 72-1608 **Size:** 1 gal.

Herbicides

Herbicides come in **pre-emergent** (preventors, applied before weed seeds germinate) or **post-emergent** (eradicators, applied after weeds germinate and are actively growing). Most herbicides are not labeled for use in the greenhouse. Consult the product label for specifics. Please see our Grower Supplies catalog for herbicides that may be useful for your non-crop areas, including driveways, field perimeters and fence lines. There are many different products to choose from depending on type of weeds being treated, time of treatment, application method, etc. Contact your salesperson, our office, or your state extension station for recommendations.

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on the full selection of CEA crop protection products

Scythe




Active Ingredient: Pelargonic acid

A naturally occurring fatty acid for use as a **non-selective, post-emergent**, burn-down, top-killing herbicide. Scythe has no soil activity, and its non-systemic action making it the ideal choice for trimming and edging, spot weeding, and renovations. **Rate:** 4–13 fl oz per gal or 3-10 gal per 100 gal.

Item: 75-10512 **Size:** 2.5 gal.



BioSafe is an industry leader in food production and horticulture when it comes to sanitation. From chemical cleaners to products for crop treatment, water treatment and hard surface sanitation against plant and human pathogens, you can count on efficacy and CEA-friendly options with BioSafe products.

Water Treatment

SaniDate 5.0 ★

Active Ingredient: Hydrogen dioxide & Peracetic acid

This powerful sanitizing agent controls algae and many water-borne pathogens in irrigation water and on many hard surfaces. The EPA has approved the use of Sanidate 5.0 as a disinfectant for the human coronavirus. Labeled for use in all types of irrigation systems, industrial, and commercial water systems, and evaporative coolers. Helps add dissolved oxygen to the water and does not off-gas. Effective at any pH level. Label includes instructions for fruit and vegetable wash. **OMRI listed.**

Item: 71-35001

Size: 2.5 gal.

Item - CA Only: 71-35001-CA

Size: 2.5 gal.

Item: 71-35151

Size: 30 gal.

Item - CA Only: 71-35151-CA

Size: 30 gal.

SaniDate 12.0

Active Ingredient: Hydrogen dioxide & Peracetic acid

This powerful sanitizing agent controls algae and many waterborne pathogens in irrigation water and on many hard surfaces. Labeled for use in all types of irrigation systems, industrial and commercial water systems, and evaporative coolers. Helps add dissolved oxygen to the water and does not off-gas. Effective at any pH level. **OMRI listed.** Larger sizes available.

Item: 71-3530-CA

Size: 5 gal.

Item: 71-35351

Size: 30 gal.

These items drop-ship to the site from the manufacturer.

ZeroTol 2.0 ★



Active Ingredient: Hydrogen dioxide & Peracetic acid

For use in greenhouses, garden centers, landscapes, nurseries, hydroponics and turf. Kills algae, bacteria, fungi and their spores on contact. Can be used to treat irrigation water for pathogen control. Labeled for use on herbs, vegetables, small fruits, hemp, and hard surface applications. Safe on foliage and most open blooms. Can be applied as a spray, fog or drench. Leaves no residue and has 0 REI for drench treatments if label conditions are met. **Foliar spray rates:** 0.5-1.25 fl oz per gal or 50-128 fl oz per 100 gal. **Drench rates:** 0.25-1.25 fl oz per gal or 25-128 fl oz per 100 gal. **OMRI listed.**

Item: 71-35501

Size: 2.5 gal.

Item - CA only: 71-35501-CA

Size: 2.5 gal

Item: 71-35511

Size: 30 gal.

Item - CA only: 71-35511-CA

Size: 30 gal

GreenCleanPRO

REI 1

Active Ingredient: Sodium Carbonate Peroxyhydrate

A broad spectrum granular algaecide/fungicide. Kills algae on contact with its powerful oxidation reaction and is labeled for use in lakes, ponds, and large bodies of water, as well as on non-painted surfaces. Effective against nostoc algae. Irrigation water can be used without interruption after treatment. NSF/ANSI Standard 60 certified for drinking water. **Rates:** 1-2 lb per 1,000 sq ft or 0.5 lb per gal. **OMRI listed. Restricted use in CT & NY.**

Item: 74-20521

Size: 50 lb.

Chemical Cleaners

GreenClean Acid Cleaner

Blend of mineral acids and wetting agents that quickly removes greenhouse whitewash, organic deposits, calcium and other hard mineral deposits. Areas of use include structures and equipment, walkways, coverings, floors and piping. GreenClean acid cleaner can be applied by spray, mop or brush at a **rate** of 3-8 fl oz per gal. Irrigation piping- Inject undiluted at 1:50 to fill the lines, let sit for 8 hours, flush with plenty of water.

Item: 74-2040

Size: 5 gal.

GreenClean Alkaline Cleaner

Blend of surfactants and alkaline detergents lift away organic deposits, emulsifies grease and oils, allowing for easy removal with a high-pressure hose or brush. Areas of use include: structures and equipment, walkways, coverings, floors tools, tractors, trucks and more. GreenClean acid cleaner can be applied by spray, mop or brush. **Rates:** Dilute 4-8 fl oz of GreenClean Alkaline Cleaner per gallon of water and apply to soiled surfaces. Allow cleaner to sit for 10-15 minutes and rinse away detergent and soils with clean water.

Item: 74-2045

Size: 5 gal.

BioSafe Test Strips

Test Strips for ZeroTol 2.0, ZeroTol HC, SaniDate 5.0 and SaniDate 12.0. Measures the PAA level, which is the most accurate way to monitor the strength of the oxidizers from Biosafe. Choose strip option to capture the ppm PAA targeted by your solution: low for dilute solutions, high for stock solutions.

- Item:** 31ZTTP LaMotte PAA Test Strips (100/vial)
- Item:** 31ZTTK 100 PAA test strips/vial (0-100 ppm)

Item 31ZTTK drop-ship to the site from the manufacturer.

BioFoamer

Foaming agent that can be used in a wide variety of foaming equipment. Creates a thick foam that can be regulated by changing the rates. For most equipment add 1-4 fl oz of BioFoamer for every gal of solution to be foamed.

- Item:** 74-1360 **Size:** 5 gal.

SaniDate 5.0 ★

Active Ingredient: Hydrogen dioxide & Peracetic acid

ZeroTol 2.0 ★



Active Ingredient: Hydrogen dioxide & Peracetic acid

ZeroTol HC ★



Active Ingredient: Hydrogen Dioxide and Peracetic Acid

GreenCleanPRO



Active Ingredient: Sodium Carbonate Peroxyhydrate

★ = Retail Store Best Seller

SUCCESS STORY

In early 2020, Mike DeRubbo, Northeast Technical Representative for BioSafe Systems, was contacted by a large hydroponic lettuce grower with concerns over algae in their facility and irrigation lines. The grower submitted water samples to our lead plant pathologist Dr. Vijay Choppakatla and the BioSafe Systems lab for analysis. Turns out, biofilm had accumulated in the irrigation lines and the gelatinous coating was protecting and feeding algae -- it needed to be broken down, oxidized, and cleaned out quickly and with vigor. The best treatment was to implement BioSafe Systems' Line Cleaning Program with GreenClean[®] Acid Cleaner and SaniDate[®] 5.0 before summer months when algae pressure typically builds.

The program reduced a significant biofilm load from the irrigation lines that cut down the algae and improved water pressure, a secondary consequence of the build-up that the grower had not even noticed. Six months after the initial biofilm diagnosis, the grower submitted new water samples to the lab and analysis showed a significant reduction in algal, fungal, and bacterial spores.

This year, the facility is starting the season with significantly lower disease pressure and credits this success to BioSafe Systems' line cleaning and crop protection programs.

Cleaners, sanitizers and water treatment products

Strip-it PRO 

A powerful combination of cleaning and wetting agents that effectively remove whitewash coatings, algae, dirt, calcium and other hard water deposits. Strip-it PRO's intensified scrubbing action will dislodge compacted organic debris and mineral deposits for easy removal with a high pressure hose. Do not allow Strip-it PRO to dry or surface etching may result. Strip-it PRO can be safely used on aluminium, copper, galvanized steel, glass, plastics, fiberglass and concrete and will not harm the greenhouse structure or horticultural equipment. Strip-it PRO can safely be used to clean under benches with no harmful fumes. **Rates:** 2.5 fl oz per gal for irrigation line cleaning, 5 fl oz per gal for hard surface cleaning.

Item: 74-2125 **Size:** 5 gal.
Item: 74-21230 **Size:** 30 gal.

HORTI-KLOR™ 

HORTI-KLOR is a heavy-duty chlorinated detergent that is formulated for cleaning and sanitizing throughout the food plant and grower industries. Can safely be used to clean indoor growing facilities, packing houses and coolers. HORTI-KLOR is an active, high-foaming chlorinated detergent designed to help meet the highest food plant and greenhouse grower sanitation standards and is HACCP approved. **Rates:** 2.5 fl oz per gal for irrigation line cleaning, 5 fl oz per gal for hard surface cleaning.

Item: 74-2105 **Size:** 5 gal.

KleenGrow MOA | REI
NC | 0-48**Active Ingredient:** Didecyltrimethylammonium chloride

4th generation DDAC sanitizing agent for control of algae, bacteria and viruses on hard surfaces. The EPA has approved the use of Kleengrow as a disinfectant for the human coronavirus. Non-corrosive with 30 day residual control with no rinse on floors, walls and other non-crop contact areas. Must rinse if used to sanitize surfaces that will contact crop (e.g. NFT gutters).

Item: 74-21101 **Size:** 1 gal.
Item: 74-21151 **Size:** 5 gal.
Item: 74-21151-CA **Size:** 5 gal for California only
Item: 74-21301 **Size:** 30 gal.

Greenshield II


The Chemical Company**Active Ingredient:** Quaternary ammonium salts

Disinfectant and algacide for use in greenhouses, nurseries, and work areas. Controls algae on walkways, benches, sidewalls, etc. Disinfects between crops by controlling fungus, bacteria and algae. Can be used to disinfect used flats, pots, etc. Not for use over the crop. **Rate:** 1.5 fl oz per 5 gal or 0.30 fl oz per gal for most uses.

Item: 74-36602 **Size:** 1 gal.
Item: 74-36611 **Size:** 30 gal.

MicroBLOC Greenhouse
Disinfectant

Antimicrobial disinfectant designed for use by wholesale and retail florists, shippers and greenhouses. When used as directed, this product will disinfect hard, nonporous surfaces such as flower buckets, tool, floors and walls of coolers, design and packing benches and counter tops. This product is specifically formulated to effectively eliminate offensive odors caused by mold and mildew. The EPA has approved the use of MicroBLOC as a disinfectant for the human coronavirus.

Rate: Interior hard surfaces 1.5 oz per 5 gal.

Item: 74-1600 **Size:** 30 gal.

 **For Maintenance of Irrigation Systems**

Eco-Clean is a biocatalyst whose advanced technology maintains drip and sprinkler irrigation systems free of deposits. Systems that are already fouled should be cleaned with an appropriate shock treatment before the constant injection of Eco-Clean begins.

- Great for cleaning drip irrigation and lines
- Vegetable based liquid concentrate
- Non-toxic and non-hazardous
- Environmentally safe

**1 gal of Eco-Clean
treats 50,000 gal of
water at the final
dilution**

Gal of Stock Solution	1:100 Ratio	1:500 Ratio	1:1000 Ratio
1	0.25 fl oz	1.25 fl oz	2.5 fl oz
30	7.6 fl oz	38 fl oz	76 fl oz
50	12.8 fl oz	64 fl oz	1 gal
100	25.6 fl oz	1 gal	2 gal

Item: 74-1705 **Size:** 5 gal.
Item: 74-1730 **Size:** 30 gal.

These items drop-ship to the site from the manufacturer.

PERpose 
Plus ★MOA | REI
NC | 10/1**Active Ingredient:** Hydrogen Peroxide

Algaecide/fungicide for use on ornamentals and edible crops in commercial greenhouses, garden centers, landscapes, agricultural crops, nurseries and interiorscapes to control a wide variety of plant diseases. It can be applied to plants as a dip, drench, fog or spray. Low rates are preventative, high rates are for curative applications.

Foliar spray rates: 0.25-1 fl oz per gal or 25-100 fl oz per 100 gal.

Drench rates: 1 fl oz per gal or 100 fl oz per 100 gal. PERpose Plus is also labeled for use on hard surfaces such as benches, floors, irrigation lines, tanks, walls and similar sites. Rates for hard surfaces vary widely, please consult the label. **OMRI listed.**

Item: 71-2690 **Size:** 5 gal.
Item: 71-2693 **Size:** 30 gal.
Item: 71-2695 **Size:** 55 gal.

These items drop-ship to the site from the manufacturer.

Parasitic wasps

Flying insects that parasitize insect pests and often reproduce in the crop. Controls foliar pests: aphids, caterpillars, leafminer, and whiteflies. Available in bulk, blister, and card forms. Do not bite or sting staff. Includes *Aphidius*, *Aphelinus*, *Diglyphus*, *Encarsia*, *Eretmocerus*, and *Trichogramma* spp.

Predatory mites

Crawling mites that feed on insect and mite pests. Include foliar and soil-dwelling species. Crucial for the control of spider mites, russet mites and thrips. Available in bulk and sachet forms. Includes *Amblyseius*, *Hypoaspis* and *Phytoseiulus*.

Predatory bugs and beetles

Larger insects that feed on soft bodied pests. Some are specialists, some are generalists. Serve as an important second layer of control. Available in bulk. Includes *Adalia*, *Atheta*, *Cryptolaemus*, and *Orius*.

Beneficial nematodes

Microscopic worms that enter larval insect bodies and release a toxin that kills the insect. Relied on for control of soil- and algae-dwelling pests, including fungus gnats, shoreflies and thrips (pupal stage). Gel or sponge forms mixed in water and applied via drench or spray. Includes *Steinernema feltiae* (*Nemasys*, *NemaShield*, *Sentry*) and *S. carpocapsae* (*Millenium*)

Predatory midge

Larval forms of these insects feed on foliar pests, including aphids and spider mites. Includes *Aphidoletes* and *Feltiella*.



BCA Species	Primary Target	Bulk	Sachet	Blister	Other
<i>Adalia bipunctata</i>	Aphid	✓			
<i>Amblyseius andersoni</i>	Spider mite	✓	✓	✓	
<i>Amblyseius californicus</i>	Spider mite	✓	✓	✓	
<i>Amblyseius cucumeris</i>	Thrips	✓	✓	✓	
<i>Amblyseius swirskii</i>	Thrips	✓	✓	✓	
<i>Aphelinus abdominalis</i>	Aphid	✓			
<i>Aphidoletes aphidimyza</i>	Aphid	✓		✓	
<i>Aphidius colemani</i>	Aphid	✓		✓	
<i>Aphidius ervi</i>	Aphid	✓		✓	
<i>Atheta coriana</i>	Fungus gnat, shorefly	✓			
<i>Chrysoperla carnea</i>	Aphid	✓			✓
<i>Chrysoperla rufilabris</i>	Aphid	✓			✓
<i>Encarsia formosa</i>	Whitefly	✓			✓
<i>Eretmocerus eremicus</i>	Whitefly	✓		✓	✓
<i>Feltiella acarisuga</i>	Spider mite	✓			
<i>Hypoaspis miles</i>	Fungus gnat, shorefly	✓			
<i>Neoseiulus fallacis</i>	Spider mite	✓			✓
<i>Orius insidiosus</i>	Thrips				
<i>Phytoseiulus persimilis</i>	Spider mite	✓		✓	
<i>Steinernema feltiae</i>	Fungus gnat	✓			✓
<i>Steinernema carpocapsae</i>	Shorefly	✓			✓
<i>Trichogramma</i> spp.	Caterpillars				✓

All BCAs direct-ship to the site from the insectary.



The Chemical Company



BeneficialInsectary



BIOBEE
Inspired by Nature



Bioline Agrosciences:

Innovation and Growth in North America

With over 40 years of experience and a solid technological background, Bioline Agrosciences is a renowned world-class player in biological control that specializes in offering premium quality macro biocontrol solutions to top growers worldwide. Bioline Agrosciences North America has recently enlarged its production capacities in California. Adding to existing breeding facilities the most modern high-tech BIO-FACTORY in North America, these investments will bring the freshest product to satisfy the higher demand of growers and markets.

Our product makes the difference: various releases to control a wide range of pests in all crops. Technology protects!

Controlled release technology: *Amblyseius andersoni*, *Amblyseius californicus*, *Amblyseius cucumeris*



Bugline



Sachet on Stick:



Sachet with hook



Gemini

Fast release Technology:



Fast release blister:
Phytoseiulus persimilis,
Amblyseius californicus
and *Phyto. Persimilis mix*
with *Ambly. californicus*

Multi-wave Technology:



**Trichogramma's spp.
Dispensers:** Manual
applications,
Capsules for drone or
machine application

CART Technology: Starskii



**Sachets, tube, Bugline
and bag with *Amblyseius
swirskii***

Solutions for all these pests:

- *Spider Mite
- *Broad Mite
- *Thrips
- *Russet Mite
- *Aphids
- *A lot More...
- *Soil Pests / Scarids
- *Leafminer
- *Lepidoptera
- *Whitefly

Bioline Academy

Helping growers has always been one of our priorities. We enjoy sharing our expertise and knowledge with them. Bioline Academy has different modules such as pest detection, scouting techniques, and crop strategies to help them make the most out of successful biocontrol stories in their crops. Our Technical Specialist with Bioline Academy visits growers at their location, giving them the essential information to implement a strong biological control program. We have a Mobile Training Unit to come to facilities or productions to implement the different learning modules. Speak to your Griffin salesperson to learn more about Bioline Academy options.



Product	Species	Target
Adaline	<i>Adalia bipunctata</i>	Ladybug larvae for control of aphids
Amblyline	<i>Amblyseius cucumeris</i>	Predatory mite for control of thrips, broad mite and cyclamen mite
Anderline	<i>Amblyseius andersoni</i>	Predatory mite for control of spider mites, russet mites, broad mites, cyclamen mites, European red mites
Apheline	<i>Aphelinus abdominalis</i>	Parasitoid wasps for aphid control
Aphidoline	<i>Aphidius aphidimyza</i>	Predatory midge. Larvae feed on aphids
Aphiline	<i>Aphidius colemani</i>	Parasitoid wasps for control of small aphid species
Aphiline Veg	<i>A. colemani</i> , <i>A. ervi</i> , <i>A. abdominalis</i>	for control of many aphid species
Californiline	<i>Amblyseius californicus</i>	Predatory mite feeds on spider mites
Chrysoline	<i>Chrysoperla rufilabris</i>	Lacewing larvae for control of aphids and mealy bugs
Cryptoline	<i>Chryptolaemus montrouzieri</i>	Predatory bug for control of mealybug, scale
Digline	<i>Diglyphus isaea</i>	Parasitic wasp for control of leafminers
Encarline	<i>Encarsia Formosa</i>	For control of greenhouse whitefly
Eretline	<i>Eretmocerus eremicus</i>	Parasitoid wasp for control of sweet potato whitefly
Encarline Mix	<i>E. formosa</i> and <i>E. eremicus</i>	Mix of parasitoid wasps for control of greenhouse and sweet potato whitefly
Erviline	<i>Aphidius ervi</i>	Parasitoid wasps for control of large aphids
Exhibitline Sf	<i>Steinernema feltiae</i>	Control of fungus gnat larvae and thrips pupae
Exhibitline Sc	<i>Steinernema carpocapsae</i>	Control of shorefly and beetle larvae
Exhibitline Hb	<i>Heterohabditis. bacteriophora</i>	Control of weevil larvae and grubs
Exhibitline GH	<i>S. feltiae</i> , <i>S. carpocapsae</i>	Control of fungus gnat and shorefly larvae
Feltiline	<i>Feltiella acarisuga</i>	Predatory midge for control of spider mites
Hesperusline	<i>Dicyphus hesperus</i>	Generalist predatory bug for control of whiteflies and other soft bodied pests
Hypoline	<i>Hypoaspis miles</i>	Soil-dwelling predatory mite for control of fungus gnat larvae, shorefly larvae and thrips pupae
Oriiline I	<i>Orius insidiosus</i>	Generalist, predatory bug feeds on all soft bodied pests
Phytoline	<i>Phytoseiulus persimilis</i>	Predatory mite for control of spider mites
Staphyline	<i>Atheta coriaria</i>	Nocturnal, soil-dwelling beetle for control of fungus gnat larvae, shorefly larvae and thrips pupae
STARSKii	<i>Amblyseius swirskii</i>	Predatory mite for control of thrips and whiteflies. Enhanced technology for stronger performance
Swirskiline	<i>A. swirskii</i>	Predatory mite for control of thrips and whiteflies
Tricholine	<i>Trichogramma spp.</i>	Mix of parasitic wasp species controls caterpillars
BugFood E	<i>Ephestia eggs</i>	Serves as an additional food source for Orius
Thripline Lure and Trap	<i>Sticky card system</i>	Sticky cards with pheromone lure to attract and thrips. Provides enhanced monitoring capability.
Trapline T	<i>Sticky traps</i>	Sticky cards and rolls in yellow or blue for monitoring and trapping flying insects.



Sticky Cards and Tape ★

Sticky cards serve as essential scouting tools for all CEA producers. Change cards regularly so pest and BCA populations can be monitored and tracked. New Sensor Monitor Cards won't stick to your hands!



Item	Description
74-36705	BASF Sensor Monitor Card, Yellow, 3x5 (50/pack)
74-3668	BioWorks 2-sided Sticky Card, 4x5, Yellow/Blue (10/sleeve)
SB8051-11	Bioline Yellow Sticky Card, double sided (10 pack)
SB8051-03	Bioline Yellow Sticky Card (20 pack)
SB8051-05	Bioline Trapline T Yellow Roller Trap, 6"x328'
SB8052-05	Bioline Trapline T Blue Roller Trap, 6"x328'
SB8051-15	Bioline Trapline T Blue Roller Trap, Pheromone, 6"x328'
74-3650	BASF Wire Card Stakes (100/set)

★ = Retail Store Best Seller

2021

Measuring and Dispensing



Item	Description
40-4180	AXIOM Measuring Kit, 3 pieces in oz and ml (3 oz, 8.5 oz, 34 oz)
41-9007	BioSafe Self-venting Spigot. Fits 2.5 and 5 gal jugs.
41-9016	BioSafe EZ Pump Drum with measuring cup. Fits 30 & 55 gal drums

These items drop-ship to the site from the manufacturer.

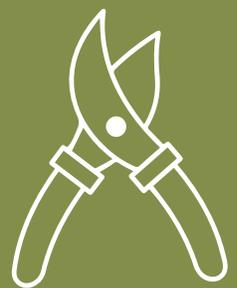
SUCCESS STORY

GGSPRO and the Griffin sales team are invested in solving your pest problems as quickly and smoothly as possible. Two recent cases demonstrate our approach. First, an outdoor hemp grower approached Neil Bassinet (Griffin salesperson, MA/CT/RI), with pictures of a mystery pest plaguing their hemp. GGSPRO identified the caterpillar as hemp borer and recommended two waves of BCA applications. The first wave cleaned up hot spots; the second wave provided preventative control. BCAs were ordered and received that week, and the grower was able to complete their growing season successfully.

Our second story also involves BCAs. When the industry recently faced a global shortage of beneficial nematodes, our customers ran the risk of increased fungus gnat, shore fly and thrips populations. The CEA team implemented training with GGSPRO on strategies for a temporary solution. Our team then worked with our customers to identify viable substitutes, appropriate for each situation. Sometimes the solution involved increased sanitation activities. Sometimes it meant adding an additional BCA. By acting early and addressing unique needs, we were able to help customers through what could have been a challenging situation.



CULTIVATION
ACCESSORIES





TENAX

HORTONOVA TRELLIS NETTING

- Maximize space use while supporting your crop
- Reduce disease by promoting airflow
- Superior strength holds up under tension
- Assorted widths to match bench size

PARTNERED WITH GRIFFIN TO MEET YOUR CULTIVATION NEEDS.



Trellis Netting

Trellis netting is used to support cannabis, hemp and vegetable crops. Choose from different mesh sizes and product widths to prevent breakage and increase airflow for reduced disease in the crop.

- UV-treated polypropylene stays flexible
- Good visibility with white material
- Three mesh size options for different crop needs
- Very durable - Hortonova tensile ratings up to 70-78 lbs/ft
- Cost-effective, bulk rolls for heavy use rates

Item	Description	Qty
81900105	Tenax Hortonova Trellis Net LM 79"x1500', White, 5.9"x6.7" Mesh	1
81900065	Tenax Hortonova Trellis Net Sm 36" X 3280' Wh 5.9"x5.9" Mesh	1
81900104	Tenax Hortonova Trellis Net Sm 48"x1500' White 5.9"x5.9" Mesh	1
81900076	Tenax Hortonova Trellis Net Sm 48"x3280' White 5.9"x5.9" Mesh	1
81900079	Tenax Hortonova Trellis Net Lm 59"x3280' White 5.9"x6.7" Mesh	1
81900081	Tenax Hortonova Trellis Net Lm 67"x3280' White 5.9"x6.7" Mesh	1
81900089	Tenax Hortonova Trellis Net Lm 79"x1000' White 5.9"x6.7" Mesh	1
81900090	Tenax Hortonova Trellis Net Lm 79"x3280' White 5.9"x6.7" Mesh	1
81900112	Tenax Hortonova Trellis Net Lm 120" X 1500' Wh 5.9"x6.7" Mesh	1
81900113	Tenax Hortonova Trellis Net Lm 120" X 3280' Wh 5.9"x6.7" Mesh	1

Natural Tonkin Bamboo

Strong, natural bamboo stakes.



Item	★	Dimensions	Bale Count
56N3S		3' x 3/8"	500
56N4	•	4' x 1/2"	250
56N6	•	6' x 1/2"	250
56N81		8' x 7/8"	50

Steel Stakes

Heavy duty, super steel stakes. Pointed, ribbed, green, and weatherproof. Useful for staking hemp and cannabis in field or greenhouse.



Item #	★	Description	UPC	Vendor	CS/UOS
80340037		Super Steel 3'	034613008030	SS3	20/20
80340038	•	Super Steel 4'	034613008047	SS4	20/20
80340039		Super Steel 5'	034613008054	SS5	20/20
80340040	•	Super Steel 6'	034613008061	SS6	20/20
80160479		Plastic Coated Metal 3'x11mm	093432897867	89786	50/50
80160480		Plastic Coated Metal 5'x11mm	093432897874	89787	50/50
80160481		Plastic Coated Metal 6'x11mm	093432897881	89788	50/50

★ = Retail Store Best Seller

 **THRIVING DESIGN™** Clips and Supports ★



Cultivate your plants your way with our versatile, durable, reusable C-BITE Stake clips. C-BITE clips work with most (trellising) garden stakes and canes and plant support products. They hold stakes in up to three directions, allowing you to make rigid cages of any size and shape, as well as pre-tie moveable support lines and cross members, to create 140+ connecting combinations.

5' PLANT SUPPORT KIT

Meet the versatile Plant Support Kit featuring patented C-BITEs plus everything else you'll need to start growing a huge healthy harvest or showy container. No more short ties or messy spools, no more danger from sharp garden stakes. No more settling for the clunky shape and size of tired tomato cages.

C-BITE CLIP

This small but mighty clip helps keep your plants upright and maximize airflow. Your plants will show their appreciation by producing bigger, healthier fruits, vegetables and flowers.



CLICK FOR MORE INFORMATION

Item	Description	UPC	Vendor	CS/UOS
82110011	C-Bite Clip, 10-12 mm, Tangerine, 100 ct	784672207287	TDCBOC	12/12
82110012	C-Bite Clip, 10-12 mm, Ingognito, 100 ct	784672207263	TDCBIC	12/12
82110013	C-Bite Clip, 8-9 mm, Lime, 100 ct	784672207270	TDCBGC	12/12
82110014	C-Bite Clip, 50/50 Lime & Tangerine, 100 ct	662578162704	TDCBMC	12/12
82110016	C-Bite Clip, 10-12 mm, Tangerine, 1000 ct	784672207249	TDCBOM	1/1
82110017	C-Bite Clip, 10-12 mm, Incognito, 1000 ct	784672207218	TDCBIM	1/1
82110018	C-Bite Clip, 8-9 mm, Lime, 100 ct	784672207225	TDCBGM	1/1
82110001	5' Plant Support Kit, Tangerine	784672207294	TDSK5O	20/20
82110002	5' Plant Support Kit, Incognito	784672207232	TDSK5I	20/20
82110003	5' Plant Support Kit, Mixed	787790313465	TDSK5CSM	20/20

Free display with purchase!

★ = Retail Store Best Seller



High Wire Crop Accessories

High quality plastics and hooks from world-leading manufacturer, Paskal.



Item	Description	Qty
Truss Supports - Cluster stem support to prevent damage due to weight of fruit.		
103-0010	Flex Arch, 6 mm, white	1,000
103-0014	Stem Holder, 122 mm, white	200
Clips - For attaching crops to trellising twine		
103-0009	Tomato Clip, 23 mm, clear	1,000
103-0011	Jumbo Tomato Clip, 25 mm, clear	1,000
103-0031	Scorpion Clip, white, double locking	460
RollerHooks		
Trellising hooks for easy, rapid lowering. Designed for 2.4-4 mm wire diameters		
103-0001	RollerHook metal part (reusable)	50
103-0003	RollerHook Spool, white, 36 meter white twine	50
103-0027	RollerHook Spool, white, 25 meter white twine	50
RollerPlast - Unique design option to traditional metal hooks. Won't slip or jump from wire. Designed for 2.5-3.5 mm wire diameters.		
103-0004	RollerPlast Body, white (reusable)	50
103-0005	RollerPlast Spool, 15 m, white twine	50



MULTILOC SLIP-ON® LABELS

Item	Description
86-1425	1000 Yellow ¾" x 7" label



BULK PLASTIC POT LABELS

Item	★	Size	Qty/Box
86-1125	•	4"	1000
86-1130		5"	1000
86-1135	•	6"	1000
86-1140		8"	500

★ = Retail Store Best Seller



INDUSTRIAL TWIST TIES

Flat paper tape reinforced with steel wire ¼" wide and green in color. Quick and easy way of tying plants to a stake.

Item	Size	Qty
88-3025	4"	1000
88-3030	8"	1000
88-3035	16"	1000

Labeling Solutions Printers and Tags

Item	»	Description
42-3000		GC Select-Sta - Stand Alone Printer
42-3005		GC Select-DLX - Printer with PC Basic Software
42-3010		GC Select-PRO - Printer with PC Pro Software
42-3015		GC Select-DLX - Stand Alone Printer with Basic Software
42-3020		GC Select-PRO - Stand Alone Printer with Pro Software
42-3025	•	GC PRO-Sta Standalone Printer NEW
42-3030	•	GC PRO-DLX - Printer with PC Basic Software NEW
42-3035	•	GC PRO-MAX - Printer with PC Pro Software NEW

» = Drop Ship Item

Item	Description
Labels	
42-2025	3" x 2½" White Waterproof Stick on Label 7,200/cs
42-1055	¾" x 5" White 4 Across Pot Stakes 6,000/cs
42-1094	¾" x 5" Yellow 4 Across Pot Stakes 6,000/cs
42-1010	1" x 7" White Wrap Around Tags 8,400/cs
42-1090	1" x 7" Yellow Wrap Around Tags 8,400/cs
42-1060	1" x 10" White Wrap Around Tags 6,000/cs
42-1092	1" x 10" Yellow Wrap Around Tags 6,000/cs
42-1015	2" x 1" White Waterproof Stick-On Label 16,560/cs
42-2030	4" x 2" White Waterproof Stick-On Labels 9,000/cs
42-2035	4" x 2" Yellow Waterproof Stick-On Labels 9,000/cs
42-1084	4" x 6" White Waterproof Stick-On Label 900/cs
42-1030	½" x 3" White Waterproof Stick-On Plug Tray Label 5,000/cs
42-1005	0.625" x 7" Wrap Around Tree Tag 4,200/cs
Ribbons	
42-1020	3.3" x 244' Black Transfer Ribbon 12 Rolls/cs *For GC-1
42-2020	GC-FLEX Printer Ribbon (6 rolls / cs)



**Prints Outdoor Vinyl Tags & Labels...
Waterproof and Sun Resistant!**

Three Label or Tag Formats many more available!



Wrap Around Tag

2" x 1" White
Waterproof Stick-On Label



5" Pot Stake



HYDROPONIC SCISSOR (A)

Stainless steel blades with double beveled tapered tips for precision cuts. Durable handle offers lightweight comfort and performance. Handle and blades can be sterilized to limit cross contamination.

Item #	★	Desc	UPC	Vendor	CS/UOS	Retail
81380030	•	2" blade	038313041335	FS 4130	12/12	\$15.49

THINNING SHEARS (B)

Forged steel alloy construction. Scissor action. Resharpenable, straight, narrow blades for tight spaces. Cushioned, non-slip grips.

Item #	★	Desc	UPC	Vendor	CS/UOS	Retail
81380031	•	1 1/4"	038313002176	FS 4350	6/6	\$29.99

LONG STRAIGHT MICRO SNIP (C)

Long, straight, pointed blade for a wide range of applications. Fully heat-treated steel blades for strength. Blades, spring and handle coated to prevent rust. Unobtrusive leather strap lock.

Item #	★	Desc	UPC	Vendor	CS/UOS	Retail
81380103	•	Steel	038313049300	AG 4930	12/12	\$11.99

HYDROPONIC MICRO SNIP (D)

Compact, sharp stainless steel blades with double beveled tapered tips for precision cuts and heavy-duty spring for reliable performance. Double-sided lock for left or right hand use. Handle and blades can be sterilized to limit cross contamination. 2 5/16" blade.

Item #	★	Desc	UPC	Vendor	CS/UOS	Retail
81380029	•	Micro Snip	038313041229	FS 4120	12/12	\$16.99

CURVED GRAPE SNIPS (E)

Long Curved Snip - Corrosion resistant Stainless Steel Blades to prevent rusting and are easier to clean and reduce germ build up.

Item #	Desc	UPC	Vendor	CS/UOS	Retail
81380106	7 1/2"	038313049805	AG4980SS	12/12	\$13.99

SHARPENING TOOL (F)

5" Super carbide file. Ideal for sharpening all straight blades (excludes saw blades). Easy to fit in pocket or scabbard. Non-slip grip for easy use.

Item #	Desc	UPC	Vendor	CS/UOS	Retail
81380003	5"	038313083007	AC 8300	12/12	\$11.49



DRAMM

LITTLE BUDDY STAINLESS STEEL HYDROPONIC CLIPPERS (G)

Stainless steel blades and frame with lightweight plastic handles and a TPR overmold for comfort. Narrow, 3" blades allow for precise cutting of hydroponic crops.

Item #	Desc	UPC	Vendor	CS/UOS	Retail
80170145	Steel	036434180377	10-18037	12/12	\$13.99

LITTLE BUDDY TITANIUM HYDROPONIC CLIPPERS (H)

3" Fine tip titanium coated blades cut precisely and resist sap. Lightweight blades resist corrosion and stays sharper longer.

Item #	Desc	UPC	Vendor	CS/UOS	Retail
80170144	Titanium	036434180339	10-18033	12/12	\$17.99

COMPACT SHEARS (I)

Lightweight shear made with corrosion resistant stainless steel blades for precise trimming and shaping. Ergonomic handle for a comfortable cut every time. Case includes 2 each pruners of 6 vivid colors

Item #	Desc	UPC	Vendor	CS/UOS	Retail
80170062	Shear	10036434180206	10-18020	12/12	\$14.99



Gilmour

GILMOUR PRUNERS

Innovative designs with great ergonomic features for all your pruning needs

Item #	Desc	UPC	Vendor	CS/UOS	Retail
80150746	★ J	46561804473	310020-1002	6/6	\$10.99
80150756	K	46561006549	399240-1003	6/6	\$16.99
80150741	L	46561006655	399250-1001	6/6	\$18.49
80150682-	M	46561191092	91095935J	6/6	\$21.49
80150743	N	46561006501	399220-1001	4/4	\$26.99

GRIFFIN CEA CATALOG 2021

TERMS AND CONDITIONS

UPS / FED EX

We generally recommend UPS / Fed Ex deliveries as the best method for shipping, providing these requirements can be met: all UPS / Fed Ex shipments require a street address and a zip code. Please do not ask us to ship UPS / Fed Ex unless these requirements are met.

Hazardous materials can not be shipped UPS / FEDEX / USPS

There is a \$16.50 charge per package for all C.O.D deliveries by UPS / Fed Ex. We suggest paying by credit card to alleviate this. UPS / Fed Ex has a fuel surcharge into their freight rates that will fluctuate monthly based on current fuel cost. All orders will have a \$6.83 charge for packaging and handling. There is an additional handling fee of \$16.00 for all packages not in a box or 48 inches along its longest side, and 30 inches along its second longest side, or has an actual weight of 70 pounds or greater. **Any refused C.O.D deliveries will incur a 25% restocking charge.**

UPS / FED EX- Damaged Shipments

If you See that a shipment is damaged upon receipt from UPS / Fed Ex, refuse shipment. UPS / Fed Ex will return the shipment to us, and we will file the claim and send a new shipment to you. If after opening the package you find concealed damage, call us at once. We will instruct UPS / Fed Ex to pick up the package and return it to us for a claim. We will reship your order.

C.O.D. Shipment

Will be made to all accounts with a balance over 60 days.

Payments

We accept Cash, Check, or the following major Credit Cards: American Express, Visa, MasterCard, and Discover. No additional discounts allowed on credit card payments. Credit cards taken after the initial purchase will require a signed form stating that purchaser agrees to a 2% processing fee, charged by Griffin Greenhouse Supplies, Inc. and will be charged with the balance being paid.

Offerings

Listed are made subject to being available. We will not be held responsible for delays in shipment caused by conditions beyond our control. Applicable substitutes will be made when necessary.

Terms

Are net 30 days unless otherwise stated. A 1½% per month service charge is added on all overdue accounts. This is an 18% annual charge. Terms are COD where credit has not been established. Returned checks will be assessed a \$20.00 fee. Delayed Payment Plan (dating) will only be extended to accounts with a satisfactory payment record.

Direct Shipment Deposits

All material that is shipped Direct from the manufacturer to the customer will require a 30% deposit before the order can be placed with the manufacturer. Depending on the size or complexity of the order you will be required to sign off on a bill of lading to ensure the accuracy and condition of the order.

Returns

No merchandise may be returned without authorization from our office. Merchandise must be returned within 60 days of purchase. Invoice number and date of purchase is required for any/all returns. A restocking charge of 20% is charged on all returns unless merchandise is defective. **ITEMS THAT ARE SPECIAL ORDERED, MADE TO CUSTOMER SPECIFICATIONS, NON-INVENTORY OR NON-STOCK ITEMS, CANNOT BE RETURNED FOR ANY CREDIT DUE TO THEIR SPECIAL NATURE.**

Chemical Shipping

No chemicals will be left without a customer signature. All restricted use products must be accepted and signed for by the license holder only, which is enforced by state law.

Sales Tax

Appropriate state tax will be charged based on location of delivery. All items will be charged sales tax unless we have your tax exempt number on file. In compliance with the law, we must charge the tax on all items, which the state designates as taxable even though you have provided us with your sales tax number. If any items purchased are for company use please notify us so the appropriate tax can be charged.

Recommendations

Made by us are compiled from recognized horticultural sources. We are not responsible for damage or failure due to recommendations given by Griffin Greenhouse Supplies, Inc.

Notice to Purchaser

The following is made in lieu of all warranties expressed or implied. Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product. Before using, user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith. The foregoing may not be changed except by an agreement signed by officers of seller and manufacturer. All terms and conditions listed are subject to change.

Motor Freight Shipments

In order to provide you with the best service possible all deliveries made must be signed for, which will ensure the right product and quantities are received. All pallets are wrapped with black wrap and taped to ensure your order arrives complete. If your pallet is tampered with, please sign the bill of lading **"1 pallet received, tape and wrap has been broken."** Any shortages or missed shipments must be noted upon receipt of your delivery, so please try to be available on delivery date.

All orders for delivery must be placed 48 hours, or 2 working days, prior to your delivery day. Any back orders would not be subject to an additional charge. Requested lift gate service will have a \$35 fee added. Appointment requests are a \$20 fee.

The original Bill of Lading attached to our invoice indicates that material shipped has now become your property and is an acknowledgment by the transportation company of the receipt of the property in good condition. Safe delivery of this shipment is now the responsibility of the carrier. Please examine your shipment carefully before signing the freight bill. We will be glad to assist in tracing or recovery of lost merchandise.

Motor Freight - Damage or Shortage

If any damage is noted, or if the number of pieces received does not agree with the number on the bill of lading, **DO NOT** accept the shipment without shortage or damage notated on your freight bill and signed by the carrier's agent (driver). Failure to do so may jeopardize your recovery. If any concealed damage or shortage is discovered when unpacking, leave the material and the packing as is and notify the carrier for a concealed damage or shortage inspection. Consult the carrier for the necessary claim papers and disposition of damaged articles. When checking shipments, compare what was received with packing list or invoice. If there is a shortage or damage, **YOU MUST CONTACT US WITHIN 24 to 48 HOURS** and provide us with full details and pictures.

Claims with motor freight companies must be made promptly. The freight company will not consider a claim unless it is presented within nine months from the date of shipment. The carriers agent will assist you in making that claim. Claims for loss or damaged material and transportation charges **MUST NOT** be deducted from the invoice and the payment of invoices **MUST NOT** be withheld awaiting adjustment of such claims, since it is the function of the carrier to guarantee safe delivery.

PRICES AND TERMS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Prices at time of shipment will prevail. For current quotations, please call us. Prices quoted are FOB Aurora, CO; Cheshire, CT; Ball Ground, GA; Tewksbury, MA; Gray, ME; Bridgeton, NJ; Ewing, NJ; Auburn, NY; Brookhaven, NY; Schenectady, NY; Salem, OR; Morgantown, PA; Richmond, VA; and Knoxville, TN or FOB the factory unless otherwise stated.



Customer Information Form & Credit Application

Instructions

If you wish to establish an account:

Please complete the Customer Information Form located on page 2 and then sign the application on page 3.

If you wish to apply for a credit account:

Please complete the Customer Information form on page 2 along with the Credit Application and Reference section located on page 3. Please make sure that you sign the application on page 3 and also the Credit Release form on page 4.

***To avoid a delay in processing please make sure
all sections of the application are completely filled out and all sections are signed.***

Terms & Conditions

Credit Terms: Terms are Net 30 days from date of delivery or as otherwise stated with approved credit.

COD Shipments: COD shipments will be made to all accounts with a balance overdue 30 days and to all accounts when credit has not been established.

Payments: We will accept cash, check or the following credit cards Visa, MasterCard, Discover & American Express. Credit cards will not be allowed any cash discounts. Credit cards taken after the initial purchase (for payments on account) will be assessed a 2% handling fee, and will not be processed without a signed form authorizing Griffin Greenhouse Supplies, Inc to charge the additional handling fee. Check by Fax available free of charge.

Returned Checks: Returned checks will be assessed a \$25.00 fee in addition to usual bank fees. Excessive returned checks will result in accounts placed on a cash/certified check only basis.

Late Payments: We will assess accounts with overdue balances a 1½% per month service charge, an annual rate of 18%. Accounts with overdue balances will be expected to pay COD until the old balance is paid.

Minimum Order: For delivery via our trucks, within our normal delivery area, we require a minimum order of \$300.00. A \$15.00 surcharge will be charged for the delivery of any order under \$300.00. On orders shipped under \$25.00, we will add a \$5.00 small order upcharge in addition to shipping or delivery charges. We reserve the right to ship any order under \$300.00 via UPS or common carrier.

Deliveries: All orders for delivery via our trucks within our normal delivery area must be placed at least 48 hours or two working days prior to your delivery day. There will be a delivery charge applied to our truck deliveries, except back orders. We will, at our option, delivery or prepay delivery of backordered items that were not available for a previous delivery. Please contact our Customer Service department for delivery charges on plant material.

Returns: We will not accept returns without prior approval and credit will not be issued until returned merchandise has been inspected and approved. Returns made within 30 days will be subject to a 20% restocking charge. We will not accept items for return which were specially ordered or non-stock items.

Damaged Shipments: All claims of damaged shipments including plants must be made within 48 hours of delivery. Sorry, no exceptions to this policy.

Sales Tax: Applicable tax will be charged unless an exemption certificate is on file with us prior to shipment. Sorry, sales tax charged prior to receipt of exemption certificate will not be refunded.



Working with the Grower since 1947.

CUSTOMER INFORMATION FORM

Business Name: _____

Business Entity: Individual Partnership Corporation & Year of Organization or Corporation

Business Type: _____ **Taxpayer ID:** _____

Contacts	Name	Title	Phone Number	Email Address
Accounts Payable				
Purchasing				
Owner				

Business Telephone	Website Address
After Hours Phone	Regular Business Hours
Fax Number	Is a purchase order required? <input type="checkbox"/> Yes <input type="checkbox"/> No
E-mail Address	Years/Months in Business

Mailing Address	
Address 1	
PO Box	
County	
City	
State	Zip Code
Country	

Shipping Address		
Address 2		
PO Box		
County		
City		
State	Zip Code	Country
Contact	Phone	

Detailed Directions for Our Driver (from the nearest state route number)

Sales Tax Information

We have attached blank sales tax exemption forms pertaining to sales made in your state. Since all states charge sales tax differently, depending on the product purchased and the exemption form or certificate provided, it is important that we receive the appropriate form from you, filled out completely, based on your company's situation. If we do not have the completed forms, we will charge sales tax based upon the sales tax laws in your state. Please note, if you provide us with a resale certificate, we will charge you sales tax on items not normally sold in the ordinary course of your business. Such items would include, but are not limited to, a greenhouse, benching in a greenhouse or an irrigation system, to name a few.

CREDIT APPLICATION AND REFERENCE SECTION

Savings Account Bank Information		
Name of Bank:	Account #	
Street Address:		
City:	State:	Zip:
Phone:	Fax:	Contact Name:

Checking Account Bank Information		
Name of Bank:	Account #	
Street Address:		
City:	State:	Zip:
Phone:	Fax:	Contact Name:

Trade References-Please provide complete information		
Name:	Name:	Name:
Street:	Street:	Street:
City:	City:	City:
State: Zip:	State: Zip:	State: Zip:
Phone:	Phone:	Phone:
Fax:	Fax:	Fax:
Account Number:	Account Number:	Account Number:
Projected Credit Requirement: \$		Current Financial Statement Attached: <input type="checkbox"/> Yes (will facilitate credit approval) <input type="checkbox"/> No

In consideration of the granting and extension of credit by Griffin Greenhouse Supplies, Inc. to applicant, it is hereby agreed that the applicant will promptly pay any indebtedness of the applicant to the Griffin Greenhouse Supplies, Inc. when due in the event of non-payment or discovery of the falsity of such statement, as its option, without demand or notice to applicant declare all indebtedness of applicant to Griffin Greenhouse Supplies, Inc. immediately due and payable, and interest shall accrue from the date of non-payment at the rate of 18% per annum or the maximum rate permitted by law, whichever is less. Applicant hereby irrevocably submit themselves to the jurisdiction of the Courts of the Commonwealth Massachusetts for the purpose of any suit or other proceeding brought by Griffin Greenhouse Supplies, Inc. or to enforce payment of credit extended hereunder, and expressly waive, and agree not to assert, in defense of such action, the impropriety of revenue or lack of jurisdiction; and also consent to the service of process by registered or certified mail at the address specified herein and agree that such service shall be deemed as effective as if personal service were made within the said Commonwealth. Applicant agrees to pay collection/attorney's fees and court costs should the indebtedness have to be collected by outside sources.

Signature: _____

Signature: _____

Date: _____

Date: _____

Applicant Name: _____

Applicant Name: _____

Address: _____

Address: _____

PERSONAL GUARANTY

In consideration of the extension of credit by the Seller, herein to Buyer herein, the undersigned does jointly and severally guarantee to pay and be responsible for payment of all sums, balances and accounts due Seller by Buyer, including collection cost, attorney's fees and court cost. The undersigned hereby irrevocably submit themselves to the jurisdiction of the Courts of the Commonwealth of Massachusetts for the purpose of any suit or other proceedings brought by Griffin Greenhouse Supplies, Inc. or to enforce payment of credit extended hereunder, and expressly waives, and agrees not to assert, in defense of such action, impropriety of revenue or lack of jurisdiction. This shall be an open and continuing guaranty and shall continue in force notwithstanding any change in form of such indebtedness, or renewals or extensions granted by the Seller, without obtaining any consent there-to, and until expressly revoked by written notice from me/us to Seller. Any such revocation shall not in any manner affect by/our liability or any indebtedness existing prior hereto. I/we do hereby waive notice of the taking action to collect or enforce payment of any obligation hereby guaranteed, with as against the Buyer or any other person primarily or liable with the Buyer, either operate as a waiver of any such right or in any manner prejudiced Seller's rights against me/us. I/we agrees that in the event of any default at any time by said Buyer, Seller shall be entitled to look to me/us immediately for full payment without prior demand or notice.

Signature: _____

Signature: _____

Date: _____

Date: _____

Applicant Name: _____

Applicant Name: _____

Address: _____

Address: _____

SSN#: _____

SSN#: _____

**Failure to completely sign this agreement will delay the processing of your application.
Please fill out & sign credit release form on the reverse side.**

CREDIT INFORMATION RELEASE FORM

To Whom It May Concern:

I hereby authorize the release of Credit information necessary to obtain an open account with Griffin Greenhouse Supplies, Inc. A facsimile is acceptable for this request.

Name on the Account _____

Street _____

City _____ State _____ Zip _____

Name of Authorized Person _____

Signature _____ Date _____

Pesticide Policy

Most of you, in the course of growing your crop, will use a product or products that have been designated "Restricted" by Federal or State statutes.

We are, by virtue of our license to sell these products, required to record your license to use these products and report that information on demand. We must have a copy of your current/valid Pesticide license on file.

No restricted products can or will be allowed out of our warehouse until that copy of your valid license has been received in our files. All chemical deliveries must be received and signed for by the license holder or they will be returned to our warehouse.

Thank you!

For Office Use Only

New Account: Reviewed Account

Customer Number: _____

Pesticide Permit Received:

Permit Number: _____ Exp Date: _____

Sales Tax Form Received: Date: _____

Commercial Resale

Credit Approved: Date: _____

Authorized By: _____



1619 Main Street
PO Box 36
Tewksbury, MA 01876-0036
Tel (978) 851-4346
Fax (978) 254-0484

Visit our web site at: www.griffins.com

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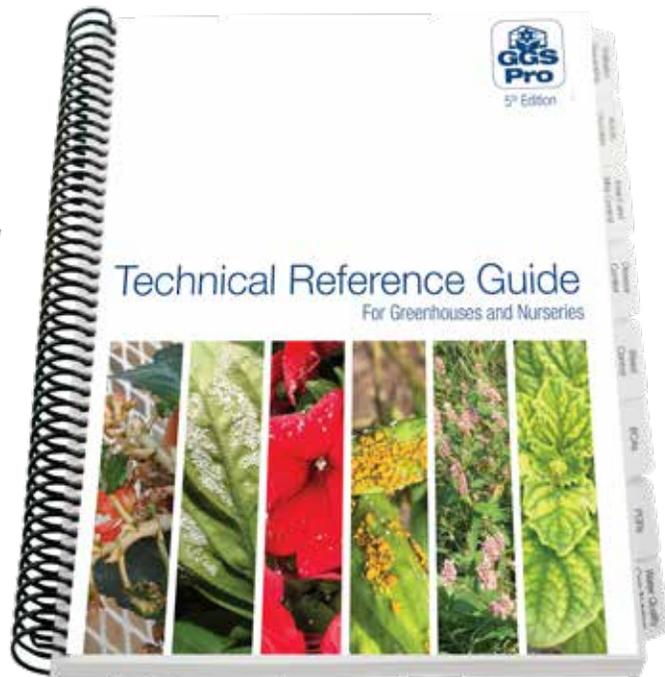
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GGSPRO TECHNICAL REFERENCE GUIDE 5TH EDITION



The GGSPRO Reference Guide is packed full of color pictures, detailed product information as well as easy to use charts and tables. These charts provide Mode of Action, Active Ingredient, REI, Application Rates and Measurement Conversion Tables.

The 5th edition of the Reference Guide includes:

- New! Lighting chapter- supplemental and photoperiodic lighting
- New! Scouting chapter- detailed information on how to identify and track insects, mites and diseases
- The latest GGSPRO product recommendations with updated rates and other important information is included throughout the guide.

The GGSPRO Reference Guide has heavy-duty water-resistant pages allowing growers to keep it where it is needed the most. Use it inside the greenhouse or outside in the field. It is a great resource for all employees from IPM scouts to those responsible for fertilizer and pest control decisions.

Item: 98-405

Visit www.griffins.com/ggspro for more information.





The effective solution for fungus gnats and Western flower thrips

Nemasys[®] beneficial nematodes offer greenhouse growers a sustainable option to add to your integrated pest management program.

To learn more, visit betterplants.basf.us or contact your BASF representative.

Nemasys[®]
Beneficial Nematodes

Always read and follow label directions.

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