



CONTROLLED ENVIRONMENT AGRICULTURE CATALOG

2024-2025

YOUR SINGLE SOURCE SUPPLIER FOR ALL HORTICULTURAL NEEDS



ABOUT GRIFFIN

Griffin is your partner and single source supplier for all horticultural needs. 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 breeders and producers, spanning seed and vegetative, bedding and potted crops, ornamentals and edibles. Our grower supplies offer includes reliable inputs and equipment to help your crops thrive through all production stages. Finally, our quality retail products drive add-on sales for you, while enhancing consumer success and enjoyment.

To learn more about our company, we invite you to visit us online at www.griffins.com, follow 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 five 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 is an industry leader and distributor, serving growers and retailers nationwide like family. 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 season ahead.

GRIFFIN IS COMMITTED TO EXCEPTIONAL 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.

Dan Lowery | Corporate Customer Service Manager | 800.888.0054 x81404 | dlowery@griffinmail.com

GRIFFIN LOCATIONS

Fourteen Distribution Centers Throughout the United States



ONLINE ORDERING AVAILABLE

www.griffins.com

TO PLACE AN ORDER

E-mail: orders@griffinmail.com

Phone: 1.800.888.0054

Grower / Retail Fax: 1.877.636.3623

Green Goods Fax: 610.913.3091

GENERAL QUESTIONS

1.800.888.0054

OFFICE HOURS

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

WAREHOUSES

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

BRANCH LOCATIONS

5303 Havana St, Suite 120
Denver, CO 80239

20 Grandview Ct
Cheshire, CT 06410

10 Middle River Drive
Stafford Springs, CT 06076

5350 Ball Ground Hwy
Ball Ground, GA 30107

2143 Internationale Parkway
Suite 400, Woodridge, IL 60517

1619 Main St
Tewksbury, MA 01876

50 W Gray Rd
Gray, ME 04039

1240 B Hwy 77
Bridgeton, NJ 08302

1 Ellis Dr
Auburn, NY 13021

2165 Montauk Hwy
Brookhaven, NY 11719

126 Van Guysling Ave
Schenectady, NY 12305

58 S.E. 223rd Ave.,
Gresham, OR 97030

200 Mountain View Rd
Morgantown, PA 19543

5612 Pride Rd
Richmond, VA 23224





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, chemistry and more from the manufacturers you know and trust. With the increasing demand for more economical and environmentally friendly methods of growing crops, we now specialize in Controlled Environment Agriculture from hydroponics to hemp. 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.



RETAIL SOLUTIONS

Griffin is the independent retailer's best source for lawn & garden products. We make it easy for IGCs to do business, with complete vendor offerings, low order minimums and efficient shipping solutions. Raise your retail game with help from our experts! Count on us for seasonal promotion ideas, merchandising best practices and space-planning tips to maximize your display areas and drive sales. 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 assortment includes seed and vegetative material, bedding and potted crops, ornamentals and edibles from the industry's most respected breeders and producers. We're uniquely committed to the seed business, stocking more than 3,300 variety/product-form combinations in our state-of-the-art seed operations facility. Count on us for annuals, perennials, grasses, herbs and vegetables. We're serious about seed quality: Inventory monitoring and regular performance testing ensure every variety meets its full potential, from the greenhouse to the garden center. Browse our complete portfolio and book your inputs through your Griffin sales representative or on www.griffins.com.



TECHNICAL SUPPORT

GGSPRO is our 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 plant 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** with questions as you have them.

CONSTRUCTION SERVICES

Our construction team assists with all aspects of greenhouse planning, construction and maintenance. Whether it's a new operation or expansion, upgrades or replacements, we can help with options to meet your needs and fit your budget. We offer a full range of equipment to help you grow efficiently and profitably. Look to us for greenhouse structures, films and coverings, lighting, climate control, irrigation, carts and more. Visit us at www.griffins.com/construction to learn more about our product portfolio and see our project showcase.

YOUNG PLANTS

Griffin delivers premium quality plugs, liners and pre-finished plants from reputable producers nationwide. Our young-plant network serves all major regions of the country with reliable fill rates. To assure freshness, truck delivery is available to most areas from many of our partners.

Our assortment of market-leading varieties is available in the most popular product forms to meet your needs and preferences. Of course, our young-plant products are backed by the same unbeatable service and support you've come to expect from Griffin.

PERENNIALS

Quality inputs yield the best finished product. We partner with accomplished breeders and producers worldwide to bring you the best in perennial seed, cuttings and young plants.

We've built our perennial assortment with your success in mind. Our diverse portfolio features cutting-edge genetics to simplify scheduling and production for you, and provides enduring performance and value to modern consumers.

We're a proud sponsor of the Perennial Plant Association and other organizations that support perennial growers, breeders and producers.

Sourcing has never been this simple

One login connects you to the industry's broadest selection of products for growers and independent retailers:

- Green goods including seed, cuttings and young plants
- Production supplies including containers, growing media and plant protection products
- Greenhouse structures and equipment
- Retail supplies including lawn & garden products, accessories and gift items

Place your order today: www.griffins.com





Follow us on Instagram
@griffin_cannabis



Sign up for Tech Tips at
www.griffins.com

Griffin and GGSPRO

Supporting your business with technical advice!

Who are we

The GGSPRO technical team at Griffin is a group of 6 professionals with over a hundred years of combined experience in the horticulture industry. Working closely with supplier partners, the team stays up to date on well-established and newly developed tools for growers throughout the industry. GGSPRO also maintains strong ties to academic institutions to keep up with promising research into crop nutrition, disease identification and management, IPM practices, and more.

What we do

Address daily concerns over phone and email

The GGSPRO team has over 18,000 points of contact every year supporting our grower customers. Whether over the phone or by email, the GGSPRO team helps our customers answer questions on product selection and use, issue diagnosis, pest and disease management, and countless other subjects related to production of CEA food crops, cannabis, nursery crops, and ornamentals.

Development of pest control strategies

Whether you would like to focus on a beneficial insect-based program or stick to conventional spray programs, GGSPRO has the knowledge to help you design a program that best fits your crop and growing environment.

Build nutrient programs around water test results and crop goals

Understanding source water quality is an essential component of crop success. The GGSPRO team can help you interpret your results and tailor your water treatment and fertilizer choices to your specific situation.

Generate culture guides and bulletins for ornamental and edible crops

Through years of experience with growers of a multitude of crops, the GGSPRO team has gathered and created hundreds of crop bulletins for a wide assortment of popular crops and subjects. Odds are, the team has something to address your question.

Insect, disease, and weed identification

Proper pest and disease management starts with proper ID of the problem. Send an image of the suspect to the GGSPRO team for aid in identification and treatment options.

Resources available at www.griffins.com

- Check out our monthly Tech Tips sent out via eBlast!
- Order our Technical Reference Guide 5th ed or our new Flip Books!
- Catch up on recent videos created by the team!
- Browse our online catalogue!
- Read our technical articles published in the Griffin Gazette!
- Ask about our informational bulletins on diseases, pests, crop culture, and more!



Griffin's GGSPRO Technical Team
ggsprotech@griffinmail.com
1-800-888-0054 ext 89129



www.griffins.com | 1-800-888-0054



Now Available
in Spanish!

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 overview of supplemental and photoperiodic plant lighting strategies
- New! Scouting chapter with detailed information on how to identify and track insects, mites and diseases
- The latest GGSPRO product recommendations with updated rates and other important information included throughout the guide.
- Updated chapters with the information you need for effective biological control, use of plant growth regulators, optimizing your crop nutrition and general problem solving strategies.

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 - Reference Guide, 190 pages

Item: 98-408 - Reference Guide - Spanish Edition

Visit www.griffins.com/ggspro for more information.

GGSPRO

POCKET GUIDE

Abiotic and Nutrition Disorders and NEW Insect Pocket Guide

The Pocket Guides were created as an extension of the GGSPRO Technical Guide. They provide information and images of abiotic plant disorders and nutritional disorders. The newest Pocket Guide titled Insects, assists growers to identify insect and mites pests. The Pocket Guides are full of sharp images and the back of each page contains valuable information. They serve as a reference tool for IPM scouts, growers and educators. Identifying problems quickly and accurately is the first step towards the remedy.

Abiotic: Not all plant symptoms are caused by pests and diseases. Abiotic factors include physiological disorders, phytotoxicities and other non-living causes. Identifying these types of disorders can help to optimize the growing environment and improve plant quality.

Nutrition: Nutritional problems often leave many clues. Soil and tissue testing are great tools, but in between tests the identification of nutritional disorders based on the symptoms, and the location on the plant where they occur allows for early detection and correction.

Insects: This newest addition to the Pocket Guides is a valuable tool for growers to use in scouting their crops and educating less experienced workers on insect and mite identification. The greenhouse environment favors the rapid development of insect and mite pests, making early and accurate identification an important tool in controlling these pests.

Item: 98-406

Item: 98-407

Description: Abiotic/Nutritional Pocket Guide, 70 pages

Description: Insect Pocket Guide, 68 pages



CONNECT *with us*

SOCIAL MEDIA

Add us to your social network! For news on products, events and more, follow us on LinkedIn and like us on Facebook. Simply log on and search "Griffin Greenhouse Supplies." Also follow us on Instagram. Log on and search "Griffin Greenhouse".



GRIFFIN GAZETTE

Published especially for top 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.



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 CATALOGS

From production to point-of-sale, we've got you covered! Our Retail, Grower Supplies, Seed and CEA catalogs feature must-have inputs from quality manufacturers, breeders and producers.

Contact your Griffin sales representative to request our catalogs, or check out our convenient and portable digital editions at www.griffins.com/publications.



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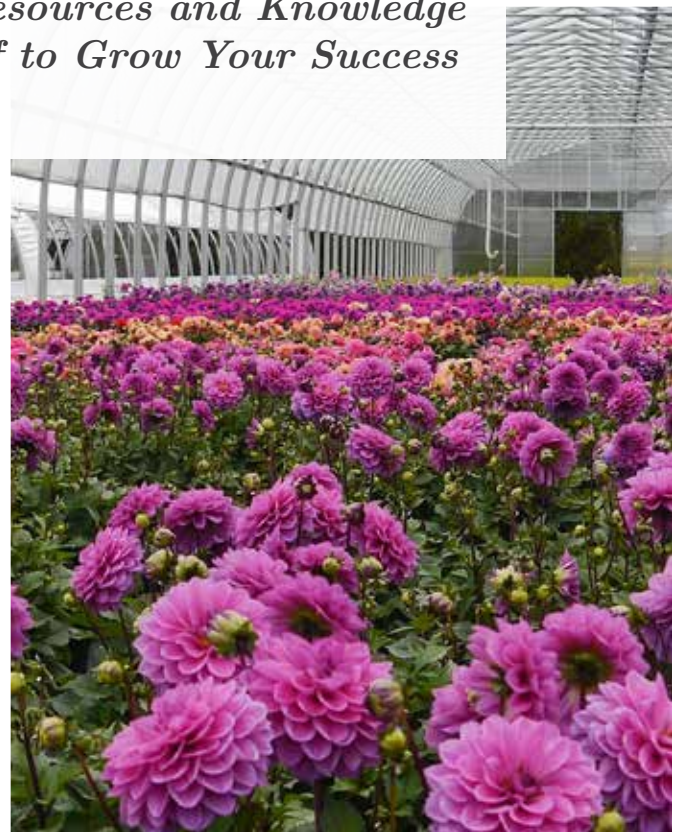


LOOK FOR QR CODES
throughout the catalog and
scan with your phone for digital
bonus information.



GriffinExpo

*Bringing Horticultural Resources and Knowledge
For You Under One Roof to Grow Your Success*



**VIRTUAL
EXPO**
August 19 -
October 31

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

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

INFRASTRUCTURE



GREENHOUSES

Conley's Gable Series



Conley's Gable & Arch Series Features

- Superior roll formed trusses or arches and roll formed purlins ensure unmatched structural integrity.
- Each truss or arch assembly is produced from one roll formed component, no splices required, from peak gutter connection.
- Condensate control features built into roll formed arches and purlins.
- Can be covered with polyethylene or rigid covering.

Conley's Arch Series



Standard Widths

Arch Series: 21', 24', 30', 35.5', 41.5'

Gable Series: 18', 21', 24', 30', 35.5', 41.5', 50'

Accessory Equipment

- Conley's Rack & Pinion roof vents - roof vents can be placed at gutter or ridge.
- Conley's Rack & Pinion side vents or end vents
- Internal retractable shading systems
- Conley's roll up side or end wall curtains
- Conley's swing, sliding or roll up door assemblies
- Conley's stationary, rolling or palletized bench assemblies
- Conley's space saver sidewall extension

All Conley's greenhouses feature superior strength roll formed steel. Each truss assembly is made from roll formed component, no splices required, between peak to gutter connection. This greenhouse is engineered in accordance with International Building Codes for almost any wind or snow load ratings. All galvanized steel frame insures maximum strength and reliability.





Conley's Superstar Series 3600

Outstanding Features

- Economy, Value & Strength
- Superior strength: rollformed arches, purlins and gutters ensure unmatched structural integrity
- Large easy to walk in gutters are lapped one into the other and cantilevered for increased strength
- 6' arch spacing virtually eliminates structural damage caused by rain and snow
- Components are shipped pre-punched and cut to length simplifying the installation
- Rollformed components nest one into the other during shipment, substantially reducing freight rates
- Certified to meet international building codes

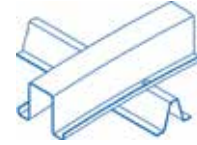
Accessory Equipment:

- Conley's Rack & Pinion roof vents- roof vents can be placed at gutter or ridge
- Conley's Rack & Pinion side vents or end vents
- Internal retractable shading systems
- Conley's roll up side or end wall curtains
- Conley's swing, sliding or roll up door assemblies
- Conley's stationary, rolling or palletized bench assemblies
- Conley's space saver sidewall extension

Gutter Height: 8'-10'-12'-14' Width: 21'-24'-30'



Arch to gutter adapters connect to the bottom of the gutter for optimum weight distribution.



Arch and purlin design offers "I" beam technology for superior strength.



Super strength arch to gutter adapter



Rack & Pinion Gutter Vent



The Conley's Advantage



Cantilevered Gutters

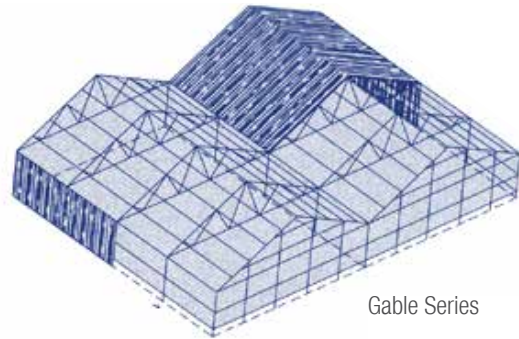
Conley gutters are cantilevered a full 2 feet over greenhouse columns, transferring the normal loads created by gutter connections away from the column. This increases the strength and stability of the structure. Gutters also lap one onto the other, virtually eliminating connection leaks.

2024
2025

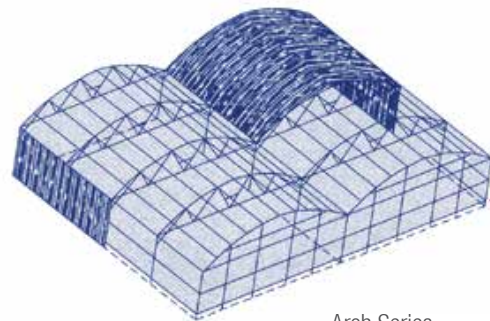


Superior Strength Rollformed Technology

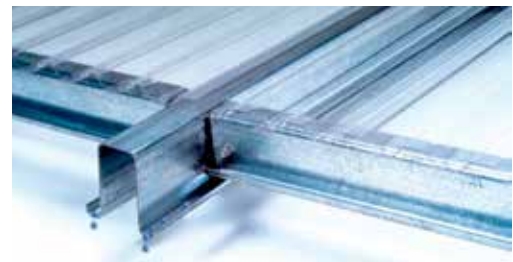
Rollformed components incorporate the same design principle applied to industrial "I" beams. Engineered to be longer than wide, Conley's rollformed members offer substantially greater resistance to the deflection causing forces of rain, snow and wind when compared to conventional components.



Gable Series



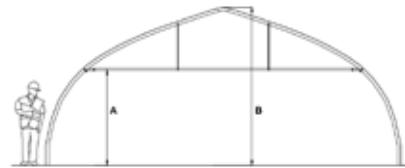
Arch Series



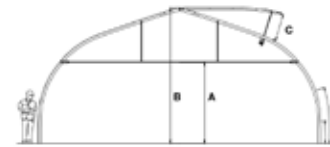
Ovaltech: Ground-to-Ground

The popularity of the Ovaltech testifies to its versatility and durability. It has become the standard in terms of wind and snow resistance. Its efficient design lets abundant light in, which promotes uniform crop growth across the greenhouse. Furthermore, it is engineered to enhance natural ventilation, creating a favorable environment for healthy crops while saving energy. **Stamped engineered drawings are available upon request.**

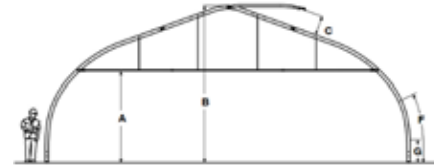
Griffin's #1 Selling Greenhouse
Ovaltech IV



Ovaltech I



Ovaltech III



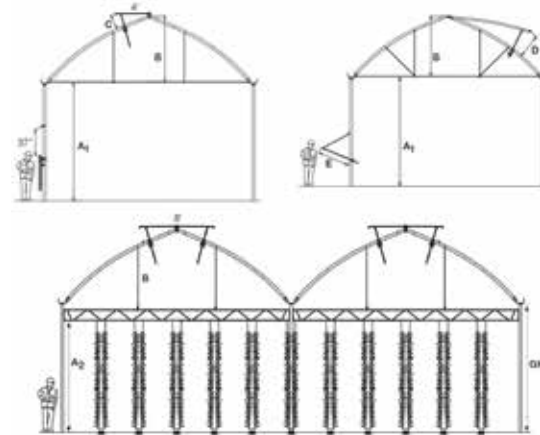
Ovaltech IV

	Ovaltech I			Ovaltech III			Ovaltech IV						
Width	20'	25'	27'	25'	30'	32'	35'	25'	30'	32'	35'	42'	
Arch spacing	5'			6'	3' - 5' - 6'	3' - 5' - 6'	5' - 6'	6'	6'	6'	3', 4', 5', 6'		
Inside clearance A	6'9"			9'-1"			9'-1"			10"			
Total height B	11'-2"	11'- 6-3/8"	14'-1"	14'-11"	15'-2"	15'-9"	14'-1-3/16"	14'-10-5/16"	15'-2"	16'-7"	17'6"		
Tubing Dimensions	1- 5/8" x 2-3/4"			2" x 3-9/16"			2 3/4" x 4 5/16"						
Mid roof vent C	-			37"			-						
Roll up Vent F	-			72" - 84"			72" - 84"			84" - 120"			
Skirt G	-			24" - 30"			24" - 30"						

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Luminosa: Gutter Connected

Available in different widths. Models 21'-4", 26'-3", 30', 31'-6" and 36' are optimized for vine crops, laid out according to European (metric) best practices, with rows spaced every 5 or 6 ft. These models are the best choice for tomatoes, cucumbers or peppers as they optimize the greenhouse space and enhance the profitability of the operation. Stamped engineered drawing are available upon request.



Models	Series 8				Series 9			Series 11
Width	21'-4"	24'	25'	26'-3"	28'	30'	31'-6"	36'
Height under gutter GH	12' 14' 16' 18' 6m							
Inside clearance (with tube) A1	arch 1-5/8" x 2-3/4" = GH + 3"							
	arch 2" x 3-9/16" = GH + 1-5/8"							arch 2" x 3-9/16" = GH + 1-5/8"
	arch 2-3/4" x 4-5/16" = GH + 1-3/8"							arch 2-3/4" x 4-5/16" = GH + 1-3/8"
Inside clearance (with truss) A2	GH - 23" (15" truss)							GH - 29-3/4" (22" truss)
	GH - 27-7/16" (20" truss)							GH - 38-3/4" (31" truss)
Height of gable B	7'-8-1/2"	8'-3-1/2"	8'-6-1/4"	8'-9"	9'-3-1/2"	9'-8-1/2"	10'	10'-3-5/8"
Dimension of arch tubing	1-5/8" x 2-3/4" or 2" x 3-9/16" or 2-3/4" x 4-5/16"							2-3/4" x 4-5/16"
Dimension of Vents								
Roof vent (opening) C	36"	35"	34-1/2"					
Simple 4', double 8'								
Mid-roof vent D	38-1/2"	37-5/8"	37-3/8"	50-5/8"	49-1/4"	48-3/4"	48-1/2"	60-3/8"
Side panel (opening) E	39-1/2"							
Guilottinie panel (opening) F	37"							



Cold Frame & TunnelPro Plus™

Tunnel Greenhouses

Three-season greenhouses that offer several economic advantages for producers.

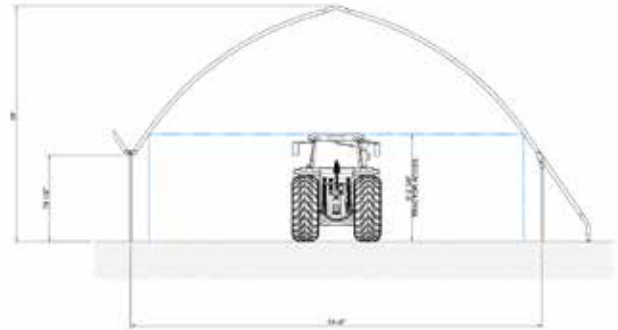
This range includes two models:

Cold frame

- Designed for three-season use;
- Offers an ideal environment for the hardening of perennials and shrubs
- De-clutter main production greenhouses, especially when plants are awaiting shipment
- Provide a protected area to allow the plants to reach the optimal size

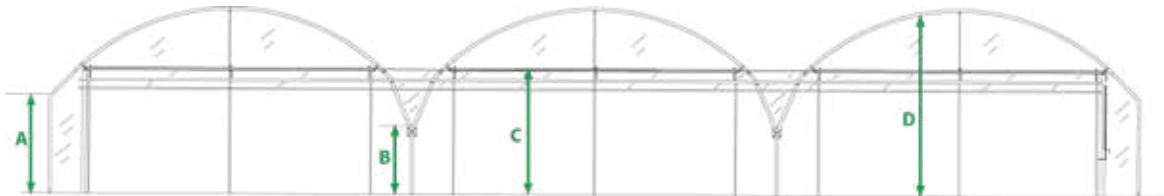
TunnelPro Plus™

- Ideal for berries growers
- Structure is manufactured using pregalvanized, oval tubing made of structural steel for years of corrosion protection.
- Fast and quick installation
- Full access for a tractor
- Economical solution to protect against adverse weather conditions.
- Screw-type anchors installed below frost to ensure stability and provide superior uplift resistance.
- Covering is secured with durable 1" wide, UV stabilized nylon straps that are stronger than rope and will not cut through the poly.



TunnelPro Plus™

Widths	28'		30'		31'	
Arch spacing	10'	12"	10'	12"	10'	12'
Side vent height (A)	84"	60"	84"	60"	84"	60"
Leg height (B)	63"	39"	63"	39"	63"	39"
Clearance (inside) (C)	114"	90"	126"	102"	130"	108"



POLYETHYLENE FILM



Sunmaster® EVO AC® IR

The benefits of EVO AC® IR:

- Permanent AC - cost savings on film & labor
- Mist elimination - less spraying & less diseases
- Highest light transmission - more and better production
- Outstanding mechanical properties - better crop protection

The properties:

- 8-layer co-extruded technology
- >90% PAR light transmission, UV-Open
- Permanent anti-condensate (AC) reduces costs and increases production
- Thermal film with superior Infrared (IR) retention promoting plant growth and energy savings
- High-diffusion (75%) which scatters sunlight uniformly, reducing shadow zones and preventing sunburns.
- Super-Strong for maximum resistance against strong winds, hail & snow loads.
- Superior mechanical properties (folds, tear & puncture) for maximum crop protection
- UV-stabilized for four years

Item	Width	Mil	Length	Fold	Weight/ lbs.
SMTHM624110EAC	24	6	110	4B	70
SMTHM628110EAC	28	6	110	4B	81
SMTHM628150EAC	28	6	150	4B	121
SMTHM632110EAC	32	6	110	4B	102
SMTHM636110EAC	36	6	110	4B	114
SMTHM636150EAC	36	6	150	4B	156
SMTHM642110EAC	42	6	110'	4B	134

Sunmaster is the leading brand of greenhouse covers in North America, offering growers a wide product range from high-performance four-year films to one-year overwintering. With decades of experience in the industry, our covers are designed to meet the unique needs of your greenhouses, ensuring maximum quality and yields.

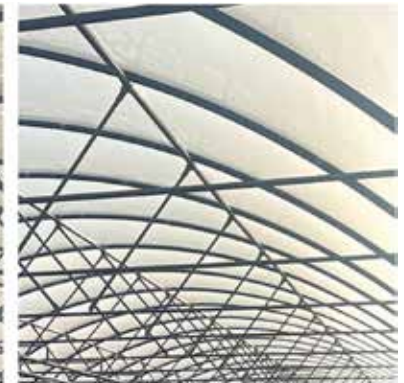
Sunmaster films can be produced in different versions depending on the application and needs of the grower. Stock products and sizing are based on most requested items, but Sunmaster can produce films with various other properties for drop-ship orders.

In double-inflated greenhouses with two sheets, Sunmaster® recommends:

- EVO AC® IR as the inside layer for maximum condensation control, light distribution, and temperature regulation.
- Sunmaster® IV as the outside layer to maximize light transmission.



Classic AC film after 2 years



EVO AC® after 4 years



Mist under classic AC film



EVO AC® anti-mist effect

Sunmaster® IR/AC Max

- 7-layer co-extruded
- >89% PAR light transmission, UV-Open
- Provides superior condensation control
- High-diffusion (75%) for uniform lighting when direct sunlight is not preferred
- Thermal film with superior Infrared (IR) retention promoting plant growth and energy savings
- Superior mechanical properties (folds, tear & puncture) for maximum crop protection
- UV-stabilized for four years

<i>Savings</i>	PURCHASE	SAVE
	\$750.00	8%
	\$1,500.00	13%
	\$2,500.00	18%

Savings applies to Polyethylene Film

Sunmaster® IR/AC Max Films

Item	Width	Mil	Length	Fold	Weight/lbs.
SMTHM628100	28'	6	100'	4B	84
SMTHM628150	28'	6	150'	4B	126
SMTHM636150	36'	6	150'	6	162
SMTHM642100	42'	6	100'	6	126
SMTHM642150	42'	6	150'	6	190
SMTHM648110	48'	6	110'	6	158
SMTHM648150	48'	6	150'	6	218

Sunmaster® IR/AC Max Tubes

Item	Width	Mil	Length	Fold	Weight/lbs.
SMTHM620100T	20'	6	100'	6	120
SMTHM624100T	24'	6	100'	6	144

Fold Code: 4A = C Fold 4B = U-Fold 4C = Gusseted fold 6 = Double U-Fold 8 = Multi U-Fold

2024
2025

Sunmaster® IV

- 3-layer co-extruded
- Crystal Clear film maximizing direct sunlight penetration is desired for specific plant growth.
- >90% PAR light transmission
- UV-stabilized for four years
- Provides superior strength (folds, tear & puncture) and high light transmission

Item	Width	Mil	Length	Fold	Weight/lbs.
SMIV620150	20'	6	150'	4B	90
SMIV624110	24'	6	110'	4B	79
SMIV624150	24'	6	150'	4B	79
SMIV628100	28'	6	100'	4B	84
SMIV628110	28'	6	110'	4B	92
SMIV628150	28'	6	150'	4B	126
SMIV628200	28'	6	200'	4B	168
SMIV632100	32'	6	100'	6	96
SMIV632110	32'	6	110'	6	106
SMIV632150	32'	6	150'	6	144
SMIV636100	36'	6	100'	6	108
SMIV636110	36'	6	110'	6	118
SMIV636150	36'	6	150'	6	162
SMIV640150	40'	6	150'	6	180
SMIV642100	42'	6	100'	6	126
SMIV642110	42'	6	110'	6	138
SMIV642150	42'	6	150'	6	190
SMIV648110	48'	6	110'	6	158
SMIV648150	48'	6	150'	8	216
SMIV650150	50'	6	150'	8	225
WHITE					
SMIV632100W	32'	6	100'	6	96
SMIV640100W	40'	6	100'	6	120
SMIV648100W	48'	6	100'	8	144

Fold Code: 4A = C Fold 4B = U-Fold 6 = Double U-Fold 8 = Multi U-Fold

Sunmaster® IV Greenhouse Tubes

Item	Width	Mil	Length	Fold	Weight/lbs.
SMIV624100T	24'	6	100'	4B	144
SMIV624110T	24'	6	110'	4B	158
SMIV624150T	24'	6	150'	4B	216

Fold Code: 4A = C Fold 4B = U-Fold 6 = Double U-Fold 8 = Multi U-Fold



Manufactured by Plastika Kritis



Tufflite IV™ Greenhouse Film

Tufflite IV™

Tufflite IV™ is a high quality PAR (photosynthetic active radiation) film offering high clarity, outstanding durability and easy installation. Retains Clarity— Tufflite IV™ stays clear without discoloration or cracking. Outstanding Durability— proprietary manufacturing yields tough sheeting that resists tears, punctures and UV degradation. Easy Installation— heavy duty packing protects every roll and improved folding makes installation fast and easy.

Fold Code: CF= Center Fold CFF= Center Fold Folded CFDF= Center Fold Double Folded CSTF= Center-slit Tubing Folded STDF= Slit Tubing Double Folded TDF= Tubing Double Folded

See next page for proper poly sizing for your greenhouse.

Item	Width	Mil	Length	Fold	Weight/lbs.
061-6161101	16'	6	110'	CFDF	50
061-6201101	20'	6	110'	CSTF	63
061-6241101	24'	6	110'	CSTF	75
061-6241501	24'	6	150'	CSTF	103
061-6281101	28'	6	110'	CSTF	88
061-6281501	28'	6	150'	CSTF	120
061-6321101	32'	6	110'	STDF	100
061-6361101	36'	6	110'	STDF	113
061-6401101	40'	6	110'	STDF	126
061-6401501	40'	6	150'	STDF	171
061-6421101	42'	6	110'	STDF	132
061-6421501	42'	6	150'	STDF	180
061-6481101	48'	6	110'	STDF	151
061-6481501	48'	6	150'	STDF	205
061-6501101	50'	6	110'	STDF	157
061-6501501	50'	6	150'	STDF	214
061-6561101	56'	6	110'	STDF	176

Tufflite IV™ Greenhouse Film Tubes

Item	Width	Mil	Length	Fold	Weight/lbs.
061-6201101T	20'	6	110'	TDF	126
061-6201501T	20'	6	150'	TDF	171
061-6241101T	24'	6	110'	TDF	151
061-6241501T	24'	6	150'	TDF	205





Tufflite Infrared™

Designed to last up to four years, Tufflite Infrared contains both the Drip-Less feature and an additive that will delay the exit of infrared waves from the greenhouse— maintaining heat factors and thus saving energy.

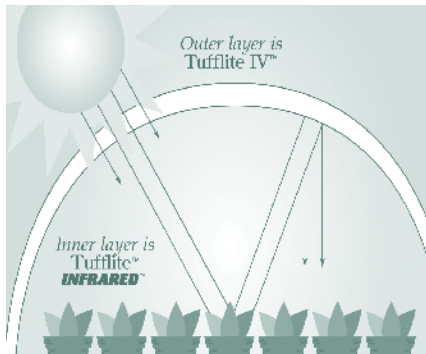
Reduced Energy Costs— improved nighttime heat retention allows for lower fuel bills.

Improved Light Diffusion— reduces shadows.

Getting the Best of Both Worlds

Combine the extraordinary clarity of Tufflite™ with Tufflite Infrared™ and reap the rewards. When using sheeting (vs. Tubing), your combination of Tufflite IV™ on the outside and Tufflite Infrared™ on the inside gives you:

- The Highest Light Transmission
- Anti-Condensation Protection
- Optimum Energy Savings



Tufflite Infrared™ Greenhouse Films

Item	Width	Mil	Length	Fold	Weight/lbs
062-6201101	20'	6	110'	CSTF	63
062-6241101	24'	6	110'	CSTF	75
062-6281101	28'	6	110'	CSTF	88
062-6321101	32'	6	110'	STDF	100
062-6321501	32'	6	150'	STDF	137
062-6361101	36'	6	110'	STDF	113
062-6401101	40'	6	110'	STDF	126
062-6401501	40'	6	150'	STDF	171
062-6421101	42'	6	110'	STDF	132
062-6421501	42'	6	150'	STDF	180
062-6481101	48'	6	110'	STDF	151
062-6481501	48'	6	150'	STDF	205
062-6501101	50'	6	110'	STDF	157
062-6501501	50'	6	150'	STDF	214

Tufflite Infrared™ Film Tubes

Item	Width	Mil	Length	Fold	Weight/lbs.
062-6241101T	24'	6	110'	TDF	151
062-6241501T	24'	6	150'	TDF	205

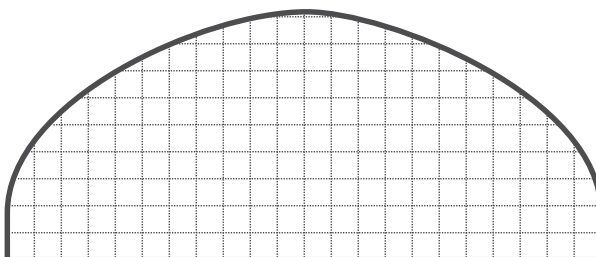
Fold Code: CSTF= Center-slit Tubing Folded
STDF= Slit Tubing Double Folded TDF= Tubing Double Folded

What Size Cover for my House?

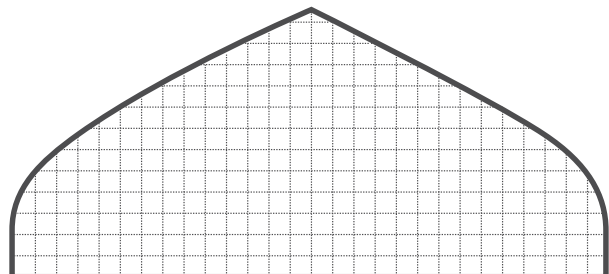
Quonset Greenhouse							
House Width	14'	17'	20'	22'	25'	28'	30'
Poly Size Use	24' wide	28' wide	32' wide	32' wide	40' wide	42' wide	48' wide

Gothic Greenhouse							
House Width	17'	20'	21'	26'	27'	29'	30'
Poly Size Use	32' wide	36' wide	36' wide	40' wide	42' wide	42' wide	48' wide

Use this information as a guide to find the poly width for a standard ground to ground greenhouse frame. High tunnels, roll up sides, or raised greenhouses are not accounted in the chart above. Griffin recommends using a soft measuring tape to make a ground to ground measurement before ordering.



Quonset Greenhouse



Gothic Greenhouse

DRAMM

Dramm offers VIFRA Humidity Management Solution to optimize humidity in your greenhouse or growing facility.

DRAMM VIFRA HIGH PRESSURE FOG

High pressure fog systems atomize water droplets to increase humidity or cool your facility. The Dramm/VIFRA system uses ceramic-tipped nozzles and VFD controlled pumps for reduced wear and a unique crimping system for installation to make a rigid connection that is easy to install, requires no guide wires and will not sag.

DRAMM VIFRA DEHUMIDIFICATION

VIFRA Dehumidification Units offer extreme efficiency, condensing more water per kW than other dehumidification systems. Reduce energy costs and vent less frequently by removing humidity via condensation. With a variety of sizes available, Dramm will engineer a solution to your needs.





MDL-400

High intensity LED grow light with 2-channel adjustable spectrum. Produces ideal spectrum for any type of plant during any phase of growth year-round. Low shadow form factor designed for greenhouse or single level indoor growing. The MegaDrive central power supply powers and controls up to 27 MDL-400's, reducing installation cost and heat in the grow area. Made in California.

- Wattage: 400 max
- PPF: 1050 $\mu\text{mol/s}$
- PPE: Up to 3.5 $\mu\text{mol/J}$
- Heat Output: 1365 BTU
- Weight: 7.2 lbs
- Warranty: 5 years



MDL-400 DUAL

High intensity LED grow light with 2-channel adjustable spectrum. Produces ideal spectrum for any type of plant during any phase of growth year-round. Low shadow form factor designed for greenhouse or single level indoor growing. Three adjustable angles for various bench widths. The MegaDrive central power supply powers and controls up to 13 MDL-400 Duals, reducing installation cost and heat in the grow area. Made in California.

- Wattage: 800 max
- PPF: 2100 $\mu\text{mol/s}$
- PPE: Up to 3.5 $\mu\text{mol/J}$
- Heat Output: 2730 BTU
- Weight: 14.4 lbs
- Warranty: 5 years



MEGADRIVE MDP-10KW CENTRAL POWER SUPPLY

The MegaDrive central power supply is a unique and patented approach to installing, powering and controlling horticultural lighting. Conduit runs and power drops for lighting are eliminated, greatly reducing installation cost and time to get operational. Higher reliability than any other lighting solution thanks to MegaDrive's redundant driver design. Mount the MegaDrive outside the grow area for reduced heat. Interconnect cables cut to spec make installation quick and easy. Made in California.

- Wattage: 10kW max
- Voltage: 208-480v Single or 3 Phase
- Chainable number of lights: Up to 27
- Controls: 2-channel with touch screen, Bluetooth, or third party 0-10v
- Heat Output: 500 BTU
- Weight: 62-72 lbs
- Warranty: 5 years





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.



Hydrofarm Brand

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 PHOTOBIO*T and TX | The PHOTOBIO T Series offers 2.6 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 858 umol/s. The TX system uses 680W and has a PPF output of 1768 umol/s.

Phantom PHOTOBIO*MX | The PHOTOBIO MX offers 2.6 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 1768 umol/s.

Phantom PHOTOBIO CX 2125 | The PHOTOBIO CX offers 2.5 umol/s and dimming capabilities. This toplighting fixture is a direct 1:1 replacement for a 1000W HPS fixtures. Slim design supports low ceiling mounts. Passive cooling for operational efficiency. S4 spectrum supports flower development. 120-277V. 850W. 2125umol/s output at 277V. IP66 with 5 year warranty.

Phantom 1000W HPS Fixtures

Next gen technology, dimmable, for HPS or MH bulbs (do not dim with MH bulbs – run at 100% power only). 277-400V

Phantom 60 Series – PHRE 1000277 | 1150W HPS, enclosed reflector.

Phantom 60 Series – PHRO1000277 | 1000W HPS, open reflector.

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: 93-2500 **Description:** PARsoure AgroSun DE HPS 1000W bulb



2024
2025



P.L. LIGHT SYSTEMS
THE LIGHTING KNOWLEDGE COMPANY

PL Light Systems develops and manufactures advanced reflectors, LED and HID (HPS & CMH) 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.

2024
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HSE NXT2 | Electronic ballast for quiet operation and extended lifetime. Cooling ribs for more efficient heat dispersal. Double ended lamps. Use with Alpha or Beta reflectors. **600W:** 277V or 347V. 1450 $\mu\text{mol/s}$. **1000W:** 277V, 347V or 400V. 2100 $\mu\text{mol/s}$.

HSE NXT-LP | Designed especially for low profile mounting for low ceiling height applications. Double ended lamps. Dimmable, electronic ballasts. Use with Alpha or Beta reflectors. **600W:** 277V or 347V. 1450 $\mu\text{mol/s}$. **1000W:** 208V, 240V, 277V or 347V. 2100 $\mu\text{mol/s}$.



PL LIGHT IQ

Achieve multi-zone lighting control of up to 512 ballasts in up to 4 zones. Works with control-enabled NXT-LP fixtures.

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** 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.



Alpha



Beta



TriPlane



TriPlane Linear



ParFX Ultra

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.

VertiMax | High-output, full spectrum LED lighting solution for multi-tier applications. PAR output of 1800 $\mu\text{mol/s}$ and system efficacy of 2.8 $\mu\text{mol/J}$. Integrated driver for reduced installation time and expense. Dimmable. Daisy-chainable.

TriPlane | High output, true 1:1 HPS replacement for greenhouse and warehouse. Plug and play: integrated drivers, standard power connectors, easy mounting. The TriPlane is available in both RWMB (red, white, medium blue) and RWMB_FR (red, white, medium blue, far red) for supplemental lighting applications. Field-adjustable for site-specific optimization of distribution pattern. Up to 2203 $\mu\text{mol/s}$, 3.3 $\mu\text{mol/J}$. IP-66. Daisy-chain capable, dimmable, and DLC listed.

TriPlane Linear | Engineered to cast minimal shadowing on the crop canopy—while delivering a performance on par with standard TriPlane model, the TriPlane Linear offers the ideal combination of form and function in greenhouse applications.

The unique mounting brackets on the TriPlane Linear's LED modules allow for the mounting angle to be adjusted in either direction, for a highly customized light distribution—depending on the application.

ParFX Ultra | Engineered to deliver a light output of up to 3745 $\mu\text{mol/s}$ and a system efficacy of 3.6 $\mu\text{mol/J}$, the ParFX Ultra delivers ultra-high performance in both full LED and/or hybrid applications. The luminaire features a unique optical lens that produces a symmetrical batwing distribution. This optimized distribution delivers industry-leading uniformity to allow for wider row spacing—enabling growers to achieve their target light levels and consistent crop growth, with fewer luminaires. Available in multiple spectrums, including custom.

ReduSystems®

ReduSystems® enables growers to make optimal use of sunlight in their greenhouses throughout the year. Products influence natural light and heat transmission from the sun in every season to optimize the greenhouse climate for the crop – from a cooler climate in summer and more light in winter to diffusing light and influencing the light spectrum.

- Choose your own shading percentage
- Select products based on need – affect light and/or heat
- Wear and frost-resistant
- Potentially higher yield and better quality
- Use with glass and plastic greenhouse coverings
- Easily removed with ReduClean



ReduSol

ReduSol is a shading agent that reflects high levels of solar energy to protect crops against heat and light. Wear-resistant shade across the whole spectrum.

ReduHeat

ReduHeat is a shading agent that blocks infrared energy to reduce heat load while allowing high light transmission of photosynthetically active radiation (PAR) that drives plant growth. Great for high-light crops.

ReduFuse

ReduFuse is a light and heat diffusing agent. Light and heat are spread through the greenhouse more evenly for more uniform crops and stronger light penetration into the crop. Beneficial for vegetables, cannabis, cut flowers, and other high light dependent crops.

ReduFuse IR

ReduFuse IR diffuses light through the greenhouse while reflecting heat. Light penetrates deeper into the crop for a general net increase in photosynthesis. Good for heat sensitive crops that also demand high light.

ReduClean

Formulated to easily remove ReduSystems coatings. Dissolved coatings will rinse off the greenhouse with rain. Safe for glass and plastic greenhouse coverings.

Item	Description	Size
16-3230	ReduSol	14.5 L
16-3240	ReduHeat	13.5 L
16-3290	ReduFuse	14.85 L
16-3295	ReduFuse IR	13.5 L
16-3287	ReduClean	20 L

How Many Buckets Per Acre?

	Average buckets per acre (in North America)	Net shading (excl. roof/structure)		Average buckets per acre (in North America)	Net shading (excl. roof/structure)
ReduSol	4 - 5	22% - 25%	ReduFuse	5 - 6	5% - 6%
ReduHeat	5 - 7	6% - 9%	ReduFuseIR	7 - 9	11% - 15%

Note: products have to be mixed with water. For machine application 120-150 gallon spray liquid (water + coating) is used per acre. For manual application 180-200 gallon spray liquid per acre is used.

Shade Cloth and Netting

Woven & Knitted Shade, Aluminet and Insect Netting options for your Greenhouse shading needs!

Woven 30%



Woven 40%



Woven 55%



Woven 63%



Woven 73%



Woven 80%



Knitted Red 30%



Knitted Red 50%



Knitted White 50%



Knitted Black 30%



Knitted Black 40%



Knitted Black 50%



Knitted Black 60%



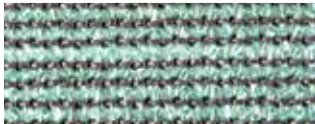
Knitted Black 70%



Knitted Black 80%



Knitted Green 60%



Knitted Ultra Tan 60%



Knitted Steel Grey 50%



Knitted Mocha 80%



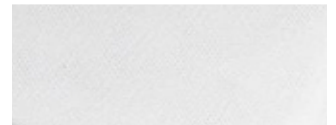
Knitted Alumi-Shade 50%



Knitted Alumi-Shade 70%



Insect Netting



Custom
Shade

- GROMMET
- BATTEN TAPE
- CUT DOWN
- HEM • SEAM

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



Exhaust Fan with Slant Wall Housing - Stocked in 115 Volt

Item	Size	Speed	HP
23-1121	24"	1	½ HP
23-1126	24"	2	½ HP
23-1131	30"	1	½ HP
23-1136	30"	2	½ HP
23-1141	36"	1	½ HP
23-1146	36"	2	½ HP
23-1150	42"	1	½ HP
23-1155	42"	2	½ HP
23-1165*	48"	2	½ HP

All Guards for wall housings have 1" x ½" 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.

*Nonstock item: order will ship direct FOB Freight Origin.

Automatic Aluminum Shutter

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



Griffin Construction Department

Partner with us on you next project.

Call for consultation and quote:

1.800.888.0054 then press 3.

2024
2025

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)



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

MOTORIZED INLET SHUTTERS

- Cam pulley operator provides long life to motor and is corrosion resistant
- Motor draws only 17 watts
- WAAC models are center pivoted to open easier against house static pressures
- 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.

Replacement Motor

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

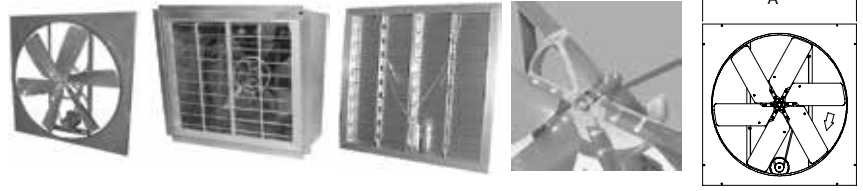


Economical, Practical, Effective

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.

Exclusive Drive Assembly

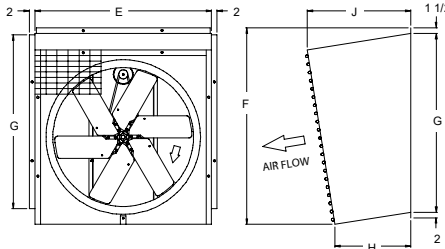
Our engineering department has developed an innovative drive assembly for the Type NBF fan. Our use of quality materials and precise engineering techniques in constructing wheel assemblies assure you of years of quiet, trouble-free service. Power is applied through V-belts directly to the propeller with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



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.

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.



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.



Coolair products drop-ship to the site from the manufacturer.

HORIZONTAL AIR FLOW

HORIZONTAL AIR FLOW SYSTEM



- Propeller - Aluminum blades held securely in place by a steel spider and hub provide quiet operation
- Motor - Heavy duty PSC, totally enclosed motor with automatic thermal overload protection and ball bearings is energy efficient. Motor can be used with variable speed control for more precise air movement
- Guards - Two piece wire guard for easy access has a gray plastic coating to resist corrosion
- Installation - Two piece rotational bracket provides a locking tilt adjustment for proper angle of air flow. "S" bracket provides two different dimensional mountings
- Wiring - Motor comes factory-wired on the "A4" with a 6'3" conductor cord with grounding type molded plug for easy installation



	HAF12A4	HAF20A4
Size	12"	20"
RPM	1566	1626
Motor HP	1/15	1/15
Voltage	115/1	115/1
Watts	124.5	105.0
Air Flow	1145	3005

Item: 23-4020 **Size:** 12"
Item: 23-4025 **Size:** 20"

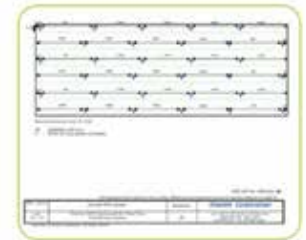
DRAMM

Dramm AME fans

- More even air movement
- Up to 4x fewer fans than baset fans
- Saves on energy and installation costs
- Shrouded design: Propels air further with less energy
- 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.



Circulation/HAF fans

Multifan circulation fans are well-known for consistent high quality, durability and longevity. Motors are produced in-house, and optima 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 air speed 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.





Evaporative Cooling Pad System

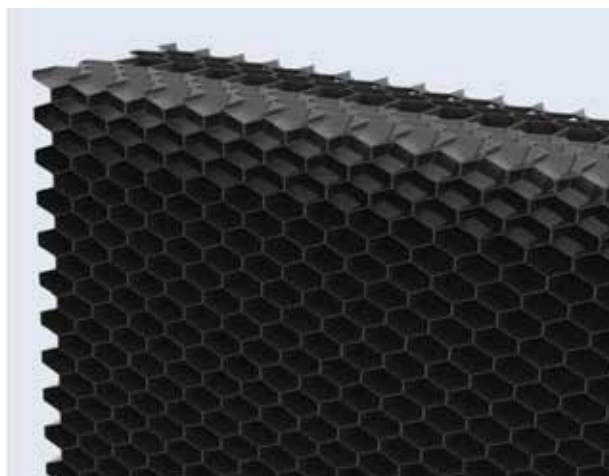


2024
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The Benefits of Lubing's Plastic Pads

- **Excellent cooling capacity – patented design:** The special layout of solid surfaces and mesh structures ensures ideal water distribution through the Pad. This allows for proper wetting and less splashing, resulting in highly efficient cooling capacity
- **Easy to clean:** The use of welded, highly resistant polymer sheets allows the plastic pad to be easily cleaned without damaging the Pads
- **Long service life:** The use of polymer sheets in combination with thermal welding guarantees best stability and a long service life
- **Lowest pressure loss:** At an air velocity of 300 ft/min (1.5m/s) the plastic pad's pressure drop is only at 0.40 inches of water (10 Pa.) substantially lowering energy consumption
- **High UV resistance:** The use of UV-stabilizing additives ensures outstanding resistance to UV light for years
- **Impermeable to light:** The plastic pad's geometry blocks out light from the outside
- **Chemical resistance:** The plastic pad is made of Polypropylene, which is highly resistant to most chemicals.
- **Pad width:** Pads are offered in 2' wide sections



Griffin Construction Department

Partner with us on you next project. Call for consultation and quote: 1.800.888.0054 then press 3.

Greenhouse Thermostats

- Weather-proof Line Voltage
- 16 Full load amp rating at 120 Volt
- 30° to 110°F



Item	Vendor	Description
24-6001	KJ16110	Single Stage Thermostat
24-6002	KT16110	Double Stage Thermostat
24-6010	KP16110	Portable Prewired Single Stage Thermostat - comes with 8' cord

DRAMM

Mechanical Thermostats

Dramm / Microfan mechanical thermostats are designed with rough environments in mind. These high quality thermostats are perfect for any situation where harsh conditions may damage less durable equipment. Protected in durable PVC housing, these thermostats offer stainless steel coil sensors and accuracy to 1° C.



Features:

- Durable PVC housing
- Unlimited accuracy
- Non-corrosive construction
- Sealed wiring strain relief
- Single-stage or two-stage

Item	Description
24-2300	T41-SV Single Stage Thermostat
24-2305	T42-SV Double Stage Thermostat

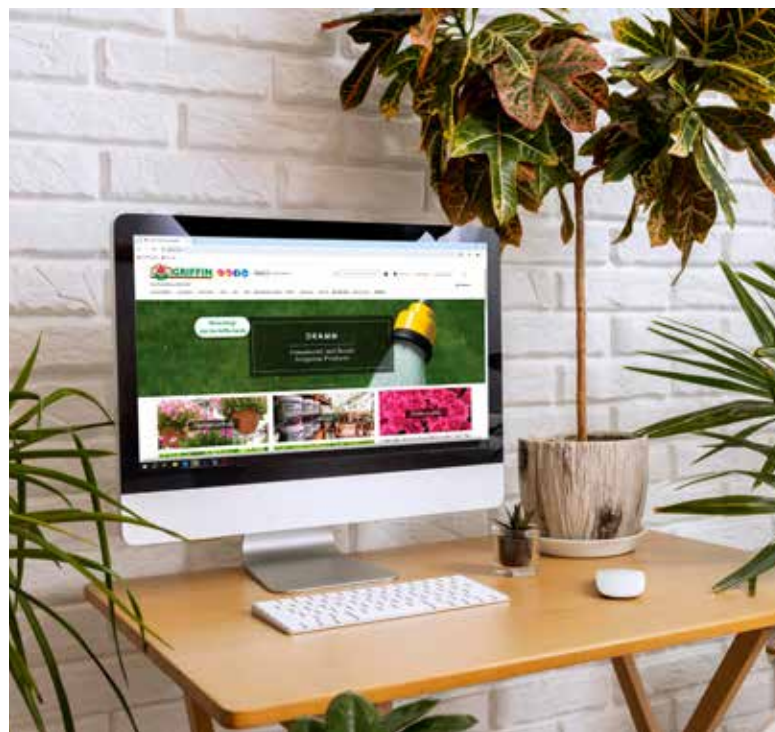
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Sourcing has never been this simple

As a single source supplier, you have one login and one place to order all of your green goods and hardgoods, connecting you to the industry's broadest selection of products nationwide.

- Green goods including seed, cuttings and young plants
- Production supplies including containers, growing media and plant protection products
- Greenhouse structures and equipment
- Retail supplies including lawn & garden products, accessories and gift items

Place your order today: www.griffins.com



EFFICIENT HUMIDITY AND COOLING MANAGEMENT

Humidity is one of the most important growth factors in a greenhouse climate as the level of humidity has both a direct and indirect effect on the production and quality of crops.

Our systems supply a uniform and controlled amount of fog within the ranges of 70-100bar through high-pressure nozzles. The fog evaporates and removes heat energy from the air, resulting in two desired effects: **cooling and humidification**.

LUBING's fogging system is designed to provide the proper amount of humidity to your entire crop to maximize growth conditions.



FOGGING SYSTEMS



EVAPORATIVE PAD COOLING SYSTEMS



RELIABLE AND PROFESSIONAL SUPPORT

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WWW.LUBINGUSA.COM | INFO@LUBINGUSA.COM | 423-709-1000

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.

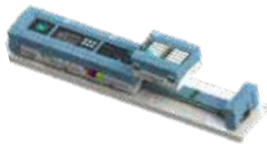
Seed and Seed 16 – Single or multiple zones. Access and adjust using the app. Real time alarm notifications. Download historical data. CO2, DO, and ability to fill tanks. Sphere software and Cloud access. Simple, intuitive touchscreen operation.

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.

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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.



Griffin Construction Department | Partner with us on you next project. Call for consultation and quote: 1.800.888.0054 then press 3.

Indoor Controllers

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 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.

Contactor Panels

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

NEW! Pearl Controller

The Pearl is easy to install, expand, and maintain due to its building-block design. Control modules allow growers to customize the controller based on their specific needs. When the Link4 Cloud software is connected to the Pearl everything in the greenhouse can be monitored from anywhere. All systems are backed by Link4's industry-leading technical support team

Key Points:

- Modular Design
- Scalable and Flexible Buy what you need today, expand later
- Powerful Controls: The Pearl can handle large and complex grow zones.
- Large Scale Systems: 256 outputs, 128 inputs, 128 user-defined controls.
- Modular Design: Snap-in control blocks that can be installed in seconds. The Pearl is easy to install, expand, and maintain due to its building-block design. Control modules allow growers to customize the controller based on their specific needs.
- When the Link4 Cloud software is connected to the Pearl, everything in the greenhouse can be monitored from anywhere. All systems are backed by Link4's industry-leading technical support team. Actual switch positions are remotely detected for possible issues.
- Manual Override Switches.

CUSTOM PRODUCTION SYSTEMS



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

- Custom-made to order to match needs
- Great benching options for production and retail displays
- Fixed, Max Roll, and Track installation options
- Single-level, multi-level, and archive rack 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



EBB & FLOW TRAYS

US-made, vacuum-formed, UV-resistant, polystyrene trays with molded drain channels. Long pieces minimize frequency of glue joints. Available as replacement trays, retrofits or as a component of a complete ebb & flow benching system.

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.

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.

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.

TRACK BENCHES

Benches roll on floor-mounted tracks for fully adjustable aisle widths. Most often used with Archive Racking or Ebb & Flow benching.

PLANT SUPPORT SYSTEMS

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

GROWING BENCHES & 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.

CATWALK SYSTEMS

Gain safe, easy access to tiered crops with this easy-to-install, ondemand catwalk system. Designed to integrate with IGE's archive racks: Rails secure to racks, lightweight, EZ-Roll platforms slide into place when racks are rolled apart. 2' wide catwalks available in 2' or 4' lengths.

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

Lumite

Blue Line Fabricated Ground Cover

INFRASTRUCTURE



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The Grower's Choice - The Best Ground Cover You Can Buy

This tightly woven fabric, constructed of tough UV stabilized polypropylene yarn, is designed to inhibit weed growth and improve the aesthetic appearance of professional nurseries.

Lumite's ground cover is:

- UV Stabilized for extended outdoor life
- Low maintenance
- A non-chemical solution for weed infested growing areas
- A cost effective superior alternative to other methods
- Weight is 3.2 oz / sq. yd.

Used for:

- Landscaping
- Shades structures
- Greenhouses
- Under containers or benches

Easy To Install

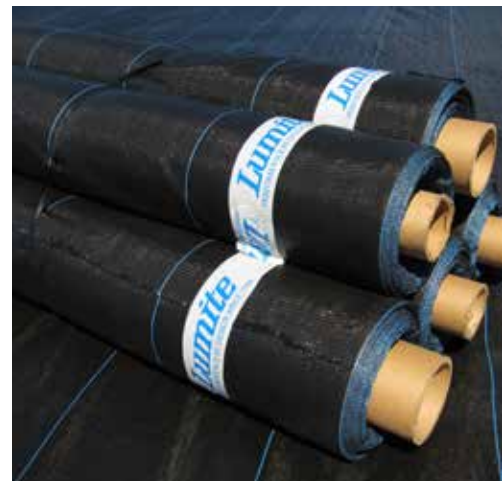
Available in convenient wide widths, this product can be quickly installed to provide years of service. Simply roll the product out and tack it down.

- Stocked widths up to 15' 6"
- Has blue stripes every 12" for easy pot alignment
- Is built tough to resist tears and punctures

The Woven Fabric - Permeable to Air and Water

1094's tightly woven design allows water and nutrients to pass through, in addition to allowing the ground to breathe.

- Reduces puddling
- Is resistant to most chemicals
- Will not rot, mildew, or become brittle in cold weather
- Helps eliminate odors



**custom sizes are available*

Ground Cover Sizes

Item	Description
78-2423	10' x 100' Black
78-2420	3' x 300' Black
78-2422	4' x 300' Black
78-2424	6' x 300' Black
78-2425	10' x 300' Black
78-2430	12' x 300' Black
78-2440	15'6" x 300' Black
78-2445	20' x 300' Black
78-2450	24' x 300' Black

Ground Staples



Item	Description
78-2510	6"-8 gauge 100/bag
78-2515	6"-11 gauge 1,000/cs

Lumite

Committed to providing quality shade, ground cover, and film products since 1942. Made with pride in Georgia.

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For more information,
visit www.lumiteinc.com

770.869.1700

1515 North County Line Road
Alto, Georgia 30510

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

- Powerful 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



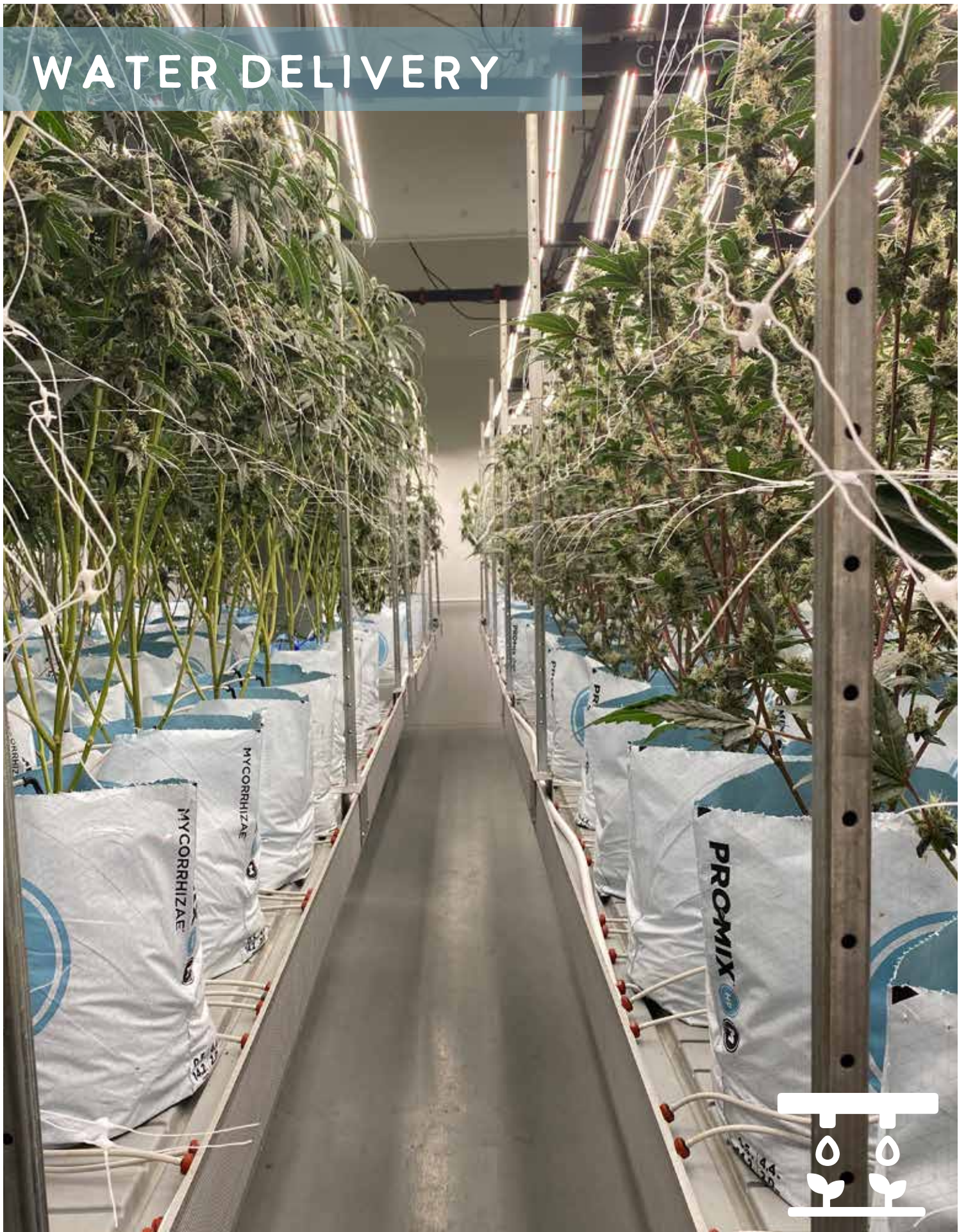
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WATER DELIVERY

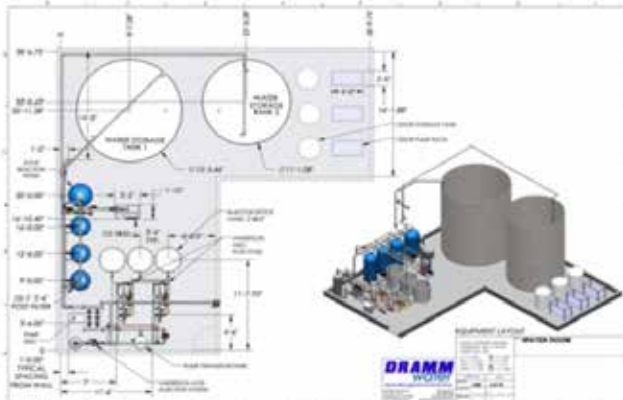


DRAMM



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. **Email your inquiries irrigationdept@griffinmail.com**

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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
- Ultrafiltration - very low micron screen that removes 99.9% pathogens

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



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)
- Micro-Doser system kits (0.5-20 GPM)

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

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



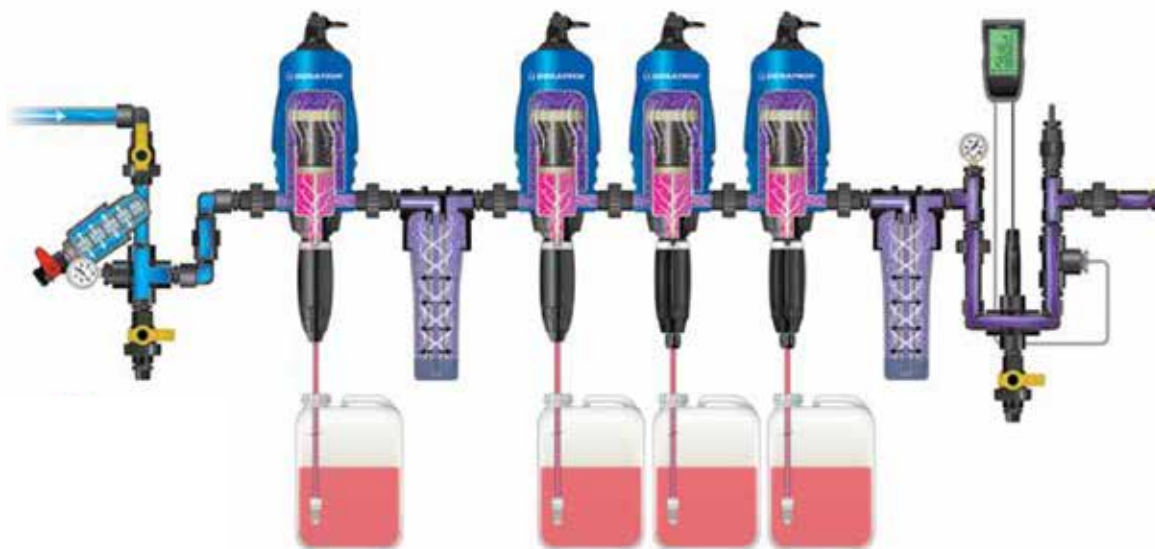
Item #	Description
33-24451	Dosatron NDS Lo 14 GPM 1-11 ml
33-2452	Dosatron NDS Lo 14 GPM 7-75 ml
33-2453	Dosatron NDS Lo 14 GPM 37-375
33-2454	Dosatron NDS Hi 40 GPM 1-7 ml
33-2455	Dosatron NDS Hi 40 GPM 7-75 ml
33-2456	Dosatron NDS Hi 40 GPM 37-190
33-2440	Dosatron 40 GPM Injector, Bypass, Kalrez
33-2442	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.

How it Works

Water-Powered NDS

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



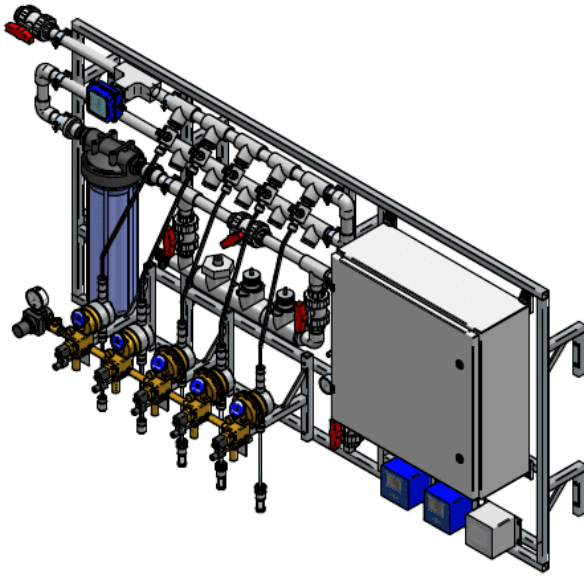


H.E. Anderson Company takes pride in manufacturing the highest quality water treatment equipment on the market. No other brand matches Anderson Injectors' reliability, accuracy, and flexibility.

Ceres Automated Fertigation Systems

Named after the Greek Goddess of Agriculture, the new Ceres Fertigation system provides full and complete automation control of your injector, along with data collection, storage, and export capabilities.

- Proven pumper technology combined with advanced software
- User-friendly, intuitive interface for recipe and scheduling
- Automatic pH and EC correction via probes
- Full control of solenoid valves for automatic irrigation and batch tank filling
- Scheduling based off combination of time, volume, level, input signal, float input
- Flexible recipes allow use of multiple formations (ratio, oz/gallon, ml/gallon, %)
- Available in many flow rates (2-20gpm, 4-40gpm, 8-80gpm, custom flow ranges)
- Simultaneous schedules of irrigation and tank filling events
- Subscription-free software compatible with all operating systems
- Lifetime remote support (phone and email) with options for on-site visits

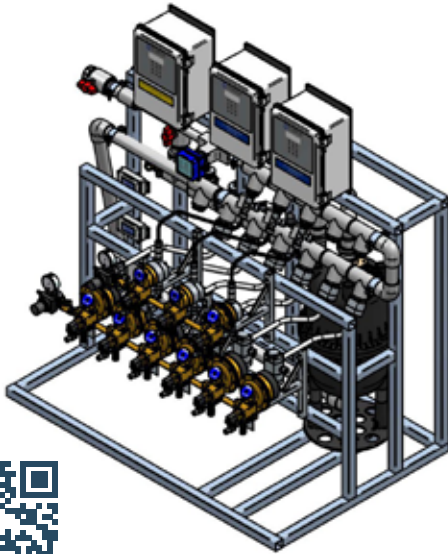


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J+Advanced

Ratio:Feeder® Injection Systems

- Combines J-Series Ratio:Feeder control w/ Ratio:Guard Monitor
- Accuracy does not degrade over time
- Positive displacement and volume proportioning
- Minimal maintenance requirements
- Custom designs available to meet your flow and application requirements
- Low pressure loss
- Expandable and flexible
- Systems can be configured for monitoring or control via ED and pH probes
- Easily integrated with other controls for full fertigation control
- Pre-assembled units available ready for installation.





H.E. Anderson COMPANY

www.heanderson.com

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sales@heanderson.com



Treat your water right!

**Superior solutions for a
variety of applications.**

H.E. Anderson Company takes pride in manufacturing the highest quality water treatment equipment on the market. No other brand matches Anderson Injector's reliability, accuracy and flexibility.



WATERING TOOLS

DRAMM



1000PL Water Breaker

Water your plugs or seedlings with the softest full-flow watering nozzle available. The 1000PL Red Head Water Breaker has over 1000 micro holes that create an ultra-soft flower shower which will not disturb delicate soil or harm tender plants. Made in the USA from ABS plastic and stainless steel. Weight 1.6 oz. GPM = 7 @ 40 PSI



Item	Description
33-5233	Regular soft flow - Red
33-5236	Narrow soft flow - Green
33-5237	Wide soft flow - Orange

750 Lemonhead Water Breaker

The 750 Lemonhead Water Breaker is designed to offer a lower, softer flow. Just as soft as the 1000 PL red head, The 750PL allows for more precise watering and gives growers yet another choice for more flexibility in watering. It has 25% less hole surface area which offers a lower flow that can be regulated by a shut-off valve for minimal water and still retain a pattern. Weight 1.6 oz. GPM = 7 @ 40 PSI



Item: 33-5234

Seedling Nozzle

The Seedling Nozzle allows you to water fragile plants, delicate seedlings or plant cuttings. This high-quality nozzle produces an extra fine hollow cone mist pattern and sprays a 1/2 gallon of water per minute. Made in the US from solid brass with 3/4" hose threads. Weight 2.7 oz. GPM = 1/2 @ 40 PSI



Item: 33-5235

170 Aluminum Water Breaker

The 170AL Water Breaker is excellent for watering in areas with low water pressure or with systems which restrict total water volume. It is designed for small containers (hanging baskets), and when using fertilizer siphons. Adjust water flow to 50% of its volume. Cast aluminum with 3/4" hose threads. Weight 1.6 oz. GPM = 7 @ 40 PSI



Item: 33-5225

400 Aluminum Water Breaker

The original full-flow shower head nozzle. The aluminum 400 Water Breaker provides fast, full-flow watering without damage to your plants. Used by professional growers worldwide. Cast aluminum with 3/4" brass hose threads. Manufactured in the USA. Weight 5.1 oz. GPM = 11.1 @ 40PSI



Item: 33-5230

400PL Water Breaker

The 400PL Water Breaker provides fast, full-flow watering without damage to your plants. Patterned after the original 400 Aluminum Water Breaker with 3/4" hose threads, the 400PL is made from high-impact ABS plastic and aluminum to provide a lightweight alternative. Weight 1.3 oz. GPM = 11.1 @ 40PSI



Item: 33-5231

DRAMM

400PL Water Breaker with Protective Ring

Adds more protection to the plastic 400 PL.

Item: 33-6101



350 PL Water Breaker

High-Flow, Aerated Stream. The plastic 350PL Screen-Aire is a light weight, full flow nozzle for quick watering. Made from durable, lightweight POM plastic and stainless steel screens, the 350PL offers high flow with an ultra-soft, aerated pattern. Perfect for quickly watering containers and nursery stock while not washing the media or fertilizer out of the pot.



Handi-Reach Handle Aluminum Extension Rods

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

Item: 33-350PLC

FOGG-IT Nozzle | (4 sizes)

Item	Description
33-5325	2 GPM Regular (Orange)
33-5326	1 GPM Fine (Purple)
33-5327	1/2 GPM Super Fine (Green)
41-300500	4 GPM Heavy (Blue)
33-6610F4	1/4 GPM Super Superfine (Black)



QAV Shut-Off Valve

The QAV uses a unique, patent-pending valve design includes a single-piece ball, stem and handle assembly to reduce the time to assemble while strengthening the structure.

Item: 50-72318



OneTouch High Flow Valve

OneTouch HF will offer twice the flow rate with less than an ounce additional weight. Larger openings to accommodate more flow, light enough for all-day use. Flow rate: 16 GPM.

Item: 33-5365



Dramm 300 Professional Brass Shut-Off

The Dramm 300 Brass Shut Off offers unmatched durability and flow. Built to last, be repairable, and offer full flow, the 300 Brass Shut Off is the gold standard for hand watering. Flow rate: 17 GPM.



Heavy Duty Plastic Shut-Off Valve

Made from glass filled polypropylene to be very durable, corrosion resistant and lightweight while offering a full flow. Flow rate: 18 GPM.

Item: 33-51051



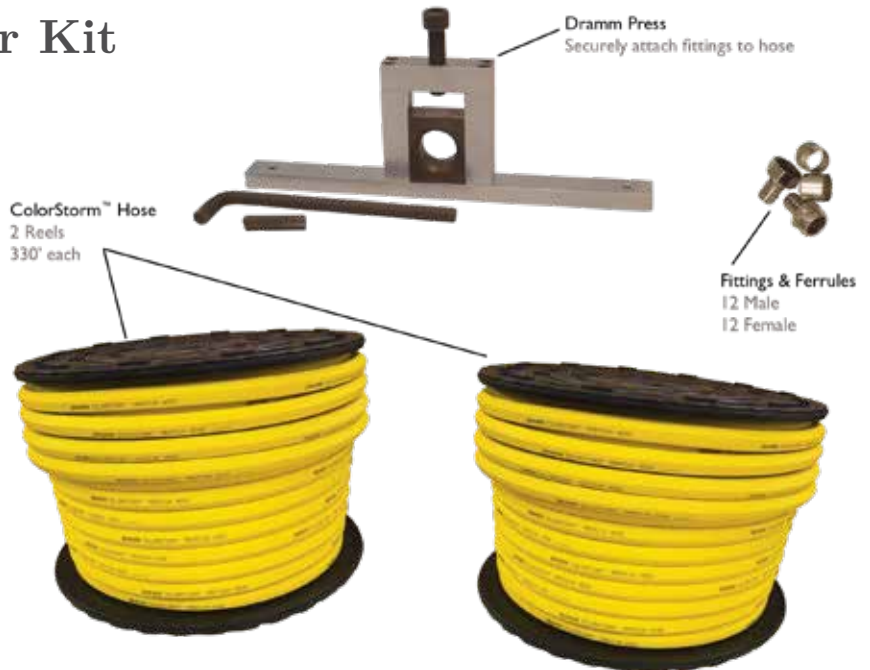
Item	Description
41-400300	Brass Shut-Off
41-400400	Brass Shut-Off Repair Kit

Custom Hose Starter Kit

Make your own hose lengths easily and quickly with our Custom Hose Starter Kit.

Dramm ColorStorm Professional Hose has become the durable and flexible choice of growers around the world. This kit makes it easy to get started cutting your own length of hose.

The kit includes the Dramm Press, our easy to use hose crimper, with one set of jaws, two spools of 330' ColorStorm Hose and 12 male and 12 female fittings with ferrules - enough to make 12 hoses. It is available in either 5/8" or 3/4" kits. Part numbers and components are listed below.



2024
2025

5/8" Custom Hose Kit

- 5/8" Hose
- 2- 330' Spools 5/8" ColorStorm™ hose
- 1- DP Frame – Free of Charge
- 1- DP-J625 5/8" Jaws
- 12- 5/8" Male Fittings/Ferrules
- 12- 5/8" Female Fittings/Ferrules

Item: 33-2266

3/4" Custom Hose Kit

- 3/4" Hose
- 2- 330' Spools 3/4" ColorStorm™ hose
- 1- DP Frame – Free of Charge
- 1- DP-J750 3/4" Jaws
- 12- 3/4" Male Fittings/Ferrules
- 12- 3/4" Female Fittings/Ferrules

Item: 33-2267



Replenishment Parts for Kit

Item	Description	Qty
33-20343	3/4" X 330' Master Roll ColorStorm Hose (No Fitting)	-
33-20583	5/8" X 330' Master Roll ColorStorm Hose (No Fitting)	-
33-22101	5/8" Male Fitting & Ferrule for ColorStorm Hose	12/cs
33-22102	5/8" Female Fitting & Ferrule for ColorStorm Hose	12/cs
33-22301	3/4" Male Fitting & Ferrule for ColorStorm Hose	12/cs
33-22302	3/4" Female Fitting & Ferrule for ColorStorm Hose	12/cs
33-22304	5/8" Splice & Ferrule Set for ColorStorm Hose	12/cs
33-22305	3/4" Splice & Ferrule Set for ColorStorm Hose	12/cs
33-2263	Dp-J750 Press Jaws 3/4" (Only)	-
33-2264	Dp-J625 Press Jaws 5/8" (Only)	-
33-2265	Dp-Frame Press Hose Crimper (Frame Only)	-

ColorStorm™ Custom Size (Min. 10')

Item	Description
33-22000	3/4" ColorStorm Hose ft Yellow Wp 125 psi 17989

Brass Swivel Hose Thread

Item	Description
41-400200	3/4" Hose Thread



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

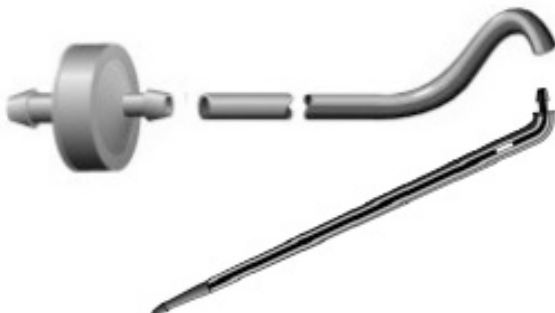
Pressure compensated valves that open/close based on water pressure and ensure even irrigation along the entire drip line.

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
DRIP EMITTERS			
5010007	•	•	Netafim Woodpecker Junior 0.5 gph PC emitter (red)
63235	•	•	Netafim Woodpecker Junior 1.0 gph PC emitter (grey)
WPCJL8	•	•	Netafim Woodpecker Junior 2.0 gph PC emitter (green)
DRIP STAKE ASSEMBLIES & 4- WAY MOD'S			
44-800024	•	•	Netafim 24" PC Dripper Stack Assembly with 0.5 gph Emitter
5013630			Netafim 30" PC Dripper Stack Assembly with 0.5 gph Emitter
44-800036	•	•	Netafim 36" PC Dripper Stack Assembly with 0.5 gph Emitter
5014215	•	•	Netafim Flat 4-Way (30" & 30") M.O.D.'s w/ arrow dripper stakes
			Dramm 24" Pressure Compensated Dripper Tube 2 liter/hour
			Dramm 36" Pressure Compensated Dripper Tube 2 liter/hour
RINGS			
5010094	•	•	Netafim Netbow 5" irrigation ring, each
5010093	•	•	Netafim Netbow 10" irrigation ring, 60 ct case
07DR648	•		Dramm DR6-48 Dribble Ring (8.0+10.0 container) #DR6-48
07DR1048	•		Dramm DR10-48 Dribble Ring (for 16.0 containers) #DR10-48
POLY TUBING			
5010047	•	•	Super Flex 1000' UV White 5/3 Tubing
65402			Netafim 16mm 100' UV White Blank Tube .520-.620
5010132	•	•	Netafim 16mm 500' UV White Blank Tube .520-.620
5010033			Netafim 17mm 500' UV White Blank Tube .560-.660
65401			Netafim 20mm 100' UV White Blank Tubing .820-.940
653811	•	•	Netafim 20mm 500' UV White Blank Tubing .820-.940
1061201W			Netafim 25mm 100' UV White Blank Tubing 1.06-.1.20
1061205W			Netafim 25mm 500' UV White Blank Tubing 1.06-.1.20
TOOLS			
			Jain 3.0 MM Punch .128 Tube WT
30-12910	•	•	#12071033
31-3025	•	•	Kwikcut Pipe Cutter T135

2024
2025

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



FILTERS, VALVES, REGULATORS & TUBING



2024
2025

Item	★	»	Description
FITTINGS			
5011015	•	•	Netafim Insert Male Adapter 3/4" Mpt x 16MM Barb
5011007		•	Netafim 16MM Insert Tee
5011005		•	Netafim 16MM Insert Elbow
5011003		•	Netafim 16MM Insert Coupling
5013078	•	•	.520(1/2") I.D. Tubing #45505
5013079	•	•	.820(3/4") I.D. Tubing #45535
5011011			Netafim 17mm TechLock Coupling
5011012			Netafim 17mm TechLock Elbow
5011013			Netafim 17mm TechLock Tee
5011014			Netafim 17mm TechLock Male 3/4"
06D31HE55	•	•	Power-Loc 1/2" Elbow For .520ID #12050004
06D31HE88	•	•	JAIN PL-80-PELL POWER-LOC 80 ELBOW 12050617
SOLENOID VALVES			
61ET75GH2			Netafim 3/4" FPT 24 Volt AC Solenoid Valve
61ET1GH2			Netafim 1" FPT 24 Volt AC Solenoid #71640-007406
FILTERS			
5012120	•	•	Arkal 3/4" Disc Filter 120 Mesh 130 MICRON (1-12 GPM)
5012130		•	Arkal 1" Disc Filter 120 Mesh 130 MICRON (5-26 GPM)
5012145		•	Arkal 1.5" Superlong Disc Filter 120 Mesh 130 Micron (10-52 GPM)
5012150			Arkal 2" Super Disc Filter 120 Mesh 130 Micron (40-110 GPM)
PRESSURE REGULATORS			
5012025	•	•	Netafim 3/4" 35Psi Low Flow Pressure Regulator .25-4.4Gpm
5012035	•	•	Netafim 3/4" 35Psi Medium Flow Pressure Regulator 4.5-17.6Gpm
30-2230	•	•	Senninger 35Psi 3/4" Fpt Low Flow Regulator .5-8Gpm
30-2202	•	•	Senninger 35Psi 3/4" Fpt Medium Flow Reg 2-20Gpm

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

Email your inquiries irrigationdept@griffinmail.com

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.



EQUIPMENT





John enjoys a hike with friends while his AutoFog treats his greenhouse.

What will you do with the time the AutoFog saves you?



AutoFog

Spraying made automatic, safe & effective



Small



Medium



Large



Extra Large

Automatically apply insecticides, fungicides, and bio-rationals. Dramm has an AutoFog for every size greenhouse.

Call to find out which one is right for you.



Scan Code for video & more information

DRAMM®

Integrated Plant Health

information@dramm.com

dramm.com

920.684.0227

SPRAY EQUIPMENT



Spray experts with a full family of products to meet all your needs.



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	•	FMST100-50 SparyTrax Foamer – 1000 gal tank on SprayTrax cart. 50' hose, options for additional hose lengths

2024
2025

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-10A-SS 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
62-6003201		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. Sprays up to 75ft
41-1488	•	ColdFogger AR – carted fogger with 20 gal tank and 150' hose. Sprays 20-25ft
41-1489	•	ColdFogger AR – carted fogger with 20 gal tank, 150' hose, and pneumatic wheels. Sprays 20-25ft
41-1121	•	Standard K-30 PulsFOG, 10 L tank, 100 HP motor, blue frame. 220ft propulsion
41-1330	•	Portable K-10 PulsFOG, 10 L tank, 25 HP motor, red frame. 45ft propulsion
41-1332	•	Portable K-22 BIO PulsFOG, two 5 L tanks, 50 HP motor, yellow frame. 110ft propulsion

» = Drop-Ship Item



DRAMM

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, up to 150 PSI for better coverage
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)

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

2024
2025**SIEBRING**

A



B



C



D

Mist'r Drench (A)

High or low pressure to mist chemicals, drench, or shade.

- 800 PSI max pressure
- 3 GPM max flow
- 100' 3/8" wire braid hose (standard)
- 60 gallon tank with sump
- Constant agitation
- Towing tongue
- 2 guns, quick coupled with 12" and 18" wands
- Gas or electric options
- Also available in 100 and 200 gallon

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

Drop Ship Only

Siebring Sprayers Available, Special Order w/Gas Engines

Fox Sprayer (B)

- 800 PSI max pressure
- 3 GPM max flow
- 100' 3/8" wire braid hose (standard)
- 35 gallon tank with sump
- Constant agitation
- Solid rubber tires
- Highly maneuverable – narrow front steering mechanism for tight turns
- Towing tongue
- 2 guns, quick coupled with 12" and 18" wands
- Gas or electric options

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

Drop Ship Only**Coyote Sprayer (C)**

- 800 PSI max pressure
- 3 GPM max flow
- 100' 3/8" wire braid hose (standard)
- 55 gallon tank with sump
- Constant agitation
- Solid rubber tires
- Towing tongue
- 2 guns, quick coupled with 12" and 18" wands
- Gas or electric options

Item	Description
COYOTE88	Coyote 800 120V stainless 100'hose, reel, 1.5HP

Drop Ship Only**Kruser Sprayer (D)**

- 750 PSI max pressure
- 1.5 GPM max flow
- 100' 1/4" wire braid hose (standard)
- 25 gallon tank with sump
- Constant agitation
- Solid rubber tires
- Gun and wand, quick coupled
- Gas or electric options

Item	Description
542SF30ES1	750 120v W/100' Spray Hose, 25G Tank, 1.5 gpm, Electric Motor
542SF30GS1H	750 W/100' Spray Hose, Honda Gas Engine

Drop Ship Only

SPRAY TYPE		KRUSER	FOX	COYOTE	MIST'R DRENCH
Brass	Electric	KS750	FOX	COYOTE	MD83BW
	Gas	KS750G	FOX GAS	COYOTE GAS	MD83BWG
Stainless Steel	Electric	KS750SS	FOXSS	COYOTE88	MD83BWSS



2024
2025

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

Grizzly 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, SHIVERS, POT FILLERS & CONVEYORS



PM20 Mixer & Flat Filler

Deciding which jobs to automate and which jobs to do manually can be a challenge for new growers. Pack Manufacturing is making that decision easier with the PM20 Combination Mixer and Flat Filler. This innovative new design combines the functionality of a 1 cubic yard batch mixer with a high volume mobile flat filler. The PM20 features a clear polycarbonate mixer door with safety cutoff switch, adjustable rotary brush and sweep, roller take-offs, soil return to eliminate wasted media, and 15" wide filling conveyor- all on a mobile frame. The PM20 is capable of mixing 1 cubic yard of media every 3- 5 minutes and filling 770 trays or 1,800 1 gallon pots every hour.



PM10C Flat Filler

The Pack Manufacturing PM10C series is an introductory level automated Flat Filler. Capable of filling flats and trays under 6" in height, the PM10C makes an excellent first choice for customers looking to reduce expensive labor costs. The PM10C comes equipped with a 16.2 Cubic Foot Soil Hopper, variable speed conveyor, fully adjustable compacting sweeps, a rotary brush, heavy drag chain soil delivery, and the side chute soil return system to deliver any excess soil media right back to the hopper. The PM10C is available with 12" or 15" belt widths and operates on a standard 120VAC plug. Custom options are available.



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 or potting bare roots. 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.



Pioneer Filler

The economy Pioneer™ Filler from Pack manufacturing is the perfect entry level machine for any pioneering new grower. The Pioneer™ Filler from Pack Manufacturing provides a grower with the same high-volume capability as the competition for a fraction of the cost. Standard with all essential elements- 1 cubic yard hopper, pot sweep, drag chain, filling conveyor, rotary brush and roller transfers. The Pioneer™ Filler allows for up to 1,400 flats or 950 5-gallon pots an hour. Add-ons to make your Pioneer™ Filler the custom machine for any operation. The Pack Mfg. Pioneer™ Filler also offers the advanced features seen on the most expensive fillers, but you only add the features you need, and skip the features you don't need.



NS1100 Pack Power Seeder™

The Pack Manufacturing NS1100 Pack Power Seeder™ is a fully automated Needle Seeder that delivers full control to the operator with the Touchscreen controller. The Pack Power Seeder™ includes an auto-indexing powered Conveyor Belt, Seed Hopper, Dibbler, Topcoat Hopper, Belt Vibrator, Seed Vacuum to retrieve excess seeds, air clean-off tools, and operates from a 120VAC outlet. The Power Seeder indexes trays to each station, and the operator has full control over the unit and number of seeds delivered per cell. Custom seed manifolds and needle sizes are available for different tray and seed sizes. Fully Pneumatic NS1000 option also available.



Trailblazer Filler

The Trailblazer Filler™ is the premiere solution for established growers with multiple filling needs. The Trailblazer Filler™ includes all the options of the Pioneer Filler®, along with the fully loaded options package to include low-profile casters, vibrator on belt for soil compaction and elimination of air pockets, powered roller take-off to eliminate tipping, an enhanced auger driven soil return to recycle excess media, and reverse options for easy cleanout and large container filling. All these features and more come standard with the Trailblazer Filler™ to provide growers the ability to fill over 1,500 containers an hour with absolute minimal labor! AUTO options are also available.





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.



2024
2025

WHY AUTOMATE?

Save on labor costs and minimize the impact of labor shortages by reallocating your staff's time to be more efficient.

HOW CAN AUTOMATION HELP YOU?

Soil handling, container filling, irrigation, product transportation, spacing, transplanting.

WHAT TYPES OF AUTOMATION MACHINES ARE AVAILABLE?

Mixers	Bale Shavers
Potters	Baggers
Flat Fillers	Watering Solutions
Conveyers	Custom Equipment



Griffin Construction Department
Partner with us on your next project.
Call for consultation and quote:
1.800.888.0054 then press 3.

CUSTOM Equipment

If you don't see what you are looking for, ask!

Pack can build it!

SUCCESS STORY

In the Fall of 2021, Neal Farnham, outside sales rep for Griffin and Paul Oparowski of Irrigation Automation Systems (IAS) met with a large nursery located in Connecticut to discuss IAS's pump automation products. However, pump automation was not the "pain point" that the customer wanted to address. Their issue was managing the irrigation schedule for their perennials. At that time, they assigned an individual the task of manually turning on valves in the hoop houses at a certain time for a certain period. This created a Goldilocks dilemma: are the plants getting too much, too little or just the right amount of water. You also had the possibility of no water or over water if the worker was pulled away for another project. Based on this scenario and the customer's needs, Irrilink™ was born.

IAS was able to modify an existing system to connect up to 16 valves to one controller that the perennial's manager could access via the internet. The initial installation of multiple systems controlling over 80 valves took place in March 2022. With Irrilink™, the customer can schedule start and run times as needed, assuring correct levels of irrigation and proper management of resources (water and pumps). Irrilink™ connects to your irrigation system with your phone, tablet or computer, accessing your valves 24/7, from anywhere in the world. The grower has reported a savings of over \$30k in the first year of operation and a significant improvement of plant health and production.

By the end of 2024, this customer will be controlling over 400 valves using Irrilink™ from Griffin and IAS. This is a success story we're happy to share with all nursery growers who wish to duplicate this success story.

-IAS Irrilink™



Irrigation Automation Systems



Automation by Design: Configurable Logic Controllers

Designed for monitoring and remote control of multi-bank valves, fans, etc.

- Allows users to remotely start/stop their systems via phone, laptop or computer
- Saves time and money by alleviating dedicated personnel overseeing manual valve control
- Improve crop yield with consistent irrigation scheduling
- An economical way to oversee your irrigation network from anywhere at any time
- On demand or scheduled irrigation control. Gang zones with similar watering times
- Cascade scheduled start time to maintain pump efficiency
- Package includes: 20W solar panel or 24v AC power source, 1 or 2 RCB's
- Available as AC or DC operation. No 110V AC Power? No problem
- Scalable

Hand Held Soil Meter

A portable and inexpensive way to monitor moisture levels in your fields or greenhouses

- Easy to use, no maintenance sensors
- Produces accurate and repeatable soil moisture measurements
- For use in all types of soil – loam, potting, sand, etc.
- Bury sensors for soil cross section and root zone analysis
- Prevent over or under watering
- Perfect for Garden Centers etc.

Item: 83-4091



Griffin Irrigation Department
Save Water • Save Labor • Grow More
Call 1.800.888.0054 and ask for an Irrigation Specialist.

2024
2025

Jump Start Seeding Heat Mat

This windowsill heat mat is perfect for veteran growers, beginners, and children too. It is the perfect size for small growing spaces, and improves germination by warming the root area 10-20°F over ambient temperature. By warming the roots you increase your growing success as this mat will maintain a controlled temperature all season long. UL listed. Power cord included. 120 Volt.

Item: 80880001
Desc: 3"x20" 7.3 Watt



Digital Temp Controller for Heat Mat

The heat mat thermostat is digital for greater accuracy. The stainless steel temperature probe can be submerged in water. Digital temperature controller for heat mats. Provides constant optimum temperatures for specific crops. Controls temperature in colder or warmer environments. Illuminated indicator light; 3-prong ground plug. Compatible with all heat mats; optional for Hydrofarm Heat Mats. Controllable range from 68 - 108° Fahrenheit. Celsius or Fahrenheit read-out (hold Up or Down button to change). Max current: 8.3 amps / 1000 watts.

Item: 80880005
Desc: 1,000 Watt

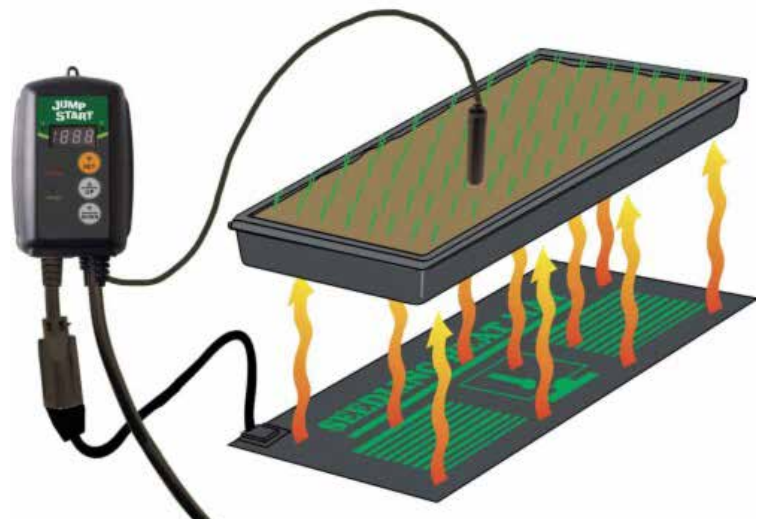


2024
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Seeding Heat Mats

Re-engineered for better performance and greater durability! The new, stronger heating wire, and thicker multi-layer construction offers more uniform heating and the durability to withstand rugged greenhouse environments. Increases success of seedlings and cuttings. Warms root area 10-20°F over ambient temperature to improve germination. Lighting, watering, and planting information printed on mat. Waterproof construction. Has a 6' power cord. The only UL-listed seedling heat mats on the market! 50% thicker construction.

Item: 80880002
Desc: 8 7/8"x19 1/2" 17 Watt
Item: 80880003
Desc: 20"x20" 45 Watt
Item: 80880004
Desc: 48"x 20" 107 Watt



GROWING MEDIA & CONTAINERS



GROWING MEDIA



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 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.

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



Item #	» Description	Size	CS/UOS
81270002	Aurora Roots Organics Original Potting Soil	1.5 cu ft	70/70
81270184	• Aurora Roots Organics Original Potting Soil	.75 cu ft	140/140
81270194	Aurora Roots Organics Original Potting Soil	3 cu ft	70/70
81270001	Aurora Roots Organics Formula 707 Potting Soil	3 cu ft	36/36
81270173	Aurora Roots Organics Formula 707 Potting Soil	1.5 cu ft	70/60
81270174	• Aurora Roots Organics Formula 707 Tote	2 cu yd	2/2
81270188	Aurora Roots Organics Greenfields Potting Soil	1.5 cu ft	70/60
81270189	• Aurora Roots Organics Greenfields Potting Soil	2 cu yd	2/2
281270190	• Aurora Roots Organics Greenlite Growing Mix	1.5 cu ft	70/60
81270191	• Aurora Roots Organics Greenlite Growing Mix	2 cu yd	2/2



Evocoir

High quality, washed and buffered coir in key forms. Open top bags are especially popular for cannabis cultivation.

- Low EC (<0.05 mmos/cm), fully washed and buffered
- Sustainable, responsibly sourced, highly managed from Sri Lanka factory
- Bagged material predrilled for drip stakes and plant placement
- Professional Open Top bags (POTs) ship with pre-cut drain holes



Item #	Description	Volume or Case Count	Dimensions	Per Pallet
POTs – all with compressed 30/70 blocks (30% chip, 70% 16 mm pith) in biodegradable, nonwoven fabric				
150-0001	Evocoir EC Platinum Open Top 1 Gal Biodegradable Coir	1 gal	7"x6"x8"	950
150-0002	Evocoir EC Platinum Open Top 2 Gal Biodegradable Coir	2 gal	7.5"x7.5"x9.5"	650
150-0003	Evocoir EC Platinum Open Top 3 Gal Biodegradable Coir	3 gal	9.8"x7.8"x8.8"	450
Grow Cubes – Non-woven, closed top, biodegradable fabric with pre-cut drain and planting holes, pre-drilled planting hole in the compressed coir				
150-0021	Evocoir EC Platinum Grow Cube 4x4	210/box	10cm x 10cm x 7cm	5040
150-0020	Evocoir EC Platinum Grow Cube 6x6	68/box	15cm x 15cm x 10 cm	1632
Loose fill bags – Fluffed and ready for planting. 70/30 Coco: perlite blend				
150-0010	Evocoir EC Platinum 50 L 70/30 Coco Perlite	1.75 cu ft	-	90
150-0011	Evocoir EC Platinum 80 L 70/30 Coco Perlite	2.8 cu ft	-	60

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 Basinet (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. GGSPRO is ready for your call and question.

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.

Item: 81600012
Desc: 1.5 cu ft.



Sprout Island Blend™ Organic Seed Starter ★



Sprout Island Organic Seed Starter is designed for seed germination & rooting plant cuttings. It is ready-to-use in cell packs or flats and provides natural moisture retention & aeration. Includes mycorrhizae, worm castings, kelp and fully-cured compost.

Item: 81600029
Desc: 16 qt

Item: 81600045
Desc: 2 cu ft



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.

Item: 81600011
Desc: 8 qt

Item: 81600007
Desc: 2 cu ft



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.

Item: 81600086
Desc: 8 qt



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!

Item: 81600084
Desc: 1 cu ft

Item: 81600061
Desc: 2 cu ft



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.

Item: 81600023
Desc: 1 cu ft

Item: 81600022
Desc: 2 cu ft



Frey Group Leaf Compost

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

Item: 81600064
Desc: 40 lb



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.

Item: 81600002
Desc: 1 cu ft



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.

Item: 81600065
Desc: 40 lb



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.

Item: 81600001
Desc: 1 cu ft



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Coast of Maine

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.

Item: 81600005
Desc: 1 cu ft



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.

Item: 81600021 **Item:** 81600020
Desc: 1 cu ft **Desc:** 2 cu ft



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!

Item: 81600014
Desc: 8 qt



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: 81600006
Desc: 1 cu ft



Organic & Natural Aeration Formula Potting Soil

A blend of coir and perlite has been a must have for hydroponic growers for years. At Coast of Maine we have developed our own unique blend by adding lobster meal and kelp meal bringing life and energy to this popular growing media.

Item: 81600198
Desc: 1.5 cu ft



Stonington Blend Plant Food - Lobster & Kelp

Coast of Maine Stonington Organic Plant Food (5-2-4) is an exceptional organic granular fertilizer made with lobster, crab, fish and kelp meal plus worm castings and other natural ingredients. It will help super charge the soil "biology" of containers as well as beds and gardens. It is also high in calcium which helps promote plant vigor. Available in 4lb bags.

Item: 81600015
Desc: 4 lb



Lobster Meal Plant Food

Coast of Maine Lobster Meal Organic Plant Food is a unique single-ingredient fertilizer, high in both natural nitrogen and calcium to help promote strong stem growth, healthy green foliage and a vigorous root system. Made of 100% ground, dehydrated lobster (with some crab shell, a by-catch of the lobster harvest), it is ideal for fertilizing outdoor container gardens, vegetable and herb gardens and flower beds. Use it on all of your gardens for great results! Available in 4 lb bags.

Item: 81600017
Desc: 4 lb



Fish Bone Meal

Coast of Maine Fish Bone Meal Organic Plant Food is ideal for budding and blooming plants. Made from Pacific Whiting bones that are dehydrated and ground into meal. An excellent natural source of phosphorus, calcium and nitrogen. It is also preservative-free and a very effective alternative for traditional steamed bone meal. Available in 3 lb bags.

Item: 81600016
Desc: 3 lb



Kelp Meal

Coast of Maine Kelp Meal Organic Plant Food is 100% dehydrated Norwegian Kelp (*Ascophyllum nodosum*) or common seaweed. Kelp Meal is a source of trace quantities of macro and micro-nutrients and a completely natural sustainable resource. Helps to promote healthier plants and improve crop yields. Use around trees and shrubs, on lawns or add to container gardens and incorporated into garden beds. Available in 4 lb bags.

Item: 81600018
Desc: 4 lb





FoxFarm 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 blend for indoor and outdoor cultivation and is designed to promote an environment beneficial to seed germination and root development.

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 ★

A richly amended container blend for indoor & outdoor plants. It contains a custom blend of soil microbes that can help improve root efficiency & encourage nutrient uptake.

Ocean Forest Potting Soil ★

FoxFarm's most popular soil, is a powerhouse blend of aged forest products, sphagnum peat moss, earthworm castings, bat guano, fish meal, and crab meal.

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.

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Item #	Description	Size	CS/UOS
82000159	Lucky Dog K-9 Kube Growers Blend	2.2 cu ft	35/5
82000169	Light Warrior Seed Starter	1.0 cu ft	75/5
82000156	Coco Loco Potting Mix	2 cu ft	48/6
82000153	Happy Frog Potting Soil	2 cu ft	60/6
82000152	Happy Frog Potting Soil	12 qt	120/10
82000154	Happy Frog Soil Conditioner	3 cu ft	35/5
82000174	Happy Frog Soil Conditioner	1.5 cu ft	75/5

Item #	Description	Size	CS/UOS
82000168	Ocean Forest Potting Soil	1.5 cu ft	75/5
82000167	Ocean Forest Potting Soil	12 qt	120/10
82000164	Ocean Forest Potting Soil	3 cu ft	36/6
82000166	Original Planting Mix	1 cu ft	75/5
82000158	Strawberry Fields Potting Soil	1.5 cu ft	75/5
82000160	Salamander Soil Potting Mix	1.5 cu ft	75/5
82000220	Cultivation Nation 70/30	2.0 cu ft	48/1

★ = Retail Store Best Seller



All Purpose Dry Fertilizer

Happy Frog All-Purpose Fertilizer is a ready-to-use blend of natural fertilizers and microorganisms that deliver nutrition where your plants need it most. Highly recommended for vegetable gardens, annual and perennial flower gardens, ornamental plantings, and all types of container gardening.

Tomato & Vegetable Dry Fertilizer

This fertilizer also contains calcium which helps prevent blossom end rot and builds stronger cell walls, boosting the plants ability to resist disease. Mycorrhizal fungi are included to help increase root efficiency, which may enhance nutrient uptake and water absorption.

Item #	Description	Size	CS/UOS
82000066	Happy Frog All Purpose	50 lb	1/1
82000064	Happy Frog Tomato & Vegetable	50 lb	1/1



SUCCESS STORY

In 2021, Eric Gaulin founded InGrow Technology intending to revolutionize grocery store produce through indoor vertical farming. The COVID-19 pandemic had caused disruptions in food supply chains, which spurred him to undertake this endeavor. Gaulin's entrepreneurial experience had taught him to seek simplicity and efficiency, which he applied here as well. His search for an ideal growing medium led him to Jiffy's J-7 organic pellets, which had an impressive 99.8% success rate in trials.

The choice of Jiffy Pellets was not arbitrary but strategic, driven by their numerous benefits. Apart from their high effectiveness, they were incredibly user-friendly, which matched Gaulin's vision of simplicity in operation. Their organic composition addressed food safety concerns, which is crucial for producing raw vegetables. Furthermore, the minimal debris resulting from the pellets' design made maintenance and cleanliness of the InGrow system a breeze.

InGrow offers a comprehensive indoor farming solution with Jiffy's efficient pellets. They provide high-quality seeds and growing instructions to ensure a hassle-free experience for customers. Gaulin's emphasis on customer education emphasizes the system's user-friendliness, efficiency, and low labor requirements.

As interest in InGrow's innovative approach to indoor farming grows, major retailers like Sobeys have taken notice. They recognize the system's potential to streamline supply chains and provide year-round fresh produce. Gaulin's vision extends beyond Quebec, with plans to expand InGrow across North America. With Jiffy Pellets at its core, InGrow is ready to lead the way in indoor vertical farming, offering a solution that is both effective and accessible.



Innovative Growing Media Solutions

Grodan stone wool media products enable precision growing. Made from basalt rock - Grodan products are favorites for propagation and production for many CEA and other long and short-term crops; including lettuce, tomatoes, peppers, cucumbers, cannabis, hemp, roses and gerbera. Grodan products arrive pathogen free.



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Starters

Grodan® Stonewool A-OK Starter Plugs™ Starters are used for propagation, both seed starting and vegetative propagation. A-OKs ship as a full sheet (sized for a 10x20 tray); individual cubes are separated from the sheet and are suitable for sowing or sticking. The 1" A-OKs are particularly popular for use in NFT systems for lettuce and herb production. 1.5" A-OKs are popular for propagation of many crops, including cannabis. Starters come wrapped (W) or unwrapped (UW) with cellophane. 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	Grodan Starters 1" AOK UW, 1.0x1.57 (25/40)	6000
51-9101	Starters 1.5" AOK UW, 1.4x1.57 (36/40)	2940
51-9002	Starters 1.5" AOK W, 1.4x1.57 (36/40)	2940
51-9106	Grodan Starters 1.5 AOK , Pre-cut	2310 plugs loose in box
51-9105	Grodan Starters 1.5 AOK, Pre-cut, pre-filled trays	50 cubes/tray, 30 trays/box
51-9023	Starters 2" AOK W, 2x1.57 (50/40)	1500
51-9035	Starters 2" AOK UW, 2x1.57 (50/40)	1500
51-9024	Macroplugs, V-cut, 1.5x1.57 (36/40), 50 per bag	35/bags
51-9025	Macroplugs, loose, V-cut, 1.5x1.57 (36/40)	2000
51-9052	Gro-Block Imp Mini Block UW 1.5" (40/40)	2250/cs



Gro-Blocks Improved

Optimized for cannabis and hemp, Improved Gro-Blocks bring optimal density and new hydrophilic technology 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
51-9165	Gro-Block Imp GR4 UW Sm 3x3x2.6 w/Hole, 8/strip	384/cs
51-9166	Gro-Block Imp GR4 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, 6/Strip	216/cs
51-9169	Gro-Block Imp GR6.5 W Sm 4x4x2.6, 6/Strip	216/cs
51-9170	Gro-Block Imp GR7.5 W Med 4x4x3, 6/Strip	216/cs
51-9160	Gro-Block Imp GR 10 UW Large, Loose, 4x4x4	1584/plt
51-9171	Gro-Block Imp GR10 UW Lg 4x4x4, 6/Strip	144/cs
51-9172	Gro-Block Imp GR10 W Lg 4x4x4, 6/Strip	144/cs
51-9161	Gro-Block Imp Jumbo, GR 22, 6x6x4	64/cs
51-9162	Gro-Block Imp Hugo, GR 32, 6x6x6	64/cs
51-9163	Gro-Block Imp Hugo Loose, GR 32, 6x6x6	512/plt
51-9173	Gro-Block Imp Uni-Block 8x8x4	36/cs



Improved Gro-Slabs

Slabs are the final step in a slab production system. The new Improved Gro-Slabs are optimized for production of cannabis and hemp with Advanced Wetting Agent for more even water distribution and better wettability. 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/case
51-9015	Grodan Uni-SLAB 9.5" x 8" x 4"	16
51-9176	Gro-Slab Imp 6" wide, 36x6x4	12
51-9177	Gro-Slab Imp 6", 36x6x3	12
51-9178	Gro-Slab Imp 8", 36x8x3	12
51-9179	Gro-Slab Imp 12", 36x12x3	8



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/case
51-9017	Gro-Smart Tray - 9.25" x 20"x 2"	5



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/case
51-9031	Grow Cubes L, 1x1, 3 bags/box	2.0 cf
51-9032	Grow Cubes M, 1x1, 6 bags/box	1.0 cf
51-9033	Grow Cubes, 1x1, loose pack	5.0 cf
51-9034	Grow Chunks, 2x2, 3 bags/box	2.0 cf
51-9030	Gro-Wool bag	45 lb bag

NEW Grodan® Stonewool A-OK Starter Plugs™ Loose in Carton

A-OK Starter Plugs™ for starting seeds and rooting of cuttings prior to plugging into the larger Grodan Gro-Blocks. A-OK Starter Plugs™ come loose in a carton for those who prefer to saturate as individual plugs. Easy to use with propagation trays such as the Grow Smart Tray. Note: the AOK plugs are shipped as 2,310 individual loose plugs, bulk in the carton. There is no shrink-wrap.

Item	Description	Qty/case
51-9105	Grodan Starters 1.5 AOK, Pre-cut, pre-filled trays	50 cubes/tray, 30 trays/box



New for 2024! Pre-Cut AOKs!

Get your AOKs pre-cut, loose in a box or prefilled in a tray.

Grodan® Stonewool A-OK Starter Plugs™ in Prefilled tray

The Grodan tray comes prefilled with Grodan A-OK Starter Plugs™ for fast and easy propagation from seeds or cuttings prior to transplanting to Grodan Gro-Blocks. The tray fits perfectly in all standard propagation dome kits. These trays are designed with a unique and convenient thumb slot to make tray removal easy and comfortable. 50 plugs per tray, 30 trays per carton.

Item	Description	Qty/case
51-9106	Grodan Starters 1.5 AOK , Pre-cut	2310 plugs loose in box

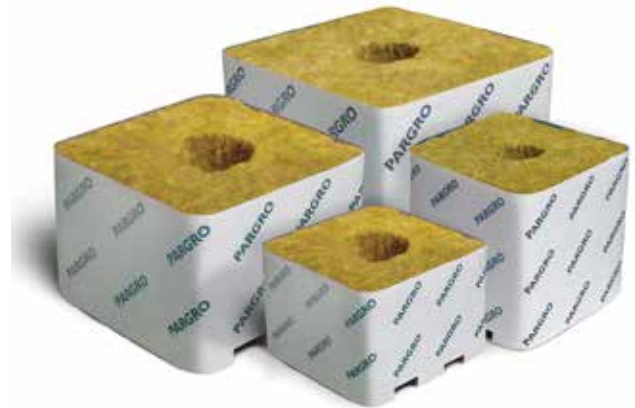


Pargro

The Pargro line of stone wool media products from Grodan brings excellent value to cannabis growers using basic irrigation strategies. With a moderate water holding capacity, Pargro blocks are more forgiving of heavier irrigation events. Growers using more technical crop steering methods will appreciate the additional water holding capacity offered by the Grodan Improved line.



Item	Description	Qty/case
51-9183	Pargro PAR6.5 Block Sm	216
51-9185	Pargro PAR10 Block Lg	144
51-9187	Pargro PAR22.5 Jumbo	64
51-9189	Pargro PAR32 Biggie	64
51-9190	Pargro Single Slab	16
51-9191	Pargro Slab 6" w/holes	12
51-9194	Pargro Slab 6"	12
51-9192	Pargro Slab 6" Tall w/holes	12
51-9195	Pargro Slab 6" Tall	12
51-9193	Pargro Slab 8" w/holes	12
51-9196	Pargro Slab 8"	12



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SUCCESS STORY

In 2023, under the leadership of GM Skyler Sprugel, Field of Dreams, located in Longview, Washington, saw a significant improvement in their crop steering strategies thanks to Grodan’s powerful e-Gro platform and business support. By working closely with Ben Feldman, Crop Specialist at Grodan, Field of Dreams enhanced their understanding of micro irrigation techniques and smoothly transitioned from using coco fiber throughout their facility to Grodan stone wool, allowing for greater precision, consistency, and control.

Through personalized business support and guidance from Grodan, Field of Dreams has surpassed its previous coco growing skills and achieved above-average results compared to other cultivators in their region. Grodan’s attention to detail and expertise have been instrumental in helping Field of Dreams improve its cultivation methods and optimize its crop steering practices.

Today, Field of Dreams is efficiently utilizing Grodan’s stone wool products and software, leading to improved crop yields, quality, and overall success. With Grodan’s support and practical solutions, Skyler and his crew are well-positioned to continue thriving and achieving excellence in their cultivation practices for years to come.

Get rooted

In stone wool

Designed to grow









Grodan® Stone wool for best propagation

Give your cuttings and seedlings the perfect start in life with Grodan Starter Plugs™ – the trusted propagation solution of horticultural professionals worldwide.



Part of ROCKWOOL Group
www.Grodan101.com



-  BETTER, FASTER GERMINATION
-  LABORSAVING
-  STRONGER ROOTS
-  FOOD SAFE
-  SUSTAINABLE
-  ORGANIC

 Jiffy Pellets



Jiffy-7 Pellets

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The Jiffy-7 Pellets is a unique concept packing amazing cost saving advantages for the grower on the lookout to minimize input costs. Jiffy-7 Pellets, media and container in one, comes compressed, saving on freight and logistics. Jiffy-7 Pellets is available in many sizes and tray configurations and suited to be used in fully automated sticking lines.

Item	Vendor	Description	Pellets/cs
60-2512	70001324	J7 Hort Peat Pel 25x35 PLA Net Stacked	3,312
60-2236	70001413	J7 Hort Peat Pel 30x40 PLA Net Stacked	1,700
	70001435	J7 Organic Peat Pel 36x41 PLA Net Stacked	2,000
60-2330	70001476	J7 Organic Peat Pel 42x43 PLA Net Stacked	1,000
60-2519	70001478	J7 Hort Peat Pel 42x63-1 PLA Net Stacked	520
60-2338	70000107	J7 Hort Peat Pel 50x95-PLA Net, 50x95mm	486
60-2537	70001509	J7 Organic Peat Pellet 70x70 PLA Net Stacked	180
60-2538	70001507	J7 Hort Peat Pel 70x100 18l PLA Net Stacked	120

Options for CEA

60-2539	70001566	J7 Organic Peat Pel 18x42-300 CN With Hole H PLA Net	7500
60-2540	70001372	J7 Organic Peat Pel 21x35WH-162 11 mm Cone indent PLA Net	2592
60-2541	70001203	J7 Organic Peat Pel 23x45WH-162 11 Ind PLA Net	2592
60-2542	70001674	J7 Organic Peat Pel 30x40-105 11i WH PLA Net	1995
60-2543	70001432	J7 Organic Peat Pel 30x65-105 PLA Net	1470
60-2544	70001532	J7 Organic Peat Pel 36x41-72WH 11mm Ind. No Precut & No aera	2088
60-2545	70001572	J7 Organic Peat Pel 42x55-50 no net on top PLA Net	1200

Jiffy Peat Pots

The Jiffy peat pot appeared on the horticultural scene in the 1950s making it the first earth friendly certified home compostable container. Available in many different versions and sizes, a Jiffypot can potentially offer a 'bio' solution for almost every job. Today's Jiffypots are well suited to work in many of the automation solutions found at modern nurseries. Jiffy pots, even though it has 60 years of offering an environmental friendly alternative to plastic pots under its belt, still is very relevant in today's market looking for bio solutions.

Item	Vendor	Description	Pots/cs
60-2021	70000357	2" rd. x 2" dp. pot with slits	3564
60-2026	70000500	2 1/4" rd. x 2 1/4" dp.	2816
60-2022	700001649	2.17"x2" Round with slits	3807
60-2027	700001636	2.4"x2.2" no hole	3136
60-2024	70001607	6.7" x 6" Rd with holes	180



What is PLA netting?

PLA netting is a lightweight fine-fiber web made of polylactic acid (PLA). This natural plant based material is 100% fossil plastic free, renewable and sustainable. PLA has a 65% lower production carbon footprint compared to polypropylene plastic.





Lambert Peat Moss high-quality peat-based substrates are sourced from their Canadian facilities. Through a carefully managed network of peatlands, the Lambert team maintains a constant supply of long-fibered, highly structured peat. Lambert consciously invests to meet the needs of emerging markets and welcomes opportunities for custom blends.

In addition to their premium peat moss, Lambert also harvests and processes EcoPeatPlus+. Exclusive to Lambert, EcoPeatPlus+ is a natural wood fiber that is durable, compressible, and essentially stable and inert. EcoPeatPlus+ acts as a natural aggregate that maintains the structure of the mixture for a long period of time and also acts as a substitute for perlite.

LM-111 All Purpose Mix

Composed of Canadian sphagnum peat moss, peat chunks, and coarse perlite. Provides medium drainage and water retention. Well-suited for pots of all sizes. Also available in an organic version. A classic all-purpose mix! 80-90% peat.

EPM-20 All Purpose Mix

Composed of Canadian sphagnum peat moss, EcoPeatPlus+, and coarse perlite. Provides medium drainage and water retention. Ideal general-purpose mix, 4" pots and larger. Works great with hanging baskets. 70-80% peat.

PC-7 All Purpose Mix

From the Green Formula Mix (GFM) family. Long fibered peat, coir, and coarse perlite. Provides medium drainage and water retention. Ideal for pots of all sizes, suitable for outdoor production. 65-75% peat.

PC-15 All Purpose Mix

From the Green Formula Mix (GFM) family. Long fibered peat, coir, and coarse perlite. Very similar to LM-111 with added coconut fiber. Medium drainage and water retention. Ideal for containers of all sizes, including large vegetable transplants. 60-70% peat.

LM-6 High Porosity Mix

Long fiber peat, peat chunks and coarse perlite. High drainage and low water retention. For plant production that requires higher drainage, 4 inches and larger. Also available in organic version. 75-85% peat.

EPM 50 High Porosity Mix

High porosity mix made with extra coarse peat, EcoPeatPlus+ and coarse perlite. High drainage and low water retention. The perfect option for nursery stocks. Ideal for large containers (> 1 gal). 45-55% peat.

Nursery Mix

Extra coarse, high porosity mix for long-term crops in large containers. Great ratio of drainage and water retention. Good option for outdoor hemp and cannabis. Peat and EcoPeatPlus+.

LM-18 Germination Mix

Fine textured peat and fine perlite for germination, plugs and cutting propagation. Low drainage and medium water retention. Use in 128 cell plug trays. 80-90% peat.

LM-19 Germination Mix

Fine textured peat and coarse perlite for germination, plugs and cutting propagation. Low drainage and medium water retention. For growers working with 50/72 cavities trays and small pots. 75-85% peat.

LM-1

Fine textured peat with fine perlite and vermiculite. Low drainage and medium water retention. Formulated for plugs and transplants. 80-90% peat.

2024
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Griffin is pleased to add NorCal Perlite to our assortment as our primary partner for our customers in the mountain, desert southwest, and west coast states. Privately held, NorCal is vertically integrated, from mine to bag. NorCal ships from plants in Richmond, CA and Bakersfield, CA.

NorCal grades range from fine to extra coarse and descriptions may differ from other manufacturers. See descriptions or ask your Griffin sales rep for more information.

Location Availability
Mountain and Western States

Item	Description	Bags/pallet
65-1600	NorCal Perlite Standard #2 4 cf bag	33
65-1601	NorCal Perlite Standard #2 62 cf sack	2
65-1602	NorCal Perlite Premium #3 2 cf bag	70
65-1603	NorCal Perlite Premium #3 4 cf bag	33
65-1604	NorCal Perlite Premium #3 62 cf sack	2
65-1605	NorCal Perlite Hydro 4+ Plus 4 cf bag	33
65-1606	NorCal Perlite Hydro 4+ Plus 62 cf sack	2
65-1607	NorCal Vermiculite Med 2 cf bag	70
65-1608	NorCal Vermiculite Med 4 cf bag	36
65-1609	NorCal Vermiculite Med 62 cf sack	2
65-1610	NorCal Vermiculite Coarse 4 cf bag	36
65-1611	NorCal Vermiculite Coarse 62 cf sack	2

*62cf totes via drop ship only

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NorCal Perlite Grades

US mesh size and sieve retain rates

Grade	4	6	8	16	20	Granular Size
#2 (medium)	17%	40%	65%	88%	95%	1/16" - 5/8"
#3 (medium)	23%	45%	68%	92%	97%	1/8" - 5/8"
#4+ (chunky)	50%	90%	98%	99%	100%	1/8" - 5/8"

NorCal Vermiculite Grades

Grade	Particle size	Typical loose bulk density	Lbs/cu ft
Fine	0.7-3 mm	75-85	6-7
Medium	1-8 mm	70-85	5-6
Coarse/Extra Coarse	3-15 mm	60-75	4-6

SUCCESS STORY

A nursery reduces production costs because Lambert Peat Moss' growing media allows the nursery to finish plants sooner.

After a competitor couldn't fulfill its order, the Texas-based nursery turned to Lambert Peat Moss. Nurserymen agree the change was for the better. "The product quality is much improved over what we used in the past,". "The quality is a very high quality, coarse-grade peat, and that's what you want for a well-draining peat-based complement."

The nursery did an extensive trial with Lambert to compare six soil mixes, and they choose the EPM-20 blend as their primary soil. "The quality of the peat is fantastic, the service offered by Lambert is second to none and the price is very competitive. »

Lambert's peat has saved the nursery's production costs by reducing production cycle. "Time is money, as it is in any business, and if we're able to grow a plant, and finish it seven to 10 days sooner, then all of our other input costs are eliminated. You're losing a week's worth of labor, a week's worth of water, fertilizer, pesticides," the grower says. "Not only are we getting very high-quality plants, but we're also saving money in production costs."

The nursery has reduced production time by 15 to 20 percent, which could relate to hundreds of thousands of dollars over the course of a year for their business. "I definitely would say \$100,000-plus dollars would be saved. We're such a high-volume grower, I wouldn't be surprised if it were more than that," the grower says.

Lambert

PROMIX

WITH
AGTIV
TECHNOLOGIES

STRONGER TOGETHER

Now proudly unified under the **AGTIV**® co-brand to showcase their distinctive qualities, our proprietary technologies, **BACILLUS** and **MYCORRHIZAE**, remain unchanged.



VISIT
OUR WEBSITE



COIR-BASED • PEAT-BASED • GROW BAGS
MYCORRHIZAL INOCULANT



PRO-MIX HP Mixes - High Porosity

Features and Benefits

- High perlite content, peat-perlite based growing medium
- Low water retention
- Designed for water sensitive crops
- Ideal for cultural conditions with low-light and excess moisture/humidity
- Dries out more frequently than general purpose, peat-based mixes
- Well suited for low-light growing conditions and high humidity
- Difficult to overwater crops
- Reduces incidence of water related problems (root diseases, algae and fungus gnats)
- Holds less water for improved leaching of fertilizer salts during crop cycle

PRO-MIX HPO Mixes - High Porosity Organic

Features and Benefits

- Organic growing
- High perlite content, peat-perlite based growing medium
- Low water retention
- Designed for water sensitive crops
- Ideal for cultural conditions with low-light and excess moisture/humidity
- Dries out more frequently than general purpose, peat-based mixes
- Well suited for low-light growing conditions and high humidity
- Difficult to overwater crops
- Reduces incidence of water related problems (root diseases, algae and fungus gnats)
- Holds less water for improved leaching of fertilizer salts during crop cycle

PRO-MIX® HP AGTIV® REACH™

With a high percent of quality perlite, PRO-MIX® HP® provides a porous environment for growers wanting a growing medium with high air porosity, low water retention and good drainage.

The added benefit of Mycorrhizae allows plants better access to nutrients and water for overall improved plant growth. Mycorrhizae expand root system growth, enhance nutrient & water uptake and increase tolerance to abiotic stresses.

Item: 94-1154	Size: 2.8 cu. ft. Loose	Qty/plt: 57
Item: 65-2040	Size: 3.8 cu. ft. Comp.	Qty/plt: 30
Item: 65-2085	Size: 135 cu. ft.	Qty/plt: 1

**65-2085 full trailer load of 22 pallets minimum order quantity, coming directly from the manufacturer*

PRO-MIX HP BIOFUNGICIDE™ + MYCORRHIZAE™

Combining BIOFUNGICIDE™ and Mycorrhizae provides plants the benefits of reducing incidence of certain plant root diseases (Fusarium, Pythium and Rhizoctonia) and risk of pathogens developing resistance to chemical fungicides. It also expands root system growth, enhances nutrient & water uptake for overall improved plant growth.

Item: 94-1170	Size: 2.8 cu. ft. Loose	Qty/plt: 57
Item: 65-2044	Size: 3.8 cu.ft Comp.	Qty/plt: 30

PRO-MIX® HP AGTIV® REACH™ OPEN TOP GROW BAG

The PRO-MIX® HP AGTIV® REACH™ Open Top Grow Bag offers the quality performance of Premier Tech's high porosity peat-based mix, but an adapted solution for growers. The Open Top Grow Bag is deployed easily into production by tearing off the opening and then transplanting directly into the media. This system streamlines production for a cleaner and faster crop turnaround. Ideal for water-sensitive crops, low-light conditions, high humidity, and scenarios where increased drainage and porosity are needed. Equivalent pot sizes 0.5 cu. ft. bag = 3.5-gallon pot, 1.0 cu. ft. bag = 7-gallon pot.

Item: 94-1301	Size: 0.5 cu. ft.	Qty/plt: 294
Item: 94-1300	Size: 1.0 cu.ft.	Qty/plt: 135

PRO-MIX® HPO AGTIV® FORTIFY™

Approved for organic use, PRO-MIX HPO offers low water retention and high air porosity. It has been designed as an adaptable blank canvas, meaning there is no fertilizer charge inside.

Item: 65-2062	Size: 3.8 cu. ft.	Qty/plt: 660
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Contact our office for direct ship truckloads. Most mixes are available in Mini-bulk & Mega-bale deliveries. Contact our office for details.



PRO-MIX HPCC Mixes - High Porosity & Chunk Coir

Features and Benefits

- Small to medium particle range consisting of short-fibered peat and horticultural grade perlite
- High moisture retention
- For plug trays (512 and larger cells) and open-seeded trays
- Easy filling of plug trays
- Require less frequent watering than peat/perlite plug mixes
- Contains slightly higher fertilizer than FPX for growers wanting high fertilizer content
- Seedling rootball holds together better at transplanting than peat/perlite germination mixes
- Greater frequency of dry-down periods (compared to general purpose peat-based mixes)
- Grower can more easily leach fertilizer salts during crop cycle
- Difficult to over-water
- Well suited for undesirable, year-round weather conditions

PRO-MIX BX Mixes - General Purpose

Features and Benefits

- Traditional peat-based growing medium with perlite
- Contains starter nutrients and pH adjuster
- Multi-purpose, general-purpose mix for transplanting a wide variety of plants species
- Ideal for the production of vegetable transplants in large cell trays
- This product answers the needs of most growing applications
- Light-weight, low bulk-density
- High water-holding capacity

Contact our office for direct ship truckloads. Most mixes are available in Mini-bulk & Mega-bale deliveries. Contact our office for details.

PRO-MIX® HPCC AGTIV® REACH™

Lightweight, high-porosity peat-based growing medium that contains chunk coir and perlite. It ensures optimum growth, especially when high air capacity and extra drainage are required. It is ideal for water-sensitive crops, rooting cuttings and/or low-light growing conditions. The added benefit of Mycorrhizae allows plants better access to nutrients and water for overall improved plant growth. Mycorrhizae expand root system growth, enhance nutrient & water uptake and increase tolerance to abiotic stresses.

Item: 94-1160 **Size:** 2.8 cu. ft. Loose **Qty/plt:** 57
Item: 65-2050 **Size:** 3.8 cu. ft. Comp. **Qty/plt:** 30

PRO-MIX HPCC BIOFUNGICIDE™ + MYCORRHIZAE™

Combining BIOFUNGICIDE™ and Mycorrhizae provides plants the benefits of reducing incidence of plant root diseases (Fusarium, Pythium and Rhizoctonia) and risk of pathogens that developing resistance to chemical fungicides. It also expands root system growth, enhances nutrient & water uptake for overall improved plant growth.

Item: 94-1165 **Size:** 2.8 cu. ft. Loose **Qty/plt:** 57
Item: 65-2080 **Size:** 3.8 cu. ft. Comp. **Qty/plt:** 30

PRO- MIX BX

PRO-MIX® BX is the solution for growers seeking to benefit from perlite's drainage and aeration properties. Combined with high-quality fibrous peat moss, this formulation is ideal for growers looking for a general purpose medium which creates a well-balanced root environment.

Item: 710B3 **Size:** 2.8 cu. ft. Loose **Qty/plt:** 57
Item: 65-2005 **Size:** 3.8 cu. ft. Comp. **Qty/plt:** 30

PRO-MIX® BX AGTIV® REACH™

The added benefit of Mycorrhizae allows plants better access to nutrients and water for overall improved plant growth. Mycorrhizae expand root system growth, enhance nutrient & water uptake and increase tolerance to abiotic stresses.

Item: 94-1152 **Size:** 2.8 cu. ft. Loose **Qty/plt:** 57
Item: 65-2015 **Size:** 3.8 cu. ft. Comp. **Qty/plt:** 30

PRO- MIX BX BIOFUNGICIDE™ + MYCORRHIZAE™

Combining BIOFUNGICIDE™ and Mycorrhizae provides the benefits of reducing incidence of certain plant root diseases (Fusarium, Pythium and Rhizoctonia) and the risk of pathogens developing resistance to chemical fungicides. It also expands root system growth, enhances nutrient & water uptake for overall improved plant growth.

Item: 94-1140 **Size:** 2.8 cu. ft. Loose **Qty/plt:** 57
Item: 65-2017 **Size:** 3.8 cu. ft. Comp. **Qty/plt:** 30

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PRO-MIX CX

Features and Benefits

- OMRI listed
- Special blend of coir pith and coir chunk
- Air-filled porosity for your high-value crops.
- Precut holes on each corner to easily insert your dripping system resulting in a quicker expansion and more effective watering.
- Preformed center hole creates an opening upon expansion for easier and faster transplantation.
- pH Range: 5.5 - 7.0
- EC: < 0.5 mmhos/cm
- Water Holding Capacity: 50 - 70%* (5.5 - 6.5 l/kg)



Carefully formulated and produced coir products from an industry leader in potting soils. 100% super washed blend of pith and chunks. Ships as compressed blocks in plastic bags with Eco-One organic additive for enhanced biodegradability when placed in a biologically active landfill. Bags have pre-cut drain holes. Blocks are pre-drilled for drip stakes and plant placement.

	1 Gal - 3.7 L	2 Gal - 7.5 L	3 Gal - 11.25 L	5 Gal - 19 L
GROW BAGS	CODE	CO15023RG	CO21023RG	CO30023RG
	SIZE ¹	15 x 15 x 15 cm	21 x 21 x 17 cm	25 x 25 x 18 cm
	DRAIN SLITS	8 (2 on each side)	8 (2 on each side)	8 (2 on each side)
	DRAIN HOLES ^{1*}	10 (2 rows of 5 holes)	12 (2 rows of 6 holes)	16 (2 rows of 8 holes)
	TYPE	Compressed	Compressed	Compressed
	UNITS PER PALLET	2721	1240	800
CASES	CODE	CO15023RG6X	CO21023RG6X	CO30023RG6X
	SIZE	36 x 36 x 16.5 cm	36.5 x 36.5 x 22 cm	43 x 26.5 x 26.5 cm
	UNITS PER CASE	20	12	8
	UNITS PER HALF-PALLET	1080	540	320
	UNITS PER PALLET	2160	1080	640

¹ Size: length x width x height. ^{1*} Diameter of 1 cm. ^{**MHC} is highest for small package and lowest for large package.

Item #	Description	Volume	Compressed Size	Expanded Size	Per Pallet
94-1310	Pro-Mix 1 Gal Open Top Bag CX Growing Media	1 gal.	CM: 14.3 x 14.3 x 2.8 Inches: 5.6 x 5.6 x 1.1	CM: 15 x 15 x 15 Inches: 5.9 x 5.9 x 5.9	2721
94-1311	Pro-Mix 2 Gal Open Top Bag CX Growing Media	2 gal.	CM: 19.5 x 19.5 x 4 Inches: 7.7 x 7.7 x 1.6	CM: 21 x 21 x 17 Inches: 8.3 x 8.3 x 6.7	1240
94-1312	Pro-Mix 3 Gal Open Top Bag CX Growing Media	3 gal.	CM: 23.5 x 23.5 x 4.5 Inches: 9.3 x 9.3 x 1.8	CM: 25 x 25 x 18 Inches: 9.8 x 9.8 x 7.1	800
94-1313	Pro-Mix 5 Gal Open Top Bag CX Growing Media	5 gal.	CM: 27.5 x 27.5 x 5.5 Inches: 10.8 x 10.8 x 2.2	CM: 30 x 30 x 21 Inches: 11.8 x 11.8 x 8.3	524

Vermiculite and Perlite



Whitemore is our primary partner for vermiculite and perlite for the central and eastern parts of the country. A family-owned company based in Lawrence, MA, Whitemore pops the product with their own furnaces for strong quality control of their horticultural products.

Vermiculite has a high water-holding capacity, good buffering characteristics and adequate cation-exchange capacity. It has an absorptive capacity for fertilizer. The mineral itself contains potassium, magnesium, and calcium available as a slow-release supply. Super Coarse Perlite is screened to remove finer particles. The perlite provides aeration and drainage, in addition to moisture retention for superior plant growth.

Location Availability
Central and Eastern States



Item	Description
65-3110	23 lb. Whitemore Vermiculite A2 Fine (African)
65-3215	15 lb. Whitemore Vermiculite A3 Medium (African)
65-3115	23 lb. Whitemore Vermiculite A3 Medium (African)
65-3216	15 lb. Whitemore Vermiculite A4 Coarse (African)
65-3116	23 lb. Whitemore Vermiculite A4 Coarse (African)
65-3220	15 lb. Whitemore Vermiculite D3 Fine (Domestic)
65-3120	23 lb. Whitemore Vermiculite D3 Fine (Domestic)
65-2225	23 lb. Whitemore Perlite Super Coarse
65-2125	15 lb. Whitemore Perlite Super Coarse

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SUCCESS STORY

Saving time with PRO-MIX grow bags.

In January, Mark Rawnsley, a Griffin salesperson based in Massachusetts, partnered with Rebecca Podnieszinski, a PRO-MIX sales representative, to assist a local client. This client, managing medicinal cannabis facilities, sought a solution tailored to their cultivation needs and agreed to trial PRO-MIX HP Mycorrhizae Grow Bags.

Impressed by the results, the client, acting as the cultivation director, swiftly decided to transition their entire operation to PRO-MIX HP Grow bags. The switch was met with enthusiasm as the client noticed significant improvements in efficiency and product quality. With the new products in place, the client expressed satisfaction with the cleaner and more effective cultivation process.

The collaboration between Rawnsley, Podnieszinski, and the client exemplifies the importance of understanding and meeting the unique requirements of each operation. This successful partnership underscores the value of tailored solutions in optimizing outcomes within the cannabis cultivation industry.





Experienced industry supplier of coco coir from India and Sri Lanka.



2024
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Grow Slabs

Compressed coir in lay flat bags, 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/fiber), 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

*Allow 2-3 weeks lead time for delivery.

Grow Bags

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

Item	Description	Qty
58-19016	Upright Grow Bag, 3 gal size, 8" x 7"x 10", white poly (OMRI listed)	1
58-19030	Upright Grow Bags, 3 gal size, 8"x7"x10", Root Kandy, Buffered Coir, white poly	1
58-19017	Upright Grow Bag, 5 gal size, 9" x 8" x 12", Coir black poly (OMRI listed)	1



Super Sack, Standard, Fluffed Coco Coir

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

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

*Allow 2-3 weeks lead time for delivery.

AmeriCoco Bagged, Fluffed Coco Coir

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

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





greenhouse



Greenhouse



Nursery



Sustainable



Retail



Contact your HC representative for more information



Leaders in Innovation



Leaders in Sustainability



Leaders in Accessibility



Leaders in Service

HC produces growing containers to meet the unique needs
of every grower, in every market



Leader in Horticultural Containers

(800) 225-7712 |



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.

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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 3,000/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
51-10087B	ITML Elite 300 1 G Trade		•	BM	BM.03000	3.00 qt	6.50	7.00	10,920/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	6.50	6.13	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	8.87	1,400/bulk plt
51-10123	HC 3.0 G Trade, Side drain	•		INJ	NSR003G0	2.62 gal	10.5	8.87	25/sleeve 1,400/bulk 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	11.88	10.00	30/sleeve 960/plt
51-10135	HC 5.0 G Squat, Side Drain			INJ	NSS005G2	3.75 gal	11.88	10.00	960/plt
51-10126	HC 7.0 G Trade Squat, Side Drain			INJ	NSS007G0	7.28 gal	15.00	11.75	50/sleeve 540/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	3.62	1,200/cs
53-2018	Dillen 4.5 Square Deep			VF	SVP0450D	1.2 qt	4.12	5.0	375/cs

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

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

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2025



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.

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.



ROUND POTS

Item #	Type	★	»	Description
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			NSI GL10000 Trade 25 gal Grip Lip, 22.75"x18.1", 27.6 gal, 150/tower
41PT10000GT	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

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.



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
59-5091		TO Plastics 72 Star 3.0 Deep Plug Tray, vent holes, 50/cs
59-5090		TO Plastics 105 Hex Plug Tray, 100/cs
59-5232		TO Plastics 32 Star Deep Plug Tray, 50/cs
59-50551		TO Plastics 288 Plug Tray, 1.25" deep, 50/cs
59-5025	•	TO Plastics 50 cell plug tray, sq, 2.37", 100/cs
59-720700		TO Plastics 50 cell Deep SureRoots plug tray, 5", 25/cs
59-720720		TO Plastics 15 cell SureRoots plug tray, 4.59", 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
59-3330		TO Plastics Germination Flat, Black, 100/cs
59-3331		TO Plastics Germination Flat, no holes, 100/cs
59-1036		TO Plastics 355 Carry tray, 18 ct, Deep Square, 50/cs
59-3195	•	TO Plastics 1020 no hole triple weight, 50/cs
53-3325		Dillen 1020 Light weight web flat, 50/cs
73S1020ID	•	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
59-5136		TO Plastics 1020 Tall Clear Dome, 25/cs
59-5135		TO Plastics 1020 Clear Dome, 50/cs

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



Sub-Irrigation System

PLUG TRAY & FLAT COMPATIBILITY

Pair select T.O. Plastics plug trays with flats for sub-irrigation.

(Chart on following page.)



720695C | PL-SR-50-3-VH
w/Germination Tray
745731C | FLAT-GERM-TRAY-NH



720695C w/Display Flat
760247C | FLAT-DISPLAY-WH-NH



720695C w/Standard Flat
710251C | STF-1020-OPEN-NH



Great for indoor growing where floor drainage is not available.



Higher seed germination rate from a consistent soil moisture.



Results in more uniform plant growth and less foliar disease.



Labor and time savings for less frequent watering.



Reduced overall water usage.



Less shrink with consistent watering across all cells.



Improved fertilizer-use efficiency.



Create all-in-one growing system with humidity dome!



Add 7-Inch Humidity Dome
760525C | STF-1020-DOME-TALL-CL

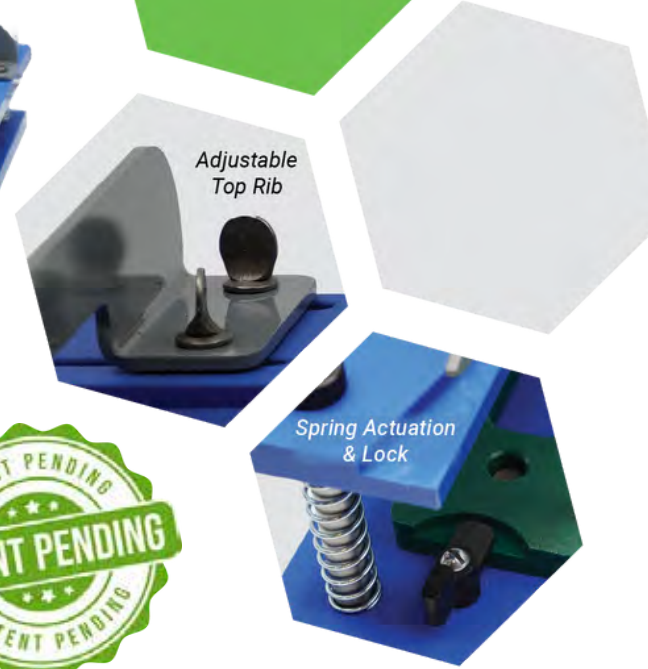


Add 2-Inch Humidity Dome
760549C | STF-1020-DOME-CL

Request a Sample or Order Now

custservice@toplastics.com





POPagationStation™

PLUG POPPER BY T.O. PLASTICS

The **POPagation Station™** Plug Popper custom made by T.O. Plastics dislodges fully rooted plugs from plug trays to minimize damage when transplanting. This two-piece system contains a base board and a spring-actuated stabilizer frame. The base board is custom built with hardened steel pegs to fit any plug tray and can function as a dibble board for seeding. Materials can easily be sterilized.



Spring-actuated stabilizer frame with upper and lower support ribs.



Requires less force than other plug poppers on the market!



Minimize damage when transplanting from plug trays to containers.



Portable transplanting system to go from greenhouse to field.
Easy to store when not in use.



Labor and time savings with transplanting efficiency.



Base board also functions as dibble board for seeding.



Cost effective equipment for growers.



Materials can be easily sterilized.

Request More Information or Order Now

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AVAILABLE TO ORDER

*Customize Base Boards to ANY
Manufacturers' Plug Tray!*

Base board and the stabilizer frame sold separately. Built to accommodate a standard 10x20 perimeter trim. Customized stabilizer frame available to order.

www.toplastics.com/horticulture

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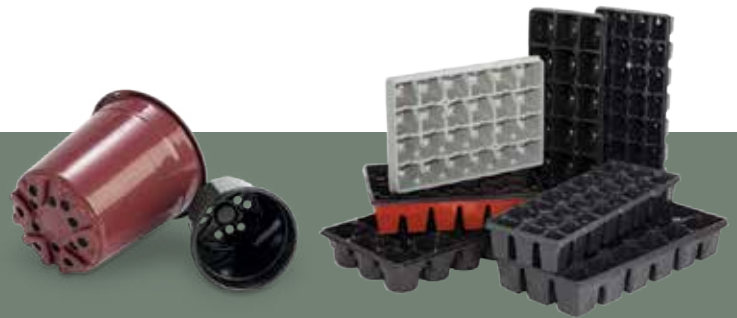


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Since 1984, Landmark Plastic has been making life easier and less chaotic for growers, from propagation to patio. Our wide range of containers, trays, packaging, and growing systems for the horticultural industry are all designed with a deep understanding of what growers need.

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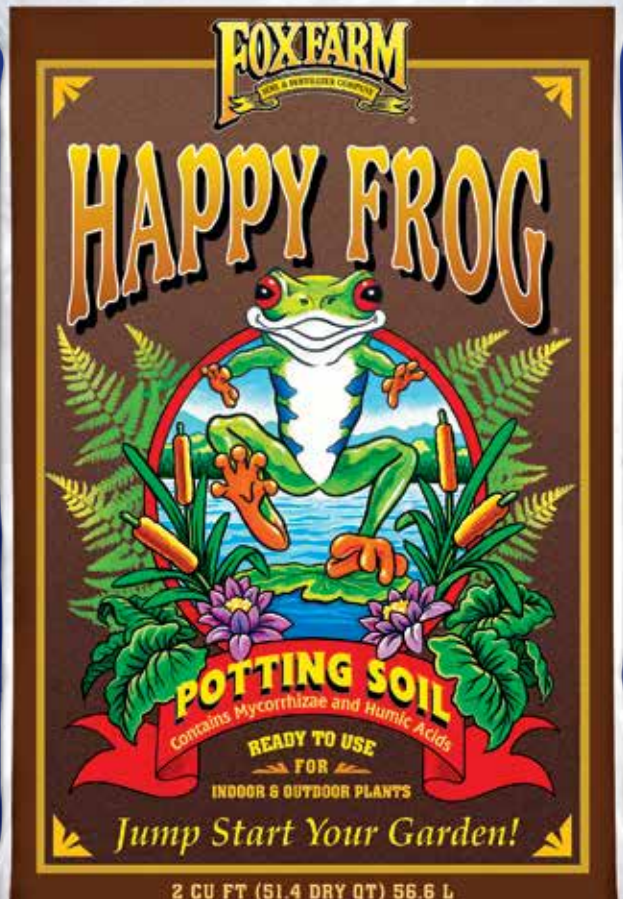
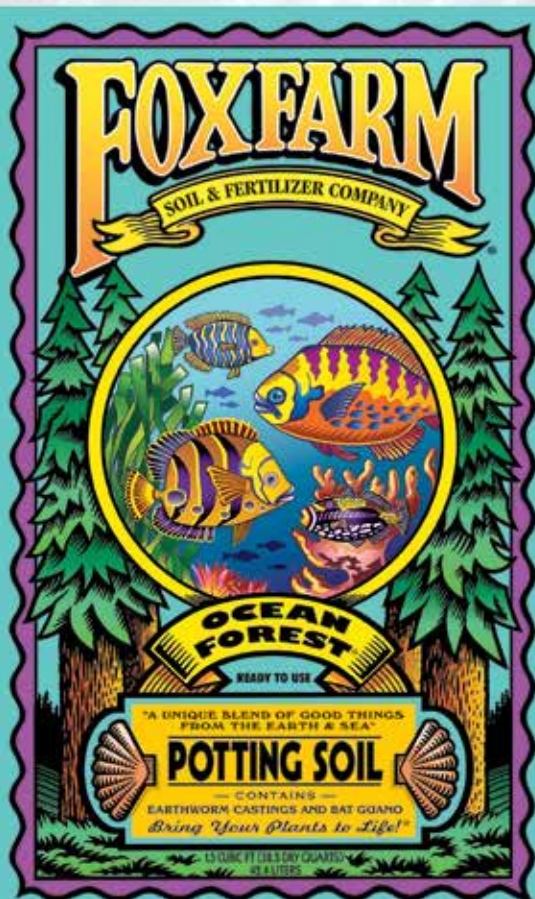
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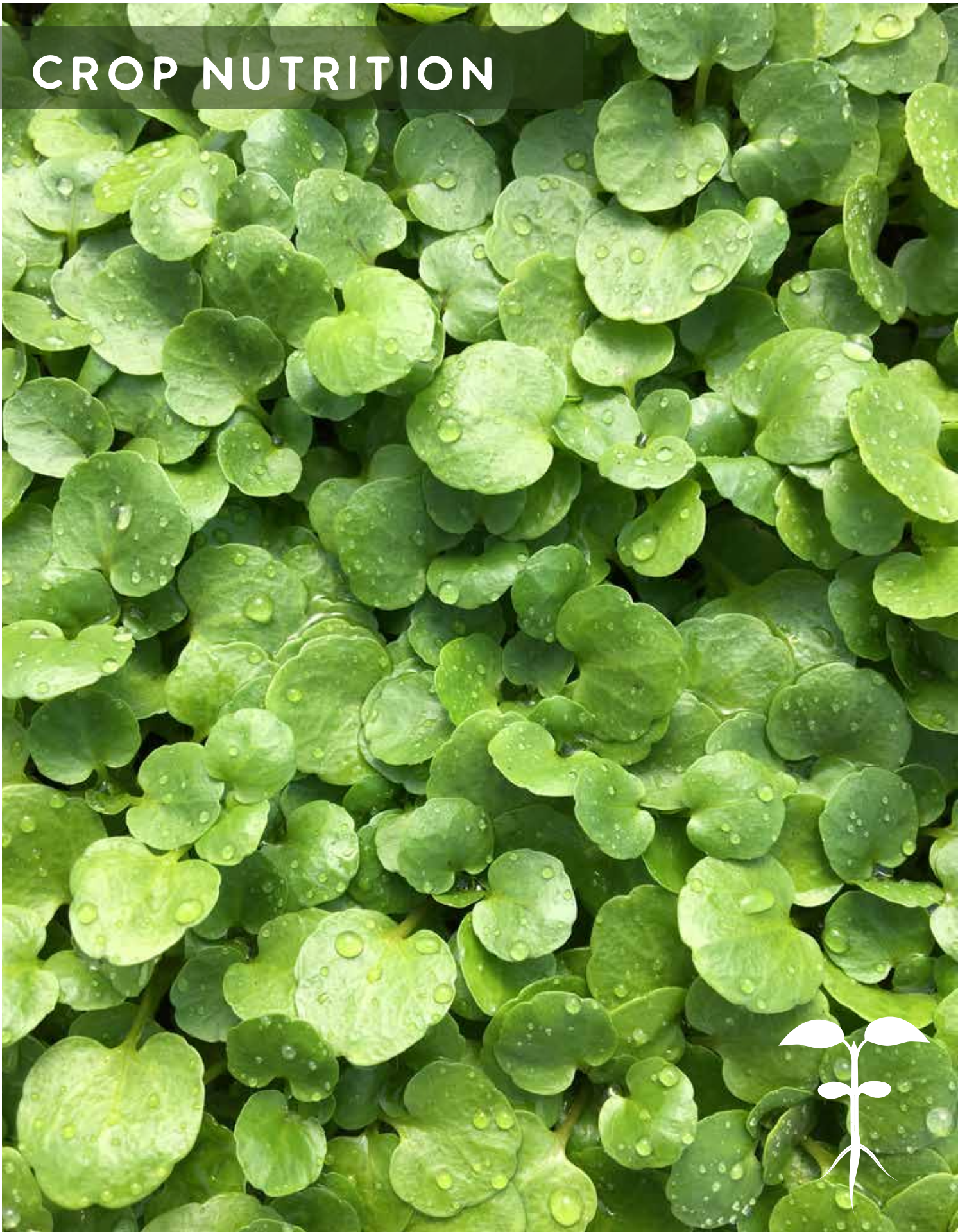
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Canna+ equals more



More growth. More quality. More profit.

The **Canna+** growing package from ICL combines the products you need to grow your plants bigger, faster, and more economically. Each specialized component—**Peters Professional**® Hydroponic water-soluble fertilizer, **Liquid STEM**® optimizer, and **H2Pro**® surfactant is part of a holistic nutrition system custom tailored to your exact needs and growing conditions. Contact your local ICL Representative today to learn how to grow your production efficiency (and your bottom line) with **Canna+**.



icl.growingsolutions.com

SLOW RELEASE NUTRIENTS



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



All-purpose, non-coated slow release granular fertilizer. Sustane 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.

SUSTANE 16-4-8

Sustane'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. Sustane 16-4-8 is a good choice for production of cannabis and hemp. Sustane 16-4-8 Nursery Fertilizer is derived from aerobically composted turkey litter, polymer coated urea, polymer coated MAP, and polymer coated potassium nitrate.

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



All natural, non-coated, slow release granular nitrogen fertilizer. Sustane 8-2-4 provides 6 - 12 weeks of nitrogen in the organic slow release form. Sustane replenishes the soil with a rich supply of humus (stabilized organic matter) and all of the essential nutrients required for quality growth. Sustane 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.

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



Sustane 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.

SUSTANE 8-4-4 ALL NATURAL



All natural, non-coated slow release granular fertilizer Sustane 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. Sustane 8-4-4 is composed of aerobically composted turkey litter, hydrolyzed feather meal, and sulfate of potash.

VERDANTA® ECOVITA 7-5-10

Homogenous - Granular - Compound Organic Fertilizer

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.



2024
2025

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.

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.

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.

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.

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.

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.

Part A 0-12-26

Zero nitrogen formula delivers a proven ratio of P and K to achieve harvest goals. Designed to follow the Part A system of nutrient delivery. This purely soluble and available formula keeps secondary and micronutrients consistent at each feeding.

Low Phos Part A 6-6-26

A unique formula designed to deliver lower phosphorus levels into any growing program. Jack's Part A 6-6-26 will replace and/or complement any two part growing system paired with typical calcium content from our Jack's Part B by ensuring consistent N, K and micronutrient levels as you expect in our typical Part A 5-12-26.

Strawberry Part A 8-10-26

Designed to deliver targeted nutrition specific for Strawberry production. This unique formula combines specific macro, secondary and micro nutrients at a low constant feed rate in complement with our Jack's Part B for the calcium source to achieve a complete two part system!



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 Boost 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.

★ = Retail Store Best Seller



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.

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.

Jack's Nutrients Grower Products

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 12-4-16	25 lb
33-15520	Jacks Nutrients 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

Professional Grower Products

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
J77680	Jack's Berry Special 25-9-17	25 lb
J77004	Jacks AG Grow & Bloom 15-20-28	25 lb

Jack's Nutrients Retail-Ready Products

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





What is Evofactor?

It's an adjuvant, designed to be added to fertilizer solutions



How does Evofactor help with nutrient uptake?

- Improves solution movement in media - As an adjuvant, Evofactor improves water and nutrient movement and availability in the root zone
- Improves fertilizer efficacy - Charged silica-based supramolecular structures trigger an osmotic pressure response in the plant. This natural plant response results in greater utility of the nutrition in the media.

How does Evofactor impact my production?

- Decreased fertilizer use – reduce fertilizer application rates by 25-35% due to better use of nutrients in the root zone or increase yields by 20-40 percent employing the same fertility levels already in use
- Hydroponic application – mix into recirculating nutrient solution or add to deep water ponds
- Stock tank – Evofactor can be added to your existing fertilizer stock



Item	Description	Size	List Price
67-9610	Evofactor Nutrient Adjuvant	2.5 gallon	\$243.65 each
67-9612*	Evofactor Nutrient Adjuvant	2 x 2.5 gal per case	\$486.46 per case
67-9615*	Evofactor Nutrient Adjuvant	55 gallon drum	\$3931.86 each



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.

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.

2024
2025

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.

Complete 17-5-17

Formulated as an advanced all-in-one nutritional program, with all Macro and Micro elements to eliminate switching of formulas. FEATURES:
High Nitrate, no urea formulation
Minimal impact on the pH of media
Three chelating agents, EDTA, DTPA, EDDHA, ensure complete nutrition over a wide pH range.
All in one formulation Comes in a duo bag for easy usage.

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.

Hydroponic 6-11-31

Formulated for fertility program for greenhouse vegetable crops. FEATURES:
100% Nitrogen in nitrate form
Unique micronutrient package design
Two chelating agents, EDTA and DTPA

Plant-Prod MJ Boost 15-30-15

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

Hydroponic 7-11-27

Formulated as a good general formulation to use for crops grown hydroponically, including use in substrates. Designed to be used with calcium nitrate. FEATURES:
91% Nitrogen in nitrate form
Contains magnesium
Contains DTPA chelating agent for better availability

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.

Tomato Hydroponic 4-18-37

Formulated for use during tomato fruit production. FEATURES:
Two chelating agents, EDTA and DTPA
Contains magnesium
High phosphorus and potassium

★ = Retail Store Best Seller

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



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

2024
2025

pH management

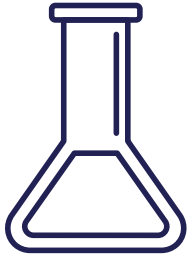
Item	★	»	Description	Manufacturer	Sold as
75-5030			Sulfuric acid	Riverside Chemical	1 gal, 4/cs
75-5035		•	Sulfuric acid, 93% Tech Grade	Riverside Chemical	55 gal
57-100239			Phosphoric acid 75% Tech Grade	Riverside Chemical	1 gal, 4/cs
57-100240		•	Phosphoric acid 85% Tech Grade	Riverside Chemical	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 the Ezi Drum Pumps for the 30 and 55 gallon drums.



PLANTEX™ SOLUTIONS MJ

NO FILLERS. NO DYE ADDED. 100% WATER SOLUBLE.



Formulated specifically for the vegetative growth stage of cannabis plants.

FEATURES:

- Ideal nitrogen breakdown
- Additional magnesium
- Addition of EDDHA to ensure sufficient nutrient uptake over a wide pH range

NUTRIENTS:

Total Nitrogen (N)	16%
Nitrate Nitrogen	12.4%
Ammoniacal Nitrogen	3.6%
Phosphoric Acid (P ₂ O ₅)	2.0%
Soluble Potash (K ₂ O)	16%
Magnesium (Mg)	3.5%
Iron (Fe)	0.25%
Manganese (Mn)	0.10%
Zinc (Zn)	0.05%
Copper (Cu)	0.05%
Boron (B)	0.02%
Molybdenum (Mo)	0.0005%

25LB
31-M12522
25/80 BAGS PER PALLET



Formulated with high phosphorus and moderate potassium that encourages full bud set & improved bud filling.

FEATURES:

- Ideal nitrogen breakdown
- Additional magnesium
- Addition of EDDHA to ensure sufficient nutrient uptake over a wide pH range

NUTRIENTS:

Total Nitrogen (N)	10%
Nitrate Nitrogen	7.9%
Ammoniacal Nitrogen	2.1%
Phosphoric Acid (P ₂ O ₅)	20%
Soluble Potash (K ₂ O)	20%
Magnesium (Mg)	3.0%
Iron (Fe)	0.25%
Manganese (Mn)	0.10%
Zinc (Zn)	0.05%
Copper (Cu)	0.05%
Boron (B)	0.02%
Molybdenum (Mo)	0.0003%

25LB
31-M12516
25/80 BAGS PER PALLET



Formulated with high calcium & moderate magnesium as the essential part of this 1-2-3 program.

FEATURES:

- High Calcium
- Full micronutrient package
- Addition of EDDHA to ensure sufficient nutrient uptake over a wide pH range

NUTRIENTS:

Total Nitrogen (N)	14%
Nitrate Nitrogen	12.5%
Ammoniacal Nitrogen	1.5%
Calcium (Ca)	8.0%
Soluble Potash (K ₂ O)	13%
Magnesium (Mg)	1.7%
Iron (Fe)	0.25%
Manganese (Mn)	0.10%
Zinc (Zn)	0.05%
Copper (Cu)	0.05%
Boron (B)	0.02%
Molybdenum (Mo)	0.015%

25LB
31-M12540
25/80 BAGS PER PALLET

2024
2025







SALES REP TO LEARN MORE
(800)888-0054 | WWW.GRIFFINS.COM

Plantex Solutions MJ™ Program





For best results, customize rates to water conditions. Suggested program based on Reverse Osmosis (RO) water source & production under indoor controlled conditions.

PRODUCTS ARE NOT COMPATIBLE IN STOCK SOLUTION & MUST BE MIXED SEPARATELY.



VEGETATIVE

1	2	3	4
			
0.008 OZ/GAL	0.040 OZ/GAL	0.067 OZ/GAL	0.067 OZ/GAL





FLOWERING

5	6	7	8-10
			
0.080 OZ/GAL	0.067 OZ/GAL	0.067 OZ/GAL	0.067 OZ/GAL

FINISHING

11-12	13-14
	
WATER	WATER

		
0.087 OZ/GAL	0.100 OZ/GAL	0.100 OZ/GAL

			
0.133 OZ/GAL	0.167 OZ/GAL	0.200 OZ/GAL	0.200 OZ/GAL

	
0.200 OZ/GAL	WATER

THE A-B SYSTEM

Part A - Constant -

CM
14-0-13 
WEEKS 2-12

Part B - Growth Stage -

VEG
16-2-16 
WEEKS 1-4

FLOWER
10-20-20 
WEEKS 5-12



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.



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
67-8505			HAIFA Multi-K GG Potassium Nitrate	Haifa	55 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
14MPP55			Soluble monopotassium phosphate	MKP	55 lb
67-4229	•		Sulfate of Potash OMRI soluble 0-0-50 50LB Diamond K	Kirby Agri	50 lb
67-4106			Magnisal Magnesium Nitrate Hexahydrate	Haifa	50 lb
31-10267		•	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

2024
2025



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		Bioimin 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		Bioimin 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

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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
67-2999	•	TerraGrow 5lb	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

» = Drop-Ship Item



Look for QR codes

throughout the catalog and scan with your phone for digital bonus information.

CROP PROTECTION & SANITATION





DPH

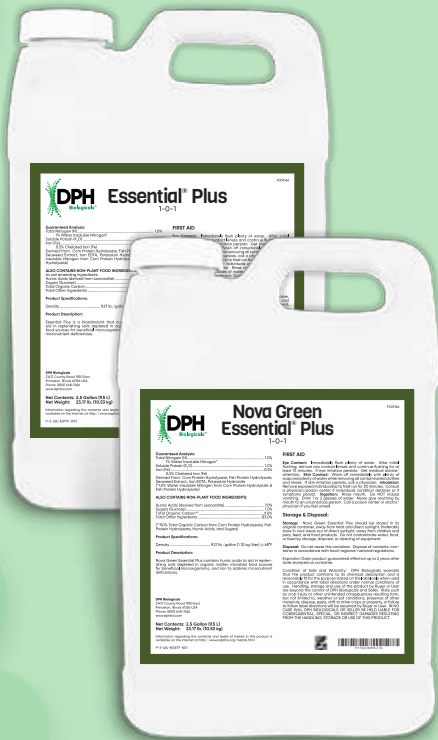
Biologicals™

SCIENCE THAT YIELDS

Field | Greenhouse | Nursery

Refined over decades of research and proven field results, our comprehensive line of biologicals play an important role in soil & plant health to deliver consistent performance, and greater profitability for growers.

Biostimulant



Essential® Plus

Nova Green Essential® Plus

Biostimulant & soil amendment that reinforces nutrient absorption, strengthens microbe population, and alleviates soil compaction

All the power of Essential Plus, specifically labeled for hemp & cannabis production
See catalog page

Biofertilizer



SP-1™

Complete biofertilizer: consortia of 5 bacillus, powered by RegenAphex™ – a proprietary, unique plant-based humus – a rich and regenerative carbon source

See catalog page



Biofungicide



Companion® Maxx Liquid Fungicide
Companion® Fungicide WP

Biological fungicide to enhance crop growth & stress resistance thanks to the power of the unique *Bacillus amyloliquefaciens* strain ENV 503*

See catalog page

1690255NG

NOVA Essential Plus 1-0-1 2.5GAL

HEMP/CANNABIS GROWTH PROD

1690256NG*

NOVA Essential Plus 1-0-1 30GAL

HEMP/CANNABIS GROWTH PROD

1690275NG*

NOVA Essential Plus 1-0-1

HEMP/CANNABIS 275GAL DPH

*30 and 275 gallon containers ship directly from the manufacturer plus freight

BotaniGard®
Mycoinsecticide

The Natural SELECTION

BotaniGard is a trademark of Certi Biologicals.



BotaniGard® Mycoinsecticide offers proven, broad-spectrum control of a variety of pests in the GH, nursery, and CEA markets. Long recognized as the best-in-class mycoinsecticide in horticulture, BotaniGard is the latest addition to the OHP family of Solutions.

Ask for BotaniGard, *the Natural Selection.*



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. 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.
- Transportation during extremely cold weather is not possible for many of our liquid chemicals.
- 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.
- 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.

2024
2025

LOOK FOR THIS SYMBOL FOR: EDIBLE CROP FRIENDLY CHEMICALS



Pesticides with this icon have at least some edible crops on the label. Consult the label for an exact list.

LOOK FOR THIS SYMBOL FOR: TOTAL RELEASE



Chemicals with this icon are aerosol cans.

Nationwide Poison Control Center
800-222-1222

CHEMICAL CONVERSION TABLE

Equivalent quantities of liquid materials (Emulsifiable 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 (Tbs)
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 Tbs	4 oz	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

PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.
Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://www.epa.gov/pesticide-protection/pages/efsa.html>

Pesticide incidents (for example, bee kills) should immediately be reported to the state/local lead agency. For product information for your state/region, go to www.epa.gov. Pesticide incidents can also be reported to the National Pesticide Information Center at www.npic.orst.edu or directly to EPA at beehive@epa.gov

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.

The science says that there are many causes for a decline in pollinator health, including pesticide exposure. EPA's new label will help protect pollinators.

EPA

Read EPA's new and strengthened label requirements: <http://go.usa.gov/jHH4>

WETTING AGENTS & 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

Active Ingredient: Alkoxylated Polyois

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.

H2Pro

H2Pro™ Greenhouse & Nursery surfactant optimizes soilless media water-holding capacity, decreases irrigation frequency, reduces or eliminates dry spots, and helps prevent wilting both in production and post-production.

It comes in both liquid and granular formulations allowing the user to choose the one that best fits their operation.

It can be applied during soil blending, or any time during production, right up through shipping. At high rates, H2Pro Greenhouse and Nursery's rewetting ability can continue for as long as a year - long enough for the entire production cycle - and right through the retail environment for many crops.

Item: 74-1418**Size:** 50 lb. granular**Item:** 74-1424**Size:** 2.5 gal. liquid

Nu-Film P

Active Ingredient: Poly-1-p-menthene

Organo-silicone surfactant increases spray droplet coverage by 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 soilbased 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: 74-2960**Size:** 1 gal.

UpTake PRO

Active Ingredient: 1-Decanaminium,N-decyl-N,N-dimethyl-,chloride

UpTake PRO is a biodegradable adjuvant designed to improve watering and performance of fertilizer programs and pesticide activity when added through drip-irrigation systems or a tank mix. This versatile formulation acts as a penetrant, spreader sticker, and wetting agent to help increase the performance of a companion product. It is also an excellent water conservation tool, allowing growers to use less water to adequately wet crops, either through in tank mix sprays or irrigation systems.

*Foliar /Drench Spray Rates: 6-25 fl oz/100 gal (40-145 ppm)
Continuous or Intermittent Injection: 0.34-1.20 fl oz/100 gal (2-7) ppm*

Item: 74-21261**Size:** 2.5 gal.**Item:** 74-21281**Size:** 5 gal.**Item: CA Only** 74-2128-CA**Size:** 5 gal.**Item:** 74-21271**Size:** 30 gal.**Item:** 74-21291**Size:** 55 gal.

GGSPRO Technical Services

Our in-house technical services team delivers prompt, practical and accurate support to Griffin customers everywhere. Visit griffins.com for more information.

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
81860068	Clonex Gel	15 ml packet	108/108
81860067	Clonex Gel	100 ml bottle	12/12
81860069	Clonex Gel	250 ml bottle	12/12
81860074	Clonex Gel	Pint	6/1
81860075	Clonex Gel	Quart	4/1
81860093	Clonex Gel	1 gal.	1/1

★ = Retail Store Best Seller

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 kg

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.

SUCCESS STORY

Tackling Powdery Mildew with MilStop® SP

Controlled Environment Agriculture (CEA) has ushered in a new era of precision farming, offering growers unmatched control over their cultivation conditions. However, along with these benefits comes the challenge of managing pests and diseases that can thrive in controlled settings. Powdery mildew is a fungal disease that can wreak havoc on fruits, vegetables and edible flowers. To effectively combat this disease, growers are harnessing the power of MilStop® SP.

Powdery mildew spreads rapidly, making proactive management crucial. This is where MilStop® SP, an OMRI Listed, potassium bicarbonate-based fungicide, shines. MilStop® SP acts as a proactive defense against powdery mildew by disrupting its lifecycle. Upon application, it forms a fine protective layer on the plant's surface, which inhibits the germination of powdery mildew spores and offers 1-2 weeks of residual protection.

Additionally, MilStop® SP mode of action extends beyond prevention by weakening the cell walls of existing fungal structures, leading to the dehydration and collapse of the pathogen. This dual-action approach halts the progress of powdery mildew and aids in the recovery of affected plants.

Features and Benefits:

- Standalone fungicide or tank mix with other products
- Preventive and curative
- Residual protection for 1-2 weeks
- Leaves no visible residue
- Does not impede plant growth
- 1-hour REI/0-day PHI
- Stable formulation with 2+ years shelf life

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.

Affirm WDG



Active Ingredient: Polyoxin D zinc salt

Broad-spectrum fungicide for use on ornamentals and many edible crops in greenhouses, nurseries, interiorscapes and other labeled sites. Foliar spray controls *Alternaria*, *Botrytis*, *Colletotrichum*, powdery mildew and others. Drench treatments control *Rhizoctonia* and *Thielaviopsis*. Chemigation instructions have been added to the label. **Foliar spray and drench rates:** ½-1 tsp per gal or 4-8 oz per 100 gal.

Item: 71-1131 **Size:** 2.4 lb.

Badge SC



Active Ingredient: Copper Oxychloride & Copper Hydroxide

Dual copper-based active ingredients used to control a wide variety of bacterial and fungal pathogens. Approved for use on ornamentals, fruiting crops, vegetables, and herbs. Foliar applications on plants grown in greenhouses, shadehouses, outdoor nurseries, landscapes, and field production settings. Rates vary widely by crop, check the label for rates. For greenhouse grown ornamentals: **Foliar spray rates:** 1.5-2 tsp per gal or 24-32 fl oz per 100 gal. Restricted Entry Interval is 24 hours for greenhouse uses and 48 hours for all field applications.

Item: 71-1205 **Size:** 2.5 gal.

Decree 50 WDG



Active Ingredient: Fenhexamid

Decree provides long residual control of *Botrytis* with minimal visible residue and excellent plant and bloom safety. Several edible crops are on the label. Labeled for grown to harvest greenhouse tomato, pepper, cucumbers and leafy greens. **Foliar spray rates:** 1-2 tsp per gal or 0.75-1.5 lb per 100 gal.

Item: 71-1439 **Size:** 2.5 lb.

Camelot O



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.

Carb-O-Nator



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.

Cease



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.

BotryStop WP



Active Ingredient: *Ulocladium oudemansii* (U3 Strain)

BotryStop is a WDG formulation fungicide based on a saprophytic fungus for the control of *Botrytis* and *Sclerotinia* spp. Foliar sprays can be applied on ornamentals in greenhouses and nurseries and many edible crops including certain vegetables, berries and tree fruits in field, high tunnel or greenhouse sites. Excellent plant safety but leaves some visible residue. **Foliar spray rates:** 3 Tbls per gal or 3 lb per 100 gal. Requires constant agitation during application. Check Bioworks website for fungicide compatibility information. **OMRI listed.**

Item: 71-12601 **Size:** 12 lb.

Item: 71-12603 **Size:** 30 lb.

Companion WP



MOA | REI
BM02 | 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.

EcoSwing



MOA | REI
BM01 | 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.

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.



Guarda



MOA | REI
BM01 | 0

Active Ingredient: Thyme Oil

Guarda is an emulsifiable concentrate of a botanical extract of Thyme oil that has been stabilized with the HOLDIt® Technology that allows it to remain active for up to 14 days. Labeled as a spray, drench or dip on ornamentals, turf and edible crops including herbs. Use preventatively against foliar pathogens bacterial blight/canker, *Botrytis*, *Colletotrichum*, downy mildew, fungal leaf spots, powdery mildew, and rust, and for *Fusarium*, *Pythium* and *Rhizoctonia* when applied as a drench. **Foliar spray rates:** 0.8-4.2 fl oz per gal or 80-422 fl oz per 100 gal. **Drench rates:** 5 fl oz per gal or 4 gal per 100 gal. **Pre-Plant Dip rates:** 0.32-0.64 fl oz per gal or 32-64 fl oz per 10 gal.

Item: 71-1610

Size: 2.5 gal.



GGSPRO TIP GUARDA FUNGICIDE

Guarda is a botanical extract of thyme oil that has been stabilized, allowing it to provide activity for up to 14 days after application. Labeled as a spray, drench, or dip on ornamentals, turf, and edible crops including herbs. Use this unique oil-based fungicide to combat many foliar pathogens.

Fosphite EC



MOA | REI
P07 | 4

Active Ingredient: Mono & Di-Potassium Salts of Phosphorous Acid

Broad spectrum, systemic fungicide for control of downy mildew, *Pythium*, *Phytophthora* and many other diseases in greenhouse and nursery outdoor crops. Many edible crops are on the label. Stimulates natural plant defenses. Do not apply within 20 days of a copper application. **Foliar spray rates:** 2-4 tsp per gal or 32-64 fl oz per 100 gal. **Drench rates:** ½-¾ tsp per gal or 6-12 fl oz per 100 gal.

Item: 71-1522

Size: 2.5 gal.

LalStop K61
WPMOA | REI
BM02 | 4**Active Ingredient:** *Streptomyces* sp. strain K61

Developed from a naturally occurring bacteria, LalStop K61 WP is a preventative foliar spray or drench product that thrives in the rhizosphere for several weeks and provides effective control on a wide range of pathogens including damping-off caused by various fungi, such as *Alternaria* and *Rhizoctonia*; and wilt and root diseases caused by *Fusarium*, *Phytophthora* and *Pythium*. Also used in hydroponics and plant dipping. Refer to label for application rates. **OMRI listed.**

Item: 71-2061 **Size:** 0.88 oz**Item:** 71-2063 **Size:** 3.5 oz**Item:** 71-2065 **Size:** 2 lb.

Regalia CG

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

A botanical fungicide labeled for use on ornamentals in greenhouses, shade-houses, outdoor nurseries and landscape plantings. Utilizing Induced Systemic Resistance, Regalia CG primes the plants for self defense. 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 and drench rates:** 0.64-1.28 fl oz per gal or 64-128 fl 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.**Item:** 70-2846 **Size:** 55 gal.*70-2846 item is drop-ship to the site from the manufacturer.*

MilStop SP

MOA | REI
NC | 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 | REI
NC | 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: 71-2744**Size:** 2.5 gal*These items drop-ship to the site from the manufacturer.*

Mildew Cure

MOA | REI
NC | 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.*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.

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 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 ½-¾ 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.

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 Plus WP

MOA
BM03 | REI
4**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: ½-1 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.

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. 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.

Sprint 330 & Sprint 138



The Chemical Company



High Performance Iron Chelates for Soil Applications

Sprint 330 and Sprint 138 are strong chelated forms of iron that maintain and protect iron availability. Sprint 138 is more effective when soil pH is higher than 6.5. Apply as soil drench at 3-5 oz per 100 gal. (rinse excess off leaves & flowers immediately following drench.)

Item	Description	Size
67-70371	Sprint 138- 6% Fully Chelated EDDHA Iron plus 4-0-0	5 lb/Pkg
67-70361	Sprint 330- Iron Chelated 10% DTPA Iron plus 8-0-0	5 lb/Pkg
67-70365	Sprint 330- Iron Chelated 10% DTPA Iron	50 lb/Pkg

Triathlon BA

MOA
BM02 | REI
4**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:** 2-4½ 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.
71-31113		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.



ZeroTol HC ★   MOA NC | REI 1

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 ★   MOA NC | REI 1

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.

★ = Retail Store Best Seller

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.

NoFly WP



Active Ingredient: *Isaria fumosorosea* strain FE 9901.

NoFly is a wettable powder insecticide based on a naturally occurring fungus. From a foliar spray it is labeled to control: aphids, leaf hoppers, mealybugs, plant bugs, spider mites, thrips, whiteflies and others. Soil applications can be made by drenching or blending in the soil prior to planting for: aphids (root), mealybugs (root), caterpillars and the pupal stage of thrips. NoFly is labeled for ornamentals as well as many herbs, fruits and vegetables grown in containers in greenhouses, hydroponic systems, nurseries, and field-grown nursery stock. Acceptable storage temperatures are 34-72°F, refrigeration is recommended. **Foliar spray and drench rates:** 1-2 tsp gal or 14-28 oz per 100 gal. **OMRI listed.**

Item: 70-2509 **Size:** 2 lb.

Aza-Direct



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



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:** ¼-1 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.

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:** ½-1 tsp per gal. **OMRI listed.**

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

BioCeres WP



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.

BotaniGard 22WP



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.

BotaniGard ES



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.

Bug-N-Sluggo



Active Ingredient: Iron Phosphate, Spinosad

Small bait pellets for the control of ants, earwigs, crickets, cutworms, slugs, snails, sowbugs and pillbugs. Scatter pellets around the perimeter of the field or greenhouse vegetable plantings. Fruit trees, small fruits and ornamentals can also be treated. **Rates:** 0.5-1 lb per 1,000 sq ft for most applications. **OMRI listed. *Not registered in all states**

Item: 70-1295 **Size:** 50 lb.



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!

2024
2025

BotaniGard Maxx



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:** ½-2 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.

BT NOW



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:** ½ - 3 ½ tsp per gal or 8-56 fl oz per 100 gal. **OMRI listed.**

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

Captiva Prime



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



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



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.

EpiShield



Active Ingredient: Peppermint Oil, Clove Oil, & Sodium Lauryl Sulfate

Essential oil-based 25b insecticide and miticide approved for ornamentals, edibles, herbs, and hemp. Applied as a foliar spray and plant cutting dip. Provides contact paralysis, suffocation, and desiccation to control aphids and mites. Exempt from REI and PHI restrictions. **Foliar spray rates:** 1/2-3/4 tsp per gal or 9-12 fl oz per 100 gal.

Item: 70-1545 **Size:** 36 oz.



Look for QR codes throughout the catalog and scan with your phone for digital bonus information.



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



Active Ingredient: *Bacillus thuringiensis israelensis*

Gnatrol WDG is a biological larvicide, 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



Active Ingredient: *Chromobacterium subsugae* 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.

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.

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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LalGuard M52 OD



Active Ingredient: *Metarhizium brunneum* Strain F52

An effective and versatile bioinsecticide for foliar and soil pest management in edible and ornamental crops. Composed of fungal spores, this microbial based pesticide provides pest control efficacy with minimum impact to applicators, non-targets, and the surrounding environment. Foliar applications controls whiteflies, thrips, mites and aphids. Drench applications targets thrips pupae and weevils. **Foliar spray rates:** 8-64 fl oz per 100 gal. **Drench rates:** 40-80 fl oz per 100 gal.

- Item:** 70-2291 **Size:** 1L

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.

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:** ½-1 tsp per gal or 8-16 fl oz per 100 gal. **Drench rates:** ½ 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.

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.

Sil-Matrix



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.



GGSPRO TECHNICAL SERVICES

Our in-house technical services team delivers prompt, practical and accurate support to Griffin customers everywhere. Visit griffins.com for more information.

PyGanic 5.0 Specialty



MOA 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.

SuffOil-X



BioWorks

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.

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.



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.

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.

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.

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.

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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.

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.

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.



DISCOVER WHY OVER 1000 GROWERS ARE USING NANOBUBBLE TECHNOLOGY IN THEIR IRRIGATION SYSTEMS

Get More From Your Irrigation Water With This One Tool

Cost savings and crop improvements

- ✓ Increase and stabilize dissolved oxygen levels
- ✓ Reduce biofilm and clogged emitters
- ✓ Suppress water-borne pathogens
- ✓ Increase nutrient uptake efficiency
- ✓ Improve input efficiency for reduced costs



Achieve better crops while maximizing efficiency and reducing inputs

“ Before, cleaning the filters needed to be completed every four weeks, however, after installing the nanobubble generator that frequency has gone down quite a bit. Washing the sand filter of the fertilizer unit now needs to be done a lot less often as well. The day tank with irrigation water remained clear, almost without any trace of organic contamination. Upon visual inspection during cultivation, the part of the trays treated with Moleaer nanobubbles had a lot more young, thin roots at the bottom of the substrate. ”

– Michiel Penninx, Lead Grower at Aardbeienkwekerij Penninx



Reduce Irrigation Pond Headaches with the Synergistic Benefits of Moleaer's Technology

Solve complex water challenges with one cost-effective tool

- ✓ Prevent and reduce algae and biofilm
- ✓ Reduce pathogens before they reach your irrigation system
- ✓ Lower chemical usage and make chemistry more effective
- ✓ Higher dissolved oxygen promotes healthier roots and better yields



Optimize your pond water for healthier, more resilient crops

“ We sought a solution for our muck and water quality issues in our irrigation pond and worked with Moleaer through our Griffin representative to install their nanobubble technology. Moleaer helped us evaluate our irrigation pond and provided support throughout the entire process. After a simple installation of Moleaer's nanobubble generator a few months ago, the unit has been running great, and we expect long-term benefits during the warmer season. ”

– Walnut Springs Nursery Inc.



DELIVERING THE POWER OF NANOBUBBLES IN OVER 2500 INSTALLATIONS IN 55 COUNTRIES

Cleaners & Sanitizers

AgH PRO®



Pace AgH PRO is an environmentally friendly, multi-purpose, non-corrosive alkaline cleaner. It is safe to use for indoor and outdoor areas such as irrigation systems, growing areas, storage facilities, growing/harvesting/transportation equipment and packing facilities and equipment. Dissolves grease, debris, algae, and organic material for easy an easy rinse removal.

Direct Spray Rates: 2.5-7.5 fl oz/1 gal

Irrigation Line Cleaning Rates: Inject 2.5 fl oz/1 gal (1:50 injecting from concentrated product).

Item: 74-1200 **Size:** 2.5 gal

Strip-It PRO™



Pace Strip-It PRO is a powerful outdoor or greenhouse/shade house cleaner, designed to dissolve mineral build up and dislodge compacted organic debris. Use in well-ventilated area to clean irrigation lines, greenhouse or shade house walls, floors, and benches. Safe to use on aluminum, copper, galvanized steel, glass, plastics, fiberglass, rocks, ground-cover cloth, and concrete. Do not use in indoor growing or packing areas. Avoid direct spray on crops.

Direct Spray Rates: 2.5-5.0 fl oz/1 gal

Irrigation Line Cleaning Rates: Inject 2.5 fl oz/1 gal (1:50 injecting from concentrated product).

Item: 74-2123 **Size:** 2.5 gal.

Item: 74-21230 **Size:** 30 gal.

Item: 74-21255 **Size:** 55 gal.

KleenGrow™



Active Ingredient: 1-Decanaminium,N-decyl-N,N-dimethyl-,chloride

Pace KleenGrow is a multi-use, broad spectrum, EPA registered product use to control diseases, viruses, and algae found on surfaces in CEA growing areas, such as tray washing/growing/packing equipment, floors, troughs, benches, and growing/harvesting tools. As a 0-REI, no rinse hard surface disinfectant for human and plant pathogens, KleenGrow provides up to 30 days of control of pathogens and algae, thereby reducing cross contamination, which results in a healthy environment for crops and workers. See label for control of diseases and algae in other areas such, on ornamental crops, in growing areas and in irrigation water.

REI	Rate fl oz/gal	Rate fl oz/100 gal	Application
0 HR	1 oz/gal	0.3-1.4	Disinfecting surfaces No Rinse
0 HR	0.5 oz/gal	6-50	Microbial Control on Surfaces Rinse

Item: 74-21125 **Size:** 2.5 gal.

Item: 74-21151-CA **Size:** 5 gal.

Item: 74-21301 **Size:** 30 gal.

Item: 74-21302 **Size:** 55 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 Alkaline 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.

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.

BioFoamer Foaming Agent

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 Foaming Agent for every gal of solution to be foamed.

Item: 74-1360 **Size:** 5 gal.

Eco-Clean 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   

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.

Water Treatment

BioSafe Systems is an industry leader in food production and horticulture when it comes to sanitation. From chemical cleaners to products for crop protection, water treatment and hard surface sanitation against plant and human pathogens, you can count on efficacy and CEA-friendly options with BioSafe Systems products.


SaniDate 5.0 ★



Active Ingredients: Hydrogen Peroxide & Peroxyacetic Acid

This powerful sanitizing agent controls algae and many water-borne 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. 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 Ingredients: Hydrogen Peroxide & Peroxyacetic 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 Ingredients: Hydrogen Peroxide & Peroxyacetic Acid

For use in greenhouses, garden centers, landscapes, nurseries, hydroponics and turf. 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.


Hard Surface Sanitation

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 Systems. 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.

GreenClean PRO 

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.

ZeroTol 2.0 ★   

Active Ingredient: Hydrogen Peroxide & Peroxyacetic Acid

★ = Retail Store Best Seller



Active Ingredient: Hydrogen Peroxide & Peroxyacetic Acid

ZeroTol HC is a fungicide/bactericide to prevent or control plant diseases on ornamentals, vegetable, berry and fruit crops, turf and lawns. 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.



★ = Retail Store Best Seller

SaniDate 5.0 ★



Active Ingredient: Hydrogen Peroxide & Peroxyacetic Acid

This powerful sanitizing agent controls algae and many water-borne pathogens in irrigation water and on many hard surfaces. Not for use over the crop. 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:** 71-35101 **Size:** 5 gal.
- Item:** 71-35151 **Size:** 30 gal.
- Item - CA Only:** 71-35151-CA **Size:** 30 gal.

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Biological Control Agents

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	Yellow 3 x 5" Cards - Moisture Resistant (Qty 50)
74-36707	Blue 3 x 5" Cards - Moisture Resistant (Qty 50)
74-3650	Card Wire Stakes (Qty 100)

★ = Retail Store Best Seller



Measuring & 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.

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.

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2025

BASF
The Chemical Company


Beneficial Insectary


BIOBEE
Inspired by Nature


Bioline
AgroSciences




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 / Sciarids
- *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
Oriline 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>Ephesia</i> eggs	Serves as an additional food source for Orius
Thripline Lure and Trap	Sticky card system	Sticky cards with pheromone lure to attract and thrips. Provides enhanced monitoring capability.
Trapline T	Sticky traps	Sticky cards and rolls in yellow or blue for monitoring and trapping flying insects.



Bug-Scan Rolls and Cards



A yellow sticky plate made of durable, recyclable plastic with glue on both sides. Commonly used tool for the timely detection of a new infestation and for monitoring the population size of pests already present. Attracts the most harmful flying insects, such as whitefly, fungus gnats, aphids and leafminers.

Item: 30BSY5X4 **Description:** 12.5cm x 10cm card, 100 pack
Item: 30BSRY30X100 **Description:** 30cm X 100m yellow roll

BCA Applicator Tools and Equipment

Universal Release Boxes



Item: 30URB **Qty:** 50/bag

Nematodes

Steinernema feltiae

Active Ingredient: *Steinernema feltiae*

Beneficial nematode for the control of fungus gnat larvae when applied as a drench. *S. feltiae* when used as the second part of a two part control plan helps kill Western flower thrips pupae and pre-pupae from a soil drench treatment. **Rate for fungus gnat larvae and thrips pupae:** 50 million nematodes treat 1,100 sq ft; 250 million nematodes treat 5,500 sq ft.

BASF
Nemasys



Item: 70-2460 **Qty:** 5 Trays 50 mil / tray
Item: 70-2489 **Qty:** 250 mil / tray

BENEFICIAL INSECTARY
NEMAforce™ SF



Item: 30F50 **Qty:** 1 tray 50 mil / tray
Item: 30F250 **Qty:** 1 tray 250 mil / tray
Item: 30F5T **Qty:** 5 trays 250 mil / tray
Item: 30F600 **Qty:** 600 mil 12 x 50 mil trays

Steinernema carpocapsae

Active Ingredient: *Steinernema carpocapsae*

Beneficial nematode for the control of shorefly larvae, soil dwelling insects and borer larvae. Labeled for use on ornamental and edible crops in greenhouses, interiorscapes, nursery, landscapes and turfgrass. **Rate for shorefly larvae:** 50 million nematodes treat 540-1,080 sq ft; 250 million treats 2,700-5,400 sq ft.

BASF
Millenium



Item: 70-2455 **Qty:** 5 trays 250 mil / tray

BENEFICIAL INSECTARY
NEMAforce™ SC



Item: 30C50 **Qty:** 1 tray 50 mil / tray
Item: 30C250 **Qty:** 1 tray 250 mil / tray
Item: 30C125B **Qty:** 1 tray 1.25 bil / tray

BENEFICIAL INSECTARY
NEMAforce™ HB



Item: 30H50 **Qty:** 1 tray 50 mil / tray
Item: 30H250 **Qty:** 1 tray 250 mil / tray

GriffinExpo

SAVE THE DATES!

Virtual Expo
August 19 - October 31, 2024

In-Person Expos

August 28-29, 2024
Silver State Pavilion at Grand Sierra
Reno, NV (**New Location**)

September 25-26, 2024
New Jersey Convention and Expo Center
Edison, NJ



THE LEADERS IN BIOLOGICAL SOLUTIONS.



CONTROL DOWNY MILDEW, BOTRYTIS & WHITE MOLD

- Increases marketable yield from a reduction of disease incidence & severity
- Broad-spectrum fungicidal activity against downy mildew & *Botrytis*
- Four-hour re-entry interval & zero-day preharvest interval allow flexible labor scheduling

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



FUNGAL & BACTERIAL DISEASE MANAGEMENT

- Promotes plant immunity & prevents disease
- Broad-spectrum mode of action protects against multiple pathogens, including powdery mildew & fire blight
- Enhances plant health & overall stress tolerance to increase yield & crop quality

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



BROAD-SPECTRUM CONTROL OF KEY INSECTS

- Easy on pollinators & beneficial insects
- Protects crops against key insects, including spotted wing drosophila (SWD) & lygus
- Provides multiple modes of action to stop insect feeding & reproduction

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



CONTROL CHEWING & SUCKING INSECTS & MITES

- Excellent mixing partner with conventional chemistry for improved performance
- Broad-spectrum activity against mites & chewing & sucking insects
- Increases marketable yield by reducing insect damage

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



FREE EDUCATIONAL VIDEOS ON INDOOR GROWING & FOGGING



Learn more at www.ProFarmGroup.com or speak to your Griffin salesperson.

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B

MILSTOP® SP – CURE AND PREVENT MILDEW WITHOUT RESISTANCE.

MilStop SP is an OMRI-listed foliar fungicide that controls and suppresses powdery mildew. As a broad-spectrum solution, MilStop SP is effective on indoor fruit, vegetable, and ornamental crops.

The MilStop SP Solution:

- + Kills powdery mildew on contact
- + 1-hour REI, 0-day PHI
- + Effective resistance management tool



ABOVE AND BEYOND IS WHERE WE BEGIN



BioWorks®

A MEMBER OF BIOBEST GROUP

BIOWORKSINC.COM/PRODUCTS/MILSTOP

CUSTOMERSERVICE@BIOWORKSINC.COM



2024 pH Pen (A)

2025 The Bluelab hand held pH pen provides a compact, quick and handy way to manage the success of your crop to ensure maximum uptake of nutrients.

Item: 83-2701

Conductivity (EC/PPM) Pen (B)

The Bluelab Conductivity Pen can read EC, PPM and temperature of water solutions.

Item: 83-2702

Multimedia pH Meter (C)

Accurately measure and monitor pH levels in solution or in a wide range of media. Combine the Multimedia pH Meter and Leap™ pH Probe to take fast accurate measurements.

Item	Description
83-2774	Multimedia pH Meter
83-2776	Leap™ Replacement Probe

Combo Meter Plus (D)

Measures pH, conductivity and temperature in one portable handheld meter. This all-in-one, convenient portable solution for accurate measurement of pH in soil or nutrient solutions. Conductivity (EC) and temperature of solutions. This battery-powered, lightweight unit can be used anywhere, anytime to measure critical parameters related to healthy plant growth. The new Bluelab Leap pH probe included, also allows fast and accurate pH measurements direct from the root zone in a wide range of growing media including soil, coco coir, potting mixes and nutrient solution- no more pH slurries or extraction mixes.

Item	Description
83-2777	Combo Plus Meter
83-2739	Carry Case
83-2776	Leap Spear-Tip Probe



Guardian Monitor (E)

Provides 24 hour continuous reading for pH, conductivity (EC/PPM) and temperature within a nutrient solution in hydroponics and other systems. Connect monitors has alarm notification and wireless data logging.

Item	Description
83-2711	Guardian Connect Monitor
83-2770	Guardian Monitor Inline Connect
83-2772	Guardian Inline pH Probe
83-2737	Connect Stick
83-2738	Connect Range Extender

Combo Meter EC (F)

Measures pH, conductivity (EC) and temperature on the go. Brilliantly simple design that's easy to use, clean and calibrate for solution measurements. Backlit display to capture every measurement with ease. Includes a pH Probe and Conductivity Probe to cover all your nutrient uptake fundamentals. 2-meter cable for measuring in hard-to-reach locations. Scales to your preference - conductivity in EC, CF, PPM 500 (TDS) or PPM 700; temperature in °C or °F.

Item: 83-2709

Commercial Truncheon Meter (G)

An EC meter built to last a lifetime – now on a bigger scale. Robust and reliable construction for long-lasting value. Fully waterproof; splash, submerge or sink - we've got you covered. Automatically detects liquids and bright LEDs indicate measurement for brilliantly simple functionality. Long-format design for mixing and measuring nutrient reservoirs simultaneously. No calibration required and easy to clean and disinfect. All conductivity scales included – EC, CF, PPM 500 (TDS), PPM 700. Industry-leading five-year warranty for peace of mind. Ideal for hydroponics.

Item: 83-2706



Guardian Monitor Inline Connect (A)

24/7 monitoring of pH, EC and temperature directly in your irrigation and nutrient feed line. View nutrient feed parameters on your mobile phone no matter where you are. Large, backlit display for at-a-glance viewing. High and low alarms to alert you when your parameters are out of range

Item: 83-2770

Pro Controller (B)

Monitor and automate nutrient and pH dosing in reservoirs when paired with Bluelab PeriPod dosers. In-built safety lockouts prevent excessive dosing, View your reservoir parameters on your mobile phone no matter where you are. Multi-part nutrient dosing possible with multiple PeriPods and Connect software. Controls pH in the up (alkali) or down (acid) direction. High and low alarms to alert you when parameters are out of range.

Item: 83-2779

pH Controllers and Dosers (C)

Controllers provide selectable, single-direction correction (either up or down), with the ability to control across the full pH range with an accuracy of +/- 0.1 point. Dosing up to 10 ml per minute to support reservoirs up to 200 gallons. Easy calibration protocols and visual alarm states. pH Controller Connect includes wireless data logging capabilities. Use with Bluelab pH Down (35% phosphoric acid) or pH Up (35% potassium hydroxide) solutions.

Item	Description
83-2712	pH Controller
83-2713	pH Controller Connect

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Pulse 3-1 Multimedia Meter (D)

Allows growers to get fast, accurate measurements directly from the root zone sent direct-to-mobile. Quickly and accurately spot-check moisture, conductivity and temperature. Wireless smartphone syncing meter.

Item: 83-2778



Calibration Solutions and Probe Care Kits pH & Conductivity

All the tools you need to care for Bluelab probes. The probe surface is where the instrument takes the reading of the solution or soil/ media. If the probe face is dirty or contaminated, then the reading will be inaccurate. Accurate readings simplify crop management and provide improved growth.

Item #	BlueLab Calibration Solutions	Amt.
83-2751	pH 7.0 Calibration Solution	500 ml /16.9 fl oz.
83-2754	pH 7.0 Calibration Solution	250 ml /8.45 fl oz.
83-2752	pH 4.0 Calibration Solution	500 ml /16.9 fl oz.
83-2755	pH 4.0 Calibration Solution	250 ml /8.45 fl oz.
83-2753	EC 2.77 Conductivity Solution	500 ml /16.9 fl oz.
83-2756	EC 2.77 Conductivity Solution	250 ml /8.45 fl oz.
83-2758	KCL Storage Solution	120 ml = 4.05 fl oz.
83-2734	Probe Care Kit – Conductivity 2 sachet – EC 2.77, 1 plastic cups, conductivity probe cleaner, chamois	Each single use sachet – 20 ml /0.67 fl oz.
83-2736	Probe Care Kit – pH & Conductivity 2 sachet – pH 7.0, pH 4.0, KCL, EC 2.77 3 plastic cups, pH probe cleaner, conductivity probe cleaner, pH probe brush, chamois	Each single use sachet – 20 ml /0.67 fl oz.
83-2735	Probe Care Kit – pH 2 sachet – pH 7.0, pH 4.0, KCL , 3 plastic cups, pH probe clean-er, pH probe brush	Each single use sachet – 20 ml /0.67 fl oz.



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Trellis netting is used to support vegetable, cutflower and medicinal 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
- Four 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
81900065	TENAX HORTONOVA TRELLIS NET SM 36" X 3280' WHITE 5.9"X5.9" MESH	1
81900304	TENAX HORTONOVA TRELLIS NET LG 39"X3280' WHITE 6"X6" MESH	1
81900104	TENAX HORTONOVA TRELLIS NET SM 48" X 1500' WHITE 5.9"X5.9" MESH	1
81900076	• TENAX HORTONOVA TRELLIS NET SM 48" X 3280' WHITE 5.9"X5.9" MESH	1
81900079	TENAX HORTONOVA TRELLIS NET LM 59" X 3280' WHITE 5.9"X6.7" MESH	1
81900305	TENAX HORTONOVA TRELLIS NET LG 60"X3280' WHITE 3.5"X3.5" MESH	1
81900081	TENAX HORTONOVA TRELLIS NET LM 67" X 3280' WHITE 5.9"X6.7" MESH	1
81900089	TENAX HORTONOVA TRELLIS NET LM 79" X 1000' WHITE 5.9"X6.7" MESH	1
81900090	• TENAX HORTONOVA TRELLIS NET LM 79" X 3280' WHITE 5.9"X6.7" MESH	1
81900112	TENAX HORTONOVA TRELLIS NET LM 120" X 1500' WHITE 5.9"X6.7" MESH	1
81900113	TENAX HORTONOVA TRELLIS NET LM 120" X 3280' WHITE 5.9"X6.7" MESH	1
81900298	• TENAX HORTONOVA TRELLIS NET SM 79"X 3280' WHITE 4X4 MESH	1
81900084	TENAX HORTONOVA TRELLIS NET LM 79"X50' WHITE 5.9"X6.7" MESH	1
81900105	TENAX HORTONOVA TRELLIS NET LM 79"X1500' WHITE 5.9"X6.7" MESH	1



★ = Retail Store Best Seller



Commercial Production of Greenhouse-Grown Vegetables Solutions Guide

BASF delivers innovative conventional and biological solutions for growers with proven plant health benefits.

This is the BASF portfolio of products that accompanies our research-based recommendations for commercial production of greenhouse-grown fruiting vegetables, cucurbits and leafy greens.

Come grow with us.



For more information, visit
www.betterplants.basf.us



Introducing the Irrilink™ Multi-Output Control System



Designed for basic monitoring and remote control, multi bank valves, fans, etc.

- Allows user to remotely start their systems via phone, laptop or computer
- Saves time and money by alleviating dedicated personnel overseeing manual valve control, eliminating human factor. Improves crop yield with consistent irrigation
- An economical way to over see irrigation network from anywhere at anytime
- 1 sensor input, up to 16 outputs
- Remote, or scheduled irrigation. Gang zones with similar watering times.
- Package includes: 20 w solar panel/ 24v AC power source, 1 RCB
- No need for WiFi
- Available as AC or DC operation. No 110v AC power? No problem
- Scalable



Griffin Greenhouse Supplies
www.griffins.com
800-888-0054



Irrigation Automation Systems
iassys.com
800-549-4551

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 \$26.00 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 \$15.00 charge for packaging and handling. There is an additional handling fee of \$25.00 for all packages not in a box or 48 inches along it's 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 24 hours, or 2 working days, prior to your delivery day.

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 Denver, CO; Cheshire, CT; Ball Ground, GA; Tewksbury, MA; Gray, ME; Bridgeton, NJ; Auburn, NY; Brookhaven, NY; Schenectady, NY; Salem, OR; Morgantown, PA; Richmond, VA; and Woodridge, IL. or FOB the factory unless otherwise stated.

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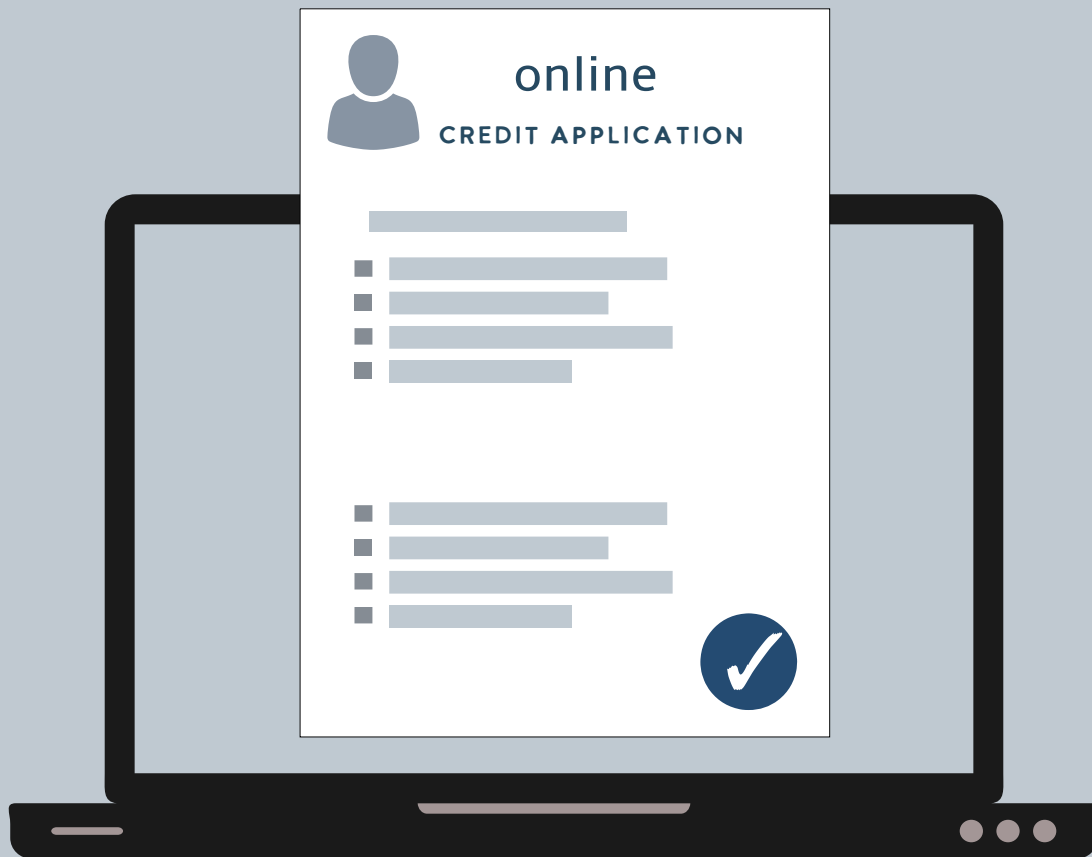
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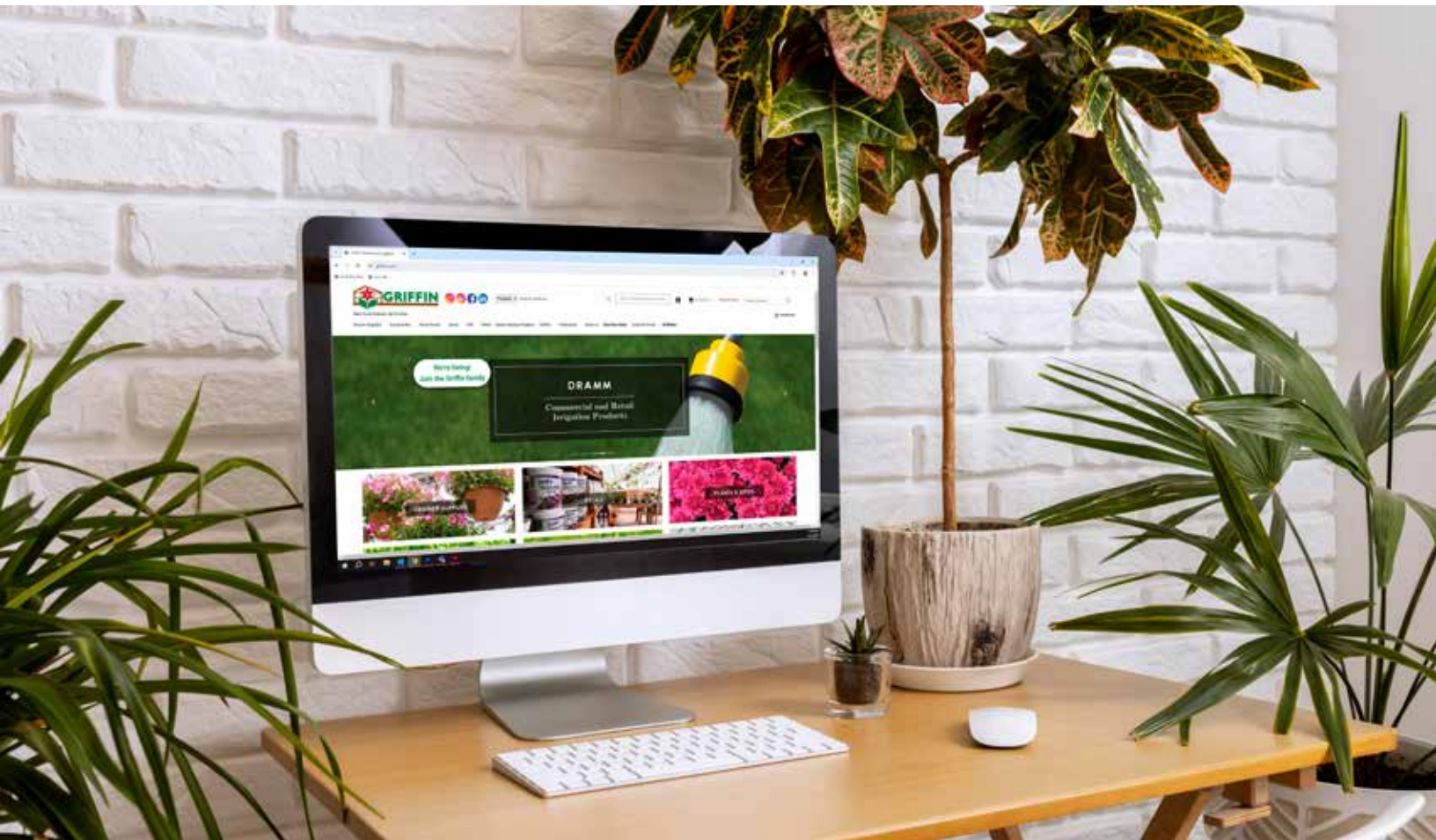


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GROWING CALENDAR

Starshine Blue from Syngenta Flowers

● Full Moon Days
■ Holidays

2023

2024

JULY

WEEK	S	M	T	W	T	F	S
26							1
27	2	3	4	5	6	7	8
28	9	10	11	12	13	14	15
29	16	17	18	19	20	21	22
30	30	23	31	24	25	26	27
	28	29					

AUGUST

WEEK	S	M	T	W	T	F	S
31			1	2	3	4	5
32	6	7	8	9	10	11	12
33	13	14	15	16	17	18	19
34	20	21	22	23	24	25	26
35	27	28	29	30	31		

SEPTEMBER

WEEK	S	M	T	W	T	F	S
35						1	2
36	3	4	5	6	7	8	9
37	10	11	12	13	14	15	16
38	17	18	19	20	21	22	23
39	24	25	26	27	28	29	30

OCTOBER

WEEK	S	M	T	W	T	F	S
40	1	2	3	4	5	6	7
41	8	9	10	11	12	13	14
42	15	16	17	18	19	20	21
43	22	23	24	25	26	27	28
44	29	30	31				

NOVEMBER

WEEK	S	M	T	W	T	F	S
44				1	2	3	4
45	5	6	7	8	9	10	11
46	12	13	14	15	16	17	18
47	19	20	21	22	23	24	25
48	26	27	28	29	30		

DECEMBER

WEEK	S	M	T	W	T	F	S
48						1	2
49	3	4	5	6	7	8	9
50	10	11	12	13	14	15	16
51	17	18	19	20	21	22	23
52	31	24	25	26	27	28	29
	30						

JANUARY

WEEK	S	M	T	W	T	F	S
1		1	2	3	4	5	6
2	7	8	9	10	11	12	13
3	14	15	16	17	18	19	20
4	21	22	23	24	25	26	27
5	28	29	30	31			

FEBRUARY

WEEK	S	M	T	W	T	F	S
5					1	2	3
6	4	5	6	7	8	9	10
7	11	12	13	14	15	16	17
8	18	19	20	21	22	23	24
9	25	26	27	28	29		

MARCH

WEEK	S	M	T	W	T	F	S
9						1	2
10	3	4	5	6	7	8	9
11	10	11	12	13	14	15	16
12	17	18	19	20	21	22	23
13	31	24	25	26	27	28	29
	30						

APRIL

WEEK	S	M	T	W	T	F	S
14		1	2	3	4	5	6
15	7	8	9	10	11	12	13
16	14	15	16	17	18	19	20
17	21	22	23	24	25	26	27
18	28	29	30				

MAY

WEEK	S	M	T	W	T	F	S
18				1	2	3	4
19	5	6	7	8	9	10	11
20	12	13	14	15	16	17	18
21	19	20	21	22	23	24	25
22	26	27	28	29	30	31	

JUNE

WEEK	S	M	T	W	T	F	S
22							1
23	2	3	4	5	6	7	8
24	9	10	11	12	13	14	15
25	16	17	18	19	20	21	22
26	30	23	24	25	26	27	28
	29						

JULY

WEEK	S	M	T	W	T	F	S
27		1	2	3	4	5	6
28	7	8	9	10	11	12	13
29	14	15	16	17	18	19	20
30	21	22	23	24	25	26	27
31	28	29	30	31			

AUGUST

WEEK	S	M	T	W	T	F	S
31					1	2	3
32	4	5	6	7	8	9	10
33	11	12	13	14	15	16	17
34	18	19	20	21	22	23	24
35	25	26	27	28	29	30	31

SEPTEMBER

WEEK	S	M	T	W	T	F	S
36	1	2	3	4	5	6	7
37	8	9	10	11	12	13	14
38	15	16	17	18	19	20	21
39	22	23	24	25	26	27	28
40	29	30					

OCTOBER

WEEK	S	M	T	W	T	F	S
40			1	2	3	4	5
41	6	7	8	9	10	11	12
42	13	14	15	16	17	18	19
43	20	21	22	23	24	25	26
44	27	28	29	30	31		

NOVEMBER

WEEK	S	M	T	W	T	F	S
44						1	2
45	3	4	5	6	7	8	9
46	10	11	12	13	14	15	16
47	17	18	19	20	21	22	23
48	24	25	26	27	28	29	30

DECEMBER

WEEK	S	M	T	W	T	F	S
49	1	2	3	4	5	6	7
50	8	9	10	11	12	13	14
51	15	16	17	18	19	20	21
52	22	23	24	25	26	27	28
1	29	30	31				



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GROWING CALENDAR

Limitless Dark Rose and Limitless Sunset from Syngenta Flowers

 Full Moon Days
 Holidays

2025

JANUARY							
WEEK	S	M	T	W	T	F	S
1				1	2	3	4
2	5	6	7	8	9	10	11
3	12	13	14	15	16	17	18
4	19	20	21	22	23	24	25
5	26	27	28	29	30	31	

FEBRUARY							
WEEK	S	M	T	W	T	F	S
5							1
6	2	3	4	5	6	7	8
7	9	10	11	12	13	14	15
8	16	17	18	19	20	21	22
9	23	24	25	26	27	28	

MARCH							
WEEK	S	M	T	W	T	F	S
9							1
10	2	3	4	5	6	7	8
11	9	10	11	12	13	14	15
12	16	17	18	19	20	21	22
13	23	24	25	26	27	28	29

APRIL							
WEEK	S	M	T	W	T	F	S
14			1	2	3	4	5
15	6	7	8	9	10	11	12
16	13	14	15	16	17	18	19
17	20	21	22	23	24	25	26
18	27	28	29	30			

MAY							
WEEK	S	M	T	W	T	F	S
18					1	2	3
19	4	5	6	7	8	9	10
20	11	12	13	14	15	16	17
21	18	19	20	21	22	23	24
22	25	26	27	28	29	30	31

JUNE							
WEEK	S	M	T	W	T	F	S
23	1	2	3	4	5	6	7
24	8	9	10	11	12	13	14
25	15	16	17	18	19	20	21
26	22	23	24	25	26	27	28
27	29	30					

JULY							
WEEK	S	M	T	W	T	F	S
27			1	2	3	4	5
28	6	7	8	9	10	11	12
29	13	14	15	16	17	18	19
30	20	21	22	23	24	25	26
31	27	28	29	30	31		

AUGUST							
WEEK	S	M	T	W	T	F	S
31						1	2
32	3	4	5	6	7	8	9
33	10	11	12	13	14	15	16
34	17	18	19	20	21	22	23
35	24	25	26	27	28	29	30

SEPTEMBER							
WEEK	S	M	T	W	T	F	S
36		1	2	3	4	5	6
37	7	8	9	10	11	12	13
38	14	15	16	17	18	19	20
39	21	22	23	24	25	26	27
40	28	29	30				

OCTOBER							
WEEK	S	M	T	W	T	F	S
40				1	2	3	4
41	5	6	7	8	9	10	11
42	12	13	14	15	16	17	18
43	19	20	21	22	23	24	25
44	26	27	28	29	30	31	

NOVEMBER							
WEEK	S	M	T	W	T	F	S
44							1
45	2	3	4	5	6	7	8
46	9	10	11	12	13	14	15
47	16	17	18	19	20	21	22
48	23	24	25	26	27	28	29

DECEMBER							
WEEK	S	M	T	W	T	F	S
49		1	2	3	4	5	6
50	7	8	9	10	11	12	13
51	14	15	16	17	18	19	20
52	21	22	23	24	25	26	27
1	28	29	30	31			

2026

JANUARY							
WEEK	S	M	T	W	T	F	S
1					1	2	3
2	4	5	6	7	8	9	10
3	11	12	13	14	15	16	17
4	18	19	20	21	22	23	24
5	25	26	27	28	29	30	31

FEBRUARY							
WEEK	S	M	T	W	T	F	S
6	1	2	3	4	5	6	7
7	8	9	10	11	12	13	14
8	15	16	17	18	19	20	21
9	22	23	24	25	26	27	28

MARCH							
WEEK	S	M	T	W	T	F	S
10	1	2	3	4	5	6	7
11	8	9	10	11	12	13	14
12	15	16	17	18	19	20	21
13	22	23	24	25	26	27	28
14	29	30	31				

APRIL							
WEEK	S	M	T	W	T	F	S
14				1	2	3	4
15	5	6	7	8	9	10	11
16	12	13	14	15	16	17	18
17	19	20	21	22	23	24	25
18	26	27	28	29	30		

MAY							
WEEK	S	M	T	W	T	F	S
18						1	2
19	3	4	5	6	7	8	9
20	10	11	12	13	14	15	16
21	17	18	19	20	21	22	23
22	24	25	26	27	28	29	30

JUNE							
WEEK	S	M	T	W	T	F	S
23		1	2	3	4	5	6
24	7	8	9	10	11	12	13
25	14	15	16	17	18	19	20
26	21	22	23	24	25	26	27
27	28	29	30				



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