# CROPKING INCORPORATED

## PRODUCT CATALOG

FOR SAME DAY SHIPPING CALL (330) 302-4203
SHOP ONLINE AT CROPKING.COM

RESEARCHED DESIGNED AND MANUFACTURED IN THE USA

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For over 35 years, CropKing has been the leader in controlled environment agriculture, greenhouse manufacturing, and hydroponic systems. We provide solutions that enhance the production of crops while helping customers to find success through technical support and education.

# Virtual Workshops
## Now Available!

Now is your chance to attend our popular Grower School Workshops, without leaving your home. We're offering a variety of opportunities and topics to learn all via Zoom, and in many cases, a recording of the live presentation is available for all attendees.

**View dates and register at www.CropKing.com**

**GROWER SCHOOL WORKSHOP:** In this overview course, topics will include an introduction to greenhouse plants and hydroponic systems including Nutrient Film Technique (NFT) and Bato buckets, best practices for growing in these systems, pest identification and management, different types of soilless culture (focusing primarily on Perlite and Rockwool) and more!

**HYDROPONIC HEMP WORKSHOP:** This course is led by Horticulturist Colin Clark, and other members of the CropKing horticulture and technical teams. Topics include greenhouse set up and growing basics, nutrients, photomanipulation periods, vegetative and flowering stages, harvesting, processing, pest management and more!

**FREE Q&A SESSIONS:** Talk with the CropKing staff and get your questions answered! Topics can include controlled environment agriculture, hydroponic growing, integrated pest management, disease troubleshooting, plant nutrition and more.

> "
>
> I was completely engaged for the entire workshop. All of the presenters were well worth the price of admission. I was especially impressed with how many different topics were covered. Hydro basics, plus building a greenhouse, the business plan and marketing, and bugs!
>
> - Grower Workshop Attendee

# Grower Support & Consulting
## Vine Crops · Leafy Greens · Cannabis · Hemp

In addition to the virtual and in-person learning opportunities mentioned above, CropKing also offers individualized consulting on both large-scale (project management, design, construction, etc.) and small-scale (pest identification and assistance, troubleshooting, etc.) projects.

The CropKing consulting program provides investors, owners, and growers with the established skills and industry experience of the CropKing team, while supporting opportunities for successful business growth and development.

We have helped hundreds of growers both large and small get started in the hydroponic industry. It is our goal to reduce the learning curve and barrier of entry for these entrepreneurs. We know the stress that can be involved with any new business and even more so when agriculture is part of that equation. CropKing takes pride in being the trusted voice of authority for design, equipment, production, and growing questions.

# CropKing 10 Bato Bucket System

Perfect for the greenhouse or an indoor grow room, the recirculating CropKing 10 bato Dutch bucket system is great for growing vine crops and other tall fruiting crops such as tomatoes, cucumbers, peppers, squash, hops, hemp, strawberries, and many other fast-growing flowering plants. Each Dutch bucket is formed with a small reservoir to avoid drowning or starving your plants between irrigation cycles and is made from high quality UV-resistant plastic. This hydroponic bucket system will provide you with fresh veggies for years to come!

**System includes:**

- (10) bato Dutch buckets with elbows and covers
- Square aluminum stand and hardware with adjustable legs for creating slope
- Complete feed and drain plumbing
- PVC cleaner, primer, and cement
- Active Aqua 400 GPH submersible pump
- Easy to assemble bato Dutch bucket system components
- Perlite growing media
- 25-gallon reservoir tank with lid
- Digital timer for irrigation cycles
- Assembly and growing instructions
- Overall footprint of system: 10 ft. 4 in. x 22 in. x 26 in. LWH

**Item BAT0010**



Overall footprint:
10' 4" x 22" x 26" LWH

Recirculating System

| ACCESSORIES | |
|---|---|
| **DESCRIPTION** | **ITEM #** |
| BlueLab Combo Meter | PHM3000 |
| pH Control Kit | PHT4000 |
| 5 Pounds HydroGro Vine Crop | FER3022 |
| 5 Pounds Calcium Nitrate | FER3025 |
| 1 Pound Potassium Nitrate | FER3012 |
| Rockwool AO 36/40 Pad | ROC1008 |
| 10/20 Seed Tray without holes | TRA1101 |
| 100 Vine Clips | VIN8003 |
| 20 Bato Bobbins | TOM1015 |
| *Hydroponic Tomatoes* by Howard M. Resh | BOO0042 |

# CropKing 24 Bato Bucket System

Perfect for the greenhouse or an indoor grow room, the drain-to-waste* CropKing 24 bato Dutch bucket system is great for growing vine crops and other tall fruiting crops such as tomatoes, cucumbers, peppers, squash, hops, hemp, strawberries, and many other fast-growing flowering plants. Each of the bato Dutch buckets is formed with a small reservoir to avoid drowning or starving your plants and is made from high quality UV-resistant plastic. This hydroponic bucket system will provide you with fresh veggies for years to come! A minimum greenhouse footprint of approximately 12 feet by 20 feet will be needed to comfortably access all sides of the plants in the system. A plant support kit for this system can be purchased separately.

*Growers can convert this system to a recirculating system by placing the entire system on a stand that is taller than the included reservoir (25 in. tall) and adjusting the plumbing or by placing the system on the floor and setting the reservoir in a hole below the drain lines and adjusting the plumbing.*

## Item BAT0024
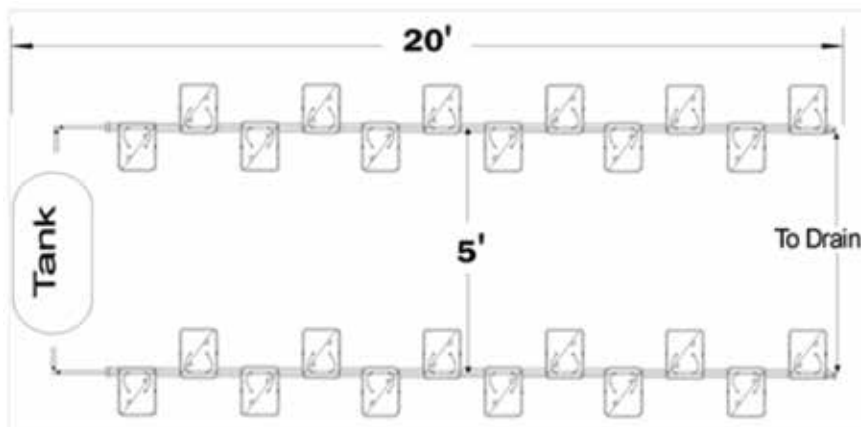


**System includes:**
- (24) bato Dutch buckets with elbows and covers
- Complete feed and drain plumbing
- PVC cleaner, primer, and cement
- Little Giant WGP-65-PW 1,900 GPH submersible pump
- Easy to assemble bato Dutch bucket system components
- Perlite growing media and 1.5 in. rockwool cubes
- 100-gallon reservoir tank (lid is NOT included)
- Digital timer for irrigation cycles
- Assembly and growing instructions
- Overall footprint of system: 20 ft. x 6.5 ft. x 25 in. LWH

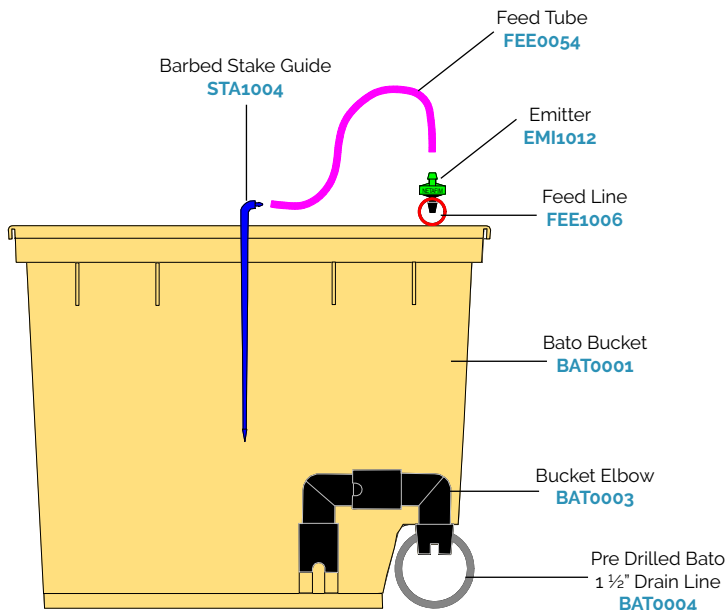| ACCESSORIES | |
|---|---|
| **DESCRIPTION** | **ITEM #** |
| BlueLab Combo Meter | PHM3000 |
| 50 Pounds HydroGrow Vine Crop (2-25lb bags) | FER1025 |
| 50 Pounds Calcium Nitrate | FER3014 |
| 5 Pounds Potassium Nitrate | FER3012 |
| Rockwool AO 36/40 Pad | ROC1008 |
| 10/20 Seed Tray | TRA1100 |
| 10/20 Seed Tray without Holes | TRA1101 |
| 200 Vine Clips | VIN8003 |
| **Plant Support Package** *100 ft of cable, Bato bobbins, turnbuckles for two rows of plants Vine crops may require plant support* | BAT0024PS |

# Bato Buckets

The bato buckets are designed to be fed by an emitter and measure 12" long x 10" wide x 9" tall. Included with the bucket are two small siphon elbows, to be installed in the bottom of the bucket. These elbows are installed to keep a small reservoir of nutrients in the bottom of the bucket, about 2" in depth. This nutrient reservoir keeps the growing media from drying out and prevents water stress on the plant between irrigation cycles. The buckets are designed to rest on a 1 ½ inch PVC drain line, so the drain water is suctioned from the lowest level and discharged into a central drain line. This method allows the reservoir to be constantly replenished and prevents the accumulation of stale nutrient solution. Bato buckets work well for heavy fruiting plants such as tomatoes, cucumbers, and peppers. Each bucket has a capacity of 2.9 gallons and takes a half cubic foot of perlite to fill one bucket.
***Call for special pricing on large orders.***

**Bato Bucket with Two Elbows,** Beige
> Item BAT0001

**Bato Bucket Elbow,** two needed per bucket
> Item BAT0003................................2 elbows

**Bato Bucket Cover Sets**
Cover your bato bucket to prevent light and debris from entering. Help keep root zone temperatures optimal and keep algae growth out. Includes a set of 1.5 pound white, Styrofoam covers. 328 sets in a case,
> Item BAT0005
> Item BAT0005

## BUCKET ACCESSORIES

**Perlite Horticulture Coarse Growing Media,** 4 Cubic Foot - Fills 8 bato buckets
> Item PER4000

**Barbed Stake Guide**
> Item STA1004

**White Feed Tube 5⁄3 mm,** per ft.
> Item FEE0054-E

**White Feed Tube 5⁄3 mm** 1000 ft. roll
> Item FEE0054

**Emitter Premium CNL 0.50 GPH**
> Item EMI1012

**Plant Support Cable 3⁄32 inch,** per ft.
> Item CAB5001

**Cable Clamp 3⁄32 inch**
> Item CAB4000

**1 ½" Drain Pipe Predrilled 7 hole with Belled End, 9-½ Foot Length on 16 inch centers**
> Item BAT0004

**Street Elbow 1-½ inch ABS PVC**
> Item PLSJJ4L-SP

**End Cap 1-½ inch ABS Anti-Vapor**
> Item PLSJA4S-S

**Slip Tee 1-½ inch ABS**
> Item PLSJJ4T-SSS

## Poly Pipe Feed Line ½ inch
**Black 500 ft. roll**
> Item FEE1500
**Black 250 ft. roll**
> Item FEE1525
**Black 100 ft. roll**
> Item FEE1510

Feed Tube
**FEE0054**

Barbed Stake Guide
**STA1004**

Emitter
**EMI1012**

Feed Line
**FEE1006**

Bato Bucket
**BAT0001**

Bucket Elbow
**BAT0003**

Pre Drilled Bato
1 ½" Drain Line
**BAT0004**

# Bato Bucket Commercial Package:
## Tomato and Vine Crop Production



### Bato Bucket Growing System

CropKing is a leader in hydroponic growing system solutions. Our Bato Bucket Growing System is the most practical and cost-effective vine crop system for hydroponic farming. Our systems are continuously improved and further developed and feature upgraded equipment. The importance CropKing places on the bottom line and the complete satisfaction of our growers is recognized in the industry and our systems offer many advantages without an expensive price tag.

For vine crop production, we recommend the Dutch or Bato Bucket Growing System. Bato buckets are UV resistant, strong plastic containers that can be used repeatedly for years to come. The Bato Bucket offers quality and security when growing high value crops and is formed with a small reservoir to help avoid over or under watering your plants.

### Other features of our Commercial Bato Bucket System:

**Triple Injection System:** Includes three concentrate tanks, (for micro nutrients, macro nutrients, and pH control), a mixing tank, pressure gauge, solenoid valve, plumbing kit and pump (all pre-assembled, mounted and tested).

**Bato Bucket and Nutrient Delivery:** The bato bucket system is suitable for longer growing, fruiting crops, including tomatoes, cucumbers, peppers, eggplant and melon. CropKing's Bato Bucket Growing System uses horticulture grade perlite as a growing medium because it is clean and has great wicking capability. Rather than black plastic, our bato buckets are made of tan plastic to help maintain a cooler root zone. This is very important on a hot, sunny day in the greenhouse. Other parts of the system include pre-cut and drilled drain lines that fit directly under the buckets, drip irrigation plumbing with pressure compensated emitters (1 per plant, 2 per bucket), ½ inch poly feed tube and emitter tubing.

**Computerized Environmental Controls:** The iGROW Control System is the brain of the greenhouse. This dedicated unit controls all the environmental equipment in the greenhouse including fans, heaters, vent door, wet wall, lights and $CO_2$. Maintaining the proper plant environment in your greenhouse is critical to growing a successful crop. This system measures both the temperature and humidity of the greenhouse and adjusts the equipment to maintain the correct set points. These precision controls allow you to improve crop quality, reduce equipment usage and lower your energy costs. This system is also capable of alarm auto-dialing to alert you if there is an issue in your greenhouse. The iGrow Control System has on-screen programming for easy tracking and adjustment of the environment. There are 12 outputs with LED status display indicators and manual override switches. With the addition of "slave units" the iGrow system can be expanded.

**Electrical Panel:** To help make sure everything works properly, CropKing provides a pre-wired electrical panel that has been tailored to your greenhouse needs. The breaker panel is mounted on a white PVC board, along with the relay box, and the iGrow controller(s). All of these come pre-wired together and terminal strips are provided to connect the greenhouse equipment. This pre-wired panel makes installation much easier and saves money compared to building a panel on site. Just connect the panel to the

incoming power source in your greenhouse and run wire from your greenhouse equipment to the provided terminal strips on the panel. The wiring for this system can be complicated and often misunderstood. This panel can save many headaches and mistakes. These panels and boxes are interior grade NEMA enclosures.

**Plant Support System:** The vine crop support is the backbone of the crop and must be capable of holding at least 70 lbs per bucket. To meet these requirements, CropKing includes 1.66" diameter steel posts that are concreted into position, with galvanized cabling and all the necessary hardware.

**Testing and Miscellaneous Equipment:** Included are systems to monitor your nutrient solutions and the environment in your greenhouse, as well as equipment for pollination and nutrient mixing pumps.

**$CO_2$ Enrichment and Control System:** The shorter daylight

hours of winter and the reduced amount of $CO_2$ in the air limit plant growth. Plants have the ability to use more $CO_2$ during photosynthesis than may be found in the greenhouse atmosphere. By providing more available $CO_2$, plants can grow faster and more prolific. This system monitors $CO_2$ levels in your greenhouse and adjusts to your desired set point through the iGrow, which controlls the $CO_2$ generator.

**Shade Cloth:** The most cost-effective way of controlling greenhouse temperature during the hot summer months is by using shade cloth. It improves light diffusion, reflects summer heat, and keeps

greenhouses cooler. It is manufactured from knitted polyethylene fabric that does not rot, mildew or become brittle. We include the cable and clips for easy installation. 40% white shade cloth is standard. (Different shade cloth densities are available depending on geographic location and local light levels). Aluminet is another great option for shading the greenhouse especially in very sunny climates.

**Growing Supplies:** The first year of growing supplies is included with your order. By providing these materials upfront, you will save on shipping costs as it is sent with the rest of your system at no extra charge. Your growing supplies include approximately 1 year of hydroponic fertilizer (designed specifically for your water), Rockwool starter cubes, hybrid seed for greenhouse production, perlite growing media, bato bobbins, heat mats and trays, vine clips, truss hooks, a one year subscription for bumble bees, Mycostop, Greenshield disinfectant and insect sticky strips.

*Note: Please check with local electric codes, some codes require the constructed panel to be UL listed. Our components are UL listed.*

| SYSTEM SIZES | WIDTH X LENGTH | PLANT SPACES |
|---|---|---|
| Freestanding Greenhouse | 30 x 128 | 870 |
| Single Bay Gutter Connect Greenhouse | 22 x 128 | 720 |
| 2-Bay Gutter Connect Greenhouse | 44 x 128 | 1,440 |
| 4-Bay Gutter Connect Greenhouse | 88 x 128 | 2,880 |
| 6-Bay Gutter Connect Greenhouse | 132 x 128 | 4,320 |
| 8-Bay Gutter Connect Greenhouse | 176 x 128 | 5,760 |
| 16-Bay Gutter Connect Greenhouse | 352 x 128 | 11,520 |

Customized Systems are available. Please call 330-302-4203 for additional options.

# BATO TRUSS HOOKS

Truss hooks are used to give support to the tomato cluster itself, keeping the truss stem from kinking and cutting off nutrient flow to the developing tomatoes. The J type truss hook has a small, "barbed" type of hook on one end that attaches to the vine twine. The other end has a small hook that goes onto the tomato truss.

**3-½ inch Bato J-Type Truss Hook**
Terra Cotta, Case of 13000
Item TRU1300

**3-½ inch Bato J-Type Truss Hook**
Terra Cotta, Bag of 100
Item TRU1302

**4-½ inch Bato J-Type Truss Hook**
Terra Cotta, Case of 8500
Item TRU2000

# PRE-TOM

PRE-TOM is a safe chemical solution which protects the pores of the skin against tomato leaf-green sap (chlorophyll). Apply just a few drops and rub onto hands and fingers prior to suckering, pruning, or harvesting. The green will be easier to wash off and will reduce drying of your hands.

**Pre-Tom,** 250 ml
Item TOM1001

# TWINE

**Poly Twine,**
Roll of 1,050 Feet
Item VIN4001



**Blue Vine Twine,**
Roll of 10,000 Feet
Item VIN4000



# VINE CLIPS

Vine clips are used when growing tall plants, or vine crops, to clip the plant to a string or trellis support wire. They are primarily used by tomato, cucumber, and pepper growers, but are also used for roses and other tall plants. These are 7/8 inch with UV protection allowing for longer life.

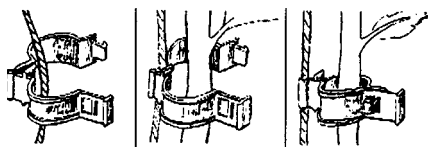*Note: Clips designed for one time use.*



**7/8 inch Terra Cotta Econo Clip**
**23mm,** Case of 10,500
Item VIN8001

**23mm,** Bag of 100
Item VIN8003



**1 inch Terra Cotta Mega Clip**
**25mm,** Case of 9,000
Item VIN8002

Growers are advised to use more clips early in the season. Generally, add one clip per week, which equals out to about a clip every 8-10 inches on the plant.

# BATO BOBBINS

Designed to hang from the overhead crop support wire. There is a locking tab in the hood to help secure the bobbin on the wire and keep them from popping off. They come factory wound with 42 feet of white twine. Due to the UV stabilizers, Bato Bobbins can be rewound and reused for several years, but because they are priced so economically, and for sanitary purposes, it is best to replace them each crop. 800 bobbins per case.



**Bato Bobbins** with 42 foot Twine
Item TOM1015

# TAPENER

**Max Tapener Machine,** HTB-2
Item TAP1000



**Tape,** HTB-2, Large Hole
Item TAP1002

**Tapener Blades, HTB-2,** 3 Blades
Item TAP1004

**Tapener Staples, HTB-2,** 4,800 Staples
Item TAP1003

Be sure to use the tapener machine properly. If you are overusing the tapener, and not using enough vine clips to support the weight of the plant, the vine clip will pop open.



# HOOK

**Top Hook,** for Cucumbers
Item VIN8006

Great for cucumbers keeps the vine from pinching as it gets to the wire of the plant support.

# Irrigation

The Netafim Dripper Stake Assembly is ideal for soilless substrates and hydroponic applications because each rockwool cube receives an equal and precise amount of water & nutrients.

**Emitter**

**Feed Tube**
**FEE0054**

**Cross End**
⊕

**Barbed Stake Guide**
**STA1004**

## Slow, Low-Flow Drippers
The slower and lower flow of Netafim drippers wet the soil media thoroughly without any run-off around the edges of the container. This allows longer runs on smaller polyethylene supply laterals maintaining excellent uniformity while holding down system costs. The PCNL dripper feature ensures that each plant receives the same amount of water at the same time. A built-in check valve assures that all the drippers will turn on - when the system is fully pressurized - and off at the same time.

## Pressure Compensating Dripper
The WPCJ dripper is pressure compensating to provide a constant flow from 10 to 45 psi and has a built-in check valve to ensure instantaneous on-off at system shut-down.
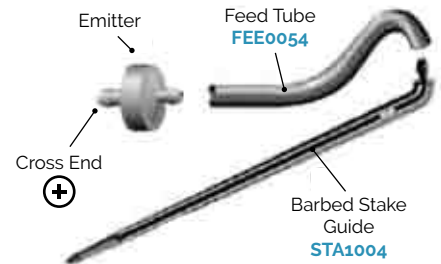
## POLY PIPE FEED LINE
Black poly pipe made with high quality polyethylene material that is pliable & allows emitters to be installed. Designed to work with Netafim emitters & feed tube.

**Poly Pipe Feed Line ½ inch,** 500 foot roll
   Item FEE1500
**Poly Pipe Feed Line ½ inch,** 250 foot roll
   Item FEE1525
**Poly Pipe Feed Line ½ inch,** 100 foot roll
   Item FEE1510
**MPT by Barb ¾ inch for ½ inch Poly Pipe**
   Item FEE2001
**Coupling Insert ½ inch**
   Item FEE2003
**Insert Tee ½ inch**
   Item FEE2005
**Insert Elbow ½ inch**
   Item FEE2006

## EMITTERS

**Pressure Compensated:**

0.50 GPH
Item EMI10027

1.00 GPH
Item EMI1004

2.00 GPH
Item EMI1000

6.00 GPH
Item EMI1001

**Non-Pressure Compensated:**

0.50 GPH
Item EMI1006

1.00 GPH
Item EMI1007

2.00 GPH
Item EMI1008

**Premium CNL Emitter:**

0.50 GPH
Item EMI1012
Item EMI1012
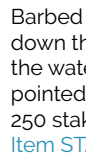
**Premium CNL Emitter:**

0.80 GPH
Item EMI1010

**Goof Plugs, Set of 10**
Used to correct a mistake or fill a hole from a removed emitter.
Item GOO1000

**Barbed Stake Guide**
Barbed Stake has a unique flow channel down the length of the stake directing the water into the container. It also has a pointed end for easy container insertion. 250 stakes in a bag.
Item STA1004

**Stabilizer Peg**
Item STA1000

## POLY PUNCH

**2 in 1 Punch and Cutter**
   Item PUN7500
**3mm Dripper Punch**
   Item PUN4000
**Miracle Punch**
   Item PUN5000

**YellowKey Punch**
Item PUN6000

## FEED TUBE
Super Flex UV White™ PE Tubing is made from the highest quality plastics with excellent UV resistance. The reflective white tubing is completely opaque to prevent algae growth and is not coated or layered.

**Feed Tube 5/3 mm (spaghetti tube),** per foot
   Item FEE0054
**Feed Tube 5/3 mm (spaghetti tube),** 1000 foot roll
   Item FEE0054
**Feed Tube, .160-.220 inch Black,** per foot
   Item FEE1000
**Feed Tube, .160-.220 inch Black,** 1000 foot roll
   Item FEE1000

## VALVES
**Variflow Valve (Fits 5/3 tubing)**
   Item EMI1015
**Shut Off Valve (Greenback) for ½ inch Poly Pipe**
   Item EMI1014

## LINE END
The line end is used to clamp the end of our poly feed line and can be removed to flush the line if needed.
**16mm Line End**
   Item FEE2002

# Bumblebee Hives & Pollen



The **Natupol Excel Startup** has a larger colony and lasts and average of 7-8 weeks. The effectiveness reaches the maximum level faster than the Excel hive because it arrives to the customer with more workers in it. The level of pollination is heavier from the first day of its introduction, but it declines faster over a shorter period of time. This hive is ideal for green-houses in or near full bloom and need a lot of pollination, fast.

The **Natupol Excel** has high pollination efficiency and lasts an average of 9 weeks. The effectiveness takes longer to reach the maximum level than the Startup hive, but the hive's overall performance is more even throughout this time span. This hive is ideal for greenhouses that operate consistently and have crops that are not yet in full bloom.

**!** **Hives must be ordered by Monday or Wednesday, 12:00 noon EST. They should arrive in the same week on Wednesday or Friday respectively.**

## POLLINATOR
Includes a sonic 5-speed rechargeable pollinator, 2 vibrating wands, a pollen spoon, a recharging base, AC adapter and USB connector for recharging. This product uses sound wave technology with 29,000-44,000 vibrations per minute to harvest excess plant pollen. This excess plant pollen is captured in a pollen spoon that can then be used to pollinate 5-6 additional flowers on the same plant.

**VegiBee Garden Pollinator**
Item POL5000

## BEEHIVE
**Natupol Excel** (formerly Class A)
Item BEN3021
**Natupol Excel Startup** (formerly Class B)
Item BEN3022

## POLLEN
Order pollen with your first hive of the season. Pollen can be fed to the hive if there are not enough flowers to meet their pollen needs. This can occur if the hive is introduced before enough flowers are open. It can also occur if your greenhouse does not have enough plants to support the hive. Pollen can be useful if you have a more vigorous hive in a marginal sized greenhouse. Store the pollen in the freezer.

**Pollen, 1 Pound**
Item BEN3024

### HELPFUL TIPS

**When your bumblebees arrive...**

Take them to the greenhouse and set them on a freestanding stand away from the fan end of the greenhouse. A shelf attached to the structure would provide undesirable vibration to the hive.

After an hour or so, open the bee door by sliding the plastic slide to the open position. Leave the cardboard cover on the hive.

If ants are present, create an ant barrier so that the ants can't get to the hive. Ants will steal the artificial nectar if they have the opportunity.

# Desktop NFT System

Our unique hydroponic desktop NFT system has all the capabilities of a traditional sized NFT system allowing you to grow fresh, high-quality leafy greens on your desktop or kitchen counter! Includes everything you need to start growing.



**System Includes:**
- (2) 1' x 4 ⅝' grow channels
- 6 plant sites
- Pump
- Feed line
- 1 ½ gal tank
- Fertilizer & Rockwool cubes
- Seeds

**NFT Desktop System**
Item NFTDESK8

# CropKing NFT 4-6

The perfect introductory system for the hobby grower or for educational purposes, this system fits well in any home or classroom. Grow a wide variety of leafy vegetables and herbs using the recirculating hydroponic nutrient film technique (NFT). This system includes all of the channels, hardware, support, and plumbing in order to get started. The reservoir is not included in the system, you may purchase a 25-gallon reservoir separately from CropKing or you may source a reservoir locally. We recommend a volume of 20-40 gallons.

**System includes:**

- (6) 4 ft. long food-grade PVC channels
- (6) 4 ft. long removable top covers for easy cleaning
  - Each cover has (6) 1 in. x 1 in. square holes that are 8 in. on center for a total of 36 plant spaces in the entire system
- Square aluminum support table with adjustable legs for creating slope
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Active Aqua 400 GPH submersible pump
- Easy to assemble NFT system components
- Assembly and growing instructions
- Overall footprint of system: 55 in. x 55 in. x 31 in. LWH

*reservoir not included*

**Item NFT0406**

**Order this system and receive Free Shipping in Continental USA**



*Nutrient Reservoir is not included.*
- *(25 gallon container with lid recommended)*

**The hydroponic starter kit includes:**
- (1) Standard 20 in. x 10 in. LW black tray without holes
- (1) Pad of (200) 1 in. x 1 in. x 1.5 in. LWH Grodan rockwool cubes
- 1 lb. CropKing HydroGro Leafy fertilizer
- 1 lb. calcium nitrate
- General Hydroponics pH control kit
  - 8 oz. pH up, 8 oz. pH down, 1 oz. indicator vial
- *Hobby Hydroponics* (2nd edition) by Howard Resh

**Item NFT0406A**

Overall Footprint:
8'8" x 42" x 56" LWH
*(Pictured with Light Support Rack)*

# CropKing NFT 8-4

The perfect introductory system for the hobby grower or for educational purposes, this system fits well in any home or classroom. You could grow a wide variety of leafy vegetables and herbs using the recirculating hydroponic nutrient film technique (NFT). This system includes all of the channels, hardware, support, plumbing, and reservoir in order to get started. We also offer a separate NFT starter kit to jump start your growing endeavors.

The NFT 8-4 system has an optional aluminum light support rack available for purchase.

**CropKing 8-4**
**Item NFT0804**

**Light Support Rack**
**Item NFT0804A**

## System includes:

- (4) 8 ft. long food-grade PVC channels for a total of 48 plant spaces
- (8) 4 ft. long removable top covers for easy cleaning
  - Each cover has (6) 1 in. x 1 in. square holes that are 8 in. on center for a total of 48 plant spaces in the entire system
- Square aluminum support table with adjustable legs
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Active Aqua 400 GPH submersible pump
- 25-gallon reservoir with lid
- Assembly and growing instructions
- Overall footprint of system: 104 in. x 42 in. x 31 in. LWH
  - With optional light support rack: 104 in. x 42 in. x 56 in. LWH

## Can be shipped via UPS!

| RECOMMENDED ACCESSORIES | |
|---|---|
| **DESCRIPTION** | **ITEM #** |
| Rockwool AO 25/40 Pad | ROC1004 |
| BlueLab Combo Meter | PHM3000 |
| 5 Pounds HydroGro Leafy | FER3020 |
| 5 Pounds Calcium Nitrate | FER3025 |
| PH Control Kit | PHT4000 |
| 10/20 Seed Tray | TRA1101 |
| *A Practical Guide to NFT* by C.J. Molyneux | BOO0027 |

# CropKing NFT 8-25

A perfect system for learning how to grow hydroponically using the recirculating nutrient film technique (NFT), the CropKing NFT 8-25 is a great way to test your market for hydroponic lettuce, herbs, and other leafy vegetables. You can grow healthy crops in a greenhouse or indoors and offer your produce to local restaurants, farmer's markets, or anyone that desires fresh, local herbs and leafy vegetables.

We recommend growing your crops using Grodan rockwool cubes since they fit perfectly into the pre-punched top cover holes. It is also highly recommended to have your water tested to determine if your source water is suitable for hydroponics. CropKing offers individual fertilizer components for growers who wish to have complete control over their custom nutrient regimes. We also offer a two-part pre-mixed fertilizer consisting of Crop-King's HydroGro Leafy and calcium nitrate that is suitable for growing most leafy crops.

**CropKing NFT 8-25**
**Item NFT0825**

## System Includes
- (25) 8 ft. long food-grade PVC channels
- (50) 4 ft. long removable top covers for easy cleaning
    - Each cover has (6) 1 in. x 1 in. square holes that are 8 in. on center for a total of 300 plant spaces in the entire system
- Round Allied Gatorshield galvanized steel support table
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Little Giant 1/8 hp 1,900 GPH submersible pump
- 100-gallon reservoir
    - Lid is NOT manufactured for this reservoir
- Assembly and growing instructions
- Overall footprint of system:
  16 ft. 9 in. x 8 ft. 6 in. x 31 in. LWH
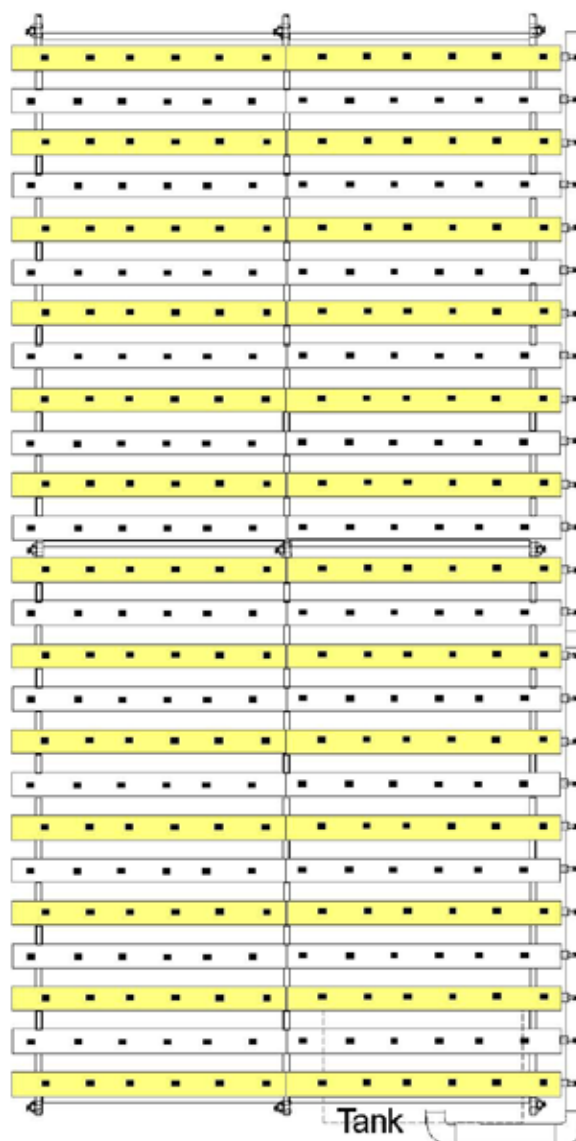
| RECOMMENDED ACCESSORIES | |
|---|---|
| **DESCRIPTION** | **ITEM #** |
| CropKing NFT Fertroller | FERT100 |
| 25 Gallon Mixing Tank (for Fertroller) | TAN2001 |
| 50 Pounds HydroGro Leafy (2-25lb bags) | FER1025 |
| 50 Pounds Calcium Nitrate | FER3014 |
| (1) Case of Rockwool AO 25/40 Pad | ROC1004 |
| 10/20 Seed Tray without Holes | TRA1101 |
| BlueLab Combo Meter | PHM3000 |
| *A Practical Guide to NFT* by C.J. Molyneux | BOO0027 |



Tank

# CropKing NFT 10-36

The CropKing NFT 10-36 is a great way to test your market for hydroponic lettuce, herbs, and other leafy vegetables. You can grow healthy crops in a greenhouse or indoors and offer your produce to local restaurants, farmer's markets, or anyone that desires fresh, local herbs and leafy vegetables.

We recommend growing your crops using Grodan rockwool cubes since they fit perfectly into the pre-punched top cover holes. It is also highly recommended to have your water tested to determine if your source water is suitable for hydroponics. CropKing offers individual fertilizer components for growers who wish to have complete control over their custom nutrient regimes.

**CropKing NFT 10-36**
**Item NFT1036**

**CropKing NFT 10-36**
with Fertroller and (3) 25 Gallon Stock Tanks
**Item NFT1036A**

**System includes:**
- (1) 10 ft. long food-grade PVC nursery channel
  - Accepts full pads of growing media, standard 10 x 20 trays and web-seedling trays
- (36) 10 ft. long food-grade PVC channels
- (72) 5 ft. long removable top covers for easy cleaning
  - Half of the covers have 8 and the other half have (7) 1 in. x 1 in. square holes that are 8 in. on center, totalling 540 plant spaces
- Round Allied Gatorshield galvanized steel support table
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Little Giant 1/8 hp 1,900 GPH submersible pump
- 100-gallon reservoir (lid not included)
- Assembly and growing instructions
- Overall footprint of system:
  26 ft. 9 in. x 10 ft. 6 in. x 31 in. LWH
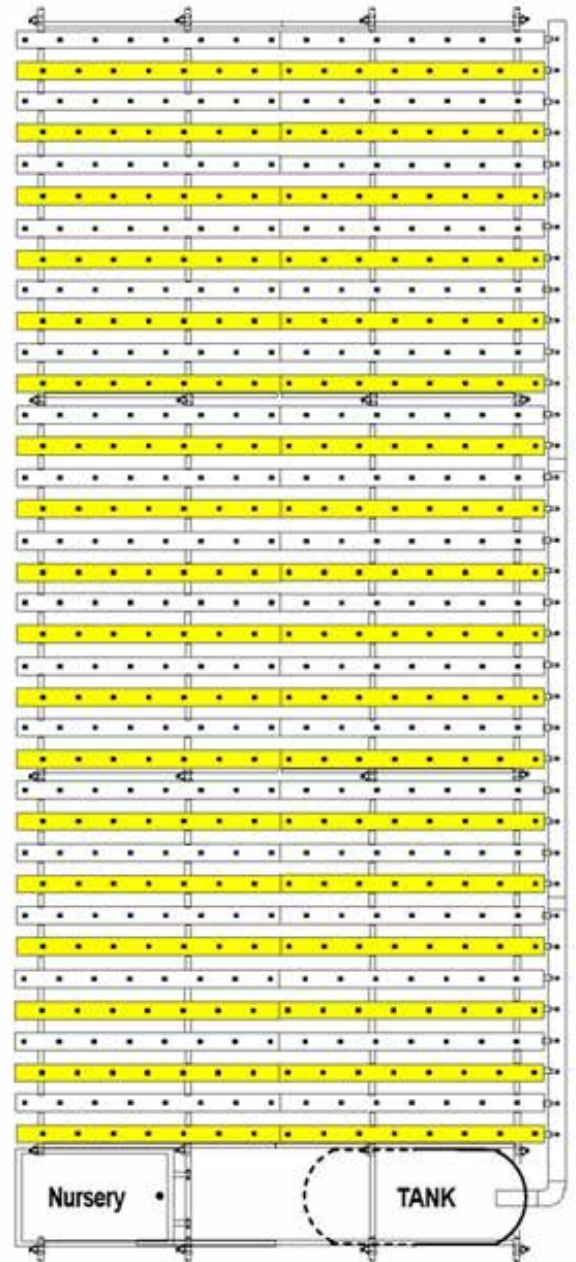
| RECOMMENDED ACCESSORIES | |
| --- | --- |
| **DESCRIPTION** | **ITEM #** |
| CropKing NFT Fertroller | FERT100 |
| 25 Gallon Mixing Tank (for Fertroller) | TAN2001 |
| 50 Pounds HydroGro Leafy (2-25lb Bags) | FER1025 |
| 50 Pounds Calcium Nitrate | FER3014 |
| (1) Case of Rockwool AO 25/40 Pad | ROC1004 |
| *A Practical Guide to NFT* by C.J. Molyneux | BOO0027 |

# Nutrient Film Technique Commercial Package:
## Lettuce and Herb Production

CropKing's many years of research and growing experience have helped us to determine the best equipment and the best growing methods for different crops. When the goal is to produce high quality lettuce and herb crops, we recommend the NFT channel system. This growing system is an investment in the future of your business and every component is of the highest quality. The NFT re-circulating system also efficiently reduces water usage. Over the years we have made changes and improvements to our growing systems, always giving careful consideration to which equipment will be the most efficient and economical. CropKing is genuinely concerned about our customer's bottom line because a profitable grower is our best advertisement!

**Other features of our Commercial NFT System:**

**NFT Channels:** Channels are food grade, sunlight resistant PVC channels with removable top cover for easy cleaning. Each channel has two types of end caps: one solid cap and one spouted cap with anti-drip drainage design. Planting holes in top caps are pre-punched square holes on 8" centers. CropKing NFT channels are completely enclosed, eliminating light from reaching the nutrient solution which greatly reduces algae growth. Algae growth can plug lines and attract pests. The spouted end cap plugs directly into the drain line for easy removal during harvesting, cleaning and replanting.

**Fertroller:** The CropKing Fertroller is an automated nutrient controller providing continuous monitoring and control of the EC and pH levels of the nutrient solution tank. With continuous, automatic adjustment of the nutrient solution, growers can expect higher production and increased crop quality. Other features of the Fertroller include: an alarm to warn the grower if solution is outside the set parameters, safety preset lockouts prevent dosing in out of range situations, large digital displays of the actual values and desired values, and easy pH calibration. The Fertroller Includes three concentrate tanks for micro nutrients, macro nutrients, and pH control, (all pre-assembled, mounted and tested).

**Nutrient Delivery:** Features a large underground nutrient solution reservoir. Underground reservoirs provide a stable nutrient solution temperature. Included in the package is an energy-saving nutrient pump and a backup pump for crop security, inline filtration with spare filter cartridges, large diameter PVC nutrient headers, zone valves and high flow emitter fittings to direct nutrient solution to each channel are also included.

**Seedling Nursery:** Custom manufactured PVC seedling nurseries are located on one end of the growing system. The nursery is designed as a propagation area for enough new seedlings to populate the growing channels as they are harvested. The nursery features automated irrigation for consistent growth and reduced labor.

**NFT Channel Supports:** A Gatorshield galvanized steel frame for supporting the growing channels and connecting hardware is included.

**$CO_2$ Enrichment and Control System:** The shorter daylight hours of winter limit plant growth. Another limiting factor is the reduced amount of $CO_2$ in the air. Plants have the ability to use much more $CO_2$ during photosynthesis than is found in the normal atmosphere. More available $CO_2$ to use for photosynthesizing and growth means faster and more prolific growing plants. This system monitors the available $CO_2$ in your greenhouse

and adjusts it to your desired set point using the iGrow, which controls the $CO_2$ generator.

**Computerized Environmental Controller:** The iGrow 1400 Control System is the brain of the greenhouse. This dedicated unit controls all the environmental equipment in the greenhouse including fans, heaters, vent door, wet wall, lights and $CO_2$. Maintaining the proper plant environment in your greenhouse is critical to growing a profitable crop. This system measures both temperature and humidity of the greenhouse and adjusts the equipment to maintain the correct set points. These precision controls allow you to improve crop quality, reduce equipment usage, and lower your energy costs. For added security, this system is capable of alarm auto-dialing to alert you if there is an issue in your greenhouse. The iGrow Control System has on-screen programming for easy tracking and adjustment of the environment. There are



12 outputs with LED status display indicators and manual over-ride switches. With the addition of "slave units" the iGrow system can be expanded.

**Electrical Panel:** To help ensure everything works properly, CropKing provides a pre-wired electrical panel that has been tailored to your greenhouse needs. The breaker panel is mounted on a white painted board, with the relay box, and the iGrow controller(s). These are prewired together and terminal strips are provided to connect the greenhouse equipment. This pre-wired panel makes installation much easier, allowing you to connect the panel to the incoming power source in your greenhouse. Wires will need to be run from your greenhouse equipment to the provided terminal strips on the panel. The wiring for this system can be complicated and often misunderstood by the local electrician. CropKing simplifies this with our prewired electrical panel. Our panels and boxes are interior grade NEMA enclosures that are appropriate for a hydroponic greenhouse operation. The power requirements of a greenhouse depend on the size of the greenhouse and whether grow lights are being installed. *Note: Please check with the local electric codes. While we use UL listed components in our electrical panels, some codes require the constructed panel be UL listed.*

**Testing and Miscellaneous Equipment:** Bluelab Combo Meter, Sensaphone Model 1104, Sensaphone Remote Temperature Sensor, Nutrient Mixing Pump, Mini-Max Thermometer (2), pocket sling psychrometer, and white ground cover for floor under the growing channel are all part of this package. A vacuum seeder is included with 2 Bays and larger to eliminate hand seeding.

**Growing Supplies:** CropKing feels that it is beneficial to include the first year of growing supplies with your order. It saves on shipping costs, as it ships with the rest of your system at no extra charge. Your growing supplies include approximately 1 year of hydroponic fertilizer (designed specifically for your water), 1 inch rockwool starter cubes and seeds for the first three crop rotations.

**Shade Cloth:** The most cost effective way of controlling greenhouse temperature during the hot, summer months is using shade cloth. It improves light diffusion, reflects summer heat, and keeps the greenhouses cooler. It is manufactured from knitted polyethylene fabric that does not rot, mildew, or become brittle. We include the cabling and quick clips for easy installation. 40% white shade cloth is standard. (Different shade cloth densities are available depending on geographic location and local light levels).

| SYSTEM SIZES | WIDTH X LENGTH | PLANT SPACES |
|---|---|---|
| Freestanding Greenhouse | 30 x 128 | 6,192 |
| Single Bay Gutter Connect Greenhouse | 22 x 128 | 4,653 |
| 2-Bay Gutter Connect Greenhouse | 44 x 128 | 9,306 |
| 4-Bay Gutter Connect Greenhouse | 88 x 128 | 18,612 |
| 6-Bay Gutter Connect Greenhouse | 132 x 128 | 27,918 |
| 8-Bay Gutter Connect Greenhouse | 176 x 128 | 37,224 |
| 16-Bay Gutter Connect Greenhouse | 352 x 128 | 74,448 |

# CropKing Fertroller for NFT

The CropKing Fertroller was developed to automatically adjust the EC and pH of the nutrient solution in a recirculating hydroponic growing system. Growers can better maintain the nutrient solution and prevent potentially damaging fluctuations.

**Additional benefits could include:**
• Higher crop yields
• Consistently uniform crop
• Shorter production times
• Improved crop quality
• Additional time for other greenhouse duties

Every CropKing Fertroller is tested before leaving our manufacturing facility and is delivered completely assembled on a steel stand and wired for 120V power. This unit includes a BlueLab Dostronic Pro Controller with a BlueLab PowerPod and alarm box designed specifically for use with hydroponic growing systems. The Fertroller also includes a pre-mounted two-headed pump that pulls fertilizer from two concentrate tanks to meet the EC target. The fertilizer salts are split in order to prevent precipitates from forming. An additional single-head bellows pump pulls acid concentrate from one tank to meet the pH target. 25-gallon or 52-gallon concentrate tanks must be purchased separately (pg. 45).

The Fertroller will provide continuous control of EC and pH of the nutrient solution by adding fertilizer and/or pH control solutions as needed. Easily adjustable set points, dosing cycles (on/off times), and current readings are easy to read on the digital display. The Fertroller features adjustable alarm triggers that can be integrated with your greenhouse alarm system. The preset safety lockout prevents dosing if the EC, pH, and/or solution flow is out of range. Safety lockout, EC, and pH set points are programmed before leaving CropKing, but these settings can be adjusted to suit each grower's needs.

The pH and EC probes can be calibrated using pH and conductivity standard solutions. The BlueLab Pro Controller and EC probe are warrantied for 2 years and the pH probe is warrantied is 6 months. Other components carry the manufacturers' warranties.

## NFT Fertroller
**Item FERT100**

## SYSTEM INCLUDES:
• (1) 2-headed Gorman Rupp bellows pump
o Pulls fertilizer concentrate from (2) tanks
• (1) 1-headed Gorman Rupp bellows pump
o Pulls acid concentrate from (1) tank
• Assembled steel frame and hardware
• BlueLab Pro Controller, PowerPod, & alarm box
• All electrical cords and cables
• Pre-plumbed sample pot with mounted EC and pH probes
• PVC unions for easy integration with recirculating hydroponic system

## SPECIFICATIONS:

|  | pH | Conductivity | Temperature |
|---|---|---|---|
| Units: | pH | EC, CF, TDS (EC x 500) | ˚C,  ˚F |
| Control Range: | 0.1-13.9 pH | 0.1-4.9 EC, 1-49 CF 50-2450 TDS (EC x 500) | 1-50 ˚C, 34-122 ˚F |
| Resolution: | 0.1 pH | 0.1 EC, 1 CF | 1˚C |
| Accuracy at 25˚C or 77˚F: | ± 0.1 pH | ± 0.1 EC, ±1  CF, ± 50 TDS | ± 1˚C, ± 2˚F |

# Replacement Parts for Fertroller

**Single Head 1 inch Bellows Pump**
Item PUM6001

**pH/ Automatic Temperature Control Probe for Dosetronic**
Item DOSETRONIC-ATC

**EC Probe for Dosetronic**
Item DOSETRONIC-EC3

# Replacement Parts for Older Versions *(before 2010)*

**EC Probe for Sample Board**
Item DOSETRONIC-EC2

# NFT Channel Overview

CropKing's NFT channels are easy to use and easy to clean. One unique feature of our NFT channel is the removable lid or top cap for ease of cleaning and harvesting. There are end caps that cover both ends of the channel keeping out the light and preventing algae growth. It is constructed from food grade, UV stabilized plastic for safety and long life. Lids snap on and remain secure until they need to be removed for harvesting and cleaning. No need to spend hours punching or drilling holes in the lids, they come pre-punched with a 1" square hole on 8" centers. These holes as well as the depth of the channel are the perfect size to accept a 1" square cube of either Rockwool or Oasis. A slight "v" in the bottom of the channel directs the nutrient down the center of the channel to insure all plants receive the necessary nutrients. **See page 22 for pricing and sizes.**

- Manufactured using non-toxic food grade plastics
- Lids remain secure, yet are easily removed for cleaning
- The tops are pre-punched to save you hours of drilling
- Standard holes in the top caps are square to accept a 1" seedling cube–no need to use net pots.
- Ask your salesperson about the availability of custom channels and covers
- Channel is available in standard lengths of 4', 8', 10' and 12' with top cap available in 4' and 5' lengths

## NFT ACCESSORIES

**Poly Pipe Feed Line ½ inch,** 500 foot roll
Item FEE1500

**Barbed Tee Emitter 5/3**
Item EMI1013

**Emitter Nipple 5mm**
Item EMI1005

**Feed Tube 5/3 mm,** per foot
Item FEE0054

**Variflow Valve**
Item EMI1015

**Shut Off Valve "Greenback" for ½ inch Poly Pipe**
Item EMI1014

**Threaded Shut Off Valve for ½ inch Poly Pipe**
Item EMI1016

Rockwool Cube AO25/40
**ROC1004**

End Cap
**CHA9100**

Feed Line
**FEE1500**

Top Covers
**CHA9005-7**

Feed Tube
**FEE0054**

Barbed Tee
**EMI1013**

Feed Tube
**FEE0054**

Top Cover
**CHA9005-8**

45° Elbow
**CHA9414**

4" Return Line Drilled or undrilled
**CHA9500**

End Cap with Spout
**CHA9101**

4" Return Line
**CHA9500**

Top Cover
**CHA9005-8**

Top Cover
**CHA9005-7**
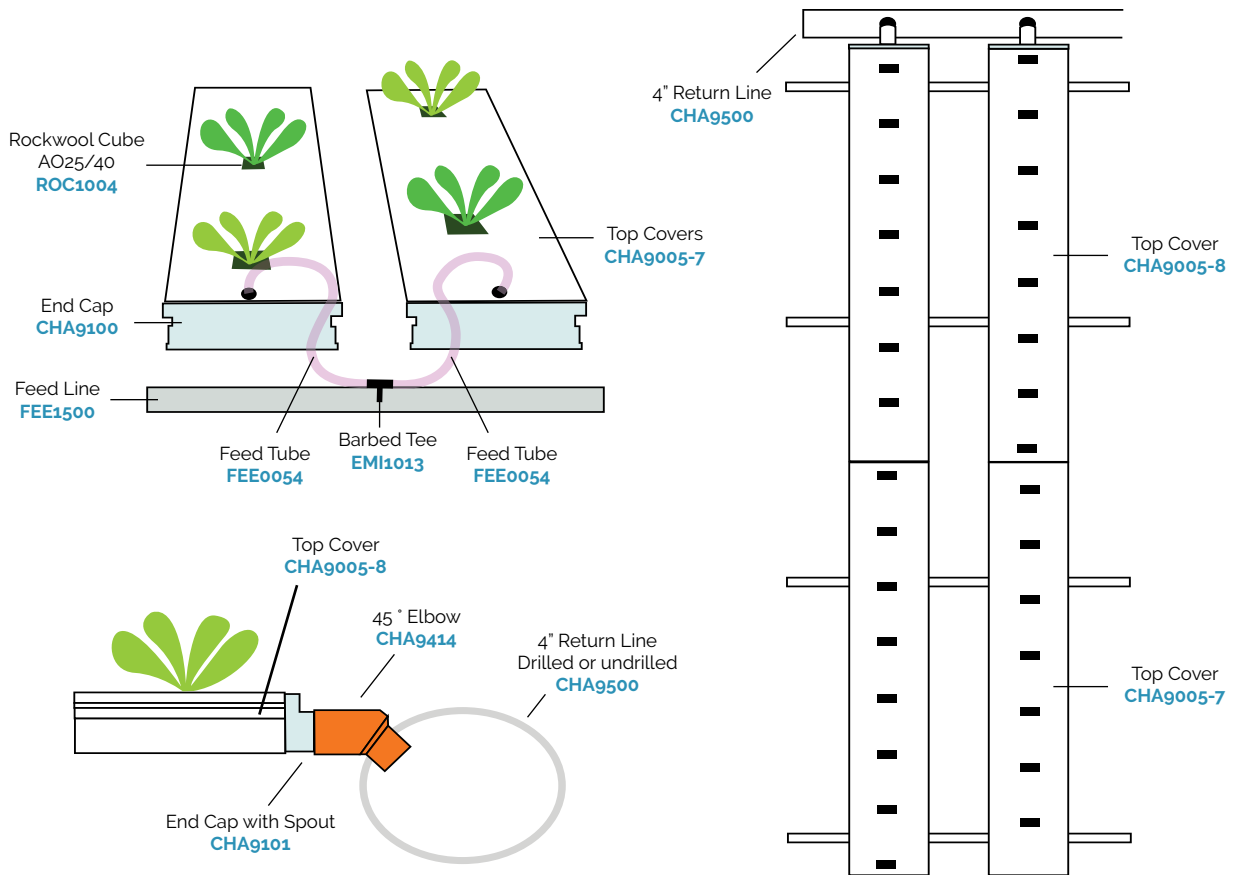
# How CropKing Channels Compare

## 1. Materials & Assembly
- Cropking NFT channels are made of extruded, UV-stabilized, 100% food-grade PVC
- Channels come in 2 different widths: 4.625" (**classic channel**) and 3.75" (**modern channel**)
- Each channel consists of a bottom, a plain end cap, top covers, and a spouted end cap with attached 45° elbow to fit snugly into our pre-drilled drain line
- Easily attach end caps and elbows using standard PVC primer and glue

**Other channels** on the market are advertised as being food-grade, but in some cases, they are really non-food grade channels coated with food grade PVC.

## 2. Dimensions
- Our classic channel has a smooth bottom and a 5.7° contour that directs the nutrient film to flow down the center from the feed line to the drain
- Our modern channel has a smaller 4.2° contour and a unique 1 ¼" wide corrugated bottom that spans the entire length of every channel. This feature provides growing plugs with some additional stability and a more directed nutrient flow
- Both styles are 1 ¼" deep and arrive pre-punched with 1" square holes spaced 8" apart on center
- Growers can use their favorite 1" growing medium from seed to harvest without the plug falling or being suspended in the air
- Grodan 1" rockwool cubes, both AX25/40 and AO25/40, are commonly used with great success in our NFT channels

**Other channels** utilize round holes, which is not the shape of most hydroponic vegetable plugs. Often times, these holes are very large and allow for light exposure and algae growth.

## 3. Customization
- NFT channels are available in 4ft., 8ft., 10ft., and 12ft. increments
- Top covers are sold in 4ft. or 5ft. increments and easily snap on each channel to prevent light leaks and excessive algae growth
- Feed line inlet hole is added to the top cover of the classic channels by the grower and is molded into the plain end cap for the modern channels
- Bulk orders of top covers can be customized by changing the hole size, increasing or decreasing the spacing, or they can be ordered unpunched
- Both top covers and channel bottoms can be cut to a desired length for a small cut fee

**Other channels** on the market are available as a single piece without a removable top cover, which can decrease harvesting efficiency and make scouting and cleaning difficult.

## 4. Support
- NFT system is supported by American-made, 1.315" galvanized steel that is locally sourced
- High-quality hardware is provided to ensure a durable, well-supported system.
- Steel is designed to support all of the channels with a mature leafy crop in every plant site, a 4" diameter opaque PVC drain line, plumbing, feed lines, and a constantly flowing nutrient solution
- A tank rated for potable water and burial below ground is recommended
- Each commercial NFT system is equipped with a pump stand that removes the old nutrients so the grower can regularly supply fresh ones
- Each pump stand is equipped with a backup pump in case of a sudden loss of function

**Other systems** are supported by lower quality hardware that causes shifting over time, leading to non-uniform nutrient delivery. Some drain lines are undrilled and semi-transparent which leads to algae growth.

# NFT Growing Channel, Extruded Food-Grade PVC

## CLASSIC:

CropKing's classic NFT channel was designed in-house to provide a simple method of producing leafy crops. This channel features a smooth bottom surface with a slight "V" shape to direct water flow down the center of each channel from feed to drain. This design produces a uniform crop from transplant to harvest by providing optimum nutrition.

**Classic Channel Features:**
- 4-5/8 in. wide, 1-1/4 in. deep
- Inner bottom width: 3-3/4 in.
- Standard lengths available: 4 ft., 8 ft., 10 ft.*, and 12 ft.*
- Cutting available upon request; fees apply
- Custom extruded lengths available
- Made of extruded UV-resistant, food-grade PVC
- Solid end caps and drain line block light to reduce algae growth
- Removable top covers for easy cleaning
- Standard 1 in. x 1 in. square holes punched 8 in. on center
- Blank covers and custom punches available

**4 ft. Length**
    Item CHA9400

**8 ft. Length**
    Item CHA9008

**10 ft. Length**
    Item CHA9010

**12 ft. Length**
    Item CHA9012



**Classic Spouted End Cap**
- Outer diameter of spout: 1-5/16 in.
- Inner diameter of spout: 1 in.
- Designed for use with a 45 degree elbow
- Made of molded UV-resistant, food-grade PVC
- Solid construction prevents light from entering channel
- Must be affixed to channel using clear PVC primer and cement

**Classic Plain End Cap**
- Made of molded UV-resistant, food-grade PVC
- Solid construction prevents light from entering channel
- Must be affixed to channel using clear PVC primer and cement

**4-5/8" End Cap with Spout**
    Item CHA9101

**4-5/8" End Cap**
    Item CHA9100

**Classic 4 ft. Top Cover:**
- 4 ft. long removable top cover for easy cleaning and harvesting
- 4.625 in. wide from
- (6) 1 in. x 1 in. square holes that are 8 in. on center
- Blank covers and custom punches available
  - Minimum order quantities may apply
  - Please contact CropKing for more information

**4 ft. Length,** 6 Square Holes
    Item CHA9004

**Classic 5 ft. Top Cover**
- 5 ft. long removable top cover for easy cleaning and harvesting
- 4.625 in. wide
- (8) 1 in. x 1 in. square holes that are 8 in. on center
  - (1) 7-hole and (1) 8-hole 5 ft. top covers are required to maintain a spacing of 8 in. on center
- Blank covers and custom punches available
  - Minimum order quantities may apply
  - Please contact CropKing for more information

**5 ft. Length,** 7 Square holes
    Item CHA9005-7

**5 ft. Length,** 8 Square Holes
    Item CHA9005-8

## 45° Elbow
    Item CHA9414

# MODERN:

CropKing's modern NFT channel was designed to maximize the production of leafy crops by increasing the number of plant sites available in a given space. This channel features a "grooved" bottom surface to evenly spread and direct water flow down the center of each channel from feed to drain. This design is ideal for producing "baby" greens or adding a section of channel for transplants before transplanting crops into their finishing channels.

**Modern channel features:**
- 3-3/4 in. wide, 1 in. deep
- Inner bottom width: 3-1/8 in.
- Standard lengths available: 8 ft., 10 ft.*, and 12 ft.*
- Cutting available upon request; fees apply
- Custom extruded lengths available
- Made of extruded UV-resistant, food-grade PVC
- Solid end caps and drain line block light to reduce algae growth
- Removable top covers for easy cleaning
- Standard 1 in. x 1 in. square holes punched 8 in. on center
- Blank covers and custom punches available

# 10 IN. WIDE CHANNEL

CropKing's 10 in. wide channel was designed in-house for the production of fodder and microgreens. 9 in. and 10 in. wide rolls of burlap that are 100 yds. long and 9 in. and 10 in. wide rolls of BioStrate felt that are 100 ft. long all fit into this channel for the production of microgreens. More recently, this channel assumed the role of "nursery" in our commercial NFT systems. Standard 10 in. x 20 in. trays and pads of growing media such as Grodan rockwool and Oasis Horticubes fit perfectly into the channel.

**10 in. channel features:**
- 1 1/4 in. deep
- Inner top width excluding lips: 10 in.
- Inner bottom width: 9-13/16 in.
- Width with top cover on including lips: 11 in.
- Standard 12 ft.* length available
- Cutting available upon request; fees apply
- Custom extruded lengths available
- Made of extruded UV-resistant, food-grade PVC
- Solid end caps and drain line block light to reduce algae growth
- Removable blank top covers available
- Integrates seamlessly with our commercial NFT systems

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**4 ft. Length**
Item CHA4048

**8 ft. Length**
Item CHA4008

**10 ft. Length**
Item CHA4010
*Cut fee is added when shipping UPS*

**12 ft. Length**
Item CHA4012
*Cut fee is added when shipping UPS*

**10 in. x 12 ft. Channel**
Item CHA3000
*Cut fee is added when shipping UPS*

**12 ft. Top Cover (unpunched)**
Item CHA3003

**End Cap with Spout**
Item CHA3002

**Plain End Cap**
Item CHA3001

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**Modern 4 ft. Top Cover**
- 4 ft. long removable top cover for easy cleaning and harvesting
- 3.75 in. wide
- (6) 1 in. x 1 in. square holes that are 8 in. on center
- Blank covers and custom punches available

**4 ft. Top Cover,** 6 Square Holes
Item CHA4004

**Modern 5 ft. Top Cover**
- 5 ft. long removable top cover for easy cleaning and harvesting
- 3.75 in. wide
- (8) 1 in. x 1 in. square holes that are 8 in. on center
- (1) 7-hole and (1) 8-hole 5 ft. top covers are required to maintain a spacing of 8 in. on center
- Blank covers and custom punches available

**5 ft. Top Cover,** 7 Square Holes
Item CHA4005-7

**5 ft. Top Cover,** 8 Square Holes
Item CHA4005-8

**Modern Spouted End Cap**
- Outer diameter of spout: 1-5/16 in.
- Inner diameter of spout: 1 in.
- Designed for use with a 45 degree elbow
- Made of molded UV-resistant, food-grade PVC
- Holes included for feed tube(s)
- Primarily solid construction prevents nearly all light from entering channel
- Must be affixed to channel using clear PVC primer and cement

**End Cap with Spout**
Item CHA4003

**Modern Plain End Cap**
- Made of molded UV-resistant, food-grade PVC
- Holes included for feed tube(s)
- Primarily solid construction prevents nearly all light from entering channel
- Must be affixed to channel using clear PVC primer and cement

**End Cap**
Item CHA4002

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**PVC Cement,** 4oz
Item PLMPVCCE-4OZ
**PVC Cement,** Pint
Item PLMPVCCE-PT
**PVC Cement,** Quart
Item PLMPVCCE-QRT

**PVC Cleaner,** 4oz
Item PLMPVCCL-4OZ
**PVC Cleaner,** Pint
Item PLMPVCCL-PT
**PVC Cleaner,** Quart
Item PLMPVCCL-QRT

**PVC Primer,** 4oz
Item PLMPVCPR-4OZ
**PVC Primer,** Pint
Item PLMPVCPR-PT
**PVC Primer,** Quart
Item PLMPVCPR-QRT

# Cropking Nutrient Injector System

CropKing's Nutrient Injector System simplifies the fertigation process by injecting concentrated fertilizer into a main reservoir tank and pumping the nutrient solution through the feed lines to irrigate the crops. The system includes a three-headed bellows pump that pulls fertilizer from two concentrate tanks and one acid concentrate tank. The fertilizer salts are split in order to prevent precipitates from forming. The pump injects the concentrated fertilizer and acid at predetermined ratios, often 1:100, in order to reach the EC and pH targets. Everything is tested before leaving our manufacturing facility and the system is delivered completely assembled and mounted on a steel frame. Two PVC union connectors are included; one at the water supply hookup and one coming off the American Stainless injection pump. Hot and cold-water valves on the water supply provide a method of adjusting the nutrient solution to the proper temperature ideal for root growth.

All electrical connections are identified in the drip-proof control box and complete electrical diagrams are provided with each injection system. The control panel features manual and automatic switches with indicator lights for all functions. The system is compatible with any type of 24-volt AC irrigation controller, including the iGrow 1400 and the Sterling irrigation timers. The system will supply nutrient solution at a rate of up to 17 GPM at 24 PSI to the irrigation system with up to 4 zones. The system also includes a bypass kit to aid in system cleanup and emergency situations. For added security, CropKing's Injection System comes equipped with an alarm kit to alert the grower if a loss of pressure is detected. The alarm can connect to a customer supplied Sensaphone to call and alert the grower or can activate a customer supplied 115V flashing light or buzzer. Nutrient and acid concentrate tanks must be purchased separately.

A Fertroller unit can be added, wired, and mounted to the injection unit for an additional cost. This addition provides a clear display and simple method for adjusting the EC and pH targets. Please contact CropKing for more information.

*Nutrient Concentrate Tanks (3) purchased separately. If you do not have an iGrow you will need an irrigation or sequence timer, see page 45.*
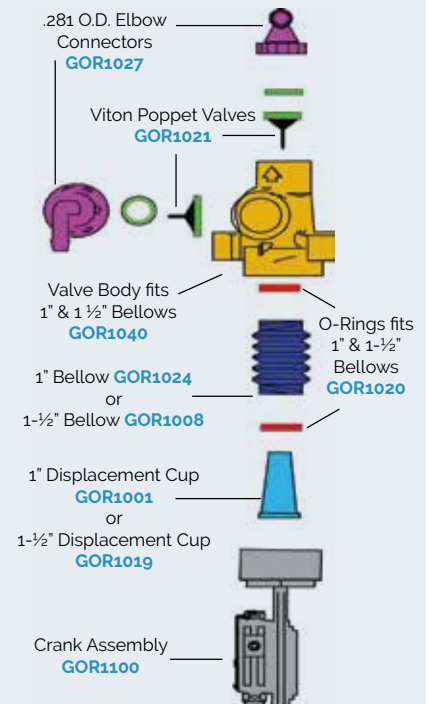
**2 Zone Nutrient Injection System**
**Item FERT202**

**4 Zone Nutrient Injection System**
**Item FERT204**

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## REPLACEMENT PARTS

**Elbow Connector**, 2 Pack
　　Item GOR1027
**Poppet Valve** includes 2 valves, 2 o-rings, ¾ inch diameter
　　Item GOR1021
**1 inch Bellows**
　　Item GOR1024
**1-½ inch Bellows**
　　Item GOR1008
**O-Ring**, 1-½ inch Bellows
　　Item GOR1020
**Displacement Cup**, 1 inch Bellows
　　Item GOR1001
**Displacement Cup**, 1-½ inch Bellows
　　Item GOR1019
**Crank Assembly**
　　Item GOR1100
**Float Switch  Upper RS-5 Assembly**
　　Item FLO7000A
**Float Switch Lower RS-5 Assembly**
　　Item FLO7000
**1-½ inch Valve Body**, no screws
　　Item GOR1040

**Suction Filter**
　　Item GOR0005
**Barbed Fitting** (tubing attachment of suction fitting)
　　Item GOR0006
**¼ inch Delivery Tube,** 1 Foot
　　Item GOR0001
**¼ inch Nylon Check Valve**
　　Item PLLCANVC-FF
**52 Gallon Mixing Tank** with Lid, Blue
　　Item TAN3000
**1 inch Solenoid Valve**
　　Item SOL4001
**Three Head Bellow Pump**
　　Item PUM6000
**One Head Bellow Pump**
　　Item PUM6001
**Gear Motor Kit** includes motor for bellows pump, fan, mounting screws, ground set screws and all assembled.
　　Item GOR1012

## BELLOWS BREAKDOWN



.281 O.D. Elbow Connectors **GOR1027**

Viton Poppet Valves **GOR1021**

Valve Body fits 1" & 1 ½" Bellows **GOR1040**

O-Rings fits 1" & 1-½" Bellows **GOR1020**

1" Bellow **GOR1024** or 1-½" Bellow **GOR1008**

1" Displacement Cup **GOR1001** or 1-½" Displacement Cup **GOR1019**

Crank Assembly **GOR1100**

# The Aquaculture System

The Aquaculture System is a great introduction to fish farming. Simple to set up and maintain, it incorporates all of the aspects of aquaculture on a smaller scale. Use it to produce clean, wholesome fish for you and your family year-round, or as an outstanding teaching tool for the classroom. The system is suitable for many species such as tilapia, catfish and ornamentals.

Daily maintenance consists of feeding the fish and the simple act of opening a valve to flush the solids from the collection chamber. It is economical to operate, using less than 10 gallons of water a day and less electricity than a 60 watt light bulb.

*System shown with optional window*

The CropKing Aquaculture System is made with durable, professional quality materials that are fully warranted. It comes complete and ready to set up with a 300 gallon fish tank, filtration unit, UL-listed air pump and all the plumbing you'll need to make it work right out of the package. The easy to follow instruction book guides you through the simple steps for set up.

**Item AQUHS300**

# The Aquaponic System

The Aquaponic System combines fish culture and true hydroponic plant production into one integrated ecosystem. Easy to set up and maintain, the Aquaponic System can provide you with fresh fish and vegetables from a clean and healthy environment year-round. The fish waste provides the nutrients for the plants, and the plants clean up the water to make it a better place for the fish to live in. This mutually beneficial arrangement is the same as what goes on in nature, but this one is completely within your control.

*System shown with optional window and stand*

The 4' x 8' hydroponic growing bed is terrific for a kitchen herb cutting garden, dozens of heads of lettuce or other salad greens. In the classroom, there is ample space for individual student projects.

The Aquaponic System is made with durable, professional quality materials. It comes complete and ready to set up with a 200 gallon fish tank, 4' x 8' hydroponic growing bed, an energy efficient, UL-listed air pump and hydroponic media.

**Item AQUHILM01**

### Fundamentals of Aquaculture
 -By James Avault, Jr.

An easy-to-follow text of practical aquaculture practices. Included are every day problems such as pond construction, feeding, disease control and more.  Also included is a comprehensive guide for the beginning fish farmer or aquaculturist, and a reference for someone established in aquaculture.

There are study questions and an extensive reference sention at the end of each chapter. This step by step guide to commercial aquaculture contains over 280 photos, and more than 50 illustrations.

**Item BOO0075**
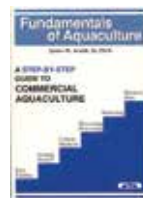
## ACCESSORIES

**Tank Heater,** 1000 watt Submersible with Digital Controller- Industrial Quality
Item AQUHEAT01

**Viewing Window,** 1 x 2 foot
Item AQUHWIN01

**Tap Water Conditioner,** 1 Gallon
Item TAPWA01

**Float Valve** for Automatic Filling
Item FLOV001

**Beneficial Bacteria,** Dry, 0.8 Ounces
Item AQUHBENBACPDR-1

**Dip Net,** 5 Foot
Item AQUNET01

**Seed Starter Kit** includes 10-20 Tray, 1 Pad of 1-½ inch Rockwool and 2 inch Dome
Item SEEDSTR01

**Stand** for Aquaponics growing bed
Item AQUHSTAND

**Digital Thermometer**
Item AQUHTHER

**Air Pump** for AQUHS300, 100 inch max depth, 92 running watts, 115V/60 Hz
Item AQUA0014

**Air Pump** for AQUHILM01, Outdoor, 81 inch max depth, 48 running watts
Item AQUA0013

**pH Test Strip Kit,** 100 Strips
Item PHK2000

**Fresh Water Aquaculture  Kit,**
A complete outfit for pond fish culture, ideal for fresh water analysis. Nine critical test factors can be efficiently and accurately determined on-site. Designed with field analysis as a priority; all reagents, components and accessories are arranged in pre-drilled ethafoam. Short form instructions are provided in a handy lid label for easy access. Long form instruction booklet provides detailed instructions and test kit diagram. Unit is supplied complete with labware, accessories, sampling bottle, and reagents for 50 tests of each factor.
Item TESTKIT01

# DO YOU HAVE AN EXISTING GREENHOUSE AND WANT TO USE HYDROPONIC SYSTEMS?

**In most cases, we can fit an existing structure with our NFT Channel or Bato Bucket systems.**



## We'll need to know:

☐ Existing equipment (heating, cooling, controller, fans, etc.)

☐ Interior layout

☐ Style of greenhouse (gutter connect or freestanding)

☐ Structure design

☐ What type of crop you plan to grow
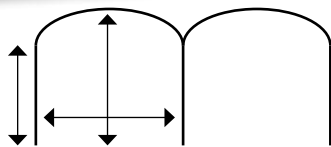


**GUTTER CONNECT STRUCTURE**



**FREESTANDING STRUCTURES**

**Our sales and technical staff can help figure out the best options for your situation. Call us today to get started growing! 330-302-4203**

# CropKing FodderKing 4-8

An ideal system for the hobby livestock farmer, this recirculating system is capable of producing up to 12 lbs. of hydroponic barley fodder per channel. Under suitable growing conditions, a channel full of fodder can be harvested every 7-9 days. Whether you're feeding twenty chickens or one cow, producing your own nutritious fodder is economically beneficial and lots of fun!
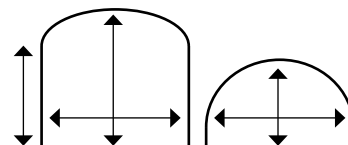
The system is designed like an NFT system, with the exception that irrigation events are operated by a timer as opposed to a continuous flow of solution. This reduces the probability of disease and/or pest establishment in the system.

All of our FodderKing units utilize CropKing's widest channel, which is capable of holding standard 10 x 20 trays. All of these units can be used for germinating seeds and growing micro-greens on burlap or BioStrate.

A reservoir is not included, which provides you with the freedom to choose a tank size to suit your unique situation. Smaller reservoirs could lead to larger and more frequent pH fluctuations due to quicker depletion of the solution while larger reservoirs may result in smaller and less frequent pH fluctuations.



**System includes:**

- (8) 4 ft. x 10 in. LW food-grade PVC channels
- 14 in. space between levels
- (2) 5-gallon soaking buckets with (4) mesh liners
- Square Allied Gatorshield galvanized steel support rack with adjustable legs for creating slope
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Active Aqua 400 GPH submersible pump (PUM8000)
- Easy to assemble fodder system components
- Digital timer for irrigation cycles
- Assembly and growing instructions
- Overall footprint of system: 4 ft. 6 in. x 2 ft. 2 in. x 5 ft. 6 in. LWH

*reservoir not included*

**Item FK48**

# CropKing FodderKing 6-24

For the livestock farmer pursuing more than just a hobby, this recirculating system is capable of producing up to 26 lbs. of hydroponic barley fodder per channel. Under suitable growing conditions, a channel full of fodder can be harvested every 7-9 days. Whether you're feeding twenty chickens or one cow, producing your own nutritious fodder is economically beneficial and lots of fun!

The system is designed like an NFT system, with the exception that irrigation events are operated by a timer as opposed to a continuous flow of solution. This reduces the probability of disease and/or pest establishment in the system.

All of our FodderKing units utilize CropKing's widest channel, which is capable of holding standard 10 x 20 trays. All of these units can be used for germinating seeds and growing microgreens on burlap or BioStrate.

A reservoir is not included, which provides you with the freedom to choose a tank size to suit your unique situation. Smaller reservoirs could lead to larger and more



frequent pH fluctuations due to quicker depletion of the solution while larger reservoirs may result in smaller and less frequent pH fluctuations.



**System includes:**
- (24) 6 ft. x 10 in. LW food-grade PVC channels
- 12 in. space between levels
- (3) 5-gallon soaking buckets with (4) mesh liners
- Square Allied Gatorshield galvanized steel support rack with adjustable legs for creating slope
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Little Giant WGP-65-PW 1,900 GPH submersible pump (PUM3400)
- Easy to assemble fodder system components
- Digital timer for irrigation cycles
- Assembly and growing instructions
- Overall footprint of system: 7 ft. x 4 ft. 2 in. x 6 ft. 10 in. LWH

*reservoir not included

**Item FK624**

# CropKing FodderKing 12-24

The largest FodderKing system available is perfect for livestock farmers with larger operations looking to make hydroponic fodder a permanent part of their feeding regimes. This recirculating system is capable of producing up to 52 lbs. of hydroponic barley fodder per channel. Under suitable growing conditions, a channel full of fodder can be harvested every 7-9 days.

The system is designed like an NFT system, with the exception that irrigation events are operated by a timer as opposed to a continuous flow of solution. This reduces the probability of disease and/or pest establishment in the system. All of our FodderKing units utilize CropKing's widest channel, which is capable of holding standard 10 x 20 trays. All of these units can be used for germinating seeds and growing microgreens on burlap or BioStrate.

A reservoir is not included, which provides you with the freedom to choose a tank size to suit your unique situation. Smaller reservoirs could lead to larger and more frequent pH fluctuations due to quicker depletion of the solution while larger reservoirs may result in smaller and less frequent pH fluctuations.

**System includes:**
- (24) 12 ft. x 10 in. LW food-grade PVC channels
- 12 in. space between levels
- (3) 5-gallon soaking buckets with (6) mesh liners
- Square Allied Gatorshield galvanized steel support rack with adjustable legs for creating slope
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Little Giant WGP-65-PW 1,900 GPH submersible pump (PUM3400)
- Easy to assemble fodder system components
- Digital timer for irrigation cycles
- Assembly and growing instructions
- Overall footprint of system: 13 ft. x 4 ft. 2 in. x 6 ft. 10 in. LWH

*reservoir not included*

**Item FK1224**

# CropKing MicroGreen Rack

Hobby growers and commercial farmers alike can benefit from growing microgreens in this recirculating system. CropKing's MicroGreen rack simplifies the process of growing microgreens by providing a self-contained growing system capable of holding a total of 96 standard 10 x 20 trays in our widest channel available. If you don't prefer to use trays, a single length of your choice of growing media can be utilized in each channel. CropKing carries both burlap and BioStrate for growing microgreens.

Unlike our FodderKing systems, this system provides 18 in. of space between levels to maximize the absorption of sunlight in each level and allow ample room for the addition of optional artificial lighting. Common artificial lights for this system include T5 HO fluorescent lamps and equivalent LED strips. Lights are not included with this system, but a you may call a CropKing salesperson for more information and recommendations regarding lights for this system.

The system is designed like an NFT system, with the exception that irrigation events are operated by a timer as opposed to a continuous flow of solution. This reduces the probability of disease and/or pest establishment in the system.

A reservoir is not included, which provides you with the freedom to choose a tank size to suit your unique situation. Smaller reservoirs could lead to larger and more frequent pH fluctuations due to quicker depletion of the solution while larger reservoirs may result in smaller and less frequent pH fluctuations.

**System includes:**

- (16) 12 ft. x 10 in. LW food-grade PVC channels
- 18 in. space between levels
- (2) Rolls of 100 yd. x 10 in. LW food-grade burlap
- Square Allied Gatorshield galvanized steel support rack with adjustable legs for creating slope
- Complete feed and drain plumbing
- PVC primer and cement for gluing end caps
- Little Giant WGP-65-PW 1,900 GPH submersible pump (PUM3400)
- Easy to assemble MicroGreen system components
- Digital timer for irrigation cycles
- Assembly and growing instructions
- Overall footprint of system: 13 ft. x 4 ft. 2 in. x 6 ft. 4 in. LWH

*reservoir and lights not included*

**Item MGSINGLERACK**

18"

*Shown with optional lights and reservoir\**

CROPKING GROWER'S WORKSHOP

# INTENSIVE PROGRAM

This immersive course provides expanded practical experience working in a production greenhouse, featuring an emphasis in hands-on work with the plants and growing systems.

The intensive workshop is held at our Lodi, OH research greenhouse facility. Students will complete the course with a greater understanding of the inner workings of a hydroponic greenhouse and the various disciplines involved in a successful operation.

## WORKSHOP HIGHLIGHTS:

· Small group instruction
· Scheduled at an on-going basis
· Content tailored to individual's skill/experience level
· Lettuce and tomato production covered
· Includes course materials
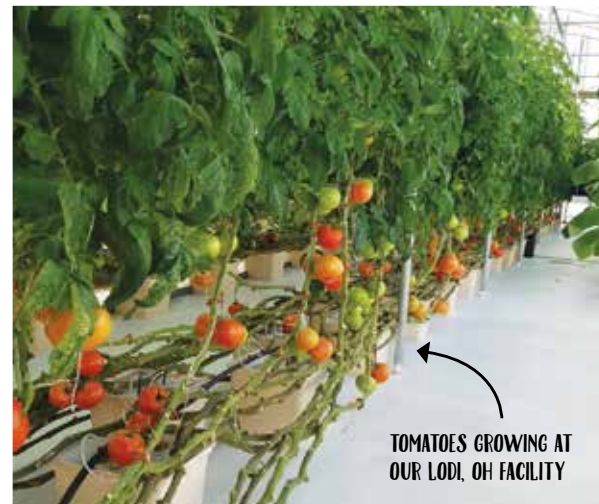
TOMATOES GROWING AT OUR LODI, OH FACILITY

**CROPKING**
INCORPORATED

**CALL FOR DATE AVAILABILITY AND TO MAKE RESERVATIONS**

# 330-302-4203

## WWW.CROPKING.COM

# 22' Wide Gutter Connect Greenhouse

## Specifications:

### Engineered for 20 pound roof load, 90 MPH wind load

Column Post Spacing...................................................................8 Foot
Height to Gutter............................................................ 8 or 10 Foot
Arch Spacing......................................................................4 Foot
Purlins.......................................................... 3, 1-3/8" OD / 16 Gauge
Wind Braces......................................................... 4, 1-3/8" OD / 16 Gauge
Column Post, 8' Gutter:................. 2" round OD / 13 Gauge
Column Post, 10' Gutter..........2-½" square OD / 12 Gauge
Arch.......................................................1-5/8" OD / 14 Gauge
End Wall Posts...........................................1-5/8" OD / 14 Gauge
End Wall Bracing....................................1-5/8" OD / 14 Gauge
Gutter........................................................10" Aluminum Extruded
Cross Tie.......................................................1-3/8" OD / 16 Gauge

## Featuring:

- Expandable structure
- More growing space
- Stuctural aluminum gutters
- Tensile strength of 50,000- 55,000 PSI
- Gutter has base extruded into the aluminum gutter
- Tubing is Allied Gatorshield Steel

| LENGTH | | 48' | 72' | 96' | 128' |
|--------|--------|-----|-----|-----|------|
| Frame with 8' high gutters | 1 Bay | | | | |
| | Additional Bay | | CALL FOR PRICING | | |
| Cover with 8' high gutters | 1 Bay | | | | |
| | Additional Bay | | | | |

| LENGTH | | 48' | 72' | 96' | 128' |
|--------|--------|-----|-----|-----|------|
| Frame with 10' high gutters | 1 Bay | | | | |
| | Additional Bay | | CALL FOR PRICING | | |
| Cover with 10' high gutters | 1 Bay | | | | |
| | Additional Bay | | | | |

# Hoop House Structure

**Featuring:**
· Arches on 4' centers -for added strength and snow load
· Heavy duty ground stakes
· Gatorshield™ galvanized steel
· Engineered frame
· Steel made in the USA
· Heating and cooling options are available



allied

| 12' WIDE GREENHOUSE WITH 3 PURLINS Center height is 7'7" | | | |
|---|---|---|---|
| Length | Frame | Double Layer Cover | Single Layer Cover |
| 24 | | | |
| 36 | CALL FOR PRICING | | |
| 48 | | | |
| 72 | | | |
| 96 | | | |

| 15' WIDE GREENHOUSE WITH 1 PURLIN Center height is 7' | | | |
|---|---|---|---|
| Length | Frame | Double Layer Cover | Single Layer Cover |
| 24 | | | |
| 36 | CALL FOR PRICING | | |
| 48 | | | |
| 72 | | | |
| 96 | | | |

| 18' WIDE GREENHOUSE WITH 3 PURLINS Center height is 9'6" | | | |
|---|---|---|---|
| Length | Frame | Double Layer Cover | Single Layer Cover |
| 24 | | | |
| 36 | CALL FOR PRICING | | |
| 48 | | | |
| 72 | | | |
| 96 | | | |

| 24' WIDE GREENHOUSE WITH 3 PURLINS Center height is 12'5" | | | |
|---|---|---|---|
| Length | Frame | Double Layer Cover | Single Layer Cover |
| 24 | | | |
| 36 | CALL FOR PRICING | | |
| 48 | | | |
| 72 | | | |
| 96 | | | |

| 30' WIDE GREENHOUSE WITH 5 PURLINS AND CROSS BRACE Center height is 12' | | | |
|---|---|---|---|
| Length | Frame | Double Layer Cover | Single Layer Cover |
| 24 | | | |
| 36 | CALL FOR PRICING | | |
| 48 | | | |
| 72 | | | |
| 96 | | | |

*Double Cover Clear 6 mil UV Film includes inflation fan and quick lock to fasten covers*

*Single Layer Cover White 4 mil Film*

*Roll up sides page 51*

# High Tunnel

This greenhouse is perfect to extend the growing season, or to grow all year long with optional heating and cooling packages. Start your seeds, grow in the dirt, or add one of CropKing's hydroponic dutch bucket or NFT growing systems.

The gothic style arches and high side walls create a very workable greenhouse with no wasted space. Add a lot of production to your produce business with very little cost. Other add ons to this greenhouse include roll up, or down side walls, metal end walls, and roll up or sliding end wall doors.

## PRICING

| SIZE | STRUCTURE WITH DOOR | DOUBLE COVER/ INFLATION FAN/ ALUMINUM COVER LOCK |
|---|---|---|
| 24' x 48' | | |
| 24' x 96' | CALL FOR PRICING | |
| 30' x 48' | | |
| 30' x 96' | | |

### Structure
· High strength GatorShield galvanized steel
· 4' arch spacing with bottom cord and "V" bracing every 8' for a very heavy duty structure
· 42" standard ground stakes
· Wind bracing in all four corners
· 6 purlin per structure for additional strength
· Aluminum clad, pre-hung steel door with window and lockset



### Cover
· One IR cover and one UVA-6 mil, 4 UV greenhouse covers
· CropKing extruded aluminum polylock system to fasten covers to structure
· High quality air inflation fan
· Includes double wall poly covers for end wall covering

**Custom quotes available, call our sales team today!**

**Hobby Greenhouse options:**
- several footprints
- American-made, high-grade structural steel frame
- Commercial grade 6 mil polyethylene covering
- Locking steel door
- Wet wall with motorized shutters
- Exhaust fan and vents

# Hobby Greenhouse

CropKing offers multiple hobby greenhouses that are perfect for extending your growing season or growing all year long with optional heating and cooling packages. Start your seeds, grow in the dirt, or add one of our hydroponic Bato bucket or NFT growing systems. Our hobby greenhouses are perfect for vining and vegetable crops (tomatoes, cucumbers, peppers) and leafy vegetables (lettuce, basil, greens).

Our horticulture and engineering staff create customized solutions based on your individual needs. **Please call 330-302-4203 for more information or to receive a quote for your project.**







# WE'RE BUILDING GREENHOUSES ALL OVER THE WORLD!

From the United States, to Barbados, to the Ascension Islands, our team is experienced with city planning and zoning issues, custom engineering to account for wind, weather or other natural elements, and even getting materials to an island in the middle of the ocean!

# Rockwool

- Proven to be one of the best and most reliable growing medium available.
- Completely sterile rockwool provides an optimum air/water ratio for the roots, insuring an abundant supply of oxygen to the roots.
- Used among commercial vegetable and floral producers throughout the world.
- Available in propagation cubes, propagation blocks, mini-blocks, and growing slabs.



The AO25/40, AX25/40, and AO36/40 rockwool cubes are designed for seed and cutting propagation. The individually shaped cells within the pad allow for effective air pruning which encourages rooting within, rather than between individual blocks. Each of these cubes comes in a 10 x 19.5 inch sheet or "pad" and fits into a standard 10 x 20 inch flat.

## ROCKWOOL CUBES

The AO25/40 rockwool cube is slightly under 1 inch square at the top, and is slightly over 1-½ inch in depth. AO25/40 1" cubes have a 7/16" hole on the wide end of the cube. It is commonly used for starting lettuce and some herbs, Designed to fit into the square holes in our NFT channel top covers. Each pad contains 200 cubes.

**1 inch AO25/40 Cube,** Pad of 200 Cubes
Item ROC1004

**1 inch AO25/40 Cube,** Case of 30 Pads
Item ROC1004

The AX25/40 is the same size as the AO25/40, but has the hole on the narrow end of the cube, and is used for the same purposes as the AO25/40. Some growers prefer it because its base is wider and does not tip over as easily.

**1 inch AX25/40 Cube,** Pad of 200 Cubes
Item ROC1006

**1 inch AX25/40 Cube,** Case of 30 Pads
Item ROC1006

The AO36/40 rockwool cube is slightly under 1-½ inch square at the top, and is slightly over 1-½ inch in depth with a 7/16" hole on the wide end of the cube. It is commonly used for starting tomato and cucumber seedlings. It is designed to be used with the propagation blocks which have a hole to accept the AO36/40.

**1-½ inch AO36/40 Cube,** Pad of 98 Cubes
Item ROC1008

**1-½ inch AO36/40 Cube,** Case of 30 Pads
Item ROC1008

**2 inch AO 50/40 Cube,** Pad of 50 Cubes
Item ROC5000

**2 inch AO 50/40 Cube,** Case of 30 Pads
Item ROC5000



## Other Grodan products, sizes and quantities may be available.

## Please call for more information.

## ROCKWOOL BLOCKS

Propagation or growing blocks, are used for holding the seedling transplants longer prior to putting them out onto the Bato bucket or rockwool slabs. Some of the blocks have "planting" holes already in them to accept the AO36/40 propagation cubes. The blocks are individually wrapped in UV resistant plastic on all four sides. The base of the propagation blocks is grooved to promote drainage.

The MM40/40 block is slightly over 1-½inch square and comes in strips of 15 blocks, 150 strips per case. MM50/40 block measure slightly under 2 inches square and comes in strips of 12 blocks, 150 strips per case. Each block is wrapped on the four sides and has a hole punched in one end. This block is not tapered like the AO25/40 or AO36/40. The MM40/40 is used primarily for propagating cuttings. The MM40/40 has a 6/15 hole for seeds or cuttings.

**MM40/40 Cube,** Strips of 15
Item ROC4041

**MM40/40 Cube,** Case of 150 Strips
Item ROC4041

**MM50/40 Cube,** Strips of 12
Item ROC1011

**MM50/40 Cube,** Case of 120 Strips
Item ROC1011

The DM4-G propagation block is 3 inch square by 2-½ inch deep. It has a hole to accept the AO36/40 cube. It is commonly used for tomatoes, cucumbers, and peppers.

**3 inch DM4-G 42x40 Block** with 1-½ inch Holes
Item ROC1002

**3 inch DM4-G 42x40 Block** with 1-½ inch Holes, Case of 384
Item ROC1002

The DM6-G propagation block is 4 inch square by 2-½ inch deep. It has a hole to accept the AO36/40 cube. It is also used for tomatoes, cucumbers, and peppers Some growers prefer the large block which gives them the capability of holding the seedling longer before transplanting into the greenhouse.

**4 inch DM6-G 42x40 Block with 1-½ inch Holes**
Item ROC1019

**4 inch DM6-G 42x40 Block with 1-½ inch Holes,** Case of 216
Item ROC1019



## VITAL SLABS

**5.9 x 3 x 35.4 inch Slab**
Item ROC0998

**5.9 x 3 x 39.4 inch Slab**
Item ROC0999

**5.9 x 3 x 39.4 inch Slab,** Case of 16 Slabs
Item ROC0999

**7.9 x 3 x 35.4 inch Slab**
Item ROC0996

**7.9 x 3 x 35.4 inch Slab,** Case of 16 Slabs
Item ROC0996

**7.9 x 3 x 39.4 inch Slab**
Item ROC0997

**7.9 x 3 x 39.4 inch Slab,** Case of 16 Slabs
Item ROC0997

# Call for pricing on:



**Hugo Gro-Block**
**6" x 6" x 5.8"**
**Hole: 40/40**
**64 blocks per case**
ROC2000



**GroSens Handheld**
ROC0050



**Grow-Cubes, 5.3 cu ft. (loose in box)**
ROC1003
ROC1014



**Uni-slab**
**9.5" x 8"x4"**
**16 slabs per case, 30 slabs per pallet**
ROC2300

**Grodan**

**DM10G 42x40**
**4"x4"x4" w/1.5" hole**
**144 blocks per case**
ROC1030



**Cress Plates**
**20" x 10" x .39"**
**95 sheets per case (fits in a 10x20 tray)**
ROC4050

# Leca Stone
## Hydro Rokz
Maintains perfect air-to-water ratio promoting vigorous root development so plant roots stay healthy and oxygen rich. Rokz unique shape provides a strong structure and a staple base for plant roots while allowing water to drain freely providing maximum oxygen to the root zone, preventing rotting and excess acidity. Hydro Rokz's porous inner core absorbs water and nutrients releasing them to the plant as required.

**45 Liter Leca Stone**
    Item LEC1004

*other sizes available*

# Burlap for Microgreens
Untreated agricultural grade. Price per roll of 100 yards

**10-inch**
    Item MGBURLAP10

**9-inch**
    Item MGBURLAP9

# BioStrate Felt
Comes in rolls 9" or 10" wide and 120' long. BioStrate Felt™ absorbs and retains water while providing an inert environment for dense healthy root development. The blend of biopolymers and natural fibers is designed to manage water efficiently for optimal growth in a variety of hydroponic systems. BioStrate will maintain its structural integrity for the life of your product and won't clog filters. Custom widths are available. This product has been tested and certified both nationally and internationally for biobased content and compostability in an industrial setting.

    Item MGFELT

**3.75" X 120' roll**
    Item MGFELT375

**10"x20" sheets**
    Item MGFELT-S

# Perlite Grow Bags
Horticultural perlite has an excellent record as a propagating and growing medium. Since it is free draining, it is also extremely well-aerated. Its neutral pH, negligible nutrient content, and freedom from pests, pathogens, and weed seeds combine to make it an excellent growing medium for hydroponic culture. Each bag, approximately 42 inch long and 8 inch in diameter, is sealed and designed to hold three tomato plants

**Empty Perlite Grow Bag,** 3 mil
    Item PER1001

**Empty Perlite Grow Bags,** 3 mil, Case of 250
    Item PER1001

**Perlite Bag Sealer,** 12 inch with a 3 mm thick seal
Item PER4001

**Filled Perlite Grow Bag**
(1-1/3 cubic foot of perlite)
    Item PER3000

# 5-Gallon Poly Grow Bags
Poly grow bags are a great, inexpensive container for your plants. The white exterior reduces heat build-up and the black interior keeps light from root growth. 500 bags in a case. Cost efficent and simple disposal. Size: 9W x 8L x 17-½H inches

**Grow Bag with Holes,** white/black
    Item BAG3001

# Oasis Horticubes

A low density, high-drainage foam, Oasis Horticube growing medium is specifically engineered for hydroponics seed germination of vegetables and herbs. This growing media is designed to drain off excess water from the base of the seed, allowing an optimal balance of oxygen and water, even when the foam is completely saturated. Horticube growing medium is sterile upon receipt and provides a clean start, pathogen-free, environment which reduces disease and insect problems for plant germination. Pre-dibbled holes make it easy to set the seed into place in the media. Case of 20 sheets

**Horticube XL**
**Thincut 276ct.** Single Dibble
    Item OAS1100
**Thincut 276ct.** Multi Dibble
    Item OAS1500

**Regular 162ct. Singl Dibble**
Bottom Groove
    Item OAS2500
**1 ½" 50ct. Single Dibble,** Bottom Groove
    Item OAS3500
**1 ¼" 104ct. Multi Dibble,** Top Groove
    Item OAS4200
**1 ¼" 104ct. Single Dibble,** Bottom Groove
    Item OAS4500

**OAS3500 & OAS4500 have no quantity breaks**

***Order 31+ cases of Oasis and receive FREE SHIPPING**

# Micro-Seed Jute
Made from recycled non-woven polypropylene felt, this material is non-toxic and environmentally friendly. The Micro-Seed pads allow for the uptake of more nutrients and allow seeds to germinate quickly making them perfect for fodder or microgreen growing. Pads measure 20"x10". Rolls measure 9.5" x 100'.
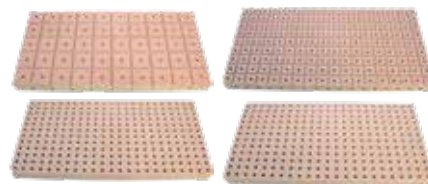
**Micro-Seed Jute Pads (10 pack)**
    Item MGJUTE-S

**Micro-Seed Jute Rolls**
    Item MGJUTE

# Air Inflation Kit

For double poly greenhouses you'll need an air inflation kit to provide the "dead air space" between the two covers. Our air inflation kit contains the cover blower (60 cfm), the air jumper tube, damper and the mounting bracket. Outside vent not included.

**Air Inflation Kit,** 60 CFM
Item AIK6000

# Air Inflation Fan

**Air Inflation Fan,** 60 CFM with Damper
Item AIK0060.....................................$83.00

AJK0200

AIK0060

# Air Jumper Tube

Use this tube when connecting double layer poly film from roof to sidewall or endwall to allow pressurized air in both locations.

**Air Jumper Tube**
Item AJK0200

# Green-Shield Disinfectant

*(Not for direct application on plants)*

Green-Shield is used to disinfect greenhouse structures, tools, floors, benches, etc., and is longer lasting, yet less irritating than bleach. When used as part of integrated pest management, Green-Shield can minimize the occurrence of disease problems in a crop by killing the resting structures of plant pathogens before they infect your crop.

**Green-Shield,** 1 Gallon
Item FUN1010

# Bracket

**2 x 4 inch Bracket Kit,** 1.315 inch, includes bracket and bolt
Item BRA2400
**2 x 4 inch Bracket Kit,** 1.660 inch, includes bracket and bolt
Item BRA2402
**2 x 4 inch Bracket only**
Item BRA2401
**2 x 6 inch Bracket only**
Item BRA2600

# Cross Connectors

**1-3/8 x 1-3/8 inch Cross Connector** with bolts
Item CRO1315
**1-5/8 x 1-3/8 inch Cross Connector** with bolts
Item CRO1660
**2 x 1-3/8 inch Cross Connector** with bolts
Item CRO2000

# Brace Bands

**1-3/8 inch Brace Band**
Item BRT1315
**1-5/8 inch Brace Band**
Item BRT1660
**1.90 inch Brace Band**
Item BRT1900

# Insulated Aluminum Door

White 3-inch aluminum door; and 3 inch aluminum with a nailing flange. The door system comes pre-hung with 3 stainless steel hinges, weather stripping and door panel seals included. It is a 4 way universal system with center lite panel with lockset included. 36" W x 80"H

**White 3 inch aluminum door**
Item DOO1000

# Patch Tape

**Poly Patch Tape,** 48 Feet
2 inch ................Item PAT2000
4 inch ................Item PAT4000
6 inch ................Item PAT6000

**Poly Patch Tape,** 48 Feet
10 inch .............Item PAT1000

# White Felt Type

Provides a soft barrier between the greenhouse frame and the cover. Prevents heats from penetrating to poly sheet and slows degradation as film does not rub against the frame. 1/8" thick x 1 ½" wide x 48' long

Item TAP2000

*Already have a greenhouse?*

*Looking to grow something different?*

CropKing can help you retrofit your greenhouse and assist you in the production of many different crops. Our trained sales and technical staff can recommend the optimal and most cost-efficient solution for your situation.

# Greenhouse Covering - Tufflite Film

**Tufflite InfraredTM** – a Tufflite product designed to last up to three years. Contains both the Drip-Less feature and an additive that will delay the exit of infrared waves from the greenhouse, maintaining heat factors and saving energy.

- Reduced energy costs.
- Improved light diffusion reduces .............. shadows.
- Improved night time heat retention ....... allows for lower fuel bills.
- Rapid payback in fuel savings after ....... only a few short months.

Combine the clarity and light transmission of Tufflite IV with Tufflite Infrared and reap the rewards. Your combination double of Tufflite IV on the outside and Tufflite Infra-red on the inside gives you:

- The highest light transmission.
- Anti-condensation protection.
- Energy savings.

**6 mil IR/TES Film**, 4-year: Inside layer
20' x 100'.........Item FIL2010
20' x 130'.........Item FIL2013

24' x 100'.........Item FIL2410
24' x 130'.........Item FIL2413
24' x 150'.........Item FIL2415

32' x 100'.........Item FIL3210
32' x 130'.........Item FIL3213
32' x 150' ........Item FIL3215

40' x 100'......... Item FIL4010
40' x 130'......... Item FIL4013
40' x 150'......... Item FIL4015

48' x 100'.........Item FIL4810
48' x 130'.........Item FIL4813
48' x 150' ........Item FIL4815

**Tufflite IVTM** – the original "super-clear" greenhouse covering. Tufflite IV is still unmatched in PAR (photosynthetic active radiation) transmission.

- Retains Clarity – Tufflite IV stays clear – no discoloration or cracking.
- Outstanding Durability – proprietary manufacturing yields tough sheeting that resists tears, punctures and UV degradation.
- Easy Installation – heavy duty packaging protects every roll and improved center slit folding makes installation fast and easy.

**6 mil UVA/TIV Film,** 4-year: Outside layer
20' x 100'.........Item FIL2001
20' x 130'.........Item FIL2031
20' x 150'.........Item FIL2051

24' x 100'.........Item FIL2401
24' x 130'.........Item FIL2431
24' x 150' .........Item FIL2451

32' x 100'.........Item FIL3201
32' x 130'.........Item FIL3231
32' x 150'.........Item FIL3251

40' x 100'.........Item FIL4001
40' x 130'.........Item FIL4031
40' x 150'.........Item FIL4051

48' x 100'.........Item FIL4801
48' x 130'.........Item FIL4831
48' x 150'.........Item FIL4851

**6 mil White UVA Film,** 4 year: Outside Layer
24' x 100'.........Item FIL6240
32' x 100'.........Item FIL6320
40' x 100'.........Item FIL6400

**One year overwintering film
4 mil White Film,** 70% Opacity:
24' x 100'..........Item WHI2410
24' x 110'..........Item WHI2413
24' x 125'..........Item WHI2425
24' x 150'..........Item WHI2415
24' x 200'..........Item WHI2420

32' x 100'..........Item WHI3210
32' x 110'..........Item WHI3211
32' x 125' ..........Item WHI3225
32' x 150'..........Item WHI3215

40' x 100'..........Item WHI4010

48' x 100'..........Item WHI4810
48' x 150'..........Item WHI4815

**8 mil Polycarbonate Sheets - Twin Wall
H-Profile, 8MM**
Item POL1011......................................24 Feet
**U-Profile, 8MM**
Item POL1012.................................... 12 Feet

4 x 8'...................Item POL1010
4 x 9'...................Item POL1009
4 x 10'................Item POL1015
4 x 11'................Item POL1027
4 x 12'................Item POL1014
4 x 15'................Item POL1025

6 x 8' .................Item POL1020
6 x 9'..................Item POL1016
6 x 10'................Item POL1021
6 x 11'................Item POL1017
6 x 12'................Item POL1018
6 x 13'................Item POL1022

***Film should not come into contact with PVC or chlorine bleach**

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# Wiggle Wire

Wiggle wire poly lock is easy to use and is an effective method of attaching your polyfilm roof and/or shade cloth. Wiggle wire lock will hold from 4 mil to 20 mil thickness of material. Use one wire to hold the roof in place and then use a second wire to hold your shade cloth. When it is time to remove the shade cloth, you will not disturb the roof plastic. Universal Base (WIG2000) is used on the top of the end arch to cap the end wall covering. Standard Base (WIG1000) is used along the length of your greenhouse.

**4 Foot Wiggle Wire,** 1.25 inch wide
Item WIG1002
**8 Foot Standard Wiggle Wire Base**
Item WIG1001
**12 Foot Standard Wiggle Wire Base**
Item WIG1000
**24 Foot Universal Wiggle Wire Base**
Item WIG2000

# QuickLock

Cap

Base

QuickLock is our extruded aluminum poly locking device. It is designed to provide an attractive and e fficient method of securing either single or double layers of poly greenhouse film. The base is screwed onto the baseboard of your greenhouse, as well as the end arches if desired. Then, the poly is laid over the base, pulled down to remove wrinkles, and the top cap is snapped into place. Over 300 lbs. holding power per lineal foot (does not bend).
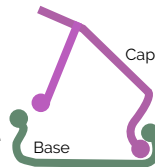
**10 Foot Quicklock Cap Only**
Item SUR1003

**10 Foot Quicklock Base Only**
Item SUR1004

# Sun Clear

When diluted and applied to dry plastic surfaces, such as flexible or rigid green-house coverings, Sun Clear prevents the formation of water droplets. As a result, the plastic remains clear, admitting up to 50% more light. Dripping, which can be injurious to plants and is annoying to personnel, is eliminated. For best results Sun Clear should be applied with a sprayer producing a forceful spray. Both new and old plastic materials can be treated. If new plastic is to be treated, Sun Clear is best applied 2 weeks after installation of the plastic. This allows for oxidation of oily residues on the new plastic to achieve maximum adhesion of Sun Clear.

**Sunclear,** 1 Quart
Item SUN1000

# Shade

## SHADE CLOTH

Our shade cloth is a high quality, knitted shade net that resists tearing. Unlike woven shade cloth, our knitted shade net will not unravel at the edges or at a tear. It contains UV inhibitors and resists deterioration better than polypropylene. There is also less wind resistance due to the knitted construction. Available widths range from 6'-32'. Other types, sizes and colors are available by custom order.

White shade cloth is ideal for cooler greenhouses as it keeps the heat off the plastic and allows more light in than black shade cloth. It is available in 40% and 50% shade, in rolls 26 x 130 foot, or can be customized.

*Add Seaming Charge of .30 per foot for custom widths.* **$25 Minimum order fee may apply**

**40% White Shade Cloth**
**8' x 130'**
    Item SHA2016
**26' x 130'**
    Item SHA1012
**Per Square Foot**
    Item SHA1013

**50% White Shade Cloth**
**8' x 130'**
    Item SHA2017
**26' x 130'**
    Item SHA1050
**Per Square Foot**
    Item SHA1051

**40% Black Shade Cloth**
**Per Square Foot**
    Item SHA1011

**50% Black Shade Cloth**
**Per Square Foot**
    Item SHA1022

**60% Black Shade Cloth**
**Per Square Foot**
    Item SHA1032

**70% Black Shade Cloth**
**Per Square Foot**
    Item SHA1042

**Clip-Its Shade Cloth Fasteners**
Item CLI1000

We recommend spacing Clip-Its every 3 foot on sides and ends

## ALUMINET® COOL SHADE

ALUMINET is a special knitted screen made from metalized HDPE. The fibers are produced from mono-oriented HDPE, giving the fiber durability and longevity. After an aluminum metalization process, the films are covered with a special antioxidation coating. The net is knitted into a precise uniform texture; meets the ASTM-D 3887 standard. Available widths 7', 14', 21', 28'.

*Specify %: Minimum order fee may apply.*

**30%, 40%, 50% Aluminet,** per square foot
    Item SHA3000

**60% Aluminet,** per square foot
    Item SHA3100

## EZ KOOL RAY LIQUID SHADE

Liquid shade is a compound for coating greenhouse glass, fiberglass or polyethylene. Effectively controls the rays of summer sun and prevents burning or scalding of plants. Standard Dilution is 1500 Sq. Ft.

**Ez Kool Ray Liquid Shade,**
1 Gallon
    Item SHA1000

# Ground Cover

## WOVEN GROUND COVER

**Sunbelt Brand**
Woven ground cover used on the greenhouse floor or outdoors in nurseries for displaying potted stock. Economical ground cover 3.2 ounce fabric, U.V. stabilized and permeable. 100% polypropylene.

**3.2 Ounce Black Ground Cover**
**6' x 300'**
    Item GRO1001

**12' x 300'**
    Item GRO1007

**15' x 300'**
    Item GRO1006

**3.2 Ounce White Ground Cover**
**12' x 300'**
    Item GRO1009

**15' x 300'**
    Item GRO1008

## KEEP UNWANTED PESTS OUT

Decrease unwanted pests and expensive pesticide usage naturally!

U.V. stabilized Insect Screens, correctly installed, prevent insect penetration yet provide maximum possible air flow that is essential for optimal crop yield.

All greenhouse openings including intake vents, service door, etc., should be screened for best results.

**Thrip Insect Screening 75 Mesh**
134 inch width and can be seamed
Item INS4000

**For a complete insect exclusion system for a CropKing Greenhouse Call for pricing at 330-302-4203**

Many of these items are special order and customized based on the project.
Please call 330-302-4203 for more information including pricing, delivery options, etc.


Cannabis facility in Aurora, CO

# Blackout Curtains

## Features
- Total control over day length for light-sensitive plants
- Fabric humidity control keeps moisture from condensing on the curtain
- All curtain systems have a firebreak or are flame retardant fabric
- Curtain is UV stable
- Positive drive rack and pinion system means no cables to adjust
- Fabric glides between stationary stainless steel lines
- Built-in safety limits protect your system
- Small bundle size ensures minimal shade when the system is uncovered
- Flexible design allows for easy installation for new construction and retrofit projects

# Light Deprivation
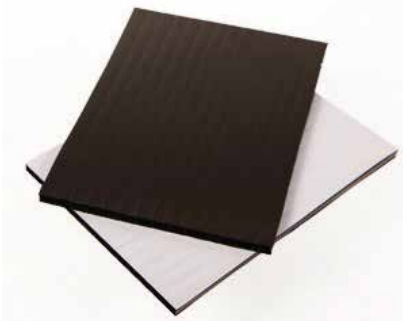


## Features
- White Exterior to Avoid Heat Gain
- Black Exterior for 0% Light Transmission
- 2 side UV Protection
- Alternative to Metal Corrugated Panels
- Virtually Unbreakable
- High Insulation Value
- Light In Weight
- 10 Year Non Prorated Warranty

## Applications
- Greenhouse End Walls & Side Walls
- Greenhouses
- Covering for Storage Areas

# Light Traps



The Max-Flow Light Trap is used to provide complete darkout capabilities. We offer custom sizes to fit your particular project and a selection of sizes to fit any size or application.



The Brown-Out Light Trap is used in conjunction with evaporative cooling cells. This combination offers a low cost method of maintaining good air flow and providing excellent light reduction.



The Black-Air High-Efficiency Light Trap is used primarily for vent boxes. The HE is the darkest light trap on the market yet has a lower air resistance than traps that offer far less light reduction. This trap provides ultimate darkout while maintaining low static pressure.

## T5 FIXTURE WITH BULBS

- Dual On/Off switches allow you to control the amount of lumens as needed (6 and 8 tube models only)
- Powder coated steel housing
- Low profile
- Hangs 3 ways - overhead, vertical, or horizontal
- 10' grounded power cord
- Includes fluorescent 6400K tubes
- 3"H x 26"W x 46"L

**4ft -4 Bulb**
Item LIG0016

**4ft - 8 Bulb**
Item LIG0018

**4ft -6 Bulb**
Item LIG0017

**4ft - 12 Bulb**
Item LIG0019



Salvation Army Fort Romig in Akron, OH



Cannabis facility in Aurora, CO

**We work with all major lighting companies to offer unique solutions for our growers. Our relationships with these industry leaders allow us to offer low pricing, quantity discounts and customized light layouts.**

**Contact a CropKing representative for products and pricing on these brands and more!**

## Trays

**Seedling Starter Tray holds 72 seedlings**
Item TRA007

**10/20 Seed Tray with Holes**
Item TRA1100

**10/20 Seed Tray with Holes,** Case of 100
Item TRA1100

**10/20 Seed Tray without Holes**
Item TRA1101

**10/20 Seed Tray without Holes,**
Case of 100
Item TRA1101

**Web Seedling Tray,** 50 per case
Item TRA1104

## Humidity Domes

Domes fit on standard and rapid rooter starter trays and keep seedlings or clones moist until they develop root systems. We recommend using these and propagation mats for a fast healthy start with seeds or clones.

**2-½ Inch Humidity Domes**
Item DOM3000

**7 Inch Humidity Domes**
Item DOM6000

## Net Pots

Net pots are used in hydro-ponics with several types of growing media for either seeding, propagation, or growing on NFT or artificial media systems. They are excellent to use in science fair projects since the root system can remain visible when lifted out of the nutri-ent solution. With net pots, root growth can be monitored and demonstrated easily, without damaging the roots.

**2 inch Net Pot**
Item NET1000-E

**2 inch Net Pot**
Item NET1000

## Propagation Heat Mats

The HEAVY DUTY modular commercial heat mats will provide uniform heat for hundreds of seedlings or cuttings. Bottom heat is one of the most important and effective ways to improve germination and rooting.

- Increases success of seedlings and cuttings
- Warms root area 10-20˚F over ambient temperature to improve germination
- Light, watering and planting information on mat
- Waterproof construction
- 6 foot power cord
- UL listed
- 50% thicker construction
- Rugged and durable with waterproof connectors
- Plug into Digital Heat Mat Thermostat (required, sold separately)

**60 x 21 inch Propagation Heat Mat,** 140 watts, can add up to 4 add-on units
Item PRO6000

**60 x 21 Add-On Propagation Heat Mat,** 140 watts
Item PRO6001

**20 x 20 inch 2 Tray Propagation Heat Mat**
Item PRO1002

**48 x 20 inch 4 Tray Propagation Heat Mat**
Item PRO1000

## Thermostat for Propagation Heat Mats

Thermostat for use with propagation heat mats. It keeps the propagation mat set at the proper temperature for optimum seed germination and cutting growth. Unit plugs into the mat in a recep-tacle on the backside.

- 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

**Digital Thermostat,** 1 Plug
Item THE1000

## Berry Seeder

- Seed up to 250 trays per hour with unequaled accuracy
- Transparent seeder body allows for easy inspection for clogged holes and/or misses.
- Seed the whole tray at once, not one row at a time
- Corrosion resistant

Berry Seeder Complete System includes seeder, both seeder plates, dibbler, inspec-tion light, seed hopper with stand, and shopVAC.

**Complete Seeder System**
Item SEE1000

**Seeder System with Base**
(plate not included)
Item SEE1001

**200 Seed Base Plate for Pelletized Seeds**
Item SEE1002

**200 Seed Base Plate for Precision Seeds**
Item SEE1003

**Dibbler Plate**
Item SEE1004

*additional sized plates available*

### HAVE QUESTIONS?

**Talk to one of our experienced sales and technical specialists about what products best fit your needs!**

**330-302-4203**

## Digital Timer
### Multiple Purpose
### 2- Outlet Digital Timer

- For indoor use only
- Variable ON/OFF times - up to +-15 minutes for added security
- Auto adjusts to sunset/sunrisee time for dusk/dawn setting
- Automatic Daylight Savings Time option
- Battery backup with low battery indicator
- Up to 28 ON/OFF settings.
- 2 timed receptacles
- Sunrise, sunset, daily, weekday, weekend options
- Limited one year warranty

**Intermatic Digital Timer**
Item TIM2008

## Irrigation Timer

- Six independent programs can run concurrently
- Up to 9 daily cycle starts per program; or, loop watering optional in all 6 programs for unlimited cycles
- Station timing adjustable from one minute to 24 hours in one minute increments
- Automatic, semi-automatic, manual, and timed manual operation
- Programmable "system check" cycle that can be initiated at any station
- Non-volatile memory holds program information during power outages of any length
- 10 year lithium battery (included) keeps real-time during power out ages of any length

**Sequence Timer:**

**4 Station**
Item SEQ0050

**8 Station**
Item SEQ1000

**12 Station**
Item SEQ1001

**18 Station**
Item SEQ1002

## Arkal Filters

**¾ inch Arkal Filter,** 140 Mesh/100 microns:
Item STR1009

**1 inch Arkal Filter,** 140 Mesh/100 microns:
Item STR1010

**¾ inch Replacement Cartridge,** 140 Mesh:
Item STR1013

**1 to 1-½ inch Black Replacement Cartridge,** 140 Mesh:
Item STR1011

**Replacement O-Ring for ¾ inch Arkal Filter**
Item STR1016

**Replacement O-Ring for 1 inch Arkal Filter**
Item STR1015

## Solenoid Valve

Heavy duty design for long life, versatile performer. Excellent for use in drip systems because it operates well at extremely low flow.

**1 inch Solenoid Valve, 24 VAC 2W**
Item SOL4001

*AC Power

## T Strainer

Use a T strainer on the inlet and/or outlet side of your nutrient pump to strain out any debris that may get into the nutrient tank. This commercial grade strainer is easily cleaned and flushed. The 1-½" strainer comes with a 100 mesh nylon screen.

**1-½ inch T Strainer,** 100 Mesh
Item STR1000

**1-½ inch Clear Cartridge Cover**
Item STR1001

**2 inch Black T Strainer,** 100 Mesh
Item STR3000

**100 Mesh Strainer**
Item STR3001

**O-Ring for STR3000**
Item STR3002

**50 Mesh Strainer**
Item STR3003

**1-½ inch Strainer Screen,** 12 Mesh
Item STR1007

**Replacement O-Ring** for 1-½ inch T-Strainer set of two one small, one large.
Item STR1012

## Tanks
**25 Gallon Polyethylene Nutrient Tank and Lid**
Used for Small Home Systems
Item TAN2001

**52 Gallon Polyethylene Tank and Lid**
Used for CropKing's Fertroller, Injection Systems, and as a nutrient mixing tank
Item TAN3000

**4' x 8' x 12" Aqua Blue Polyethylene Tray**
Used for 200 Gallon Aquaponics System Tray
Item TAN4000

**200 Gallon Blue Round Polyethylene Tank**
Used for Aquaponics System Tank
Item TAN4001

**300 Gallon Blue Round Polyethylene Tank**
Used for Aquaculture System Tank
Item TAN4002

**3 Quart Round Polyethylene Tank and Lid**
Used for Fertroller sample pot
Item TAN4003

# Submersible Pumps

## Active Aqua Pumps

The Active Aqua is designed to run completely submerged in water. It may be utilized in either fresh water or saltwater, but not in foreign fluids, flammable liquids, or any chemical; also used for mixing.  ½ inch discharge. Aeration Kit included.

**400 GPH Submersible Pump**
Item PUM8000

**1000 GPH Submersible Pump**
Item PUM8200

## 6 CIA Little Giant Pump

CIA Little Giant Pump applications include commercial, industrial, and home uses where liquid must be transferred or recirculated.

- 1/3 hp shaded pole motor with over load protection
- Designed for continuous duty
- Epoxy coated cast iron housing
- 1-¼" (31.7 mm) adapter and ¾" (19 mm) garden hose adapter available
- Carbon/ceramic shaft seal
- Upper and lower sintered sleeve bearings
- cCSAus listed
- 720 watts, 9 amps
- 17.5 pounds
- 46 GPM at 5 foot

**6 CIA Little Giant Pump**
Item PUM3000

## 8 CIA Little Giant Wet Wall Pump

- 4/10 hp shaded pole motor with overload protection
- Designed for continuous duty
- Epoxy coated cast iron housing
- Carbon/ceramic shaft seal
- Upper and lower sintered sleeve bearings
- cCSAus listed
- 1 ½ inch FPT discharge
- 830 watts, 10 amps
- 9 ½ x 8 ½ x 6 inches LWH
- 18.75 pounds
- 54 GPM at 5 foot

**8 CIA Little Giant Wet Wall Pump**
Item PUM3100

## 1900 GPH 1/8 HP Little Giant Submersible Pump

This pump is extremely versatile, able to be used vertically and horizontally.

- Unique dual-discharge design allows for operation of two water features simultaneously
- Powerful direct-drive pump produces greater starting torque and flow pressure than comparable magnetic drive submersible pumps
- Corrosion-resistant body designed for non-potable submersible use
- Includes two 1 ¼" MNPT x 1" barbed elbow adaptor and a 1 ¼" MNPT discharge cap
- Maximum pumping height of 20'
- 1 ¼" FNPT discharge and 1 ¼" MNPT discharge cap
- Barbed adaptor accepts 1" tubing
- 3 Year Warranty
- 1/8 HP, 115V
- 9.6 x 6.35 x 8.1 LWH

Item PUM3400

# Dolphin Pumps

**Super Amp Master 7200**
Freshwater Seal, 2 inch wet end with new super flow turbine style impeller, using a new style reverse seal. One year factory warranty and free 10-year factory service guarantee. Motor anti vibration pad and super seal 2 inch unions included.

**1/3 HP Dolphin Super AMP Master Marine 7200,** 1725 RPM, 115v
Item PUM7500

**Dolphin Diamond Series Aqua Sea Premium Efficiency Pump.**
High head low current draw. Two year factory warranty and 10-year free extended service guarantee. Motor pad and 1 ½ inch new super seal unions included.

**1 HP Dolphin Aqua Sea 9250 Pump,** 115v
Item PUM8300
**1 HP Dolphin Aqua Sea 9500 Pump,** 230v 50/60Hz
Item PUM8400

**Dolphin Super Aqua Sea**
Premium efficiency compact 2 inch side discharge high head maximum flow freshwater pump. Includes 2 inch super seal unions and pump anti-vibration pad. One year factory warranty and free 10 year factory service guarantee included.

**1 ½ HP Dolphin Super Aqua Sea 12,500 Pump,** 115v or 230v
Item PUM8700

# CropKing Injector System Pump

- All stainless steel pump head
- 115 Volt
- 1-¼ inch inlet, 1 inch Outlet

Open impeller for solids handling, or enclosed impellers for higher heads and efficiencies American Stainless pumps have a one-piece shell with an internal design that prevents air from being trapped in the pump case. These pumps do not have a volute design case which can put a radial load on the motor bearing. There is no diffuser to plug up or wear out.

**¾ HP SSPI Pump,** 60 Hz, 115v, Single Phase
Item PUM5001
**1 ½ HP SSPCI Pump,** 50/60Hz, Single Phase
Item PUM5002

**Feed Pump Adaptor, 1-¼ x 1 inch Reducer**
*Note: To convert the pumping from PUM5000 to PUM5001*
Item PUM5010

# Lettuce Crisper

Keeps lettuce fresh and prevents damage from handling in the grocery store. One piece, crystal clear crisper has hinged lid and has a cup in the bottom for the roots.
It is also ideal for basil. Made from PETE material. Size: 7 ¾ x 7 ¼ x 5 ¼ inches LWH

**Recycle #1 Lettuce Crisper**
    Item CRI1000

# Lettuce Crisper

**Rounded Top**

Just like our other crisper, but this one is more rounded, or dome like. These new crispers are less bulky and take up less space per box, so there is a saving on shipping. It is also a little less expensive than our standard crisper.

**Recycle #6  7"x8"x6.5"**
**Lettuce Crisper Rounded Top**
    Item CRI1500

**Lettuce Crisper Box,** Minimium of 1,200
Size: 16 x 24 x 12 inches LWH
Each box holds 12 lettuce crispers.
    Item BOX5000

# Herb Crisper

Keeps herbs fresh and prevents damage from consumer handling. One-piece clear clam shell makes for easy packing. Designed to hold ½ - 1 oz. of herbs, and has hole for hanging. Size: 8-1/8 x 4 ¼x 1-3/8 inches LWH

**Herb Crisper**
    Item CRI3000

# Lettuce Box

Our one-piece lettuce box is designed for quick and easy fold-together assembly.
It is pre-printed with green lettering on a white background and will hold 20 heads of hydroponic bibb lettuce. Use with our white lettuce box liners. Quantities of 5,000 or more are available to be custom printed.

**Lettuce Bulk Pack Box,** Size: 24" x 16" x 8 ¼"
* Minimum of 1,200
    Item BOX3000

**Clear Lettuce Box Liner** Size: 45"x55" 1 MIL, Roll of 500
Perforated, single-wound sheeting.
    Item LIN0500

# Leaf Lettuce Bag

Leaf lettuce V Shaped vented bags. 4,000 to a case. Great for basil, too.
Openings at top and bottom. 12 ¾" long 12 ½" at the top and 4" at the bottom

    Item BAG4000

# Tomato Packaging

It is low cost, and very simple to use. It is a brown, one piece box with red and black printing, and the top is open allowing easy viewing of the tomatoes. End tabs allow easy stacking.

**10 Pound Open Tomato Box, Skid of 500**
Size: 19 ¼ x 13 x 3 ½ inch LWH
* Minimum order of 1000
    Item BOX1011

**15 Pound Open Tomato Box, Skid of 520**
Size: 23 x 15 x 3 ½ inch LWH
    Item BOX3001

# Cucumber Labels

Identify Locally Grown Gourmet Cucumber and includes bar code.

**Cucumber Label, Roll of 2,000**
    Item LAB2000

## Custom Labels Available
Approved art needed.
Call for custom labels at 330-302-4203.

50 roll minimum on Tomato Labels
25 roll minimum on Crisper Labels

# BlueLab Combo Meter

A conductivity, pH and temperature meter all in one. It comes with a pH probe and conductivity/ temperature probe (reads in both EC and PPM), which are simply placed into the solution and the selected reading is displayed on screen. As the Blue Lab Combo Meter is portable and does not require a power supply to operate, it can be used anytime and anywhere to help you manage your crops daily nutrient requirements.

**Bluelab Combo Meter**
Item PHM3000
**Replacement Probe**
Item PHM3001

# BlueLab Guardian Monitor

The Bluelab Guardian Monitor is not only a constant indicator of the desired levels of pH, conductivity and temperature of your nutrient solution, it also data logs these critical parameters to your computer for you. It does not stop there. You can access the data via the cloud from a remote mobile device or computer to check for extreme variances to ensure these critical parameters are hitting the mark for crop success. Just one Bluelab Connect Stick is required to receive wireless data from one or more Guardian Monitor connects. For remote or cloud access, the computer you are already data logging to will need permanent internet access.

**BlueLab Guardian Monitor**
Item PHM3002

# Bluelab Guardian Monitor Connect

The Bluelab Guardian Monitor Connect is not only a constant indicator of the desired levels of PH, conductivity and temperature of your nutrient solution, it also data logs these critical parameters to your computer for you.

**Guardian Monitor Connect**
Item PHM3005
**Connect Stick**
Item PHM3006
**Connect Range Extender**
Item PHM3007

# Refractometer

Check sugar content of ripening fruit. Easily calibrated, the refractometer measures from 0-32% Brix, with +0.5% accuracy, with or without automatic temperature compensation. Simply place one or two drops of fruit or vegetable juice on the scale and read the results in Brix percentages through the shaded area on the eyepiece. Includes case and instructions.

**Refractometer**
Item REF1000

# TDS Conductivity Standard

Use conductivity standard for verifying, or adjusting the readings on your conductivity meter. Standard expected reading 2.77 milli mhos/cm.

**TDS Standard, ½ Pint**
Item TDS1001
**TDS Standard, 1 Pint**
Item TDS1002

# pH Adjusters

To maximize plant growth, the pH content of your nutrients should be slightly acidic. Experienced growers consider the ideal pH for most crops to fall between 5.5 and 6.5.

## pH Up

pH Up: Base formulated using Potassium Hydroxide and Potassium Carbonate. Add a little at a time if your nutrient pH is too low in order to raise the pH to the proper level.

**pH Up, 1 Gallon**
Item HYD5003

## pH Down

pH Down: Acid formulated using food grade Phosphoric acid. Just add a little at a time if your nutrient pH is too high in order to lower the pH to the proper level.

**pH Down, 1 Gallon**
Item HYD5002

# pH Supplies

**pH Test Strips kit**
Comes with 100 test strips and a color chart.

Item PHK2000

**pH Buffer Solution 4.0**
Item PHB1000
Item PHB1001

**pH Buffer Solution 7.0**
Item PHB1003
Item PHB1004

# Cleaning Kits

## BlueLab pH Cleaning Kit

Includes detailed instructions, decanter vessels, probe cleaner, cleaning tool, toothbrush, and calibration solutions

Item PHM3100

## Bluelab EC Cleaning Kit

Includes detailed instructions, decanter vessel, probe cleaner, probe chamois, and conductivity standard solution.

Item PHM3200

## KCl Storage Solution 100ml

We know it is extremely important to care for and store pH probes correctly. pH probes are sensitive glass instruments which age through normal use. The life and performance of pH probes is reduced heavily when they are used or stored dry. Bluelab pH Probe KCl Storage Solution is made specifically for use with Bluelab pH products. It is designed to increase response time and maximize the life of Bluelab pH pens and pH probes. For best results, use the KCl solution to store the pH pen/probe after use and hydrate monthly. Instructions are on the bottle label. Bluelab pH Probe KCl Storage Solution is manufactured specifically for Bluelab products are NIST certified and are made to a traceable standard to ensure your Bluelab products last longer and maintain accuracy.

Item PHM3400

# iGrow 1400™
## Greenhouse Environmental Manager

Using the iGrow1400, you can easily integrate and control virtually every piece of equipment in your greenhouse, giving you powerful control of the heating, cooling, shading, venting, humidity and irrigation.

The iGrow 1400 features 12 relay outputs, 2 alarm outputs, 8 sensor inputs, and manual override switches to control all your greenhouse equipment. It has intelligent heating/cooling, humidity, CO2, shading, vent, bottom heat, HID lighting and irrigation control to create the perfect environment for your plants. Advanced features like 12 stages of heating/cooling, stage overrides, 4 setpoints that can be adjusted, flexible dehumidification control, heat boost, up to 30 day historical data storing, and smart irrigation make this the perfect controller for all your greenhouse needs.

The controller can be programmed or monitored via its own control panel, or through your computer through the use of the iControl Software. Should the need arise for analysis or troubleshooting, CropKing technical staff can access your iGrow1400 remotely once you grant access to the system.

- Enclosure is a white, NEMA 4, watertight case with clear lockable cover (9 x 9 x 4inch)
- 12 relay outputs, all user-definable
- Mechanical interlock jumpers for adjacent channels
- Bus jumpers for wet contact outputs (e.g. 24VAC)
- 2 alarm outputs – dry contacts – compatible with Sensaphone telephone autodialer
- 8 analog sensor inputs
- 4 serial communication channels
- 11 digital inputs
- Manual override switches and green LED status lights for each relay output
- Red LED alarm status lights
- Powered by 12 volt DC external power supply

**iGrow 1400 with Digital Temperature/ Humidity Sensor**
Item IGROW1400THS

**iGrow 1400 Environmental Controller Only**
Item IGROW1400

**iGrow Environmental Control Software**
(Minimum Windows 7 Operating System)
Item IGROWICONTROL

**iGrow Weather Station**
Item IGROWWEASTA

**iGrow Solar Light Sensor**
Item IGROWSOLAR

**iGrow Bottom Heat and Water Temperature Probe with 50 ft Cable**
Item IGROWTEMP

**iGrow Digital Temperature and Humidity Sensor**
Item IGROWDTHS

**iGrow 2-24 Cable,** per foot
Item IGROW224CABLE

**iGrow 4-24 Cable,** per foot
Item IGROW424CABLE

**$CO_2$ Transmitter**
Item CO2GMW25

# Custom Pre-Wired Electrical Panel
## with pre-mounted environmental controls

CropKing offers a pre-wired electric panel for your greenhouse, built to your specifications to integrate the heating, cooling, or irrigation equipment.

Features:
- CropKing features the iGrow 1400 as the standard environmental controller.
- The iGrow is pre-mounted and programmed to best operate your greenhouse.
- 100 or 200 Amp Main breaker panel, Single or Three Phase
- Separate relay panel with terminal strip connections for all equipment (each connection is clearly marked)
- Wiring diagrams included for all equipment in the greenhouse
- Indoor rated electrical enclosures used as standard equipment

Options:
- NEMA/4 rated (watertight) enclosures
- Backup generator transfer switches
- Sensaphone alarms systems

Call for an equipment specification worksheet for your greenhouse. This allows us to accurately quote the electrical panel.

# Autogrow MultiGrow

The MultiGrow is your all-in-one, multiple grow area controller and is designed to be expandable as you grow. The MultiGrow can run up to 8 different growing zones, managing the environment as well as your reservoirs and irrigation schedules. While the sensors are constantly monitoring every aspect of your grow, the unit is data logging and making adjustments to create your perfect environment. The MultiGrow is fully customizable and built to order, so you only pay for what you need.
**Please contact us for a quote.**

# Certified Hygrometer

The Abbeon Certified Hygrometer is a high quality instrument certified to be accurate within ±2%. The dial indicates the complete range of 0 to 100% relative humidity and each instrument has been tested at three different positions of the dial at temperatures ranging from 32° to 230°F

**Certified Hygrometer**
Item HYG1000

# Thermometer

Indoor/Outdoor Minimum/ Maximum Thermometer Features highest and lowest daily temperature records, large easy-to-read face, convenient pushp-button reset and temperature range from -40F to 120°F

**Thermometer**
Item THE1002

**Dial Thermometer,** 8 inch Stem
Item THE1006

# CO$_2$ Generator

The shorter daylight hours of winter limit plant growth. To bring this growth to a maximum rate, it is essential to not only provide normal summertime CO$_2$ saturation rate but to "fertilize" the air with additional CO$_2$. Plants can use more CO$_2$ than normal atmosphere provides, and the more they use, the faster they grow. This generator provides the necessary CO$_2$ to speed up plant growth during the shorter daylight hours of winter. Plant quality is also improved as you add low cost warmth to your greenhouse.

**CO$_2$ Generator, Propane**
Item COG2000

**CO$_2$ Generator, Natural Gas**
Item COG2001

# Sensaphone 400
## Monitoring System
Built-in Features

- Four user-selectable inputs, temperature or dry-contact
- Voice messages for each of the input alarms can be customized. User can record messages through unit's built-in micropohone
- Microphone monitors high sound alarms and enables remote listen-in
- AC power failure sensing with variable recognition time
- Phone circuit monitors the integrity of the phone line. If phone line is cut or disconnected, an LED will flash and optionally the output relay can be tripped at the same time for a local indicaiton of a problem
- Battery condition monitor; backup power via C cell batteries accessible from front of unit
- Standard power plug so that power cord can be easily removed and fed through enclosure openings
- Clock

**Sensaphone, Model 400**
Item SEN0400

# Temperature Sensor

Measures temperatures at a location away from the Sensaphone. Triggers alarm when temperature passes user-programmed high/low limits. Temperature range: –20° to +150°F. 25 foot cord.

**Sensaphone Temperature Sensor,** 2.8K Weather Proof Temperature Probe
Item SEN0005

# Electronic Temperature Control (ETC)

With its wide temperature setpoint range and selectable heating or cooling modes, the ETC can be used for a wide variety of applications. Closer control with electronic thermostat results in lower heating and cooling bills!

- Digital display allows simple and accurate setting of controls.
- Wide setpoint range (-30°F to 220°F) and differential adjustment (1°F to 30°F).
- Diagnostic program checks for hardware, software, or system problems and displays different error codes for easy troubleshooting.
- Keypad lockout switch prevents tampering.
- EPROM memory retains control settings during power outage.
- On power up, time delay protects equipment from simultaneous restarts.

**1 Stage Electronic Temperature Controller,** 120/208/240 Volt
Item THE2003

**2 Stage Electronic Temperature Controller,** 120/208/240 Volt
Item THE2004

# Pocket Sling Psychrometer

Simple to operate: saturate the wick of the wet bulb thermometer in clean water and whirl the sling psychrometer until the temperature stops dropping. Read the two thermometers.

Place wet bulb temperature over the dry bulb temperature scale on the slide rule. The arrow will then point directly to the accurate relative humidity. Comes complete with carrying case and slide rule. Range on thermometers is 20°F to 110°F.

**Pocket Sling Psychrometer**
Item SLI1000

## Fans & Shutters

**Horizontal Air Flow Fan**

A high efficiency air circulator that effectively cools plants. Reduces condensation, controls insects and maintains a uniform temperature throughout your building to reduce heating costs.

**Features:**

- Aluminum propeller designed to reduce ambient noise levels while maintaining maximum circulation requirements.
- OSHA approved guard
- Efficient variable speed motor
- Corrosion resistant white powder coated guard and hot dip galvanized bracket
- Fan and guards come completely assembled
- Prewired with 115V attached 6 foot cord and 3-prong plug
- Totally enclosed, maintenance free direct drive high efficiency motors have completely sealed ball bearings, UL/CUL certification and are covered by a full two year warranty
- 1/15 HP, 100W, 1400 RPM, 2000 CFM, 115 Volt

**20 inch Horizontal Air Fan**
Item FAN1001

## Vertical Airflow Fan

Manufactured by Vostermans, the Multifan V-FloFan produces an air current that is forced outward and downward along the roof and walls of the greenhouse and then pulled upward through the crop. Possible benefits include reduced condensation on the inner plastic roof surface and the potential for reduced condensation on plant leaf surfaces. Such factors could have benefits in both plant production and plant health.

Item FAN2000
240v and 3-phase options available.
Call for pricing.

**V-Flo Fan Hanging Bracket by CropKing**
Item FAN2100

**V-Flo Fan Hanging Bracket by Vostermans**
Item FAN2150

## Shutters, Aluminum

Motorized Shutter Kits include the aluminum shutter, motor (115 or 230V), and the mounting hardware.

**Motorized Aluminum Shutter,**
Inner Dimension

16 x 16 inch......... Item SHU1600
21 x 21 inch.......... Item SHU2100
27 x 27 inch ........ Item SHU2700
33 x 33 inch ........ Item SHU3300
39 x 39 inch........ Item SHU3900
45 x 45 inch........ Item SHU4500
51 x 51 inch ......... Item SHU5100
57 x 57 inch ........ Item SHU5700
60 x 36 inch ....... Item SHU6036

**Shutter Motor, 115V, Coolair** (motor only)
Item SHU1000

**Double Arm Linkage Kit** for shutters over 33 inches. *Motor not Included*.
Item SHU1100

## Shutter Motor Kit

Kit for 16-33 inch shutters. Over 33 inch shutters requires double-arm.

**Shutter Motor Kit,** 115V, Coolair
(includes motor, arm, chain and spring)
Item SHU1001

## Variable Speed Modules

Variable speed module with a manual speed selector and a maximum load of 15A. The faceplate is designed with a toggle switch and a manual speed selector dial. The toggle switch allows you to select between manual and automatic modes. In manual mode, you set the fan speed by turning the manual speed selector dial to the desired value. Possible settings range from OFF to 10. In automatic mode, the VSD-1MC responds to the input signal.
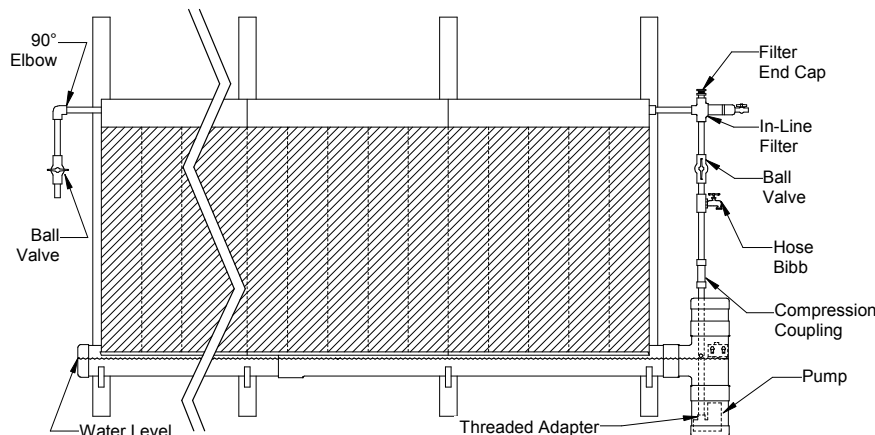
**V-Flo variable speed drive, 10 amp**
FAN2210

**V-Flo variable speed drive, 20 amp**
FAN2220

## PVC Evaporative Cooling System



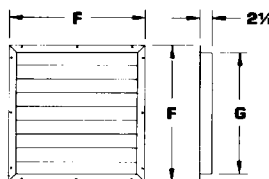## Need to Cool Your Small Greenhouse?

## Cooling Package

- Cools approximately 450 sq. ft.
- 30" Exhaust Fan, 1/3 HP, 230V, 2 speed, single phase motor
- (2) 60" x 36" Motorized Inlet Shutters
- 3' x 10' x 4" Evaporative Cooling Package with Sump Pump
- *Additional Sizes Available*

# Coolair Fan Packages
**Package includes: Shutter, Slope Wall Housing and Fan**

**Basic Components**
- Fan packages are single speed, two speed also available for an additional cost.
- Frames are fabricated from heavy gauge steel with all welded construction offering rigidity and strength for years of quiet trouble-free operation. A wide flared orifice is recessed and welded into the frame.
- Coolair's new super tough paint finish is a baked powder polyester coating for years of long wear and low upkeep.
- Box wall housings are available at a lower cost. Aluminum housings are available at a higher cost.
- Fans and cooling equipment are shipped direct from the factory in Jacksonville, Florida, and prices are FOB factory. Indicate voltage needed.

**24 inch Fan Package:**
1/4 HP............ Item FAN2414
1/3 HP............ Item FAN2413
1/2 HP............ Item FAN2412
3/4 HP............ Item FAN2434

**30 inch Fan Package:**
1/4 HP............ Item FAN3014
1/3 HP............ Item FAN3013
1/2 HP............ Item FAN3012
3/4 HP............ Item FAN3034

**36 inch Fan Package:**
1/3 HP............ Item FAN3613
1/2 HP............ Item FAN3612
3/4 HP............ Item FAN3634
1 HP................ Item FAN3610

**42 inch Fan Package:**
1/2 HP............ Item FAN4212
3/4 HP............ Item FAN4234
1 HP................ Item FAN4210

**Replacement Parts for 42 inch Fan:**
Fan Blade Pair.................. Item FAN4200
Fan Shaft Assembly...... Item FAN4201
Fan Disc Assembly........ Item FAN4202

**48 inch Fan Package:**
1/2 HP............ Item FAN4812
3/4 HP............ Item FAN4834
1 HP................ Item FAN4810

**Replacement Parts for 48 inch:**
Fan Blade Pair.................. Item FAN4800
Fan Shaft Assembly...... Item FAN4801
Fan Disc Assembly........ Item FAN4802

**54 inch Fan Package:**
1 HP................ Item FAN5410
1-1/2 HP........ Item FAN5415

**Slope wall housing, motor mounted shutter and wall housing guard are shipped in separate cartons. Please inspect cartons for damage!**

### LRW SHUTTER DIMENSIONS

| Shutter Model | F O.D. | G* I.D. | Ship Wt. |
|---|---|---|---|
| LRW27 | 30-1/4 | 27 | 12 |
| LRW33 | 36-1/4 | 33 | 14 |
| LRW39 | 42-1/4 | 39 | 17 |
| LRW45 | 48-1/4 | 45 | 20 |
| LRW51 | 54-1/4 | 51 | 24 |
| LRW57 | 60-1/4 | 57 | 30 |

*For net opening add 1/2" to I.D.
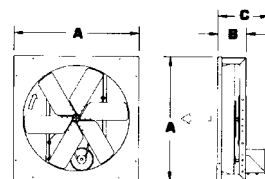
### NBF FAN DIMENSIONS

| Fan Model | Dia. | Blade A | B | C |
|---|---|---|---|---|
| NBF24 | 24 | 32 | 10-5/16 | 17-7/8 |
| NBF30 | 30 | 38 | 10-5/16 | 17-7/8 |
| NBF36 | 36 | 44 | 10-1/16 | 17-3/4 |
| NBF42 | 42 | 50 | 9-7/16 | 17-1/8 |
| NBF48 | 48 | 56 | 10-1/8 | 17-1/8 |
| NBF54 | 54 | 62 | 10-5/8 | 18/1-4 |

### GSWH (SLOPE) WALL HOUSING DIMENSIONS

| Model | H | J | K | L | M | Ship Wt. |
|---|---|---|---|---|---|---|
| GSWH24 | 32-3/8 | 38-1/16 | 32-3/8 | 22-15/16 | 27-15/16 | 52 |
| GSWH30 | 38-3/8 | 43-15/16 | 38-1/2 | 22 | 27-15/16 | 67 |
| GSWH36 | 44-3/8 | 50 | 44-9/16 | 21-13/16 | 28-11/16 | 82 |
| GSWH42 | 50-3/8 | 55-7/8 | 50-5/8 | 20-1/2 | 28-5/16 | 104 |
| GSWH48 | 56-3/8 | 62-1/16 | 56-11/16 | 21-1/16 | 29-7/8 | 122 |
| GSWH54 | 62-3/8 | 68-3/16 | 62-3/4 | 21-1/2 | 31-3/16 | 132 |

Rough Opening– Add 1/2 " to H for width and:
- for 2" wall add 3/4" to K for height
- for 4" wall add 1-1/4" to K for height
- for 6" wall add 1-1/2" to K for height

### PERFORMANCE DATA: Type NBF Fan (all specifications subject to change without notice)

| Fan Model | Blade Dia. | Motor H.P. | Fan RPM | Approx. Ship Wt. | 0" S.P. CFM | BHP* | .05" S.P. CFM | BHP* | .10" S.P. CFM | BHP* | .125" S.P. CFM | BHP* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAN2414 | 24" | 1/4 | 627 | 70 | 5400 | 0.235 | 5100 | 0.248 | 4755 | 0.258 | 4530 | 0.267 |
| FAN2413 | | 1/3 | 706 | 73 | 6080 | 0.336 | 6800 | 0.350 | 5490 | 0.364 | 5370 | 0.368 |
| FAN2412 | | 1/2 | 815 | 79 | 7020 | 0.517 | 6760 | 0.534 | 6550 | 0.549 | 6375 | 0.559 |
| FAN2434 | | 3/4 | 972 | 93 | 8370 | 0.877 | 8140 | 0.897 | 7970 | 0.915 | 7885 | 0.925 |
| FAN3014 | 30" | 1/4 | 486 | 77 | 7620 | 0.268 | 7100 | 0.282 | 6480 | 0.295 | 6040 | 0.301 |
| FAN3013 | | 1/3 | 533 | 70 | 8360 | 0.353 | 7890 | 0.369 | 7360 | 0.383 | 7040 | 0.390 |
| FAN3012 | | 1/2 | 627 | 86 | 9830 | 0.575 | 9430 | 0.594 | 9020 | 0.611 | 8790 | 0.619 |
| FAN3034 | | 3/4 | 706 | 106 | 11070 | 0.821 | 10715 | 0.842 | 10350 | 0.862 | 10160 | 0.872 |
| FAN3613 | 36" | 1/3 | 419 | 100 | 10600 | 0.364 | 9840 | 0.387 | 8890 | 0.399 | 8225 | 0.405 |
| FAN3612 | | 1/2 | 474 | 110 | 12000 | 0.527 | 11325 | 0.554 | 10580 | 0.572 | 10120 | 0.578 |
| FAN3634 | | 3/4 | 541 | 118 | 13700 | 0.783 | 13105 | 0.815 | 12495 | 0.839 | 12155 | 0.893 |
| FAN3610 | | 1 | 609 | 120 | 15415 | 1.117 | 14895 | 1.153 | 14360 | 1.184 | 14080 | 1.196 |
| FAN4212 | 42" | 1/2 | 365 | 122 | 14-25 | 0.496 | 13070 | 0.523 | 11925 | 0.546 | 11040 | 0.560 |
| FAN4234 | | 3/4 | 433 | 128 | 16635 | 0.827 | 15865 | 0.860 | 14390 | 0.888 | 14435 | 0.903 |
| FAN4210 | | 1 | 474 | 130 | 18210 | 1.085 | 17515 | 1.121 | 16685 | 1.157 | 16265 | 1.168 |
| FAN4812 | 48" | 1/2 | 303 | 146 | 17665 | 0.577 | 16250 | 0.589 | 14300 | 0.593 | 12635 | 0.589 |
| FAN4834 | | 3/4 | 350 | 152 | 20410 | 0.889 | 19240 | 0.904 | 17625 | 0.910 | 16875 | 0.914 |
| FAN4810 | | 1 | 373 | 154 | 21750 | 1.076 | 20665 | 1.092 | 19220 | 1.104 | 18500 | 1.103 |
| FAN5410 | 54" | 1 | 350 | 280 | 24520 | 0.986 | 23060 | 1.027 | 21360 | 1.058 | 20250 | 1.079 |
| FAN5415 | | 1-1/2 | 414 | 296 | 29000 | 1.631 | 27780 | 1.681 | 26475 | 1.725 | 25750 | 1.741 |

**Note:** Motors have been tested at maximum BHP conditions and operate within standard allowable NEMA temperature, limits, and carry full warranty. Performance shown is for Type NBF fans without ducts.
*BHP does not include drive losses. Bearing losses are included.

# Glacier-Cor™ System

Evaporative cooling pads are 4" or 6" thick, 12" wide with height increments every 12" from 24" to 96". The pads are positioned adjacent to each other to form a continuous pad. The pads are made of specially formulated cellulose paper, impregnated with insoluble anti-rot salts, stiffening saturants and wetting agents. 4" evaporative pads up to 48" tall and 6" evaporative pads up to 72" tall are self-supporting and do not require wire baskets or other supporting materials. The pads are held in place by component parts of the system. Tall pad supports are required on 4" pad systems over 48" tall and 6" pad systems over 72"tall.

*Cooling pads can only be shipped via motorfreight.*

# Replacement Cooling Pad

**4" thick x 1' wide  x 3' tall**
    Item GCP3600
**6" thick x 1' wide x 3' tall**
    Item GCP3601
**4" thick x 1' wide  x 4' tall**
    Item GCP4800
**6" thick x 1' wide  x 4' tall**
    Item GCP4801
**4" thick x 1' wide x 5' tall**
    Item GCP6000
**6" thick x 1' wide x 5' tall**
    Item GCP6001

# Cool-N-Klean
*For water pipes, cool cell pads and hard environmental surfaces.*

**1.** Wet Pad thoroughly using a house washer or water hose. Do NOT use too high of pressure or it will harm the pad

**2.** Combine ( 2 ) gallons of Cool-N-Klean with (10) gallons of water into a backpack/ pump up sprayer

**3.** Spray mixture thoroughly onto entire length of pad and let sit for 30 minutes

**4.** Then spray with clear water from top to bottom, removing all mineral deposits and algae

**5.** To control the growth of algae, spray pads once a week with Cool-N-Klean at a rate of 1 ounce to 20 gallons of water during periods of use.

**1 Gallon**
    Item GCP1000

# Vent Door

Endwall Vent Door Package with extruded aluminum frame, 8mm polycarbonate covering, heavy duty gear motor with internal limit switches, and related hardware for mounting onto an endwall. The vent door assembly is attached to the structure itself. The gear motor includes an exterior wiring box with manual switches and connections for an iGrow or other computer systems. The door covers openings of 4 foot high to any length up to 175 foot. ***Please call for a price quote.***

**CropKing Vent Door Motor**
    Item VEN4000

**Mounting Kit**
    Item VEN4001

# The Pump and Sump

The pumps are sized for the system to supply at least 1/2 gallon of water per minute per linear foot of pad system. The integral PVC sump and trough hold an adequate water supply for systems up to 60 foot long and 8 foot high.
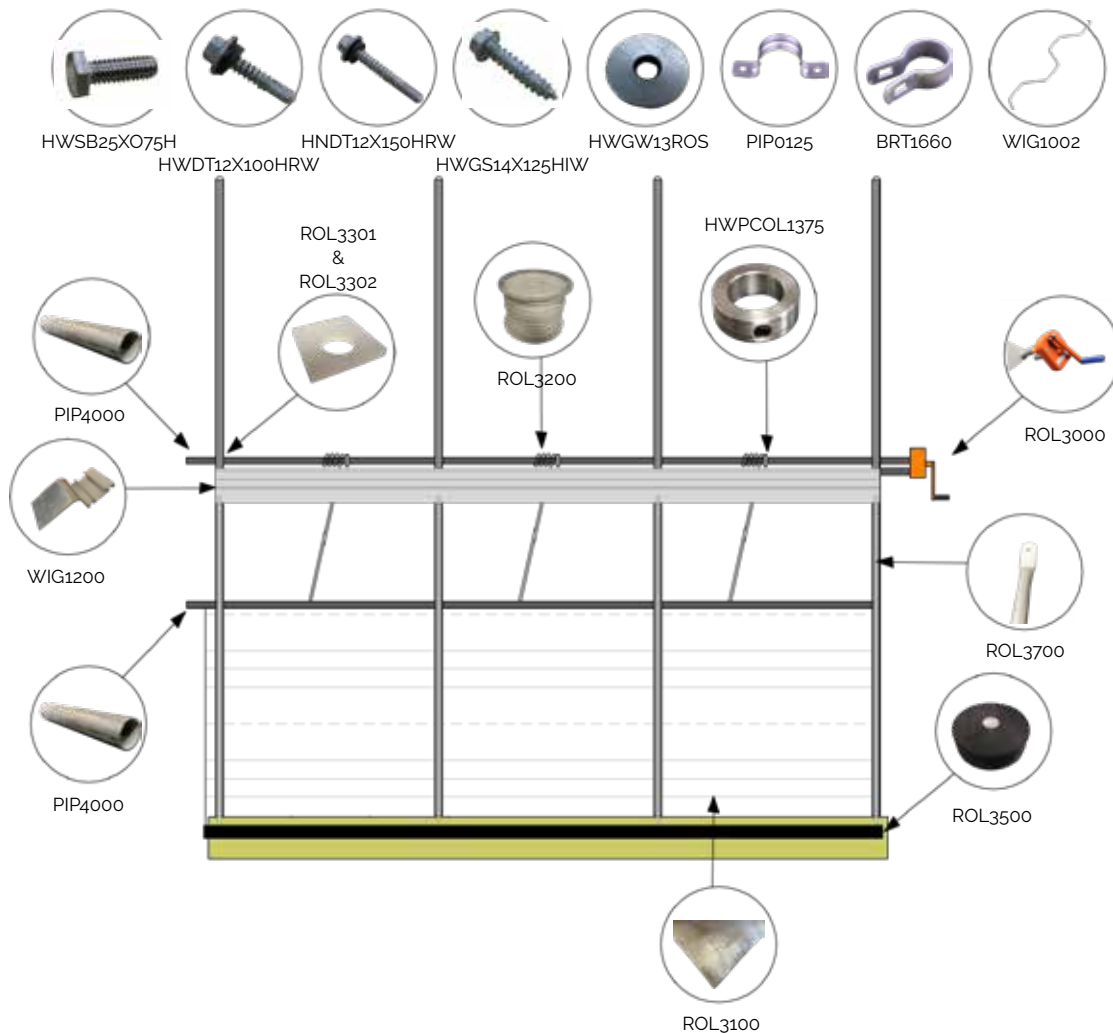
# Water Distribution Systems

The water distribution systems for both PVC and Aluminum designs are composed of the water distribution PVC pipe with metered outlet holes, top and bottom pad support material, water distribution pipe cover, water return trough, water filter, float and volume control valves, and various parts and fasteners.
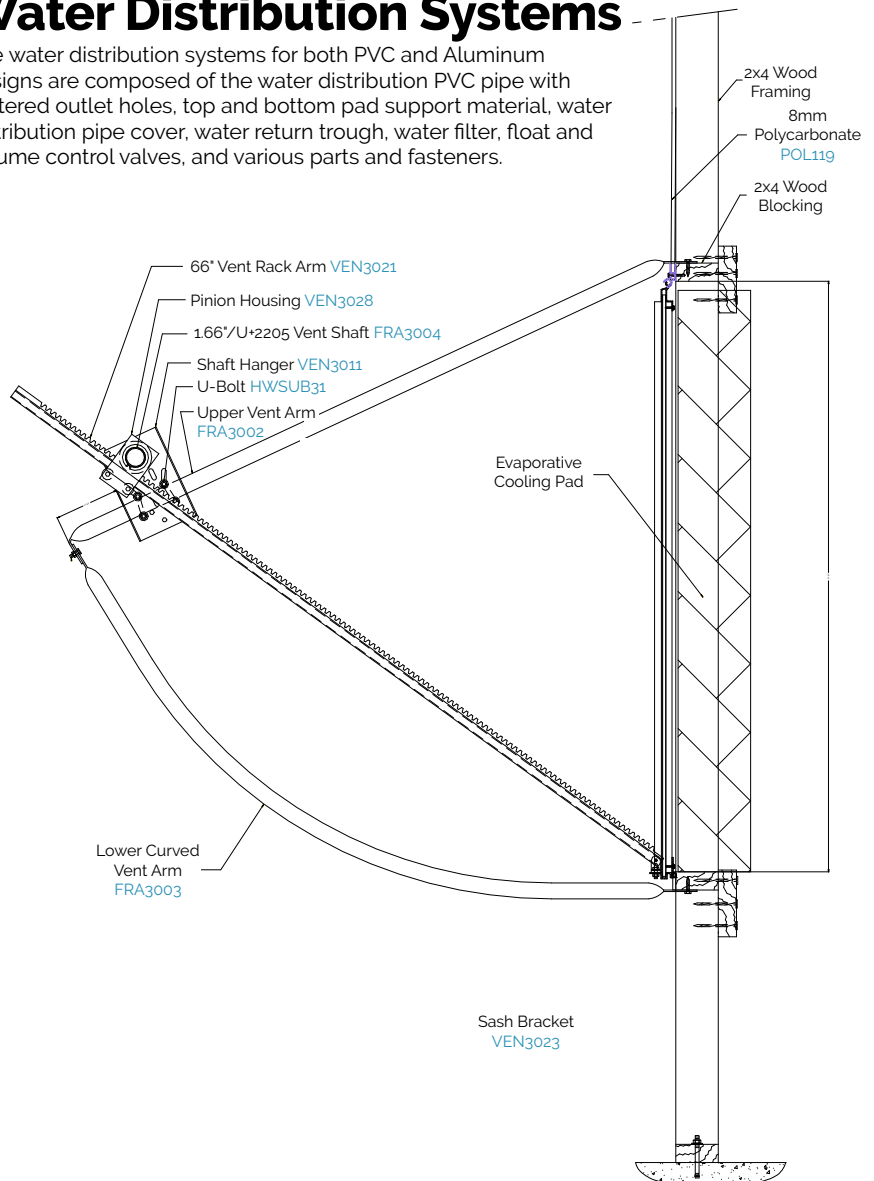
# Drop-Down Sidewall Curtain Package for High Tunnel

## Call for custom quote!

HWSB25XO75H

HWDT12X100HRW

HNDT12X150HRW

HWGS14X125HIW

HWGW13ROS

PIP0125

BRT1660

WIG1002

ROL3301
&
ROL3302

HWPCOL1375

PIP4000

ROL3200

ROL3000

WIG1200

ROL3700

PIP4000

ROL3500

ROL3100

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# Roll-Up Sidewall Curtain Package for Hoop House

*Side-Clasp Roll-Bar System Packages use 2 inch Side-Clasp Roll-Bar with built in wirelock channel*

- One-Piece Roll-Bar with integrated WireLock Channel
- Double WireLock to attach your roof covering to the top clasp and the roll-up curtain to the lower clasp.
- Wind Rope System that holds curtain to the structure, and materials for creating end panels. Curtain laps 4' on each end.

- Packages include End Panel, WireLock and installation aids.
- Film for curtain sold separately.
- 4' 6" tall opening.

## Call for additional options!

### PACKAGE OPTION 1

Includes options above, plus the unique Roll-Lock system to securely lock down curtain and provide an airtight seal.
**\* Curtains must be ordered in 8 foot increments.**

**Item ROL2000**

Discounts available depending on length of curtain ordered.
***Please call to order.***

### PACKAGE OPTION 2

Cost effective roll-up curtain package. Includes options above, without the Roll-Lock system.
**\* Curtains must be ordered in 8 foot increments.**

**Item ROL2100**

Discounts available depending on length of curtain ordered.
***Please call to order.***

## Model PDP, Power Vented



- Power vented (less heat loss in off cycles)
- Flue can be run horizontally
- Helps overcome negative pressure in house
- Can use smaller diameter single wall flue
- No blocked vent switch
- Higher seasonal efficiency
- Spark ignition (saves energy)
- Requires Single Heater Hanger Kit

**Features:**
- 80% thermal efficiency, maximizing seasonal efficiency through the use of a collector box and the power exhauster.
- A power exhaust that can be rotated 180°. The unit can be vented vertically or horizontally.
- A 100% shut-off, intermittent pilot-ignition system with continuous retry, at no extra charge. This ignition system allows for all PDP units to be field-converted to propane
- A safety pressure-switch to assure safe venting conditions.
- Designed to utilize the smallest-diameter vent pipe possible.
- PDP models are designed to operate against 0.5 inches of external static pressure.
- "Wing" screws so that the bottom pan can be dropped without a screwdriver or nut driver.
- A level hanging mechanism for easy field adjustments after adding accessories that may change the unit's center of gravity.

**PROPANE:**
**150,000 BTU**
   Item HEA3014
**175,000 BTU**
   Item HEA3016
**200,000 BTU**
   Item HEA3018
**250,000 BTU**
   Item HEA3020
**300,000 BTU**
   Item HEA3022

**NATURAL GAS:**
**150,000 BTU**
   Item HEA3015
**175,000 BTU**
   Item HEA3017
**200,000 BTU**
   Item HEA3019
**250,000 BTU**
   Item HEA3021
**300,000 BTU**
   Item HEA3023

## Effinity 93 Heater
### (model PTC)

The most efficient gas-fired unit heater in North America.



Operating at 93% efficiency, the Effinity 93 will dramatically lower energy costs through decreased gas/propane consumption. For those looking to feel even more green, each unit will reduce $CO_2$ output by roughly 13% versus comparable sized heaters.

**Features:**
- Uses 100% outside air for combustion.
- Sealed compartment protects combination gas control, ignition control, manifold and burner.
- Industry-proven, AL29-4C stainless steel secondary heat exchanger relieves fears of failure
- The PTC condensing unit heater line utilizes a bent tube heat exchanger and is ready for PVC pipe connections.
- 93% thermal efficiency, maximizing seasonal efficiency with the use of a collector box and power exhauster
- Horizontal or vertical concentric vent kits are available
- 20 gauge aluminized steel cabinet
- Aluminized steel heat exchanger (409 stainless steel optional)
- Adjustable air-deflector blades
- Fans engineered for quiet operation
- Totally enclosed fan/blower motors
- Permanently-lubricated motor for trouble-free dependability.
- High temperature limit protection
- Gas control step down transformer with 24V gas controls
- Direct spark ignition with continuous retry control system
- Requires a Double Heater Hanger Kit

**PROPANE:**
**135,000 BTU**
   Item HEA4000
**156,000 BTU**
   Item HEA4002
**180,000 BTU**
   Item HEA4004
**215,000 BTU**
   Item HEA4006
**260,000 BTU**
   Item HEA4008

**NATURAL GAS:**
**135,000 BTU**
   Item HEA4001
**156,000 BTU**
   Item HEA4003
**180,000 BTU**
   Item HEA4005
**215,000 BTU**
   Item HEA4007
**260,000 BTU**
   Item HEA4009



## Hot Dawg: Modine Gas-Fired Low Profile Unit Heater

Model HD – Modine's gas-fired, low profile unit heaters are available in 115V/60Hz/1Ø power, come standard for use on natural gas and propane, and are equipped with hot surface ignition. All Hot Dawg models come standard with a power exhauster and are certified for residential, commercial and industrial applications. They can be easily installed from a ceiling with two angle brackets supplied with the unit.

**Features:**
- 80% thermal efficiency
- Electrostatic polyester powder finish
- TEFC motors with vibration mounts
- Large easily accessible junction box
- Hinged bottom access for easy service
- Adjustable mounting brackets
- Requires a Double Heater Hanger Kit

**For high altitudes, when ordering include:**
- Type of gas: Propane or Natural
- BTU content (BTU/gallon of fuel used)
- Specific altitude in feet

**PROPANE:**
**30,000 BTU**
   Item HOTHD30B
**45,000 BTU**
   Item HOTHD45B
**60,000 BTU**
   Item HOTHD60B
**75,000 BTU**
   Item HOTHD75B
**100,000 BTU**
   Item HOTHD100B
**125,000 BTU**
   Item HOTHD125B

**NATURAL GAS:**
**30,000 BTU**
   Item HOTHD30A
**45,000 BTU**
   Item HOTHD45A
**60,000 BTU**
   Item HOTHD60A
**75,000 BTU**
   Item HOTHD75A
**100,000 BTU**
   Item HOTHD100A
**125,000 BTU**
   Item HOTHD125A

**Free shipping on all heaters excluding Hot Dawg heaters!**

# Heater Hanger Kits



**Single Heater Hanger Kit**
Item HEA1000

**Double Heater Hanger Kit**
Item HEA1002



**Heater Hanger Rod, 18 x 3/8 inch**
Item HWALL37x18



**Convection Tube Hangers,** PVC, 10 pack
Item TUB1000

# CoolAir Power Tube Fans

## Pricing includes Heat Kit

Power Tube Fans (also called a Jet Fan) are an important part of a controlled environment greenhouse. These fans are usually placed in the gable of the greenhouse and provide the distribution of outside air or the warm air from the heaters down the length of the greenhouse.

The system includes the fan, the motorized shutter and the heat kit. The Power Tube Fans are available in 18", 24", and 30". The 24" and 30" Convection Tube and tube hangers are sold separately, by needed length. Guards are optional but recommended.

**Standard Features:**
- Air straightener vanes
- Self-sealed bearings for continuous trouble free performance
- Heavy gauge steel construction
- Six steel die formed propeller blades
- The 24" and 30" are belt driven models with two sealed lifetime lubricated shaft bearings

## Single Phase (3 phase is Optional):

**18 inch Jet Power Tube Fan**
1/3 HP, Direct Drive, 1625 CFM
Item JET1813

**24 inch Jet Power Tube Fan**
1/3 HP, Belt Drive, 4850 CFM
Item JET2413

**30 inch Jet Power Tube Fan**
1/2 HP, Belt Drive, 7550 CFM
Item JET3012

**30 inch Jet Power Tube Fan**
1 HP, Belt Drive, 10450 CFM
Item JET3010

# Convection Tube



Our convection tube is made of 4 mil strong virgin polyethylene with high clarity and a special blend of additives. It is designed to last one season, when installed inside a greenhouse. Tubes are staggered punched for improved air circulation and distribution. **50' minimum length.**

**12 inch Staggered Punched,** per foot, 1.9" holes
Item CON0012

**12 inch Unpunched,** per foot
Item CON0013

**18 inch Staggered Punched,** per foot, 2.2" holes
Item CON0018

**18 inch Unpunched,** per foot
Item CON0019

**20 inch Staggered Punched,** per foot, 2.5" holes
Item CON0020

**20 inch Unpunched,** per foot
Item CON0021

**24 inch Staggered Punched,** per foot, 2.2" holes
Item CON0024

**24 inch Staggered Punched,** per 130' roll, 2.2" holes
Item CON2400

**24 inch Unpunched,** per foot, 2.7" holes
Item CON0025

**30 inch Staggered Punched,** per foot, 2.7" holes
Item CON0030

**30 inch Staggered Punched,** per 130' roll
Item CON3000

**30 inch Unpunched,** per foot
Item CON0031

*\*24 and 30 inch in stock at 100' and 130' rolls.*



## TRY BEFORE YOU BUY WITH ONE OF OUR GROWER WORKSHOPS

Whether you're looking for a 2 day introduction or more personalized instruction, we have something to fit your needs in-person and online!

**Turn to page 63 for more details.**

# BiOWiSH™- Crop

**Produce More Without Increasing Square Footage**
What is standing in the way of your dream yields? BiOWiSH® biostimulants are a reliable tool for growers who are looking for a natural way to increase yield without increasing square footage. BiOWiSH® works for hydroponic, broad acre, and organic farmers alike.

**A Unique Technology**
The unique microbial strains within BiOWiSH® Crop are produced by a proprietary manufacturing process which promotes the expression of specifically desired characteristics. The consistent expression of these characteristics is called the epigenetic effect.

Designed for the agricultural industry, BiOWiSH® biology uses multiple modes of action and performs reliably across broad operating conditions. The final result is a range of microbial biostimulants, proven to improve crop yields and nutrient availability.

**The Intersection of Nature and Science**
Natural and non-GMO, BiOWiSH® Crop technology can significantly improve crop yield without increasing your square footage. Farmers, governments, and research institutes around the world have tested the BiOWiSH® Crop technology and results show increased yield on a variety of crops including lettuce, tomatoes, corn, wheat, and more.

*CropKing is not authorized to sell BiOWiSH® Crop outside of the United States.*

**BiOWiSH™- Crop,** 1,000 grams (2.2 lbs)
Item BIO0159

## KEY BENEFITS

- Improve crop yields
- Increase nutrient availability
- Enhance root development
- Improve plant vigor
- Stimulate native microbial activity
- OMRI listed
- Completely water soluble and can be placed directly in the tank with no need for filter bags

# HYDRO-GRO Hydroponic Fertilizer

CropKing's Hydro-Gro fertilizer is the premier hydroponic fertilizer to get you great looking, healthy crops! It can be shipped easily by UPS or by motor freight and guaranteed analysis & mixing instructions are available.

**Hydro-Gro Vine Crop**
50 lb. - 5 gallon plastic buckets
Item FER1000

**Hydro-Gro Leafy Greens**
50 lb. - 5 gallon plastic buckets
Item FER1500

**Hydro-Gro Vine Crop,** 5 lb.
Item FER3022
**Hydro-Gro Vine Crop,** 1 lb.
Item FER3021

**Hydro-Gro Vine Crop**
25 lb. - poly bags
Item FER1025

**Hydro-Gro Leafy Greens**
25 lb. - poly bags
Item FER1525

**Hydro-Gro Leafy Greens,** 5 lb.
Item FER3020
**Hydro-Gro Leafy Greens,** 1 lb.
Item FER3019

**Hydro-Gro Veg (Cannabis & Hemp)**
25 lb. - poly bags
Item FER1225

**Hydro-Gro Flower (Cannabis & Hemp)**
25 lb. - poly bags
Item FER1325

**Calcium Nitrate,** 50 Pounds
Item FER3014
**Calcium Nitrate,** 5 Pounds
Item FER3025
**Calcium Nitrate,** 1 Pound
Item FER3024

# Pre-Empt Organic Hydroponic Fertilizer

Pre-Empt is a revolutionary product that can completely replace your conventional hydroponic fertilizer program. Pre-Empt was developed for recirculating NFT (Nutrient Film Technique) crops such as lettuce, basil and other leafy greens and herbs.

Pre-Empt is a multi-staged fermented molasses product. The fermentation process packs Pre-Empt with essential macro-nutrients, micro-nutrients, amino acids, as well as an array of vitamins that builds a full spectrum that your plants desire. Due to this process, there is little need to supplement Pre-Empt with any micro or macro nutrients.

Our research has shown that Pre-Empt does not need to have any pH adjusters added to the product in order for the plants to receive optimum nutrient absorption, although some wells may vary. Pre-Empt can be used in conjunction with other products including other fertilizers, insecticides and fungicides.

## Benefits

- OMRI Listed complete organic nutrient package
- Derived from all natural plant extracts
- Improves ion exchange between plants and water
- Elements are in colloidal form
- Includes a vitamin complex
- Can be used with supplemental fertilizers, insecticides and fungicides
- Around a pH of 4, which reduces amount of pH Down required

- Can completely replace conventional nutrient programs
- Can reduce overall plant cycle (seedling to harvest)
- Basil growers have experienced harvest 5 days earlier than with conventional program
- Growers have been able to go 90 days between reservoir changes (and possibly beyond)

**5 Gal Sample**
Item FER3001

**275 Gal Tote**
Item Fer3000

*For PH Testing see page 45*

## MICRO NUTRIENTS

**Copper Sulfate,** 1 Pound
Item FER3003

**Iron Chelate,** 5 Pounds 11% DTPA
Item FER3015

**Manganese Sulfate,** 1 Pound
Item FER3005

**Micro Fine Sulfur,** 1 Pound
Item FER3042

**Sodium Molybdate,** ¼ Pound
Item FER3033

**Sodium Molybdate,** ½ Pound
Item FER3033

**Sodium Molybdate,** 1 Pound
Item FER3033

**Solubor (Boron),** 1 Pound
Item FER3006

**Zinc Sulfate,** 1 Pound
Item FER3016

## CALCIUM NITRATE

For best results, use only Greenhouse Grade Calcium Nitrate in your hydroponic growing system. You will have less residue and sediment from mixing, and less plugging of your feedlines and drippers. 15.5-0-0

Greenhouse Grade Calcium Nitrate is a refined, prilled (uncoated) highly soluble material.

**Calcium Nitrate,** 50 Pounds
Item FER3014

### GUARANTEED ANALYSIS

| | |
|---|---|
| Total Nitrogen (N) | 15.5% |
| Nitrate Nitrogen ($NO_3$) | 14.4% |
| Ammoniacal Nitrogen ($NH_4$) | 1.1% |
| Calcium (Ca) | 19.0% |

## FERTILIZER COMPONENTS

**Citric Acid,** 1 Pound
Item FER4000

**Citric Acid,** 50 Pounds
Item FER4000

**Magnesium Sulfate,** 1 Pound
Item FER2900

**Magnesium Sulfate,** 50 Pounds
Item FER2900

**Mono- Potassium Phosphate,** 1 Pound
Item FER3009

**Mono- Potassium Phosphate,** 50 Pounds
Item FER3009

### GUARANTEED ANALYSIS

| | |
|---|---|
| Total Nitrogen (N) | 0% |
| Available Phosphate ($P_2O_5$) | 51.5% |
| Soluble Potash ($K_2O$) | 34% |

**Potassium Nitrate,** 50 Pounds
Item FER3012**

**Potassium Nitrate,** 1 Pound
Item FER3012**

**Potassium Sulfate (Potash),** 50 Pounds
Item FER3010

### GUARANTEED ANALYSIS

| | |
|---|---|
| Soluble Potash ($K_2O$) | 52% |
| Sulfer (S) | 18% |

** *Ships as HAZARDOUS: Add $31.36 per carton*

## FOLLOW US ON SOCIAL MEDIA

## Shop online at www.CropKing.com

# FUNGICIDE
## OXIDATE 2.0
Broad Spectrum Bactaericide/ Fungicide. OxiDate 2.0 kills bacterial and fungal pathogens, offering superior crop protection. Use for curative and preventative applications, or tank mix with other residual fungicides to help provide immediate knockdown control. Zero days to harvest and zero hour re-entry intervals allow growers to spray right up to harvest. After contact, Oxidate biodegrades leaving no residue on crops. Use as seed treatment, transplant water application, foliar spray, or with overhead or drip irrigation.

**Oxidate,** 2.5 Gallons
Item FUN3000
**Oxidate,** 5 Gallons
Item FUN3001

## CEASE
Cease can be used as a foliar spray and soil drench on a variety of plants including flowering plants, greenhouse crops and vegetables grown under cover. It is a broad spectrum biofungicide targeting fungal and bacterial diseases such as Botrytis, Pseudomonas, Xanthomonas, Erwinia, Powdery Mildew, Leaf Spot and Speck, Anthracnose and Rust. OMRI listed.

**Cease,** 1 Gallon
Item FUN5000

## MILSTOP
A potassium bicarbonate-based, foliar fungicide that kills powdery mildew on contact by pulling water from spores and their growing strands. Diseases controlled include Alternaria Blight, Anthracnose, Black Spot, Botrytis Blight, Cercospora Leaf Spot, Downy Mildew, Phomopsis Blight, and Septoria Leaf Spot. OMRI listed.

**Milstop,** 5 Pounds
Item FUN5001

## MYCOSTOP
A biofungicide for vegetable & ornamental crops grown in greenhouses. For control of Fusarium, damping-off, root rot and Phomopsis and has shown suppression of Botrytis Gray mold, Pythium and Phytophthora root rots in the greenhouse. Formulated as a wettable powder, containing living spores and mycelium of a selected strain of naturally occuring Streptomyces soil bacterium which deprive pathogen fungi of living space and nourishment. Application should begin at the time of seeding and should be repeated every 3 – 6 weeks. OMRI listed.

**Mycostop,** 5 Grams
Item BEN4000

**Mycostop,** 2 Grams
Item BEN4002

## SUFFOIL-X
Suffocates and kills eggs, larvae, nymphs and adult soft bodied insects and mites. Controls fungi including powdery mildew. Smaller oil particles provide uniform coverage with less chance of phytotoxicity. Use on vegetables, nursery, landscape, ornamental and greenhouse crops. OMRI listed.

**Suffoil-X,** 2.5 Gallon
Item FUN5002

# INSECTICIDE
## BOTANIGARD WP
When combined with a beneficial insect control program, BotaniGard will greatly enhance the control of whiteflies, thrips, and aphids. Available in wettable powder only.

**Botanigard WP,** 1 Pound
Item INS1017

## DIPEL DF
The active ingredient, Bt kurstaki, is a naturally occurring bacteria which works against the tomato hornworm, loopers, cutworms, imported cabbage worm, armyworms, etc. OMRI listed.

**Dipel,** 1 Pound Bag, Dry
Item INS1000

## PYRETHRUM TR
Place in the center of area to be treated. Safe up to day of harvest. Effective on ants, aphids, beetles, cabbage worm, cadelles, centipedes, crickets, fleas, flies, fungus gnats, hornworm, leafhoppers, mealy bugs, mites, moths, scale, silverfish, spider mites, spiders, trogaderma, weevils, whiteflies and more.

**Pyrethrum TR,** 2 Ounce Can
Item INS1011

## PYLON
Pylon® TR total release insecticide provides control of mites, thrips and adult fungus gnats. It is a miticide/ insecticide that offers thorough coverage, excellent plant safety and flexible re-entry times. For use in commercial greenhouses on ornamental crops and fruiting vegetables, as well as bedding plants, cut flowers, foliage, potted flowering plants, ornamentals and flowering hanging baskets.

**Pylon,** 2 Ounce Can
Item INS1025

## M-PEDE INSECTICIDE SOAP
M-Pede is a biodegradable, fatty acids contact insecticide for control of aphids, spider mites, whitefly and thrips. M-Pede is generally effective on larval, nymphal and adult life stages. M-Pede is an excellent organic alternative to conventional insecticides. OMRI listed.

**M-Pede,** 2.5 Gallons
Item SAF1001

## AZAGUARD
AzaGuard is a 3% Azadirachtin formulated Insect Growth Regulator (IGR) that offers broad spectrum insecticidal control on over 300 insect species. AzaGuard prevents molting between larval, pupal and nymphal stages reducing insect infestations in/around the facility. OMRI listed.

**Azaguard,** 1 Quart
Item INS1030

# INSECT TRAPS
## STICKY STRIPS AND STICKY RIBBONS
Sticky Strips and Sticky Ribbons provide a safe method of trapping insects and can reduce or eliminate the use of harmful chemicals in your hydroponic garden. Sticky Strips are a yellow 3 x 5 inch card that is coated with a specially formulated trapping compound that will survive repeated wetting and drying cycles and exposure to sunlight. When Sticky Strips are full of insects, dispose of them and replace with new ones. Use them with the galvanized stakes to hold them in pots or benches.

**3 x 5 inch Yellow Sticky Strips,** 100/Box
Item STI1004

**6 x 12 inch Yellow Sticky Strips,** 50/Box
Item STI1005

**2 inch Sticky Tape,** 530 Foot
Item STI1100

**Sticky Strip Stakes,** 100/Box
Item STI1007

*\*\* Ships as HAZARDOUS: Add $31.36 per carton*

# Integrated Pest Management
## (IPM) is the combination of several methods of managing insect problems.

These methods may include some or all of the following:
- Environmental Control
- Insect Barriers
- Insect Traps
- Insecticides and Fungicides
- Beneficial Organisms

The goal of IPM is not necessarily the eradication of all pests, but rather, the control of the pest population to achieve a balance so that no economic damage is being caused by the pests. A limited amount of the pest will continue to survive in your crop, regardless of the method of control you choose. Using chemical insecticides should only be considered as a last resort, and if IPM is begun early and practiced properly, chemicals may never have to be used.

Using beneficial insects is safer than chemicals, and is generally less expensive. It takes some time to get the beneficials established in your crop, so you need to begin planning your program early, preferably six months in advance. When using beneficials, monitoring the harmful pests is important. Use Sticky Strips or Sticky Cards at the rate of at least one per 250 sq.ft. If thrips are suspected, use blue sticky traps in addition to the yellow ones.

Our technical service staff can help you determine the right beneficials program for your greenhouse. We handle several beneficials, a few of which are listed below. If you are in need of one not shown, we can probably get it for you.

# BENEFICIALS

## Aphid Control Use:
- Lacewings (*Chrysopa carnea*)
- Ladybugs (*Hippodamia convergens*)
- Gall-midge (*Aphidoletes aphidimyza*)

### LACEWING, 1,000
For aphid control, we suggest a combination of lacewing larvae and eggs. Lacewing larvae arrive ready to work as soon as released. Lacewing eggs should be sprinkled around the plants that are infested with aphids. To stop the growth in population of aphids, release approximately one lacewing for every 10 aphids that are present. Two to three releases, two weeks apart, should be made.

Item BEN1428 ...........................................Larvae
Item BEN2102 (1000) ...............................Eggs

### LADYBUGS
Ladybugs (*Hippodamia convergens*) are an additional predator insect effective in controlling aphids. They are not always available, however. They may be used in conjunction with lacewings. (seasonal)

½ Pint .........................Item BEN1880
1 Pint ...........................Item BEN1881
1 Quart ......................Item BEN1882
½ Gallon...................Item BEN1883
1 Gallon.....................Item BEN1884

*Aphisius colemani*:
### APHIPAR
**Target:** Aphids, in particular the cotton aphid, tobacco aphid and the peach potato aphid; especially useful when aphid infestations are beginning. **To use:** Spread material on rockwool slabs or in application boxes. Store in the dark.

**Aphipar,** 100 ml bottle (1,000)
Item BEN1260

*Aphidius ervi*:
### ERVIPAR
**Target:** Aphids, in particular the potato aphid and glasshouse potato aphid; especially useful when aphid infestations are beginning. **To use:** Sprinkle mummies with buckwheat on rockwool and leave it there for at least one week. Store in the dark.

**Ervipar,** 250 ml bottle (500 adults)
Item BEN1272

## Leaf-Miner Control Use:
- *Dacnusa sibirica*
- *Diglyphus isaea*

*Dacnusa sibirica*:
### MIGLYPHUS
**Target:** Leaf-miners in second and third stages. **To use:** Release parasitic wasps between leaves in the morning or in the evening. Store in the dark.

**Miglyphus,** 100 ml bottle (500 adult)
Item BEN1292

## Fungus Gnat Control Use:
- *Steinernema feltiae*
- *Hypoaspis*

*Steinernema feltiae/Nematodes*:
### ENTONEM
**Target:** Sciarid flies, larvae. **To use:** Put contents of package into a bucket containing 5 liters of water. Stir well and leave the solution to soak for 20-30 seconds. Stir well again and pour the entire solution into spray tank. Spray immediately after preparation. Store in the dark.

**Entonem,** 50 million larvae in clay carrier
Item BEN1461

## BENEFICIALS ORDERING INFORMATION:

Plan ahead when using beneficials! Beneficials must be ordered by **12:00 noon on Monday** to ship **Next Day Air Thursday** for delivery **Friday**, or ordered by **12:00 noon Wednesday** to ship the following **Tuesday** for delivery **Wednesday**.

Lacewing eggs and ladybugs are shipped on Mondays, Tuesdays and Wednesdays.

We will make every attempt to have your order delivered as quickly as possible. However, due to unpredictable weather, production variations, holidays, etc., some shipments may be delayed.

The effectiveness of any pest management program will depend greatly on early detection, proper release rates, maintaining the proper environment and, your cultural practices. Biological control methods need some time to become well established. Successive releases are often necessary to help establish overlapping generations of the beneficials. If you have an existing pest problem, the use of beneficials may need to be delayed until the pest population has been reduced by other means. We will be happy to assist you with developing a biological control program.

We may also have access to newly cultured beneficials not listed here. Please call for more information.

*Hypoaspis*:
**ENTOMITE**
**Target:** Small soil living insects and some nematodes. **To use:** Turn and shake the bottle or bag gently before use. Spread material evenly on rockwool blocks. Do not apply close to stem to avoid plant damage. Store in the dark.

**Entomite,** Bottle (10,000 mites)
Item BEN1467

## Vine Weevil Control Use:
· *Heterorhabditis megidis*

**LARVANEM**
**Target:** Curculionids, such as the vine weevil, larvae. **To use:** Put contents of package into a bucket containing 20 liters of water. Stir well and leave the solution to soak for 5 minutes. Mix well again. Poor entire solution through a fine sieve into spray tank. Spray immediately after the preparation. Store in the dark.

**Larvanem,** 50 million larvae
Item BEN1451

## Whitefly Control Use:
· *Encarsia formosa*
· *Eretmocerus ermicus*

*Encarsia formosa* is a tiny parasitic wasp that will lay 50 to 100 eggs into greenhouse whitefly larvae. They work best if ordered as soon as the first whitefly is seen in the greenhouse. Usually three to four introductions, one to two weeks apart, at the rate of one per sq.ft. will establish them.

Additional introductions may be necessary if whitefly persist. Be sure to use yellow sticky traps to monitor whitefly populations.

*\*NOTE: If you determine whiteflies in your greenhouse, it is important to identify the specific type. The more familiar greenhouse whitefly is very successfully controlled by the beneficial wasp,* encarsia formosa*. Sweet potato whitefly and silver leaf whitefly are more effectively controlled by* eretmocerus ermicus, *which is also recommended for greenhouse whiteflies in the summer when temperatures in the greenhouse are higher.*

*Encarsia formosa*:
**EN-STRIP**
**Target:** Greenhouse whitefly and sweet potato whitefly in the third and fourth larval stage. Preference for greenhouse whitefly. **To use:** Open package carefully inside the greenhouse. Bend strips and tear off. Start tearing opposite hang-up hole, suspend the cards in the crop not in direct sunlight. Do not touch the pupae. Store in the dark.

**En-Strip,** Box of 50 cards (3,000 pupae)
Item BEN1210

*Eretmocerus ermicus*:
**ERCAL**
**Target:** Greenhouse whitefly and sweet potato whitefly in the second and third larval stage. **To use:** Open package carefully inside the greenhouse. Bend strips and tear off. Start tearing opposite hang-up hole, suspend the cards in the crop, not in direct sunlight. Do not touch the pupae. Store in the dark.

**Ercal,** Box of 50 cards (3,000 pupae)
Item BEN1433
**Ercal,** Box of 250 cards (15,000 pupae)
Item BEN1434

*Eretmocerus ermicus* and *Encarsia formosa*:
**ENERMIX**
**Target:** Greenhouse whitefly and sweet potato whitefly in the second to fourth larval stage. **To use:** Open package carefully inside the greenhouse. Bend strips and tear off. Start tearing opposite hang-up hole, suspend the cards in the crop, not in direct sunlight. Do not touch the pupae. Store in the dark.

**Enermix,** Box of 50 cards (1,500 pupae)
Item BEN1236

## Thrips Control Use:
· *Amblyseius cucumeris*
· *Orius laevigatus*
· *Orius insidiosus*

*Amblyseius cucumeris* are predatory mites, tan to orange in color, and are similar looking to the spider mite predator. The predator population must be established early in the crop, before you see evidence of thrips. Introduce at the rate of one predator per sq.ft., two weeks after transplanting. Repeat applications every month during periods of warm, dry weather.

*Amblyseius cucumeris*:
**THRIPEX**
**Target:** Various thrip species; hatching eggs and larvae. Predatory mites also eat spider mites. **To use:** Turn and shake gently before use. Sprinkle material on leaves or apply on crop with mechanical blower. Store bottles horizontally in the dark.

**Thripex,** 50,000 mites per bottle (all stages)
Item BEN1375

*Orius laevigatus* or *Orius insidiodus*:
**THRIPOR**
**Target:** Various thrips species; larvae and adults in the absence of thrips can also survive on pollen. **To use:** Turn and shake gently before use. Spread material on clean rockwool slab, leaves and/or in application boxes. Store in the dark.

**Thripor,** 500 ml bottle
(1,000 adults and nymphs)
Item BEN1401

## Whitefly/Thrip Control Use:
*Amblyseius swirskii*
**SWIRSKI-MITE**
**Target:** whitefly and thrip in all larval stages. Turn and shake gently before use. **To use:** Press on center of cap to open dosage hole. Sprinkle material on leaves. Store in the dark.

**Swirski-Mite,** 50,000 adult mites
Item BEN1540

## Spider Mite Control Use:
· *Phytoseiulus persimilus*
· *Amblyseius californicus*

Predatory mites can be very successful in controlling spider mites as they will multiply nearly twice as fast as the spider mite population. As a preventative measure, introduce *Phytoseiulus persimilus* at the rate of 1 predator for every 5 sq.ft. of greenhouse area, just after transplanting. Repeat this two weeks later. For control of an existing problem, introduce at the rate of 1 predator for every 25 to 50 spider mites. The more you introduce, the quicker you will gain control.

*Phytoseiulus persimilis*:
**SPIDEX**
**Target:** Two spotted spider mite and carmine spider mite: all stages, preferring younger stages. Also effective on mites on tomato plants. **To use:** Turn and shake gently before use. Sprinkle material on leaves or pour into application boxes. Store in the dark.

**Spidex,** 500 ml bottle with dosage-plug (4,000 adults)
Item BEN1320

*Amblyseius californicus:*
**SPICAL** *(use in conjunction with SPIDEX)*
**Target:** Two spotted spider mite, carmine spider mite and fruit tree red spider mite: all stages, preferring younger stages. Predatory mites also survive on other mites and can survive for a number of weeks without food. **To use:** Turn and shake the bottle gently before use. Sprinkle material on leaves. Store in the dark

**Spical,** 25,000 ml bottle w/feeder mites
Item BEN1485

*Feltiella acarisuga* (gall-midge):
**SPIDEND** *(use in conjunction with SPIDEX)*
**Target:** Various species of spider mites, especially when spider mite occurs in colonies. **To use:** Make a hole in the paper in the lid on the beaker and put it on the rockwool slab. Protect against direct sunlight. Store in the dark.

**Spidend,** 750 ml bottle (pupae, from which 250 gall-midges will emerge)
Item BEN1435

## Technical Service Package

This package offers you the most complete technical service program available in the hydroponic industry. You'll receive all the following for less than half of the retail price when purchased separately.
- One year technical support
- Unlimited interpretation of water and leaf analysis
- Custom fertilizer recipe
- Telephone support from our Technical Staff
- Grower Training Workshop for 2 participants
- Comprehensive Grower Training Manual
- Training Workshop on DVD, 3 Volume Set
- Growing System DVD

Item TEC1003

## Technical Assistance Packages

**Technical Services:**
- Custom fertilizer recipe designed for grower's water source
  Item TEC1007

- 1 hour increments of technical support (phone only)
  Item TEC1009

- Review, interpretation, and advisement on leaf, tissue and solution analysis
  Item TEC1010

- Site visit to your greenhouse, per each 8 hour day (travel expenses are additional)
  Item SITEVISIT001

## USB Flash Drives

## Introduction to Soilless Controlled Environment Agriculture

Item DVD1200
**+$4.95 for Shipping & Handling**

## Advanced Cultural Practices

Topics covered in the video:
- Clipping
- Suckering
- Pollination
- Cluster Pruning
- Truss Support Installation
- Leaf Pruning
- Leaning and Lowering
- Growing Point Removal
- Fruit Picking

Item DVD 2003

## Advanced Fruit Load Management

Illustrates pruning and other factors that affect the setting, development and production of fruit.

- Benefits of Cluster Pruning
- Techniques for Pruning
- Abnormal Cluster Growth
- Differences in Cluster Growth
- Cluster Support
- Fruit Set
- Blossom Development

Item DVD2002

## NFT Lettuce Production

Learn from Jim Brown, the details of NFT Lettuce Production.

Starting with seeding to harvesting, demonstration and explanation of the procedures and techniques involved in growing Nutrient Film Technique Lettuce is presented.

**Key topics include:**
- Seeding and Harvesting
- Schedule Adjustments
- Seeding Media Selection and Preparation
- Seeding Procedure
- Sequence of Plant Ages on the Nursery Table
- Transplanting Seedlings into the Channels
- Placing the Channels into the Fertilizer Feed System
- Progressive Growth of Bibb lettuce
- Harvesting and Packing lettuce in Crispers
- Harvesting Basil
- Lettuce Storage in Refrigeration
- Nutrient Feed System Operation

Item DVD1300`

# Two Day Growers Workshops

With consumer demand for hydroponic produce increasing significantly, it is imperative to have the knowledge and tools available to make your hydroponic facility more productive and profitable. Why experiment or "reinvent the wheel" when you can benefit from years of accumulated knowledge in hydroponics that we cover in this Workshop? Starting off with the right information can have a significant impact on the success of your operation. This workshop can provide you with that information!

**Two Day Grower Workshop:**
**Call for pricing**

## Includes:

- 2 days of instruction
- ½ day in classroom
- ½ day in greenhouse
- Interactive training
- Lunch each day

Classroom sessions begin each morning with presentations on the following topics: Hydroponics, Basic Botany, Soilless Production Systems, Environmental Control, Source Water Needs, Nutrient Management, Resource Identification

Several types of soilless culture are covered with the primary focus on the Bato Bucket system for vine crops and NFT system for leaf crops. The main crops discussed are tomato, cucumber, lettuce and herbs.

**Our popular Grower Workshops have moved online due to the COVID-19 Pandemic! Please check www.CropKing.com for pricing and upcoming workshops held via Zoom.**

# Intensive Workshops

CropKing offers an immersive course featuring practical experience working in a production greenhouse with a larger emphasis in hands-on work with the plants and growing systems. The content covered in our Intensive Workshop will be tailored to the individual's skill and experience level.

Participants will receive small group instruction and guidance with the end goal of fostering a greater understanding of the inner workings of a hydroponic greenhouse and the various disciplines involved in a successful operation.

Please call for date availability, sessions run regularly throughout the year.

**Intensive Workshop:**
**Call for pricing**

## Includes:

- Hands-on & classroom instruction
- Coursework tailored to individual skill levels
- Small group attention
- All education materials

**Workshops are filled first-come, first-served. Please call our sales team for more information.**

# USB Flash Drives

## Business Plan Template

Our Business plan helps with cost estimates, projected income and a complete background on the system you are considering. Whether it is NFT Lettuce System or a Bato Bucket System for Tomatoes, the Business Plan Template contains the information your banker will want to see.

Item CDR2020
***This item ships FREE!***

## Grower Training

The classroom powerpoint portion of our workshop covers both botany and the environmental factors in the greenhouse. Also discussed are the different pieces of equipment and their specific function on a hydroponic greenhouse. The main cultural chores of a hydroponic greenhouse are described and demonstrated. This presentation can be used to train greenhouse workers on cultural procedures.

Item DVD1400

# Books

## A Practical Guide to NFT
By C.J. Molyneux

This book sets out the principles and practices of the technique in a concise but thorough manner. With this guide at hand, anyone can introduce NFT.

Item BOO0027

## A Tomato a Day
By Francisco Contreras

Discover why a tomato is the next superfood, a powerful anti-cancer agent, a foundation of youth and a promoter of heart health.

Item BOO0099

## Hobby Hydroponics 2nd Edition
By Howard M. Resh

A guide to all aspects of home hydroponics culture and systems, providing the most up-to-date information on hobby hydroponic growing, including the numerous advancements in concepts, technology, and products since the first edition.

Item BOO1006

## Hydroponic Food Production
By Howard M. Resh

A complete manual and an encyclopedic reference work on soilless food production. Technically comprehensive with nearly 400 photographs and detailed drawings on every form of hydroponics for temperate, tropical, or cold climates.

Item BOO0001

## Hydroponic Home Food Gardens
By Howard M. Resh

An abundance of new information, written for easy reading, and productive action. Shows home gardeners how to grow fruits and vegetables in a clean, nutritionally perfect soilless medium; how to say goodbye to problems of infertile or infested soil, weeds, pests; how to give plants super nutrition for super growth, appearance, and quality. Scores of photographs, drawings and diagrams make it easy to have a variety of gardens a simple home hydroponic window, deck trays, containers, full-scale hydroponic gardens or small greenhouse projects right at home.

Item BOO0021

## Hydroponic Tomatoes for the Home Gardener
*By Howard M. Resh*

Step-by-step instructions, with many clear, "show-me-how" illustrations, both photographs and drawings.

Item BOO0042

## Hydroponics "A Practical Guide for the Soilless Grower"
*By Dr. J. Benton Jones*

Gives detailed descriptions of the most commonly used hydropponic growing procedures. Provides clear explanations of the advantages and disadvantages of each hydroponic growth system. Describes the basic concepts of the plant growth and development. Lists the numerous solution formulas and ways these solutions can be used and monitored. Outlines experiments that can be used by students to successfully grow plants hydroponically.

Item BOO 0084

## Hydroponics: Q & A for Successful Growing
*By Howard M. Resh*

287 Questions and Answers on topics like nutrition, essential elements, water, diseases, environmental conditions, nutritional disorders, sterilization, herbs and other food crops. Finds helpful pointers on growing many specific products. This paperback book is well indexed and illustrated to easily find the answers you need.

Item BOO0078

## Knowing & Recognizing: The biology of glasshouse pest and their natural enemies
*By Koppert*

Book covers life cycles of pests and beneficials, background information on how to make a beneficial program work. A "must" for the grower who uses beneficials for pest control. Many diagrams and colored pictures.

Item BOO0040

## Tomato Plant Culture
*By Benton Jones*

A comprehensive factual information about tomato plant culture and fruit production, beneficial to plant scientists and commercial field and greenhouse growers as well as the home gardener. Data compiled focuses on the more recent literature, including information about the cultural characteristics of the plant; fruit production and related quality factors; and environmental and nutritional requirements for both field- and greenhouse-grown plants.

Item BOO0083

## Hydroponic Tomato Crop Production
*By Lynette Morgan, PhD*

Filled with up-to-date information on hydroponic tomato production from expert growers. Complete guide includes background on the tomato plant, types of tomatoes and seed suppliers, proper growing environment, organic production, nutrient management, propagation, systems of production, fruit quality, pests and diseases, and harvesting and handling.

Item BOO0010

## Hydroponic Salad Crop Production
*By Lynette Morgan, PhD*

Lettuce crops continue to dominate hydroponic salad production in volume and this book encompasses all of the most recent developments, scientific findings, research, and grower experience to present the definitive information on hydroponic lettuce production.

Item BOO0079

## CropKing Growers Manual
*By Natalie Bumgarner, PhD*

Growing instruction for use with CropKing growing systems. This guide will walk you through how to grow in a CropKing NFT or Bato Bucket system. This book is a great resource for anyone who has bought a CropKing system used.

Item BOO 4000

# TOMATO, Beefsteak
## Foronti

This large beef tomato has good plant vigor and fruit set that contribute to its high yield potential in ungrafted greenhouse production. Round, smooth fruit are similar in size and shape to Torero. Powdery mildew resistance can make it a little low light sensitive under some conditions.

**Disease Resistance (HR):** ToMV:0-2/Ff: A-E/Fol:1,2/For/Va:1/Vd:1
**Disease Resistance (IR):** On

**Foronti, 100 Seeds**
Item TOM1701

## DRW 7749 - Rebelski



Red big beef tomato with high yield potential. Open leaf structure and strong plant that should be steered generatively. Fruits have good taste and shelf life and also have a distinctive flatter shape with more ribbing. Average weight 220 grams.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** On

**DRW 7749, 100 Seeds**
Item TOM1051

## Tomimaru Muchoo



An Asian style pink tomato preferred in Japanese culture for its sweet, less acidic flavor profile. This tomato is medium to firm in texture. These are vigorous plants with a broad range of disease resistance, perfect for greenhouse growing.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:1,2, For
**Disease Resistance (IR):** Ma, Mi, Mj

**Tomimaru Muchoo, 100 Seeds**
Item TOM1960

## Torero



Red beef tomato with large (250 grams) fruit size (especially in early clusters) and good yield potential. Fruits are consistently round and firm with good shelf life. Plants are labor friendly as they are more generative than Geronimo, Foronti, and Rebelski. Torero can be grown ungrafted, but for long crops carried through hot summers, grafting could provide a benefit.

**Disease Resistance (HR):** ToMV:0-2, ToTV, Ff:A-E, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** -

**Torero, 100 Seeds**
Item TOM1501

## Big Dena

This vigorous and productive cultivar is appropriate for ungrafted cultivation in heated greenhouses. The vigor of this cultivar makes it well suited to maintain summer growth. Large beefsteak tomato fruit (230-280 gram) are slightly ribbed with good taste.

**Big Dena, 250 Seeds**
Item TOM1760
**Big Dena, 1000 Seeds**
Item TOM1760

## Beorange



Beorange is an orange beef tomato hybrid with good taste and flavor.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** -

**Beorange, 100 Seeds**
Item TOM1410

# TOMATO, Grape
## Dasher

Red grape with a good taste and an average fruit weight of 20 to 25 grams. Open plant with moderate vigor. There are some other possibilities as far as yellows, but yield is lower.



**Dasher, 100 Seeds**
Item TOM1275



# TOMATO, Cherry
## DRC 564

A cherry tomato that can be sold loose or on trusses. The fruit has excellent red color and taste with fruit that average approximately 18 grams. Similar or just slightly smaller size than Conchita. Higher brix with deeper red color, but may have shorter shelf life than Conchita.

**Disease Resistance (HR):** ToMV:0-2, TSWV, Fol:1,2, Va:1, Vd:1
**Disease Resistance (IR):** Ma, Mi, Mj

**DRC 564, 100 Seeds**
Item TOM1910

## Favorita

Cherry, red, semi-greenback, average fruit weight 13-17 grams. Slightly stretched. Vigorous growth, long and many double trusses. Excellent fruit shape, good flavor.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:0,1
**Disease Resistance (IR):** Ma, Mi, Mj

**Favorita, 100 Seeds**
Item TOM1024

## Conchita

Cherry tomato with firm fruits. Average fruit weight 20 grams. Fruit tend to be less red- slightly orange with moderately good taste. May have lower brix levels than DRC 564. Consistent producer.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** -

**Conchita, 100 Seeds**
Item TOM1034

# TOMATO, Cluster

## Merlice

This large size truss tomato (155-160 grams) is a vigorous, but shorter length plant with a high yield potential. The plant has smooth, high round fruit and good stem quality. Merlice has powdery mildew resistance and can be more light sensitive than Komeett. For warmer brighter climates, this could be a good option or for those who value powdery mildew resistance.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** On

**Merlice, 100 Seeds**
Item TOM1810

## Komeett

For the heated soilless glasshouse crops and the large size truss harvest segment in Europe and North America. Red, high round shape with an average fruit weight of 165 grams. Consistent, all around performer, but does not have powdery mildew resistance.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** -

**Komeett, 250 Seeds**
Item TOM1600

# TOMATO, Cocktail

## Red Delight

Shiny and nice deep red cocktail tomatoes. Open plant with strong vigor. Nice dark green plant with good summer behavior. Good shelf life and the truss stem stays green and fresh for a long time. Very strong against cracking.

**Red Delight, 250 Seeds**
Item TOM1109

# TOMATO, Roma

## Italia / W54179

This is a smooth roma tomato that averages 90-120 grams per plant and is a strong producer for smaller fruited tomato. Plants tend to be open and long, and may be a challenge in shorter greenhouses. Fruit maintains good quality in resisting blossom end rot.

**Italia, 250 Seeds**
Item TOM1650

## Prunus

Prunus is a roma tomato hybrid suitable for both truss- and loose harvest. Prunus has high vigor resulting in high yield potential.

**Disease Resistance (HR):** ToMV:0-2, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** On

**Prunus, 250 Seeds**
Item TOM1300

# TOMATO, Cluster

## Orangaro

Orange color. Average fruit weight is 3 oz. (100 grams). High yield potential. Can be harvested loose or as a cluster. Normal vigor, Mild flavor.

**Disease Resistance (HR):** ToMV:0-2, Ff:A-E, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** -

**Orangaro, 250 Seeds**
Item TOM1115

## Lorenzo

Lorenzo is a tomato on the vine with an attractive deep yellow color.

**Disease Resistance (HR):** ToMV:0-2, Fol:1,2, For, Va:1, Vd:1
**Disease Resistance (IR):** -

**Lorenzo, 250 Seeds**
Item TOM1151

## Bolzano

Bolzano is a trusted, standard truss tomato variety in the orange truss segment.

**Disease Resistance (HR):** ToMV:0-2 / Ff:A-E / Fol:1,2 / For / Va:1 / Vd:1
**Disease Resistance (IR):** -

**Bolzano, 250 Seeds**
Item TOM1114

# EGGPLANT

## Scorpio

Purple eggplant with high potential production due to it being very generative and its open plant habit. The shiny fruit are firm and have a small bow and slender shape, its color is very dark. The fruit have excellent shelf life.

**Scorpio, 100 Seeds**
Item EGG1001

**Greenhouse peppers are available by special order only. Please call 330-302-4203 for varieties and pricing.**

# CUCUMBER

## Denali- Long English

This vigorous and productive long english cultivar has high powdery mildew resistance for summer production and umbrella systems. Denali will maintain medium plant habit through summer stress. The fruit are dark green, 13 to 15 inches long with good shelf life.

**Denali, 100 Seeds**
Item CUC1900

## Unistar- Cocktail

This cocktail cucumber produces approximately 4 inch fruit. Under reproductive conditions, multiple fruit per node are produced.

**Disease Resistance (HR):** Ccu
**Disease Resistance (IR):** Px

**Unistar, 100 Seeds**
Item CUC1950

## Camaro

This cultivar is partially tolerant to powdery mildew and is suitable for lower light production. Low susceptibility to Fusarium in the vigorous yet easy to grow cultivar. Camero can perform well under a variety of conditions.

**Disease Resistance (IR):** Px

**Camaro, 100 Seeds**
Item CUC1600

## DRL9510

Good low light option similar to Camaro with slightly smaller fruit size.

**Disease Resistance (HR):** Ccu
**Disease Resistance (IR):** Cca, Px

**DRL9510, 100 Seeds**
Item CUC2000

## Eldora

Eldora is a long English cucumber with high resistance to Powdery mildew. Eldora is extremely well suited for high light conditions. Optimal planting window for most locations is from March through August.

**Disease Resistance (HR):** Ccu, Px
**Disease Resistance (IR):** Cca

**Eldora, 100 Seeds**
Item CUC1800

# CUCUMBER, Mini

## Jawell

This cultivar is suitable for year-round production and has partial powdery mildew tolerance. Fruit will be 5 ½ to 6 ½ inches and the plant can produce 1 or 2 fruit per node. Production is early and high with dark green slightly ribbed fruit. A short internode length make this cultivar appropriate for shorter greenhouses.

**Disease Resistance (HR):** -
**Disease Resistance (IR):** CMV, CVYV, Px

**Jawell, 100 Seeds**
Item CUC1700

## Manar

This powdery mildew tolerant cultivar has strong vigor and excellent fruit quality. Slightly larger fruit than Jawell.

**Manar, 100 Seeds**
Item CUC1500

# LETTUCE, Bibb

## Teodore- Red Bibb

A large red butterhead that has ruby coloration half way down the leaf while the lower portion has a brilliant green contrast color. Resistant to Bl: 1-26/Nr/LMV.

**Teodore, 5,000 Seeds**
Item LET2015

## Alexandria

An indoor lettuce variety for summer, which produces blonde to medium green heads with medium thick leaves and a large frame. Slow bolting and strong against tipburn. Similar to Flandria, but with a slightly wider range of downy mildew resistance.

**Disease Resistance (HR):**
Bl:16-23,25,31,32EU/Pb

**Alexandria, 5,000 Seeds**
Item LET2009

## Flandria

Thick-leaved butterhead variety for year-round production; excellent quality and shelf life. The plant has a strong base with few yellow leaves and is strong against tipburn and bolting. Slightly more loose and open head than Rex with a wider range of downy mildew resistance.

**Disease Resistance (HR):**
Bl:16,17,21,23,32EU

**Flandria, 5,000 Seeds**
Item LET1063

## Natalia

A blonde butterhead lettuce for summer production that was bred and is well adapted for the autumn and spring markets. Similar visually to Alexandria and Flandria.

**Disease Resistance (HR):**
Bl:16-26,31,32EU/Pb

**Natalia, 5,000 Seeds**
Item LET2013

## Rex

This cultivar has been well known as a reliable bibb crop in hydroponic greenhouses for many years. It can be grown as a year round crop, but is well suited for spring and summer production due to being strong against tipburn and bolting. Thick fairly dark green leaves mature to form a clear head.

**Disease Resistance (HR):**
Bl:17,18,22,24,25,29,30,33EU

**Rex, 5,000 Seeds**
Item LET2003

## All lettuce seeds are pelleted unless otherwise noted.

### Santoro RZ

A larger frame size bibb lettuce with excellent color under warm conditions with a broad resistance package. Leaves are smooth with good resistance to tipburn, and the heads are slow to bolt. This cultivar tends to have larger frame sizes and less dense heads under low light conditions.

**Disease Resistance (HR):**
Bl:16-22,24,25,29-33EU/Nr:0/Pb
**Disease Resistance (IR):** LMV:1

**Santoro, 5,000 Seeds**
Item LET2011

### Skyphos

A large red butterhead that has ruby coloration half way down the leaf while the lower portion has a brilliant green contrast color. For a red cultivar, Skyphos is slow bolting and resistant to tipburn. Under lower light conditions, the frame size tends to increase and leaf coloration decrease.

**Disease Resistance (HR):**
Bl:16-26,32EU/Nr:0
**Disease Resistance (IR):** LMV:1

**Skyphos, 5,000 Seeds**
Item LET2014

### Gardia

Butterhead variety similiar to Flandria. Strong against tipburn and bolting.

**Disease Resistance (HR):**
Bl:16-30,32,33EU

**Gardia, 5,000 Seeds**
Item LET2040

# LOLLA

### Carmesi- Lolla Rossa

This triple red lolla rossa has a deep red color over a large portion of the leaf. It is slow bolting, but may have a slightly slower growth rate than a typical bibb crop.

**Disease Resistance (HR):**
Bl:16-27,30-32EU/Fol:1/Nr:0

**Carmesi, 5000 Seeds**
Item LET2025

### Orville- Lolla Rossa

This double red lolla rossa is similar to Carmesi in size and growth characteristics, but with a lighter red color- ation on the edges of the leaves.

**Disease Resistance (HR):**
Bl:16-33EU/Nr:0

**Orville, 5000 Seeds**
Item LET2030

### Lozano- Lolla Bionda

This lolla bionda has a light green color and a compact frame size. The leaves have a very fine margin and the plant is strong against tipburn.

**Disease Resistance (HR):**
Bl:16-33EU/Nr:0

**Lozano, 5000 Seeds**
Item LET2035

# LETTUCE, Oakleaf

### Kireve

Green oakleaf solid producer in greehouse production.

**Disease Resistance (HR):**
Bl:16-26,31,32EU/Nr:0/Pb
**Disease Resistance (IR):** LMV:1

**Kireve, 5000 Seeds**
Item LET2045

### Rutilai

Red oakleaf with strong coloration on tip. Strong resistance to edge burn and bolting.

**Disease Resistance (HR):**
Bl:16-33EU/Nr:0
**Disease Resistance (IR):** LMV:1

**Rutilai, 5000 Seeds**
Item LET2050

# LETTUCE, Romaine

### Salvius- Green Romaine

A tall, dark green romaine cultivar with medium savoyed leaves.

**Disease Resistance (HR):**
Bl:16-26,32EU/Nr:0
**Disease Resistance (IR):** Ss (Rs)

**Salvius, 5000 Seeds**
Item LET2020

# LETTUCE, Mix

### Summer Picnic

Supplied as combination cultivar multi-pellet, with 3 or more seedlings per pellet. Summer Picnic is easy to produce, with quick crop times and only one multi-pellet needed. Can be direct-sown into 4 to 6-in./10 to 15-cm pots or color bowls. Extend your selling season with this more heat tolerant, all-lettuce mix. Includes red and green varieties. Formerly Endless Summer Mixture.

**Summer Picnic, 1000 Seeds**
Item LET2100
**Summer Picnic, 100 Seeds**
Item LET2150

### Mix Wonder Wok

Supplied as multi-species multi-pellets, with 3 or more seedlings per pellet. Easy to grow with very quick crop times and only one multi-pellet needed. Produces more vivid colors when finished cool. Gardeners will enjoy as both a colorful, mixed-texture ornamental and a delicious, nutritious ed-ible. Performs best for consumers in full sun in cool weather, or partial shade as temperatures warm up. Mix of Asian greens including mustards, kale and bok choy.

**Mix Wonder Wok, 1000 Seeds**
Item LET2200

**Mix Wonder Wok, 100 Seeds**
Item LET2250

# SEED PACKETS

*Seed packets are non-pelleted unless otherwise noted.*

**Basil, Packet**
Item BAS1001
**Basil, 1 Ounce**
Item BAS1000
**Cucumber, 10 Seeds**
Item CUC1001
**Lettuce, 150 Seeds** *Pelleted Rex Seeds
Item LET2001
**Tomato, 20 Seeds**
Item TOM2000

# SUPPORTING STUDENTS & EDUCATION

Whether you have room for our Desktop NFT system, or an empty classroom that you're ready to convert into a growing operation, our team can customize a package to fit your curriculum and your students, complete with troubleshooting and technical support. We also offer powder-coated pallet racking to match school colors!
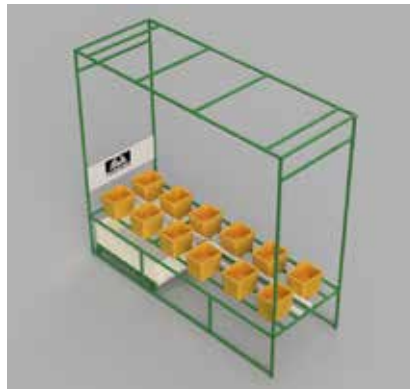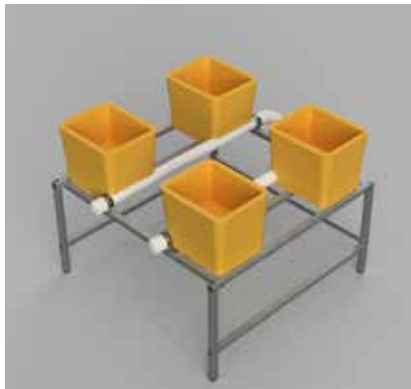




## Bato Bucket Systems

Our Bato bucket growing system is an excellent choice for growing vine crops like cucumber and tomato. Bato buckets are UV resistant, strong plastic containers that can be used repeatedly for years to come, making them a great classroom investment.

### Follow @CropKingSchools on Instagram!









## NFT System

Our NFT system is perfect for growing leafy greens and great for educational purposes! Constructed of galvanized steel & UV-stabilized food grade growing channels, the removable top covers make cleaning a breeze! The channels are designed to prohibit algae growth and they are pre-punched with square holes perfect for 1" rockwool cubes.

## Microgreen System

Our Microgreen system simplifies the process of growing microgreens by providing a self-contained growing system capable of holding standard 10 x 20 trays. If you don't prefer to use trays, a single length of your choice of growing media can be utilized in each channel.

## Desktop NFT System

Our desktop NFT system has all the capabilities of a traditional sized NFT system allowing you to grow fresh, high-quality leafy greens on your desktop or kitchen counter!

## Rolling Cart & Reservoir

Includes a 70 gallon Botanicare reservoir with lid and powder coated steel cart with wheels to make maintaining the tank between crops easier! *Already included in 12-Bucket Bato and NFT system.*

## Aquaponic and aquaculture systems also available!

WE ACCEPT ALL MAJOR CREDIT CARDS ON ORDERS AT 330-302-4203

# INNOVATIVE SOLUTIONS
## FOR THE CANNABIS & HEMP INDUSTRY

RESEARCHED DESIGNED AND MANUFACTURED IN THE USA

## 30x100 Light Dep Greenhouse Package

- Nutrient Injection System
- $CO_2$ Enrichment
- Heating, Cooling & Air Circulation
- Automated Blackout Curtain System
- 2-iGrow 1400 Environmental Controllers
- Insect Exclusion Package
- Pre-Wired Electrical Panel
- Stamped Greenhouse Plans Available
  *additional costs apply

## COMMERCIAL PRICING ON

## Grodan®

## ASK ABOUT OUR CONSULTING SERVICES & HEAD GROWER PLACEMENT PROGRAM

## Nutrient Injection System

- Easy setup — ships assembled, just hook up water
- Constant EC and pH monitoring and dosing
- Works with recirculating and drain to waste systems
- Works with an unlimited number of concentrate tanks

## CUSTOM-ENGINEERED FACILITIES

# Hydroponic or Organic
## Is There a Difference?

Many individuals believe that hydroponic and organic are the same thing. While there are certain similarities, there are definite differences between the two cultures. Most consumers who purchase organic produce have a high level of concern about their health and want to make sure that they consume produce which is as safe and nutritious as possible.

Small, local hydroponic growers are very concerned about having a pesticide free environment inside the greenhouse. Many hydroponic growers use bees for pollination. Any pesticide would kill off the bees who are doing the pollination work in the greenhouse. The biggest difference between a hydroponic grower and an organic grower is the fertilizers that they use. Hydroponic growers used fertilizers that are mined out of the ground and can be dissolved in water. Organic growers use fertilizers that come from a living source such as manure, blood meal or fish emulsion. Whether plants are grown organically or hydroponically, they take in dissolved minerals or "ions" through their root system and convert it through photosynthesis. Whether phosphorus comes from mined rock phosphate or from bat guano, phosphorus is phosphorus. It can only be used by the plant as an "ion" of phosphorus… a charged elemental particle dissolved in water.

Both hydroponic plant growth and organic plant growth are looking for the same results: safe, nutritious vegetables that are not contaminated by pesticides or herbicides. The question becomes how do the two different cultures go about getting their desired results.

## Differences Between Hydroponic and Organic Growing:

**Hydroponic:**
1. Hydroponics feed the plants directly.
2. Hydroponics uses clean water.
3. Plants use less energy to find the nutrients as they are dissolved in water that is fed directly to the roots.
4. Hydroponics uses approximately 1/10 of the amount of water that traditional soil growing uses.
5. Soil quality is not a factor as there is no soil involved.
6. Hydroponic vegetables are gown in a controlled environment.
7. Hydroponic produce is clean because it does not come in contact with soil.

**Organic:**
1. Organics feed the soil.
2. Organics use rain water and other available irrigation water.
3. Plants must spend more of their energy creating root mass to search out the necessary nutrients in the soil.
4. Organic production requires more water because much of it leaches away down into the soil.
5. Soil quality is very important to plant growth.
6. The organic environment is dependent on the weather (rain, wind storms, etc).
7. Organic produce can have soil or animal residue on it, from the environment and should be washed.

The debate can continue as long as there are farmers, regardless of the growing method. For those of us who do not want to eat vegetables that are coated with pesticides, there are few choices. No matter the growing method, we know that clean food is better food. The search for safe, nutritious food needs to start outside your own front door. The best way to know if "organically grown" produce or any produce is clean and safe, is to know your farmer. We cannot be sure of the safety of either organic or hydroponic vegetables that are grown in foreign countries, and what sprays or contamination may be on them. Buying food from a local farmer is the final answer to eating the best and safest possible produce.

WE ACCEPT ALL MAJOR CREDIT CARDS ON ORDERS AT 330-302-4203

CropKing Research Greenhouses in Lodi, OH

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# Information

## HOW TO USE THIS CATALOG

Our entire product line is organized according to use in this catalog to make it easy to find the items you're looking for. You'll also find an alphabetical index of products on page 71.

A product's item number usually begins with the first three letters of the general name of the product. Some of them may begin with the first three letters of the category name that they would come under. For example, Calcium Nitrate would be found under "Fertilizer", with an item number beginning with the letters "FER".

Please be sure to use the Item Number when ordering. This will enable us to be sure that we're sending you exactly what you want.

## PLACING ORDERS

Your customer account number can be found on the left side of an order or invoice.

Occasionally, growers have different ship to addresses. Please specify to the person taking your order which address you wish your order shipped to. If any part of your address is incorrect, please let us know so that we can correct it.

## TERMS AND ORDERING INFORMATION

**Mailing Address:**
CropKing Inc.
134 West Drive Lodi, Ohio 44254
Phone: 330-302-4203
Fax: 330-302-4204

**Hours:**
Monday-Thursday: 8 a.m. to 5 p.m. EST
Friday: 8 a.m. to 1 p.m. EST

**Web Site:** www.cropking.com

**E-Mail:** cropking@cropking.com

**What About Credit?**
We offer a variety of payment options, to allow you to choose the most convenient way to purchase your products. We accept most major credit cards including Visa, MasterCard, Discover, or a program called a Farm Plan. If you'd like to open a Farm Plan account with us, just let us know and we'll be happy to send you an application. **We do not ship COD.**

**Check Policy:** Unless you are pre-approved for personal checks, your order will be held for ten days before shipping to allow time for the check to clear. If you are in a hurry and need your order shipped immediately, please send a Cashier's or Certified Check or Money Order. There will be a $20.00 charge for any returned checks.

**Minimum Orders:** We have a minimum order policy of $25.00. Orders less than $25 will result in a $5.00 service fee. To avoid this charge, try to plan ahead and order at least $25 worth of product.

**Hazardous Materials:** All hazardous materials ships UPS (example, Potassium Nitrate) and are charged an additional fee of $32.50.

**Foreign Shipments:** Please call for availability and details on foreign shipments.

**Hawaii and Alaska Shipments:**
Actual shipping charges will apply along with any special handling charges required.

**CPU:** Customer pickup available. Must call for arrangements.

**Damage and Loss Replacement Policy:**
The customer is responsible for inspecting all shipments-either refusing the shipment for damage or making any claims for damage with the carrier. The customer will have to obtain a refund from the trucking company if the customer accepts damaged merchandise.

Be sure to examine your shipment and have the driver note any discrepancies, damage, or appearance of damage or rough handling on the bill of lading.

**Returned Merchandise:** No returns will be accepted without prior authorization by CropKing. A restocking charge of 15% may be charged on returns unless there was an error in our shipping or the product was defective. No returns on books, CDs and DVDs.

**Prices:** With over 1,500 different products, it is impossible to keep all prices current in a catalog. All prices are subject to change without notice. We will use the price that is current at the time of your order, and will try to advise you at the time of order. However, we urge you to confirm prices when you place your order.

**Limited Warranty, Disclaimer of Other Warranties:** As to products not manufactured by Seller, Seller shall pass through to Buyer any warranties given by the product manufacturer, to the extent permitted by such manufacturer. In the event of any breach of such warranties, Buyer shall notify Seller within thirty (30) days of receipt of the products. The exclusive remedy for breach of such warranties shall be those remedies provided by the original manu-

facturer. In no event shall Seller be liable for any damage as a result of such breach.

As to products manufactured by Seller, Seller warrants the Products will conform to the description of the Products on the face hereof, and that such products shall be free from defects in material or workmanship for a period of ninety (90) days from the date of shipment. The Seller shall not be liable for any incidental or consequential damages for any breach of warranty, and Buyer's exclusive remedy shall be limited to repair or replacement of the defective Product, or repayment of the purchase price, as Seller's sole option. Replacement of defective Products or repayment of the purchase price will be made only upon return of the defective Products to Seller, at Buyer's cost. Repair of defective Products shall be done at Seller's location, or at such other place as Seller may direct, with shipping to location at Buyer's cost.

THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND SELLER EXPRESSLY DISCLAIMS ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

**Backorders:** In the event that an item is currently out of stock, your sales/service representative will notify you. You then have the choice to request:
- The balance of your order can be shipped immediately, and the backordered items shipped when they become available; or,
- CropKing can hold the order until all the items are available, then ship the entire order together.

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