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CROPKING BY THE NUMBERS

WE HAVE:

- 28 Employees
- 2,800 square feet dedicated to research
- Over 35 years in business

IN 2017, OUR GROWERS HARVESTED APPROXIMATELY:

- 17,600,000 lbs. of tomatoes
- 39,000,000 heads of lettuce

OUR GROWERS HAVE SAVED

- MILLIONS OF GALLONS
  OF WATER GROWING HYDROPONICALLY

WE HAVE GROWERS IN

- 50 STATES
- 20 COUNTRIES

WE USE

- ZERO SOIL

HYDROPONIC CROPS GROW APPROXIMATELY

- TWO TIMES
  FASTER THAN TRADITIONAL GROWING METHODS
CropKing’s High Tunnel and the NRCS Grant

The Natural Resources Conservation Service (NRCS) conservation programs help people to reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters. NRCS provides funding opportunities for agricultural producers and other landowners through these programs.

The High Tunnel System is a conservation practice available through the Environmental Quality Incentives Program (EQIP). This practice helps producers:

- Extend the growing season
- Improve plant quality and soil quality
- Reduce nutrient and pesticide transportation
- Improve air quality through reduced transportation inputs
- Reduce energy use by providing consumers with a local source of fresh produce

More information regarding the NRCS High Tunnel Initiative can be found online here: http://bit.ly/2mnMLxq

A customer in West Virginia received the NRCS grant and chose the CropKing High Tunnel. This is what she had to say about it...

“I had my inspection yesterday and the NRCS said it was the best constructed [High Tunnel] they’d seen. They also said it was the best high tunnel package they’d ever seen. They were impressed. They took a CropKing catalog to have in the NRCS office. So glad I chose CropKing for my supplier.”
**CropKing 10 Bato Bucket System**

The CropKing 10 Bucket Bato System is great for growing vine crops and other tall growing plants. This system is suitable for tomatoes, cucumbers, peppers, squash, and many other fast growing fruiting and flowering plants. The bato bucket system is formed with a small reservoir to avoid drowning or starving your plants, and buckets are made from high-quality UV resistant plastic. This hydroponic bucket system will provide you with fresh veggies for years to come!

**System Includes:**
- Sturdy Aluminum Stand
- Feed and Drain Plumbing
- 10 Bato Buckets with Elbows
- Active Aqua Pump 400 GPH
- Perlite Growing Media
- 25 Gallon Tank with Lid
- Digital Timer
- Bato Bucket Covers
- Adjustable Feet for Leveling
- Assembly Instructions

**Item BAT0010** $695.00

---

**ACCESSORIES**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ITEM #</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BlueLab Combo Meter</td>
<td>PHM3000</td>
<td>$199.00</td>
</tr>
<tr>
<td>pH Control Kit</td>
<td>PHT4000</td>
<td>$17.20</td>
</tr>
<tr>
<td>5 Pounds HydroGro Vine Crop</td>
<td>FER3022</td>
<td>$19.00</td>
</tr>
<tr>
<td>5 Pounds Calcium Nitrate</td>
<td>FER3025</td>
<td>$7.00</td>
</tr>
<tr>
<td>1 Pound Potassium Nitrate</td>
<td>FER3012</td>
<td>$5.10</td>
</tr>
<tr>
<td>Rockwool AO 36/40 Pad</td>
<td>ROC1008</td>
<td>$10.00</td>
</tr>
<tr>
<td>10/20 Seed Tray without holes</td>
<td>TRA1101</td>
<td>$1.40</td>
</tr>
<tr>
<td>100 Vine Clips</td>
<td>VIN8003</td>
<td>$5.00</td>
</tr>
<tr>
<td>20 Bato Bobbins</td>
<td>TOM1015</td>
<td>$10.00</td>
</tr>
</tbody>
</table>

_Hydroponic Tomatoes_ by Howard M. Resh

---

PRICES SUBJECT TO CHANGE
CropKing 24 Bato Bucket System

Grow over 1000 pounds of vine ripe fresh tomatoes per year in this commercial style system! Like our other bato bucket systems, this is ideal for growing crops such as tomatoes, cucumbers, eggplants or peppers. Each perlite filled bato bucket holds one or two plants and is fed hydroponic nutrients from a provided 100 gallon nutrient tank. The long life, tan colored, plastic bato buckets have a special reservoir and elbow drainage system to provide the correct moisture level and nutrient gradient for optimal root health.

The bato bucket system is comprised of 16’ long double rows with 12 buckets in each row. The buckets rest on the provided drain lines. This system is normally setup as a “drain to waste” commercial style system where the excess nutrient solution flows through the 2” drain line down the center of the system into a drain, but it can also be setup as a recirculating system by burying the nutrient feed tank and sloping the drains back to the tank.

A minimum greenhouse footprint of approximately 12’ x 20’ will be needed to access all sides of the plants.

Item BAT0024 $995.00

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ITEM #</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BlueLab Combo Meter</td>
<td>PHM3000</td>
<td>$199.00</td>
</tr>
<tr>
<td>50 Pounds HydroGrow Vine Crop</td>
<td>FER1000</td>
<td>$126.00</td>
</tr>
<tr>
<td>50 Pounds Calcium Nitrate</td>
<td>FER3014</td>
<td>$29.95</td>
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<tr>
<td>5 Pounds Potassium Nitrate</td>
<td>FER3012</td>
<td>$25.50</td>
</tr>
<tr>
<td>Rockwool AO 36/40 Pad</td>
<td>ROC1008</td>
<td>$10.00</td>
</tr>
<tr>
<td>10/20 Seed Tray</td>
<td>TRA1100</td>
<td>$1.40</td>
</tr>
<tr>
<td>10/20 Seed Tray without Holes</td>
<td>TRA1101</td>
<td>$1.40</td>
</tr>
<tr>
<td>200 Vine Clips</td>
<td>VIN8003</td>
<td>$5.00</td>
</tr>
<tr>
<td>Plant Support Package</td>
<td>BAT0024PS</td>
<td>$167.00</td>
</tr>
</tbody>
</table>

System Includes:
- Sturdy Aluminum Stand
- Feed and Drain Plumbing
- 24 Bato Buckets with Elbows
- Active Aqua Pump 400 GPH
- Perlite Growing Media
- 100 Gallon Tank with Lid
- Digital Timer
- Bato Bucket Covers
- Adjustable Feet for Leveling
- Assembly Instructions

100 ft of cable. Bato bobbins, turnbuckles for two rows of plants. Vine crops may require plant support.

PAGE 6
The CropKing Nutrient Injector System is the ideal way to precisely control nutrient and pH levels in your hydroponic system. Designed with the grower in mind, our injector system is simple to use and is built with the highest quality PVC and corrosion-resistant components for reliability and minimal maintenance. The system offers the consistency of a reservoir setup and the convenience of a direct injection system.

The CropKing Nutrient Injection System comes completely assembled and mounted on a steel frame. It is pressure tested prior to leaving our facility. Installation is simple with PVC union connectors on the water supply and nutrient solution side. The system also includes a bypass kit to aid in system cleanup and emergency situations. For additional security, the CropKing Nutrient Injector System comes equipped with an alarm to alert the grower if a loss of pressure is detected. The alarm can connect to a Sensaphone to call and alert the grower or it can activate a 115 volt flashing light or buzzer (customer supplied).

All electrical connections are clearly marked in the drip-proof system control box. Complete electrical diagrams are provided with each 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 and will supply up to 17 GPM at 24PSI of nutrient solution to the irrigation system with up to 4 irrigation zones. Standard injection ratio is designed at 1 to 100 with 3 injection heads. Nutrient Concentrate Tanks (3) purchased separately. If you do not have an iGrow you will need an irrigation or sequence timer, see page 42.

### REPLACEMENT PARTS

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Item Number</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbow Connector, 2 Pack</td>
<td>GOR1027</td>
<td>$25.00</td>
</tr>
<tr>
<td>Poppet Valve, includes 2 valves, 2 o-rings, ¾ inch diameter</td>
<td>GOR1021</td>
<td>$26.00</td>
</tr>
<tr>
<td>1 inch Bellows</td>
<td>GOR1024</td>
<td>$23.00</td>
</tr>
<tr>
<td>1-½ inch Bellows</td>
<td>GOR1008</td>
<td>$39.00</td>
</tr>
<tr>
<td>O-Ring, 1-½ inch Bellows</td>
<td>GOR1020</td>
<td>$6.75</td>
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<tr>
<td>Displacement Cup, 1 inch Bellows</td>
<td>GOR1001</td>
<td>$12.00</td>
</tr>
<tr>
<td>Displacement Cup, 1-½ inch Bellows</td>
<td>GOR1019</td>
<td>$16.00</td>
</tr>
<tr>
<td>Crank Assembly</td>
<td>GOR1100</td>
<td>$50.00</td>
</tr>
<tr>
<td>Float Switch Upper RS-5 Assembly</td>
<td>FLO7000A</td>
<td>$58.75</td>
</tr>
<tr>
<td>Float Switch Lower RS-5 Assembly</td>
<td>FLO7000</td>
<td>$48.25</td>
</tr>
<tr>
<td>1-½ inch Valve Body, no screws</td>
<td>GOR1040</td>
<td>$14.00</td>
</tr>
<tr>
<td>Suction Filter</td>
<td>GOR0005</td>
<td>$4.50</td>
</tr>
<tr>
<td>Barbed Fitting (tubing attachment of suction fitting)</td>
<td>GOR0006</td>
<td>$12.21</td>
</tr>
<tr>
<td>¼ inch Delivery Tube, 1 Foot</td>
<td>GOR0001</td>
<td>$0.47</td>
</tr>
<tr>
<td>¼ inch Nylon Check Valve</td>
<td>PLLCANVC-FF</td>
<td>$2.00</td>
</tr>
<tr>
<td>52 Gallon Mixing Tank with Lid, Blue</td>
<td>TAN3000</td>
<td>$189.95</td>
</tr>
<tr>
<td>1 inch Solenoid Valve, Nylon Electric PBI 2-Way Valves, 24 Volt, PVC</td>
<td>SOL4000</td>
<td>$31.00</td>
</tr>
<tr>
<td>Three Head Bellow Pump</td>
<td>PUM6000</td>
<td>$400.00</td>
</tr>
<tr>
<td>One Head Bellow Pump</td>
<td>PUM6001</td>
<td>$255.00</td>
</tr>
<tr>
<td>Gear Motor Kit, includes motor for bellows pump, fan, mounting screws, ground set screws and all assembled.</td>
<td>GOR1012</td>
<td>$310.00</td>
</tr>
</tbody>
</table>

### BELLOWS BREAKDOWN

- 281 O.D. Elbow Connectors
  - Viton Poppet Valves (GOR1021)
- O-Rings fit 1” & 1-½” Bellows (GOR1040)
- Valve Body fits 1” & 1-½” Bellows (GOR1020)
- 1” & 1-½” Bellows (GOR1008)
- 1” Displacement Cup (GOR1019)
- 1-½” Displacement Cup (GOR1019)
- Crank Assembly (GOR1100)
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 CO₂. 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

PAGE 8
WE ACCEPT ALL MAJOR CREDIT CARDS ON ORDERS AT 330-302-4203
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.

**CO₂ Enrichment and Control System:** The shorter daylight hours of winter and the reduced amount of CO₂ in the air limit plant growth. Plants have the ability to use more CO₂ during photosynthesis than may be found in the greenhouse atmosphere. By providing more available CO₂, plants can grow faster and more prolific. This system monitors CO₂ levels in your greenhouse and adjusts to your desired set point through the iGrow, which controls the CO₂ 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.*

<table>
<thead>
<tr>
<th>SYSTEM SIZES</th>
<th>WIDTH X LENGTH</th>
<th>PLANT SPACES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freestanding Greenhouse</td>
<td>30 x 128</td>
<td>870</td>
</tr>
<tr>
<td>Single Bay Gutter Connect Greenhouse</td>
<td>22 x 128</td>
<td>720</td>
</tr>
<tr>
<td>2-Bay Gutter Connect Greenhouse</td>
<td>44 x 128</td>
<td>1,440</td>
</tr>
<tr>
<td>4-Bay Gutter Connect Greenhouse</td>
<td>88 x 128</td>
<td>2,880</td>
</tr>
<tr>
<td>6-Bay Gutter Connect Greenhouse</td>
<td>132 x 128</td>
<td>4,320</td>
</tr>
<tr>
<td>8-Bay Gutter Connect Greenhouse</td>
<td>176 x 128</td>
<td>5,760</td>
</tr>
<tr>
<td>16-Bay Gutter Connect Greenhouse</td>
<td>352 x 128</td>
<td>11,520</td>
</tr>
</tbody>
</table>

Customized Systems are available. Please call 330-302-4203 for additional options.
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 1-50 $6.25
- Item BAT0001 51-250 $6.75
- Item BAT0001 251-607 $4.95
- Item BAT0001 608-4255 $4.50
- Item BAT0001 4256+ $3.95

Bato Bucket Elbow, two needed per bucket
- Item BAT0003 1-50 $0.70

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 1-199 $0.45
- Item BAT0005 200+ $0.37

BUCKET ACCESSORIES

Perlite Horticulture Coarse Growing Media, 4 Cubic Foot - Fills 8 bato buckets
- Item PER4000 1-32 $11.60
- Item PER4000 33-99 $10.30
- Item PER4000 100+ $10.00

Barbed Stake Guide
- Item STA1004 $0.15

Feed Tube 5/3 mm, per ft.
- Item FEE0054 $0.20

Feed Tube 5/3 mm 1000 ft. roll
- Item FEE0054 $60.00

Emitter Premium CNL 0.50 GPH
- Item EMI1012 1-49 $0.29
- Item EMI1012 50+ $0.27

Poly Pipe Feed Line ½ inch, Black 500 ft. roll
- Item FEE1500 $50.00

Poly Pipe Feed Line ½ inch, 250 ft. roll
- Item FEE1525 $32.25

Poly Pipe Feed Line ½ inch, 100 ft. roll
- Item FEE1510 $15.95

Plant Support Cable 3/32 inch, per ft.
- Item CAB5001 $0.25

Plant Support Cable 3/32 inch, 500 ft.
- Item CAB5002 $78.00

Plant Support Cable 3/32 inch, 1,000 ft.
- Item CAB5003 $135.20

Cable Clamp 3/32 inch
- Item CAB4000 $0.50

1 ½" Drain Pipe P edrilled 7 hole with Belled End, 9-½ Foot Length on 16 inch centers
- Item BAT0004 $13.00

Street Elbow 1-½ inch ABS PVC
- Item PLSJ4L-SP $2.90

End Cap 1-½ inch ABS Anti-Vapor
- Item PLSJ4S-SP $2.96

Slip Tee 1-½ inch ABS
- Item PLSJ4T-SSS $2.61
Bato Bucket Systems

**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: $151.75
  - Terra Cotta, Bag of 100: $5.00
- **4-½ inch Bato J-Type Truss Hook**
  - Terra Cotta, Case of 8500: $88.74

**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: $16.95

**TWINE**
Poly Twine, Roll of 1,050 Feet: $9.00
Blue Vine Twine, Roll of 10,000 Feet: $27.95

**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 1-799: $0.50
  - Item TOM1015 800-3199: $0.45
  - Item TOM1015 3200-12,799: $0.40
  - Item TOM1015 12,800+: $0.35

**TAPENER**
Max Tapener Machine, HTB-2: $74.95
Tape, HTB-2, Large Hole: $2.12
Tapener Blades, HTB-2, 3 Blades: $9.70
Tapener Staples, HTB-2, 4,800 Staples: $5.18

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: $0.17

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.
## 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.

### 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. Drippers have a RED inlet for easy flow identification.

### Emitter

#### Pressure Compensated:

- **0.50 GPH**
  - Item EMI1002 ......................... $0.45
  - Item EMI1002 ......................... 50+, $0.43

- **1.00 GPH**
  - Item EMI1004 ......................... $0.65
  - Item EMI1004 ......................... 50+, $0.63

- **2.00 GPH**
  - Item EMI1000 ......................... $0.45
  - Item EMI1000 ......................... 50+, $0.43

- **6.00 GPH**
  - Item EMI1001 ......................... $0.60
  - Item EMI1001 ......................... 50+, $0.57

#### Non-Pressure Compensated:

- **0.50 GPH**
  - Item EMI1006 ......................... $0.42
  - Item EMI1006 ......................... 50+, $0.40

- **1.00 GPH**
  - Item EMI1007 ......................... $0.42
  - Item EMI1007 ......................... 50+, $0.40

- **2.00 GPH**
  - Item EMI1008 ......................... $0.42
  - Item EMI1008 ......................... 50+, $0.40

#### Premium CNL Emitter:

- **0.80 GPH**
  - Item EMI1010 ......................... $0.59
  - Item EMI1010 ......................... 50+, $0.56

- **Goof Plugs, Set of 10**
  - Used to correct a mistake or fill a hole from a removed emitter.
  - Item GOO1000 ......................... $1.50

- **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 ......................... $0.35

- **Stabilizer Peg**
  - Item STA1004 ......................... $0.35

#### POLY PUNCH

- **2 in 1 Punch and Cutter**
  - Item PUN7500 ......................... $7.95
  - Item PUN7700 ......................... $16.95

- **Miracle Punch**
  - Item PUN5000 ......................... $17.95

**POLY PIPE FEED LINE**

- **Poly Pipe Feed Line ½ inch**, 500 foot roll
  - Item FEE1500 ......................... $50.00

- **Poly Pipe Feed Line ½ inch**, 250 foot roll
  - Item FEE1525 ......................... $32.25

- **Poly Pipe Feed Line ½ inch**, 100 foot roll
  - Item FEE1510 ......................... $15.95

- **Poly Pipe Feed Line ½ inch for ⅜ inch Poly Pipe**
  - Item FEE2001 ......................... $0.98

- **Coupling Insert ½ inch**
  - Item FEE2003 ......................... $0.38

- **Insert Tee ½ inch**
  - Item FEE2005 ......................... $0.87

- **Insert Elbow ½ inch**
  - Item FEE2006 ......................... $0.67

#### 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 ......................... $0.20

  - **Feed Tube 5/3 mm (spaghetti tube)**,
    - 1000 foot roll
    - Item FEE0054 ......................... $60.00

  - **Feed Tube, 160-220 inch Black**
    - per foot
    - Item FEE1000 ......................... $0.28

  - **Feed Tube, 160-220 inch Black**
    - 1000 foot roll
    - Item FEE1000 ......................... $100.00

#### VALVES

- **Varioflow Valve (Fits 5/3 tubing)**
  - Item EMI1015 ......................... $0.45

- **Shut Off Valve (Greenback)**
  - for ½ inch Poly Pipe
  - Item EMI1014 ......................... $1.60

#### 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 ......................... $0.21
Using Bumblebees

In comparison with other pollinating insects like honeybees, bumblebees are very effective pollinators. They are fast workers (they visit twice as many flowers per minute as honeybees), and because of their size, they can carry relatively heavy loads which enables them to make long foraging trips. Also, due to their large size they often achieve better contact with stamens and pistils than smaller insects.

Bumblebees feel more at ease in greenhouses/tunnels than honeybees, particularly where restricted areas are concerned. Bumblebees are still active at relatively low temperatures (around 10°C) and low light intensity levels.

Another advantage of bumblebees over honeybees, which manifests itself particularly in fruit crops, is the fact that they are not tied to a specific area in the crop. They change trees more often and more easily than honeybees. This benefits the cross-pollination which is often required in fruit. In addition to the labor savings, when using bumblebees growers report more complete pollination and fruit set, more uniform, larger and better quality fruit. There are two sizes of hives currently available:

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 greenhouses 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.

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.

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

BEEHIVE

Natupol Excel (formerly Class A)
Item BEN3021 .....................$195.00
Natupol Excel Startup (formerly Class B)
Item BEN3022 ....................$135.00

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. A 30 x 128 foot house is marginal. 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 .....................$17.00

PETAL TICKLER POLLINATOR

Series Ultima CL
- Lightweight
- Maneuverable
- Versatile
- Cordless
- A 4.8 Volt battery pack as the power source provides up to eight hours of run time before charging is required. Normal charge time is 1-1/2 to 2 hours.
- Variable speed control knob allows precise adjustment to optimize the pollination process.
- Rubber coated vibrating flex-rod provides protection to the flower stem.
- Switch: The standard switch in the Ultima CL has push-on, push-off action, which allows removal of thumb while in operation. A momentary action switch, which requires continuous activating pressure, is available as a special order.

The manufacturer offers a one year limited warranty against defective parts and workmanship.

Petal Tickler Pollinator
Item POL1998 ......................$259.00

Pollinator Battery Pack 4.8V
Replacement battery for cordless pollinator
Item POL1996 .....................$51.80
CropKing NFT 4-6

Perfect introduction system to NFT, Great for educational purposes.

**System Includes:**
- (6) 4 foot channels with a total of 36 plant spaces
- 55” x 55” x 31” LWH
- Square Aluminum Support Table with adjustable legs for leveling
- Completely closed system, including both spouted and smooth end caps to help prevent algae growth
- Removable top caps for easy cleaning
- Nutrient feed line plumbing and drain lines
- Submersible Pump
- Easy to assemble

*(Tank not included; 25 gallon tank recommended)*

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

Item NFT0406 $375.00

---

**4-6 Starter Kit** includes: pH Control Kit, 1 lb. Hydro-Gro Fertilizer, 1 lb. Calcium Nitrate, 200 1-inch Rockwool Cubes, Seed Tray and *Hobby Hydroponics* Book.

Item NFT0406A.................................$49.95

Nutrient Reservoir is not included. (25 gallon container with lid recommended)
CropKing NFT 8-4

System Includes:
• Square Aluminum Stand
• Feed and Drain Plumbing
• (4) 8 foot NFT Growing Channels with Removable Top Covers
• Channel End Caps
• Active Aqua Pump
• 25 Gallon Tank with Lid
• Adjustable feet for Leveling
• Assembly Instructions
• 48 plant positions

CropKing 8-4
Item NFT0804 $695.00

Light Support Rack (pictured above)
Item NFT0804A $114.95

RECOMMENDED ACCESSORIES

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ITEM #</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rockwool AO 25/40 Pad</td>
<td>ROC1004</td>
<td>$10.00</td>
</tr>
<tr>
<td>BlueLab Combo Meter</td>
<td>PHM3000</td>
<td>$199.00</td>
</tr>
<tr>
<td>5 Pounds HydroGro Leafy</td>
<td>FER3020</td>
<td>$19.00</td>
</tr>
<tr>
<td>5 Pounds Calcium Nitrate</td>
<td>FER3025</td>
<td>$7.00</td>
</tr>
<tr>
<td>PH Control Kit</td>
<td>PHT4000</td>
<td>$17.20</td>
</tr>
<tr>
<td>10/20 Seed Tray</td>
<td>TRA1101</td>
<td>$1.40</td>
</tr>
<tr>
<td>A Practical Guide to NFT</td>
<td>BOO0027</td>
<td>$35.00</td>
</tr>
</tbody>
</table>

Overall Footprint: 8'8" x 42" x 56" LWH
(Pictured with Light Support Rack)
CropKing NFT 8-25

The CropKing NFT 8-25 with 300 plant spaces is a great way to test your market for hydroponic lettuce or to supply a farm market with locally grown greens.

The growing channels are constructed from UV stabilized, Food Grade plastic and have removable top covers for ease of cleaning. A cleaner system allows for healthier plants and higher yields.

CropKing eliminates the need for cutting and drilling by pre-punching the top covers.

Our channel comes with end caps to keep out light and prohibits algae growth. The design and height of the CropKing NFT channel works perfectly with a one inch rockwool cube, eliminating the need for filling net pots.

System measures 8’6” x 16’9”

System Includes
- (25) 8 Foot Growing Channels with 300 plant spaces
- Galvanized Steel Support Table
- Nutrient Feed and Return Plumbing
- 1/8 HP Submersible, Continuous Duty Pump
- 100 Gallon Stock Tank
- Growing Instructions

CropKing NFT 8-25
Item NFT0825 $1,695.00

RECOMMENDED ACCESSORIES

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ITEM #</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>CropKing NFT Fertroller</td>
<td>FERT1000</td>
<td>$2795.00</td>
</tr>
<tr>
<td>25 Gallon Mixing Tank (for Fertroller)</td>
<td>TAN2001</td>
<td>$100.50</td>
</tr>
<tr>
<td>50 Pounds HydroGro Leafy</td>
<td>FER1000</td>
<td>$126.00</td>
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<tr>
<td>50 Pounds Calcium Nitrate</td>
<td>FER3014</td>
<td>$29.95</td>
</tr>
<tr>
<td>(1) Case of Rockwool AO 25/40 Pad</td>
<td>ROC1004</td>
<td>$178.80</td>
</tr>
<tr>
<td>10/20 Seed Tray without Holes</td>
<td>TRA1101</td>
<td>$1.40</td>
</tr>
<tr>
<td>BlueLab Combo Meter</td>
<td>PHM3000</td>
<td>$199.00</td>
</tr>
<tr>
<td>A Practical Guide to NFT by C.J. Molyneux</td>
<td>BOO0027</td>
<td>$35.00</td>
</tr>
</tbody>
</table>
CropKing NFT 10-36

This hydroponic system is a great starter system for those interested in commercial hydroponic lettuce production.

The NFT 10-36 is the perfect way to test your market for hydroponic lettuce. This system is completely enclosed to minimize algae growth with a removable top for easy cleaning.

System measures 10'6" x 26'9" feet

System Includes
- (36) 10 foot Growing Channels with 540 plant spaces
- Galvanized Steel Support Table
- Nutrient Feed and Return Plumbing
- (2) 1/8 HP Submersible Pump
- 100 Gallon Stock Tank
- 1 or 2 Channel Seedling Nursery
- Instructions

CropKing NFT 10-36
Item NFT1036 $2,495.00

CropKing NFT 10-36 with Fertroller and (3) 25 Gallon Stock Tanks
Item NFT1036A $5,495.00

RECOMMENDED ACCESSORIES

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ITEM #</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CropKing NFT Fertroller</td>
<td>FERT100</td>
<td>$2,795.00</td>
</tr>
<tr>
<td>25 Gallon Mixing Tank (for Fertroller)</td>
<td>TAN2001</td>
<td>$100.50</td>
</tr>
<tr>
<td>50 Pounds HydroGro Leafy</td>
<td>FER1000</td>
<td>$128.00</td>
</tr>
<tr>
<td>50 Pounds Calcium Nitrate</td>
<td>FER3014</td>
<td>$29.95</td>
</tr>
<tr>
<td>(1) Case of Rockwool AO 25/40 Pad</td>
<td>ROC1004</td>
<td>$178.80</td>
</tr>
<tr>
<td>A Practical Guide to NFT by C.J. Molyneux</td>
<td>BO00027</td>
<td>$35.00</td>
</tr>
</tbody>
</table>
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. In-line 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.

**CO₂ Enrichment and Control System:** The shorter daylight hours of winter limit plant growth. Another limiting factor is the reduced amount of CO₂ in the air. Plants have the ability to use much more CO₂ during photosynthesis than is found in the normal atmosphere. More available CO₂ to use for photosynthesizing and growth means faster and more prolific growing plants. This system monitors the available CO₂ in your greenhouse.
and adjusts it to your desired set point using the iGrow, which controls the CO₂ 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 CO₂. 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).

<table>
<thead>
<tr>
<th>SYSTEM SIZES</th>
<th>WIDTH X LENGTH</th>
<th>PLANT SPACES</th>
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</thead>
<tbody>
<tr>
<td>Freestanding Greenhouse</td>
<td>30 x 128</td>
<td>6,192</td>
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<tr>
<td>Single Bay Gutter Connect Greenhouse</td>
<td>22 x 128</td>
<td>4,653</td>
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<tr>
<td>2-Bay Gutter Connect Greenhouse</td>
<td>44 x 128</td>
<td>9,306</td>
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<td>4-Bay Gutter Connect Greenhouse</td>
<td>88 x 128</td>
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<tr>
<td>6-Bay Gutter Connect Greenhouse</td>
<td>132 x 128</td>
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<td>8-Bay Gutter Connect Greenhouse</td>
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<tr>
<td>16-Bay Gutter Connect Greenhouse</td>
<td>352 x 128</td>
<td>74,448</td>
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</tbody>
</table>

PRICES SUBJECT TO CHANGE

PAGE 19
CropKing Fertroller for NFT
Controls pH & EC

The CropKing Fertroller featuring BlueLab’s new Pro Controller Connect enables the grower to automatically control the EC and pH of the nutrient solution in recirculating NFT growing systems, with the added feature of remote monitoring via cell phone or computer. With automatic EC and pH control, the grower can expect higher production, better crop quality and more time for other greenhouse duties.

The CropKing Fertroller is more than just a controller. It will arrive completely assembled, mounted on a tubular steel stand and wired for 120 volt power. The Pro Controller is specifically for use with greenhouse hydroponic systems. The Fertroller includes a pre-mounted two head pump to deliver “A” & “B” nutrient concentrates. Additionally, there is a single head adjustable pump to deliver pH control solutions.

The Fertroller will provide continuous control of EC and pH of the nutrient solution by adding nutrient and/or pH control solutions as needed. Easily adjustable set points and dosing cycles are displayed along with your desired targets on large (½”) digital readouts. The Fertroller also has user adjustable alarm triggers to work with your alarm system.

Nutrient Concentrate Tanks (3) must be purchased separately, see page 42.

The controller and EC probe are warranted for 2 years and the pH probe warranty is 6 months. Other components carry the manufacturers warranty.

System measures: 40” x 10” x 80” 100 lbs

NFT Fertroller
Item FERT1000 $2,795.00

Replacement Parts for Fertroller

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>PUM6001</td>
<td>Single Head 1 inch Bellows Pump</td>
<td>$255.00</td>
</tr>
<tr>
<td>DOSETRONIC-ATC</td>
<td>pH/Automatic Temperature Control Probe for Dosetronic</td>
<td>$140.00</td>
</tr>
<tr>
<td>DOSETRONIC-EC3</td>
<td>EC Probe for Dosetronic</td>
<td>$60.00</td>
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<tr>
<td>DOSETRONIC-TEMP</td>
<td>Temperature Sensor for Dosetronic</td>
<td>$65.00</td>
</tr>
<tr>
<td>DOSETRONIC-EC2</td>
<td>EC Probe for Sample Board</td>
<td>$75.00</td>
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Replacement Parts for Older Versions (before 2010)

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOSETRONIC-EC2</td>
<td>EC Probe for Sample Board</td>
<td>$75.00</td>
</tr>
</tbody>
</table>

FEATURES:
- Control pH, conductivity and temperature when connected to a dosing system, like the BlueLab® PeriPod™
- Easy to navigate menu to program and adjust settings
- Remote viewing with BlueLab® Connect™ desktop software and mobile app
- Bright, plant-safe green LED display with adjustable brightness
- Simple pH calibration with on screen instructions
- High and low alarm control lockouts
- Auto resume dosing on restart after power loss
- Dosing lockouts to protect from over-dosing
- Replaceable BlueLab® probes
- Use BlueLab® PowerPod™ to connect to other mains operated dosers and/or heating or cooling devices

SPECIFICATIONS:

<table>
<thead>
<tr>
<th>pH</th>
<th>Conductivity</th>
<th>Temperature</th>
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</thead>
<tbody>
<tr>
<td>Units:</td>
<td>pH</td>
<td>EC, CF, TDS (EC x 500)</td>
</tr>
<tr>
<td>Control Range:</td>
<td>0.1-13.9 pH</td>
<td>0.1-4.9 EC, 1-49 CF, 50-2450 TDS (EC x 500)</td>
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<tr>
<td>Resolution:</td>
<td>0.1 pH</td>
<td>0.1 EC, 1 CF</td>
</tr>
<tr>
<td>Accuracy at 25°C or 77°F:</td>
<td>± 0.1 pH</td>
<td>± 0.1 EC, ± 1 CF, ± 50 TDS</td>
</tr>
</tbody>
</table>
NFT Channel

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>FEE1500</td>
<td>Poly Pipe Feed Line ½ inch, 500 foot roll</td>
<td>$45.00</td>
</tr>
<tr>
<td>EMI1013</td>
<td>Barbed Tee Emitter 5/3</td>
<td>$0.19</td>
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<tr>
<td>EMI1005</td>
<td>Emitter Nipple 5mm</td>
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<tr>
<td>FEE0054</td>
<td>Feed Tube 5/3 mm, per foot</td>
<td>$0.20</td>
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<tr>
<td>EMI1015</td>
<td>Variflow Valve</td>
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<tr>
<td>EMI1014</td>
<td>Shut Off Valve “Greenback” for ½ inch Poly Pipe</td>
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<tr>
<td>EMI1016</td>
<td>Threaded Shut Off Valve for ½ inch Poly Pipe</td>
<td>$1.85</td>
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NFT ACCESSORIES

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<td>ROC1004</td>
<td>Rockwool Cube AO25/40</td>
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</tr>
<tr>
<td>CHA9005-8</td>
<td>Top Cover</td>
<td></td>
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<tr>
<td>CHA9005-7</td>
<td>Top Cover</td>
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<tr>
<td>CHA9100</td>
<td>End Cap</td>
<td></td>
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<tr>
<td>FEE1500</td>
<td>Feed Line</td>
<td></td>
</tr>
<tr>
<td>EMI1013</td>
<td>Barbed Tee</td>
<td></td>
</tr>
<tr>
<td>FEE0054</td>
<td>Feed Tube</td>
<td></td>
</tr>
<tr>
<td>CHA9101</td>
<td>End Cap with Spout</td>
<td></td>
</tr>
<tr>
<td>CHA9005-7</td>
<td>Top Cover</td>
<td></td>
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</tbody>
</table>
NFT Growing Channel Extruded Food-Grade PVC

Call for special pricing on large orders. We also offer top covers with no holes and custom hole spacing.

4-5/8” Wide x approx. 1-1/4” Deep Channel

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHA4000</td>
<td>Item CHA4000...................$5.20 ea.</td>
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</tr>
<tr>
<td>CHA4008</td>
<td>Item CHA4008...................$10.30 ea.</td>
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<tr>
<td>CHA4010</td>
<td>Item CHA4010...................$13.00 ea.</td>
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<tr>
<td>CHA9010</td>
<td>Item CHA9010...................$16.65 ea.</td>
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<tr>
<td>CHA9012</td>
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10 Foot Length

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<tr>
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12 Foot Length

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<tbody>
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<td>CHA9012</td>
<td>Item CHA9012...................$17.83 ea.</td>
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TOP COVERS

5 Foot Length, 7 Square Holes

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
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</thead>
<tbody>
<tr>
<td>CHA9005-7</td>
<td>Item CHA9005-7................1-399 $5.23</td>
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<tr>
<td>CHA9005-7</td>
<td>Item CHA9005-7................400-999 $4.70</td>
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<td>CHA9005-7</td>
<td>Item CHA9005-7................1000-1999 $4.24</td>
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<tr>
<td>CHA9005-7</td>
<td>Item CHA9005-7................2000+ $3.81</td>
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5 Foot Length, 8 Square Holes

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
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<tbody>
<tr>
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<td>Item CHA9005-8................1-399 $5.23</td>
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<tr>
<td>CHA9005-8</td>
<td>Item CHA9005-8................400-999 $4.70</td>
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<tr>
<td>CHA9005-8</td>
<td>Item CHA9005-8................1000-1999 $4.24</td>
<td></td>
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<tr>
<td>CHA9005-8</td>
<td>Item CHA9005-8................2000+ $3.81</td>
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</table>

4 Foot Length, 6 Square Holes

<table>
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<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
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<tbody>
<tr>
<td>CHA9004</td>
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<tr>
<td>CHA9004</td>
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<tr>
<td>CHA9004</td>
<td>Item CHA9004...................1250-2499 $3.48</td>
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<tr>
<td>CHA9004</td>
<td>Item CHA9004...................2500+ $3.13</td>
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END CAP

4-5/8” End Cap

<table>
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<th>Description</th>
<th>Per Foot</th>
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<tr>
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<td>Item CHA9100...................1-249 $1.70</td>
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<tr>
<td>CHA9100</td>
<td>Item CHA9100...................250-624 $1.50</td>
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<tr>
<td>CHA9100</td>
<td>Item CHA9100...................625-1249 $1.40</td>
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<tr>
<td>CHA9100</td>
<td>Item CHA9100...................1250+ $1.15</td>
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4-5/8” End Cap with Spout

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<tr>
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<th>Description</th>
<th>Per Foot</th>
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<tbody>
<tr>
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<tr>
<td>CHA9101</td>
<td>Item CHA9101...................250-624 $1.50</td>
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<tr>
<td>CHA9101</td>
<td>Item CHA9101...................625-1249 $1.40</td>
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<tr>
<td>CHA9101</td>
<td>Item CHA9101...................1250+ $1.15</td>
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</table>

3-3/4” Wide x approx. 1” Deep Channel

Per Foot

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
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</thead>
<tbody>
<tr>
<td>CHA4000</td>
<td>Item CHA4000...................$1.30 ea.</td>
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<tr>
<td>CHA4008</td>
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10 Foot Length

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
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</thead>
<tbody>
<tr>
<td>CHA4010</td>
<td>Item CHA4010...................$13.00 ea.</td>
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12 Foot Length

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
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<tbody>
<tr>
<td>CHA4012</td>
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TOP COVERS

5 Foot Length, 7 Square Holes

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHA3000</td>
<td>Item CHA3000...................1-199 $5.50</td>
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<tr>
<td>CHA3000</td>
<td>Item CHA3000...................200-499 $5.15</td>
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<td>Item CHA3000...................1,000+ $4.05</td>
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5 Foot Length, 8 Square Holes

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<thead>
<tr>
<th>Item Code</th>
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<tbody>
<tr>
<td>CHA3000</td>
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4 Foot Length, 6 Square Holes

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<tr>
<th>Item Code</th>
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<tbody>
<tr>
<td>CHA3004</td>
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<td>CHA3004</td>
<td>Item CHA3004...................2500+ $3.13</td>
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END CAP

10” Wide x approx. 2” Deep Channel

End Cap

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<tr>
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<tr>
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<td>CHA3003</td>
<td>Item CHA3003...................$1.80 ea.</td>
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12 Foot Channel

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<th>Description</th>
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<td>Item CHA3000...................1-199 $5.50</td>
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<td>CHA3000</td>
<td>Item CHA3000...................200-499 $5.15</td>
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<tr>
<td>CHA3000</td>
<td>Item CHA3000...................500-999 $4.75</td>
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12 Foot Top Cover

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<th>Item Code</th>
<th>Description</th>
<th>Per Foot</th>
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<td>CHA3004</td>
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9-1/2” Wide x approx. 2” Deep Channel

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<th>Item Code</th>
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<tbody>
<tr>
<td>CHA4002</td>
<td>Item CHA4002...................$1.70 ea.</td>
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Wide Channels

used for CropKing Microgreens, Forage Crops, Nursery

10” Wide x approx. 2” Deep Channel

45° Elbow

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<tr>
<th>Item Code</th>
<th>Description</th>
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<tr>
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<td>CHA4114</td>
<td>Item CHA4114...................250-624 $1.40</td>
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<td>CHA4114</td>
<td>Item CHA4114...................625-1249 $1.25</td>
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<td>CHA4114</td>
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PVC Cement, 4oz

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PVC Cement, Pint

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<tr>
<th>Item Code</th>
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PVC Cement, Quart

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PVC Cleaner, 4oz

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PVC Cleaner, Pint

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PVC Cleaner, Quart

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PVC Primer, 4oz

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PVC Primer, Pint

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PVC Primer, Quart

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<tr>
<td>PLMPVCRP-QRT</td>
<td>Item PLMPVCRP-QRT.........$14.70</td>
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</table>
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 ornaments.

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.

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           $3,345.00

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.

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, filtration unit, UL-listed air pump and hydroponic media.

Item AQUHILM01           $3,395.00

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 section 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.....................$99.95

ACCESSORIES
Tank Heater, 1000 watt Submersible with Digital Controller- Industrial Quality
Item AQUHEAT01_____________ $485.00

Viewing Window, 1 x 2 foot
Item AQUHWIN01_____________ $99.95

Tap Water Conditioner, 1 Gallon
Item TAPWA01________________ $42.70

Float Valve for Automatic Filling
Item FLOV001______________ $46.00

Beneficial Bacteria, Dry. 0.8 Ounces
Item AQUHBENBACPDR-1 ______ $26.40

Dip Net, 5 Foot
Item AQUUNET01_____________ $39.00

Seed Starter Kit includes 10-20 Tray, 1 Pad of 1-½ inch Rockwool and 2 inch Dome
Item SEEDSTR01______________ $24.95

Stand for Aquaponics growing bed
Item AQUHSTAND____________ $449.95

Digital Thermometer
Item AQUHTHER______________ $48.00

Air Pump for AQUHS300, 100 inch max depth, 92 running watts, 115V/60 Hz
Item AQUA0014_______________ $431.80

Air Pump for AQUHILM01, Outdoor, 81 inch max depth, 48 running watts
Item AQUA0013_______________ $349.70

pH Test Strip Kit, 100 Strips
Item PHK2000________________ $19.00

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_______________ $250.00

System shown with optional window
System shown with optional window and stand

PRICES SUBJECT TO CHANGE
DO YOU HAVE AN EXISTING GREENHOUSE AND WANT TO GROW HYDROPONICALLY?

In most cases, we can fit an existing structure with our NFT 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

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

The FodderKing 4-8 is our smallest fodder system, perfect for those only needing a small amount of hydroponic fodder sprouts each day. Whether you’re feeding twenty chickens or one cow, the daily production of your own nutritious fodder is economically beneficial and lots of fun! Larger space between shelves allows room for supplemental lighting if desired.

System Includes:
- (8) - 4' L x 10" W UV stabilized, food grade PVC growing channels
- 2 channels per level / 4 levels high
- 400 GPH submersible pump
- Overall footprint of assembled system is 4'6" L x 2'2" W x 5'6" H
- 1 soaking bucket with 2 mesh liners
- 27 square feet of growing area
- Capable of producing 23 pounds a day
- Perfect for the hobby farmer

Item FK48 $850.00
CropKing FodderKing 6-24

The FodderKing 6-24 is identical to our large model in every way except for length. It is perfect for entry level growers or someone experimenting with the addition of fodder to their feeding regime. At an extremely competitive price this unit is a great way to "get your feed wet" growing hydroponic fodder sprouts.

System Includes:
- (24) - 6’ L x 10” W UV stabilized, food grade PVC growing channels
- 4 channels per level / 6 levels high
- Pump, 1/8 HP pond
- Overall footprint of assembled system is 7’ L x 4’ 2” W x 6’10” H
- 3 soaking buckets with 6 mesh liners
- 120 square feet of growing area
- Capable of producing 105 pounds of fodder daily
- Tank not included

Item FK624  $1,950.00
CropKing FodderKing 12-24

With only 20 minutes of labor a day, you can produce up to 210 pounds of hydroponic fodder sprouts a day. Each galvanized steel-supported system also includes all necessary plumbing, a submersible pump, timer and detailed operational instructions. All of these systems are recirculating and drain-to-waste compatible, making growing your own fodder a breeze!

System Includes:
- (24) - 12’ L x 10” W UV stabilized, food grade PVC growing channels
- 4 channels per level / 6 levels high
- Pump, 1/8 HP pond
- Overall footprint of assembled system is 13’ L x 4’ 2” W x 6’10” H
- 3 soaking buckets with 6 mesh liner
- 240 square feet of growing area
- Tank not included

Item FK1224  $2,950.00
CropKing MicroGreen Rack

A MicroGreen is the shoot of a vegetable plant that is picked just after the first few true leaves have developed. MicroGreens are often used as a garnish and are tender, delicate and full of flavor! They are ready for harvest approximately two weeks after seeding.

Our unique hydroponic MicroGreen growing rack is designed to allow for more sunlight to reach between each level. There is even enough space to add artificial lighting above each level. With 4 levels per rack and 4 channels per level, the 16 channels will allow you to harvest a full channel 3-4 times per week. As an increasingly popular ingredient, local chefs will love having fresh, beautiful MicroGreens available all year around.

System Includes:
- Single rack with nutrient feed and drain plumbing
- (16) - 12’ L x 10” W PVC growing channels
- 4 channels per level / 4 levels high
- Measurement of complete rack is 13’ L x 4’2” W x 6’ 4” H
- Support rack is made of square galvanized steel
- Pump, 1/8 HP 1900GPH
- 2 - 10” rolls of burlap
- Digital Timer
- Instruction Manual
- Tank not included

Item MGSINGLERACK $2,350.00

Shown with optional lights and reservoir*
CROPKING GROWER’S WORKSHOP

FIVE DAY INTENSIVE

The five day 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 (2-person max)
- Scheduled throughout the year
- Content tailored to individual’s skill/experience level
- Lettuce and tomato production covered
- Includes course materials and lunch each day

CALL FOR DATE AVAILABILITY AND TO RESERVE YOUR WEEK
330-302-4203
WWW.CROPKING.COM
Greenhouses

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
- Structural aluminum gutters
- Tensile strength of 50,000- 55,000 PSI
- Gutter has base extruded into the aluminum gutter
- Tubing is Allied Gatorshield Steel

<table>
<thead>
<tr>
<th>LENGTH</th>
<th>48'</th>
<th>72'</th>
<th>96'</th>
<th>128'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame with 8’ high gutters</td>
<td>1 Bay</td>
<td>$4398</td>
<td>$6269</td>
<td>$7785</td>
</tr>
<tr>
<td></td>
<td>Additional Bay</td>
<td>$3143</td>
<td>$4407</td>
<td>$5492</td>
</tr>
<tr>
<td>Cover with 8’ high gutters</td>
<td>1 Bay</td>
<td>$1465</td>
<td>$1967</td>
<td>$2036</td>
</tr>
<tr>
<td></td>
<td>Additional Bay</td>
<td>$490</td>
<td>$613</td>
<td>$774</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LENGTH</th>
<th>48'</th>
<th>72'</th>
<th>96'</th>
<th>128'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame with 10’ high gutters</td>
<td>1 Bay</td>
<td>$5377</td>
<td>$7571</td>
<td>$9417</td>
</tr>
<tr>
<td></td>
<td>Additional Bay</td>
<td>$3798</td>
<td>$5243</td>
<td>$6513</td>
</tr>
<tr>
<td>Cover with 10’ high gutters</td>
<td>1 Bay</td>
<td>$1757</td>
<td>$2364</td>
<td>$2455</td>
</tr>
<tr>
<td></td>
<td>Additional Bay</td>
<td>$490</td>
<td>$613</td>
<td>$774</td>
</tr>
</tbody>
</table>
**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

<table>
<thead>
<tr>
<th><strong>12’ WIDE GREENHOUSE</strong></th>
<th><strong>15’ WIDE GREENHOUSE</strong></th>
<th><strong>18’ WIDE GREENHOUSE</strong></th>
<th><strong>24’ WIDE GREENHOUSE</strong></th>
<th><strong>30’ WIDE GREENHOUSE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>WITH 3 PURLINS</td>
<td>WITH 1 PURLIN</td>
<td>WITH 3 PURLINS</td>
<td>WITH 3 PURLINS</td>
<td>WITH 5 PURLINS AND CROSS BRACE</td>
</tr>
<tr>
<td>Center height is 7’7”</td>
<td>Center height is 7’</td>
<td>Center height is 9’6”</td>
<td>Center height is 12’5”</td>
<td>Center height is 12’</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td><strong>Frame</strong></td>
<td><strong>Double Layer Cover</strong></td>
<td><strong>Single Layer Cover</strong></td>
<td><strong>Length</strong></td>
</tr>
<tr>
<td>24</td>
<td>$797</td>
<td>$614</td>
<td>$370</td>
<td>24</td>
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<td>36</td>
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<tr>
<td>96</td>
<td>$2135</td>
<td>$1198</td>
<td>$657</td>
<td>96</td>
</tr>
</tbody>
</table>

*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*
Greenhouses

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

<table>
<thead>
<tr>
<th>SIZE</th>
<th>STRUCTURE WITH DOOR</th>
<th>DOUBLE COVER/ INFLATION FAN/ ALUMINUM COVER LOCK</th>
</tr>
</thead>
<tbody>
<tr>
<td>24’ x 48’</td>
<td>$3,485</td>
<td>$1,280</td>
</tr>
<tr>
<td>24’ x 96’</td>
<td>$6,105</td>
<td>$1,655</td>
</tr>
<tr>
<td>30’ x 48’</td>
<td>$3,790</td>
<td>$1,885</td>
</tr>
<tr>
<td>30’ x 96’</td>
<td>$6,679</td>
<td>$1,989</td>
</tr>
</tbody>
</table>

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!

CropKing is an NRCS approved vendor
Greenhouses

INTRODUCING THE
HYDROSHELD

PROFESSIONAL-GRADE HYDROPONIC TECHNOLOGY DESIGNED FOR HOMEOWNERS, RESTAURANTS AND SCHOOLS.

Hydrosheled details:
• 10 x 12’ footprint
• 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
• 8-bucket hydroponic growing system (up to 16 plants)
• 3 tray NFT growing system (36 plants)

Hydrosheled is a turnkey, ready-to-install hydroponic greenhouse, complete with all required systems, technology, materials and instructions necessary to begin growing immediately.

Hydrosheled is perfect for vining vegetables (tomatoes, cucumbers, peppers), leafy vegetables (lettuce, basil, greens) and a large variety of fruits. It provides the ideal environment for year-round growth, regardless of your climate.

$8,995

VISIT CROPKING.COM OR
CALL 330-302-4203 FOR MORE INFORMATION

PRICES SUBJECT TO CHANGE
ROCKWOOL CUBES
The AO25/40 rockwool cube is slightly under 1 inch square at the top, and is slightly over 1-1/2 inch in depth. The hole is 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 ---------------------- $10.00

1 inch AO25/40 Cube, Case of 30 Pads
Item ROC1004 1-11 $178.80
Item ROC1004 12-29 $168.90
Item ROC1004 30+ $162.60

The AX25/40 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 ---------------------- $10.00

1 inch AX25/40 Cube, Case of 30 Pads
Item ROC1006 1-11 $178.80
Item ROC1006 12-29 $168.90
Item ROC1006 30+ $162.60

The AO36/40 rockwool cube is slightly under 1-1/2 inch square at the top, and is slightly over 1-1/2 inch in depth. The hole on the AO36/40 is on the wide end of the cube. It is commonly used for starting lettuce and some herbs. Designed to be used with the propagation blocks which have a hole to accept the AO36/40.

1-1/2 inch AO36/40 Cube, Pad of 98 Cubes
Item ROC1008 ---------------------- $10.00

1-1/2 inch AO36/40 Cube, Case of 30 Pads
Item ROC1008 1-11 $178.80
Item ROC1008 12-29 $168.90
Item ROC1008 30+ $162.60

2 inch AO50/40 Cube, Pad of 50 Cubes
Item ROC5000 ---------------------- $10.00

2 inch AO50/40 Cube, Case of 30 Pads
Item ROC5000 ---------------------- $178.00

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 1-1/2 inch 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 ---------------------- $3.14

MM40/40 Cube, Case of 150 Strips
Item ROC4041 1-11 $282.00
Item ROC4041 12+ $244.50

MM50/40 Cube, Strips of 12
Item ROC1011 ---------------------- $4.91

MM50/40 Cube, Case of 120 Strips
Item ROC1011 1-11 $237.80
Item ROC1011 12+ $220.80

The DM4-G propagation block is 3 inch square by 2-1/2 inch deep. It has a hole to accept the AO36/40 cube. It is commonly used for tomatoes, cucumbers, and peppers. The DM5-G propagation block is 3 inch square by 3 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 1-1/2 inch Holes
Item ROC1002 ---------------------- $0.55

3 inch DM5-G 42x40 Block with 1-1/2 inch Holes, Case of 384
Item ROC1002 1-14 $96.00
Item ROC1002 15+ $88.32

The DM6-G propagation block is 4 inch square by 2-1/2 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 1-1/2 inch Holes
Item ROC1019 ---------------------- $0.68

5 inch DM6-G 42x40 Block with 1-1/2 inch Holes, Case of 216
Item ROC1019 1-14 $77.76
Item ROC1019 25-99 $73.44

VITAL SLABS
5.9 x 3 x 35.4 inch Slab
Item ROC0998 ---------------------- $5.81

5.9 x 3 x 39.4 inch Slab
Item ROC0999 1-11 $45.00
Item ROC0999 12+ $35.52

7.9 x 3 x 35.4 inch Slab
Item ROC0996 1-11 $60.00
Item ROC0996 12+ $47.40

7.9 x 3 x 39.4 inch Slab
Item ROC0997 1-11 $66.84
Item ROC0997 12+ $52.80
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............................... $21.95
'other sizes available

Burlap for Microgreens
Untreated agricultural grade. Price per roll of 100 yards
10-inch
Item MGBURLAP10....................1-4 $52.00
Item MGBURLAP10....................5+ $45.00
9-inch
Item MGBURLAP9....................1-4 $42.00
Item MGBURLAP9....................5+ $39.00

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.

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 PER3000________________________ $0.82

Empty Perlite Grow Bags, 3 mil, Case of 250
Item PER3000..........................1-4 $97.50
Item PER3000..........................5-9 $95.00
Item PER3000..........................10+ $92.50

Perlite Bag Sealer, 12 inch with a 3 mm thick seal
Item PER4001..........................$40.00

Filled Perlite Grow Bag (1-1/3 cubic foot of perlite)
Item PER3000________________________ 1-100 $6.75
Item PER3000________________________ 101-999 $5.80
Item PER3000________________________ 1000+ $5.45

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 efficient and simple disposal. Size: 9W x 8L x 17-1/2H inches

Grow Bag with Holes, white/black
Item BAG3001________________________ 1-499 $0.60
Item BAG3001________________________ 500-999 $0.36
Item BAG3001________________________ 1000-2499 $0.33
Item BAG3001________________________ 2500+ $0.29

Organic Ellepot Grow Plugs
Meeting the USDA organic standards, Ellepots are sustainable organic growing plugs. They provide fast, healthy root growth, even vegetative growth, higher take rates, and reduced labor costs. 2 plug sizes are available: A 23mm plug suitable for leafy crops that fit perfectly into CropKing’s NFT channels and a 35mm plug suitable for vine crops and longer-term crops. For large volume orders (truckload) call for pricing and available tray configurations.

Available in pallet quantities, call for pricing.

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 medium 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

Thinctut 276ct. Single Dibble
Item OAS1100

Thinctut 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
1-4 cases................................. $92.50
5-9 cases................................. $91.10
10-24 cases.............................. $89.05
25+ cases................................. $87.70

‘Order 31+ cases of Oasis and receive FREE SHIPPING

Oasis Horticubes

Perlite Grow Bags

Organic Ellepot Grow Plugs

Oasis Horticubes
**Greenhouse Supplies**

**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 AIK0600........................................$90.00

**Air Inflation Fan**

- Item AIK0600........................................$58.00

**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.

- Item AJK0200.......................................$15.30

**Cross Connectors**

- Item CRO1315.........................................$1.80

- Item CRO1660.........................................$1.80

- Item CRO2000........................................$2.00

**Bracket**

- Item BRA2400......................................$4.48

- Item BRA2401......................................$3.83

- Item BRA2600......................................$3.27

**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.

- Item FUN1010 .................................... $42.00

**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

- Item DOO1000.................................$395.00

**Patch Tape**
Poly Patch Tape, 48 Feet

- 2 inch Item PAT2000............................$8.95

- 4 inch Item PAT4000............................$17.95

- 6 inch Item PAT6000............................$24.95

Poly Patch Tape, 24 Feet

- 10 inch Item PAT1000...........................$42.95

**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 ...............................1-9 $19.95

- Item TAP2000 ................................10+ $17.95

**Brace Bands**

- Item BRT1315.................................$0.93

- Item BRT1660.................................$1.32

- Item BRT1900.................................$1.32

---

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 Infrared™ – a Tufflite greenhouse 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 shades.
- 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 Infrared 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.......... $220.00 Roll
20’ x 130’........ Item FIL2013.......... $286.00 Roll
24’ x 100’........ Item FIL2410.......... $264.00 Roll
24’ x 130’........ Item FIL2413.......... $344.00 Roll
24’ x 150’........ Item FIL2415.......... $396.00 Roll
32’ x 100’........ Item FIL3210.......... $352.00 Roll
32’ x 130’........ Item FIL3213.......... $458.00 Roll
32’ x 150’........ Item FIL3215.......... $528.00 Roll
40’ x 100’........ Item FIL4010.......... $440.00 Roll
40’ x 130’........ Item FIL4013.......... $572.00 Roll
40’ x 150’........ Item FIL4015.......... $660.00 Roll
48’ x 100’........ Item FIL4810.......... $528.00 Roll
48’ x 130’........ Item FIL4813.......... $687.00 Roll
48’ x 150’........ Item FIL4815.......... $792.00 Roll

Tufflite IVT™ – 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 Film, 4-year: Outside layer

20’ x 100’........ Item FIL2001.......... $192.00 Roll
20’ x 130’........ Item FIL2031.......... $248.00 Roll
20’ x 150’........ Item FIL2061.......... $287.00 Roll
24’ x 100’........ Item FIL2401.......... $230.00 Roll
24’ x 130’........ Item FIL2431.......... $299.00 Roll
24’ x 150’........ Item FIL2451.......... $345.00 Roll
32’ x 100’........ Item FIL3201.......... $306.00 Roll
32’ x 130’........ Item FIL3231.......... $398.00 Roll
32’ x 150’........ Item FIL3251.......... $459.00 Roll
40’ x 100’........ Item FIL4001.......... $383.00 Roll
40’ x 130’........ Item FIL4031.......... $498.00 Roll
40’ x 150’........ Item FIL4051.......... $574.00 Roll
48’ x 100’........ Item FIL4801.......... $460.00 Roll
48’ x 130’........ Item FIL4831.......... $597.00 Roll
48’ x 150’........ Item FIL4851.......... $689.00 Roll

6 mil White UVA Film, 4-year: Outside Layer

24’ x 100’........ Item FIL6240.......... $257.00 Roll
32’ x 100’........ Item FIL6320.......... $343.00 Roll
40’ x 100’........ Item FIL6400.......... $429.00 Roll

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

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 the material. Use one wire to hold the roof in place and then use a second wire to hold the material.

- Efficient 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 linear foot (does not bend).

4 Foot Wiggle Wire, 12 gauge wide
Item WIG1002.................... $1.00
8 Foot Standard Wiggle Wire Base
Item WIG1001.................... $8.00
12 Foot Standard Wiggle Wire Base
Item WIG1000.................... $12.00
24 Foot Universal Wiggle Wire Base
Item WIG2000.................... $44.14

QuickLock

QuickLock is our extruded aluminum poly locking device. It is designed to provide an attractive and efficient 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 linear foot (does not bend).

10 Foot Quicklock Cap Only
Item SUR1003.................... $10.10
10 Foot Quicklock Base Only
Item SUR1004.................... $6.95

Sun Clear

When diluted and applied to dry plastic surfaces, such as flexible or rigid greenhouse 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.................... $39.95
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 .................................. $189.70
26' x 130'
Item SHA1012 ................................ $551.60
Per Square Foot
26' x 130'
Item SHA1013 .................................. 1-1999 $0.19
Item SHA1013 ................................ 2000-2999 $0.18
Item SHA1013 ................................ 3000+ $0.17
50% White Shade Cloth
8' x 130'
Item SHA2017 ................................ $262.80
26' x 130'
Item SHA1050 ................................ $769.40
Per Square Foot
26' x 130'
Item SHA1051 .................................. 1-1999 $0.26
Item SHA1051 ................................ 2000-2999 $0.24
Item SHA1051 ................................ 3000+ $0.23
40% Black Shade Cloth
Per Square Foot
Item SHA1011 .................................. 1-1999 $0.15
Item SHA1011 ................................ 2000-2999 $0.14
Item SHA1011 ................................ 3000+ $0.13
50% Black Shade Cloth
Per Square Foot
Item SHA1022 .................................. 1-1999 $0.15
Item SHA1022 ................................ 2000-2999 $0.14
Item SHA1022 ................................ 3000+ $0.13
60% Black Shade Cloth
Per Square Foot
Item SHA1032 .................................. 1-1999 $0.15
Item SHA1032 ................................ 2000-2999 $0.14
Item SHA1032 ................................ 3000+ $0.14
70% Black Shade Cloth
Per Square Foot
Item SHA1042 .................................. 1-999 $0.16
Item SHA1042 ................................ 2000-2999 $0.15
Item SHA1042 ................................ 3000+ $0.14

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 ...................................... $0.34
60% Aluminet, per square foot
Item SHA3100 ...................................... $0.37

EZ KOOD 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 ...................................... $28.50

WE ACCEPT ALL MAJOR CREDIT CARDS ON ORDERS AT 330-302-4203
Lights

HORTILUX HPS BULBS

Extend the growing season to 365 days a year with Eye HortiluxTM grow lamps. Choose Eye Hortilux lamps to raise your lighting system to a new level of performance, optimizing spectral energy levels that promote vigorous plant growth.

EN lamps are completely lead-free and contain less mercury than standard HPS lamps. The environmentally friendly lamps (EN) can usually be disposed of without being recycled; however, please check your state laws first, which may be more strict than federal law. For information on how to recycle your lamp, visit www.lamprecycle.org.

Hortilux Super HPS Enhanced Spectrum grow lamps fine-tune your lighting system to provide optimum spectral energy levels that promote vigorous plant growth. The Eye Super HPS EN Grow Lamps provide 17% more total energy and 25% more energy in the violet, blue, and green spectrum than standard high pressure sodium lamps. These lamps are environmentally friendly and pass EPA TCLP test criteria as non-hazardous waste.

400W
- Item LIG2014 $68.00
- Item LIG2014 6+ $60.00

600W
- Item LIG2015 $85.00
- Item LIG2015 6+ $89.00

1000W
- Item LIG2016 $90.00
- Item LIG2016 6+ $86.00

GLX

- 8 foot Power Cord with 240V Plug
- Warranty: 2-Year Ballast; 1-Year Reflector and Bulb
- Ships in 3 boxes

Magnetic Ballast 1000W Halide
- Item LIG7502 $235.00

GLX Reflector (7¼ H x 12¼ W x 18¼ L inches)
- Item LIG7503 $74.95

1000 Watt Horizontal Halide Bulb
- Item LIG7504 $54.95

GLX Lens System
- Item LIG7501 $14.95

LUMIGROW PRO 325

325W LED LIGHT

System, 88-264V (auto-switching) The Pro 325 system is engineered for commercial greenhouses and controlled environment agriculture (CEA) environments. Like all LumiGrow solutions, the Pro 325 light eliminates waste inherent to HID lights by focusing photons in plants’ primary response regions rather than in spectral regions plants can’t use. All of the light produced by the Pro 325 system is productive for plants, yielding 70% energy savings versus the 1000W HID lights they replace.

- Item LIG1000 $585.00

HID (see next page)

The Commercial DE Lighting System is state-of-the-art double-ended technology that uniformly delivers optimum PAR value. The Commercial DE Lighting System gives you the unique ability to remove the ballast from the reflector so it can be used remotely, allowing you to operate the ballast outside of your grow room, to effectively reduce heat load. The Phantom Ballast Commercial DE drives maximum PAR value. This ballast is designed with a high precision microprocessor that makes it totally silent, lightweight, highly efficient, and extremely reliable.
- High frequency design optimized for double-ended 1000W lamps
- High-precision microprocessor control
- Four-way dimming: 60%, 75%, 100%, and Super Boost (up to 1150W lamp output)
- LED status indicator
- Internal RF shielding
- Patented ignition control
- End of lamp life signal
- Auto restrike feature protects valuable lamps from damaging power interruptions
- Cooling fins for maximum heat dissipation
- Suitable for use in damp locations
- Features an IEC power connection and comes with an 8’ 240V 16/3 AWG power cord
- 240V

Call for quantity discounts: 330-302-4203
Growing Accessories

COMMERCIAL DE ENCLOSED LIGHTING SYSTEM, 240V
DE1000Z Reflector: Hydrofarm engaged a renowned American lighting engineer to design the most efficient DE Enclosed type reflector on the market. This reflector delivers focused light, and effectively dissipates heat while operating the DE bulb at ideal temperatures, for maximum light output and lamp life.

- Double-ended system delivers higher PAR value with incredible uniformity
- Enclosed design for maximum focused light output, optimum heat management, and longer lamp life
- Highly efficient in overlapping multi-light configurations
- Premium aluminum European hammer-tone interior: 99.85% pure, 95% reflectivity
- European-made VS K12 x 30S high temperature lamp holders
- DE Bulb: This package features a European made premium DE lamp with a rated PAR output of 2100 μmol

Item LIG6010.........................$424.95

COMMERCIAL DE OPEN LIGHTING SYSTEM, 240V DE1000 LH
Reflector: This reflector delivers uniform growth over a broad footprint, and effectively dissipates heat while operating the DE bulb at ideal temperatures, for maximum light output and lamp life.

- Double-ended system delivers higher PAR value with incredible uniformity
- Open design for maximum light output, optimum heat management, and longer lamp life
- Highly efficient in overlapping multi-light configurations
- Premium aluminum European hammer-tone interior: 99.85% pure, 95% reflectivity
- European-made VS K12 x 30S high temperature lamp holders
- DE Bulb: This package features a European made premium DE lamp with a rated PAR output of 2100 μmol

Item LIG6000.........................$424.95

FLUORESCENT
Hydrofarm’s T5 EnviroGro system delivers performance, flexibility, and high lumen output in any growing environment. These low-profile systems allow you to choose multiple hanging configurations to meet your garden’s design. They combine a specular aluminum interior with energy-efficient/high-output T5 bulbs and put out double the light energy of normal fluorescent systems. T5’s cannot ship UPS, call our sales staff to arrange shipping

- T5 4FT Fixture with Bulb
- T5 fluorescent bulb includes electronic ballast, clips, & fixture
- Low heat
- No frequency flickering
- 6’ power cord
- Includes fluorescent 6400K tube

T5 4FT 4 BULB FIXTURE WITH BULBS
- Powder coated steel housing
- Low profile
- Hangs 3 ways - overhead, vertical, or horizontal
- 10’ grounded power cord
- Includes fluorescent 6400K tubes
- 3’H x 13½’W x 46’L

Item LIG0037..........................$28.95

T5 4FT 8 BULB 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

Item LIG0018..........................$199.95

T5 4FT 12 BULB FIXTURE WITH BULBS
- 3’H x 39’W x 46’L
- Rated up to 60,000 lumens
- Includes 12 54W HO T5 tubes (6400k)
- Multiple on/off switches on 6, 8, and 12 tube fixtures allow you to control the amount of light output/coverage as needed
- High efficiency specular aluminum for maximum reflectivity
- Powder coated steel housing
- Hangs 3 ways - overhead, vertical, or horizontal
- 10’ grounded. 120 volt power cord

Item LIG0019..........................$333.95

The T5 systems can be connected using the **Daisy-Chain Cable**

Item LIG0038..........................$2.00

T5 4FT 6 BULB 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
- 2.75’H x 19.75’W x 46.25’L

Item LIG0017..........................$162.95
Growing Accessories

Trays

Seedling Starter Tray holds 72 seedlings
Item TRA0072 ........................................... $1.70

10/20 Seed Tray with Holes
Item TRA1100 ........................................ 1-50 $1.40

10/20 Seed Tray with Holes, Case of 100
Item TRA1100 ........................................ 1-9 $122.00
Item TRA1100 ........................................ 10+ $117.00

10/20 Seed Tray without Holes
Item TRA1101 ........................................ 1-50 $1.40

10/20 Seed Tray without Holes, Case of 100
Item TRA1101 ........................................ 1-9 $122.00
Item TRA1101 ........................................ 10+ $117.00

Web Seedling Tray, 50 per case
Item TRA1104 ........................................ 1-49 $1.00
Item TRA1104 ........................................ 50-199 $0.95
Item TRA1104 ....................................... 200-499 $0.90
Item TRA1104 ....................................... 500+ $0.81

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 ................................... $2.50

7 Inch Humidity Domes
Item DOM6000 ................................... $6.50

Net Pots

Net pots are used in hydroponics 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 nutrient solution. With net pots, root growth can be monitored and demonstrated easily, without damaging the roots.

2 inch Net Pot
Item NET1000 ...................................... 1-100 $0.20
Item NET1000 ...................................... 101-999 $0.10
Item NET1000 .................................... 1000+ $0.07

2 inch Net Pot
Item NET1000 ................................ Case of 5418 $242.00

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 ....................................... $129.95

60 x 21 Add-On Propagation Heat Mat, 140 watts
Item PRO6001 ....................................... $114.95

20 x 20 inch 2 Tray Propagation Heat Mat
Item PRO1002 ....................................... $46.95

48 x 20 inch 4 Tray Propagation Heat Mat
Item PRO1000 ....................................... $79.95

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 receptacle 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 ....................................... $39.95

Berry Seeder

- Seed up to 250 trays per hour with unequalled 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, inspection light, seed hopper with stand, and shopVAC.

Complete Seeder System
Item SEE1000 ...................................... $1094.00

Seeder System with Base
(plate not included)
Item SEE1001 ....................................... $574.00

200 Seed Base Plate for Pelletized Seeds
Item SEE1003 ....................................... $186.00

200 Seed Base Plate for Precision Seeds
Item SEE1003 ....................................... $186.00

Dibbler Plate
Item SEE1004 ....................................... $176.00

* 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/sunrise 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 .................. $34.95

**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 outages of any length

**Arkal Filters**
3/4 inch Arkal Filter, 140 Mesh/100 microns:
Item STR1009 ........... $25.00

1 inch Arkal Filter, 140 Mesh/100 microns:
Item STR1010 ........... $79.00

3/4 inch Replacement Cartridge, 140 Mesh:
Item STR1013 ........... $18.00

1 to 1-1/2 inch Black Replacement Cartridge, 140 Mesh:
Item STR1011 ........... $38.00

Replacement O-Ring for 3/4 inch Arkal Filter
Item STR1016 ........... $3.50

Replacement O-Ring for 1 inch Arkal Filter
Item STR1015 ........... $5.00

**Sequence Timer**
4 Station
Item SEQ0050 ............... $420.45

8 Station
Item SEQ1000 ............... $460.80

12 Station
Item SEQ1001 ............... $518.75

18 Station
Item SEQ1002 ............... $705.00

**Autopilot Analog 24hr Recycling Timer**
Controls any application requiring a device to be turned on and off at precise intervals. This timer has a wide range of uses including controlling hydroponic pumps, CO2 injection, turning on and off exhaust fans, misters and more. There is no programming required, it is easy to set and operate. Cycle timing is adjustable for operation during the day, night, or 24 hours.
- Controls 120V pumps, fans, and more on a periodic repeat cycle
- Adjustable “ON” duration spans from 15 seconds to 13 hours
- Adjustable “OFF” duration spans from 15 seconds to 13 hours
- Functions during the day, during the night, or 24 hours

**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 Volt, PVC
Item SOL4000 ............... $31.00

**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 1-1/2” strainer comes with a 100 mesh nylon screen.

1-1/2 inch T Strainer, 100 Mesh
Item STR1000 ............... $82.45

1-1/2 inch Clear Cartridge Cover
Item STR1001 ............... $44.35

2 inch Black T Strainer, 100 Mesh
Item STR3000 ............... $138.60

100 Mesh Strainer
Item STR3001 ............... $94.30

O-Ring for STR3000
Item STR3002 ............... $3.50

50 Mesh Strainer
Item STR3003 ............... $96.00

1-1/2 inch Strainer Screen, 12 Mesh
Item STR1007 ............... $24.85

Replacement O-Ring for 1-1/2 inch T-Strainer set of two one small, one large.
Item STR1012 ............... $3.25

**Tanks**
25 Gallon Polyethylene Nutrient Tank and Lid
Used for Small Home Systems
Item TAN2001 ............... $100.50

52 Gallon Polyethylene Tank and Lid
Used for CropKing’s Fertroller, Injection Systems, and as a nutrient mixing tank
Item TAN3000 ............... $189.95

4’ x 8’ x 12” Aqua Blue Polyethylene Tray
Used for 200 Gallon Aquaponics System Tray
Item TAN4000 ............... $520.00

200 Gallon Blue Round Polyethylene Tank
Used for Aquaponics System Tank
Item TAN4001 ............... $370.00

300 Gallon Blue Round Polyethylene Tank
Used for Aquaculture System Tank
Item TAN4002 ............... $430.00

3 Quart Round Polyethylene Tank and Lid
Used for Fertroller sample pot
Item TAN4003 ............... $24.50
Submersible Pumps

NK Little Giant Pumps are for commercial, industrial, and home use worldwide where liquid must be transferred or recirculated. Applications include aquariums, swimming pools, water displays, ice makers, air conditioners, boat bailing, fuel oil transfer, circulating water for welding and pipe threading machines, pumping mild chemicals such as soap solutions, acids, plating solutions and fertilizers.

NK1 Little Giant Pump
- 210 GPH @ 1 ft
- Operates submersed
- Corrosion-resistant nylon housing
- Sump-type screened inlet
- ¼” MNPT outlet accepts ½” I.D. tubing
- Thermally protected
- 70 watts, 1 Amps
- 4.13 x 0.466 inch LWH
- 3.67 pounds

NK2 Little Giant Pump
- 325 GPH @ 1 ft
- Operates submersed
- 6” cord
- Corrosion-resistant nylon housing
- Five position options
- ¼” MNPT outlet accepts ½” I.D. tubing
- Thermally protected
- 100 watts, 1.7 Amps
- 54 GPM at 5 foot

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 $26.95

1000 GPH Submersible Pump
Item PUM8200 $69.95

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

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

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 $446.00

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 $522.00

1 HP Dolphin Aqua Sea 9500 Pump, 230v 50/60Hz
Item PUM8400 $522.00

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 1/2 HP Dolphin Super Aqua Sea 12,500 Pump, 115v or 230v (must specify)
Item PUM8700 $610.00

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 SSSI Pump, 60 Hz. 115v. Single Phase
Item PUM6001 $680.00

1 ½ HP SSSC Pump, 50/60Hz, Single Phase
Item PUM6002 $755.00

Feed Pump Adaptor, 1-¼ x 1 inch Reducer
Note: To convert the pumping from PUM5000 to PUM5001
Item PUM5100 $9.95
### 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 ¼ x 7 ¼ x 5 ¼ inches LWH

**Lettuce Crisper**
- Item CR1000.......................... $0.21
- Item CR1000........Case of 420 $84.00

### 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.

**Lettuce Crisper Rounded Top**
- Item CR1500.......................... $0.21
- Item CR1500........Case of 840 $142.80

### Lettuce Crisper Box, Minimum of 240
Each box holds 12 lettuce crispers.

**Lettuce Crisper Box**
- Item BOX5000......................1-1199 $2.75
- Item BOX5000........1200-2499 $2.65
- Item BOX5000........2500-4999 $2.55
- Item BOX5000...............5000+ $2.40

### 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........1-999 $3.00
  - Item BOX1011........1000-2499 $2.00
  - Item BOX1011........2500-4999 $1.75
  - Item BOX1011...............5000+ $1.65

**15 Pound Open Tomato Box, Skid of 520**
Size: 23 x 15 x 3 ¼ inch LWH
- Minimum of 1000
  - Item BOX3001........1040-2499 $2.10
  - Item BOX3001........2500-4999 $1.95
  - Item BOX3001...............5000+ $1.85

### 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 inches LWH**
- Minimum of 1,200
  - Item BOX3000........1200 $3.40
  - Item BOX3000........1201-2399 $3.25
  - Item BOX3000...............2400+ $3.15

**White Lettuce Box Liner 1 MIL, Roll of 500**
One sheet of liner is 54” x 45”
- Item LIN0500......................10+ $121.00

### Leaf Lettuce Bag
Leaf lettuce V Shaped vented bags. 4,000 to a case. Great for basil, too. Openings at top and bottom. 12 ¼” long 12 ½” at the top and 4” at the bottom

**Leaf Lettuce Bag**
- Item BAG4000.............Case $278.00

### Herb Crisper
Keeps herbs fresh and prevents damage from consumer handling. One-piece clear clam shell makes for easy packing. Designed to hold 1/2 - 1 oz. of herbs, and has hole for hanging. Size: 8-1/8 x 4 ¼ x 1-3/8 inches LWH

**Herb Crisper**
- Item CR3000..................Case of 1000 $130.00

### Cucumber Labels
Identify Locally Grown Gourmet Cucumber and includes bar code.

**Cucumber Label, Roll of 2,000**
- Item LAB2000........1-19 $26.95
- Item LAB2000........20+ $23.00

### 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 .................................$199.00
Replacement Probe
Item PHM3001 ...............................$52.00

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 ...............................$255.00

BlueLab Guardian 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 ...............................$325.00
Connect Stick
Item PHM3006 ...............................$105.00
Connect Range Extender
Item PHM3007 ...............................$125.00

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 ...............................$54.00

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 .................................$7.50
TDS Standard, 1 Pint
Item TDS1002 .................................$10.50

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 .................................$26.90

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 .................................$26.90

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

pH Test Strips kit
Item PHK2000 .................................$19.00
pH Buffer Solution 4.0
Item PHB1000 .................................½ Pint $7.50
Item PHB1001 .................................1 Pint $10.50
pH Buffer Solution 7.0
Item PHB1003 .................................½ Pint $7.50
Item PHB1004 .................................1 Pint $10.50

Cleaning Kits
BlueLab pH Cleaning Kit
Includes detailed instructions, decanter vessels, probe cleaner, cleaning tool, toothbrush, and calibration solutions.

BlueLab pH Cleaning Kit
Item PHM3100 .................................$19.95

Bluelab EC Cleaning Kit
Includes detailed instructions, decanter vessel, probe cleaner, probe chamois, and conductivity standard solution.

Bluelab EC Cleaning Kit
Item PHM3200 .................................$9.95

KCI 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 KCI 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 KCI solution to store the pH pen/probe after use and hydrate monthly. Instructions are on the bottle label. BlueLab pH Probe KCI 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.

KCI Storage Solution 100ml
Item PHM3400 .................................$9.95
The compact, highly versatile iGrow 1400™ represents state-of-the-art greenhouse environmental automation. 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. All of these functions are integrated into one easy-to-use system.

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 iGrow1400™ comes in a watertight NEMA4 clear lockable enclosure to protect it from moisture and prevent rust. The iGrow1400™ is also the first controller of its kind to have a context-specific “HELP” button on the front panel to give you helpful hints as you use the controller. The controller can be programmed or monitored via its own control panel, or through your computer (minimum Windows 2000 operating system) through the use of the optional iControl Software. A USB port makes it easy to connect your laptop to the system for programming, downloading historical information or troubleshooting. Should the need arise for analysis or troubleshooting, CroppingKing 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)
- Backlit graphical display
- Keypad for local programming
- 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 $2400.00

IGrow 1400 Environmental Controller Only
Item IGROW1400 $2150.00

IGrow Environmental Control Software
(Minimum Windows 7 Operating System)
Item IGROWICONTROL $1450.00

IGrow Weather Station
Item IGROWWEASTA $1550.00

IGrow Solar Light Sensor
Item IGROWSOLAR $280.00

IGrow Bottom Heat and Water Temperature Probe with 50 ft Cable
Item IGROWTEMP $200.00

IGrow Digital Temperature and Humidity Sensor
Item IGROWDTHS $410.00

IGrow 2-24 Cable, per foot
Item IGROW224CABLE $1.19

IGrow 4-24 Cable, per foot
Item IGROW424CABLE $1.29

CO2 Transmitter
Item CO2GMW25 $280.00

Our Sales Staff Can Assist You...
We offer retrofit growing systems for any size greenhouse. Our sales associates will help you with your layout; our engineering staff will design a system for your current structure. Hydroponic seed varieties, nutrients and growing media are available.

Please call us at 330-302-4203 and ask to talk with one of our helpful sales people.
Environmental Control

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... $195.00

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... $82.00

2 Stage Electronic Temperature Controller, 120/208/240 Volt
Item THE2004... $142.50

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 microphone
- 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 indication 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... $395.00

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... $33.75

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.

Pocket Sling Psychrometer
Item SLI1000... $77.50

Sensaphone Temperature Sensor, 2.8K Weather Proof Temperature Probe
Item SEN0005... $33.75

Prices Subject To Change
Vertical Airflow Fan

Vertical air flow (VAF) 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. Potential improvements that we have observed in trials in our on-site research and demonstration greenhouses 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. We look forward to further trials and continued optimization of these air movement tools in our controlled environmental vegetable greenhouses.

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 .................................................... $150.00

Vertical Airflow Fan Mounting Kit
Item FAN2100 ..................................................... $20.00

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 ........... $172.00
- 21 x 21 inch .... Item SHU2100 ........... $184.80
- 27 x 27 inch .... Item SHU2700 ........... $205.60
- 33 x 33 inch .... Item SHU3300 ........... $233.60
- 39 x 39 inch .... Item SHU3900 ........... $300.80
- 45 x 45 inch .... Item SHU4500 ........... $336.80
- 51 x 51 inch .... Item SHU5100 ........... $380.80
- 57 x 57 inch .... Item SHU5700 ........... $439.20
- 60 x 36 inch .... Item SHU6036 ........... $429.60

Shutter Motor, 115V, Coolair (motor only)
Item SHU1000 .................................................... $86.00

Double Arm Linkage Kit for shutters over 33 inches. Motor not Included.
Item SHU1100 .................................................... $48.00

Shutter Motor Kit
Kit for 16-33 inch shutters. Over 33 inch shutters requires double-arm.
Item SHU1001 ................................................... $123.00

Cooling Package $2700.00
- 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

Need to Cool Your Small Greenhouse?

PVC Evaporative Cooling System

Filter End Cap
In-Line Filter
Ball Valve
Hose Bibb
Compression Coupling
Pump
Threaded Adapter
Water Level
90° Elbow
Ball Valve

Vostermans
Environmental Control
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.

42 inch Fan Package:

1/2 HP Item FAN4212 $666.40
1/4 HP Item FAN4241 $1016.00

Replacement Parts for 42 inch Fan:

Fan Blade Pair Item FAN4200 $46.00
Fan Shaft Assembly Item FAN4201 $57.00
Fan Disc Assembly Item FAN4202 $122.00

48 inch Fan Package:

1/2 HP Item FAN4812 $1080.80
1/4 HP Item FAN4834 $1108.80
1 HP Item FAN4810 $1340.40

Replacement Parts for 48 inch:

Fan Blade Pair Item FAN4800 $50.00
Fan Shaft Assembly Item FAN4801 $65.00
Fan Disc Assembly Item FAN4802 $185.00

54 inch Fan Package:

1 HP Item FAN5410 $1315.20
1-1/2 HP Item FAN5415 $1377.60

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

PRICES SUBJECT TO CHANGE

ENVIRONMENTAL CONTROL

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

- For net opening add 1/2” to I.D.
- For 6" wall add 1-1/2" to K for height
- For 2" wall add 3/4" to H for width and:
- For 4" wall add 1-1/2" to K for height

For 6" wall

For 4" wall

For 2" wall

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.

PAGE 49
Environmental Control

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 .............................. $16.00

6” thick x 1’ wide x 3’ tall
Item GCP3601 .............................. $21.50

4” thick x 1’ wide x 4’ tall
Item GCP4800 .............................. $21.50

6” thick x 1’ wide x 4’ tall
Item GCP4801 .............................. $30.00

4” thick x 1’ wide x 5’ tall
Item GCP6000 .............................. $27.50

6” thick x 1’ wide x 5’ tall
Item GCP6001 .............................. $37.25

Cool-N-Clean

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-Clean at a rate of 1 ounce to 20 gallons of water during periods of use.

1 Gallon
Item GCP1000 .............................. $19.95

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 .............................. $1635.10
Mounting Kit
Item VEN4001 .............................. $49.50

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.
Environmental Control

**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 4 foot increments.

<table>
<thead>
<tr>
<th>Item</th>
<th>20 - 44 Foot</th>
<th>48 - 92 Foot</th>
<th>96 - 240 Foot</th>
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<tr>
<td><strong>ROL2000</strong></td>
<td>$17.25 per foot</td>
<td>$15.80 per foot</td>
<td>$14.40 per foot</td>
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</tbody>
</table>

**PACKAGE OPTION 2**

Cost effective roll-up curtain package. Includes options above, without the Roll-Lock system.

* Curtains must be ordered in 4 foot increments.

<table>
<thead>
<tr>
<th>Item</th>
<th>20 - 44 Foot</th>
<th>48 - 92 Foot</th>
<th>96 - 240 Foot</th>
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<tr>
<td><strong>ROL2100</strong></td>
<td>$11.50 per foot</td>
<td>$10.50 per foot</td>
<td>$9.50 per foot</td>
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</tbody>
</table>

**Drop-Down Sidewall Curtain Package for High Tunnel**

**Call for custom quote!**

---

**PRICES SUBJECT TO CHANGE**
Environmental Control

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:

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<tr>
<td>HEA3023</td>
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<td>$1750.00</td>
</tr>
</tbody>
</table>

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 CO2 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 (49 gauge stainless steel optional).
- Adjustable air-deflector blades.
- Fans engineered for quiet operation.
- 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:

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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

PROPROPANE:

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Free shipping on all heaters! *Excludes Hot Dawg Heaters

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WE ACCEPT ALL MAJOR CREDIT CARDS ON ORDERS AT 330-302-4203
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 ........................................$742.40

24 inch Jet Power Tube Fan
1/3 HP, Belt Drive, 4850 CFM
Item JET2413 ....................................... $839.20

30 inch Jet Power Tube Fan
1/2 HP, Belt Drive, 7550 CFM
Item JET3012 ......................................$917.60

30 inch Jet Power Tube Fan
1 HP, Belt Drive, 10450 CFM
Item JET3010 ......................................$967.20

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 ______________________ $0.65

12 inch Unpunched, per foot
Item CON0013 ______________________ $0.60

18 inch Staggered Punched, per foot,
2.2” holes
Item CON0018 ______________________ $0.75

18 inch Unpunched, per foot
Item CON0019 ______________________ $0.70

20 inch Staggered Punched, per foot,
2.5” holes
Item CON0020 ______________________ $0.85

20 inch Unpunched, per foot
Item CON0021 ______________________ $0.80

24 inch Staggered Punched, per foot,
2.2” holes
Item CON0024 ______________________ $1.00

24 inch Unpunched, per foot, 2.7” holes
Item CON0025 ______________________ $0.95

30 inch Staggered Punched, per foot,
2.7” holes
Item CON0030 ______________________ $1.15

30 inch Staggered Punched, per 130’ roll
Item CON3000 ______________________ $135.00

30 inch Unpunched, per foot
Item CON0031 ______________________ $1.15

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

TRY BEFORE YOU BUY WITH ONE OF OUR GROWER’S WORKSHOPS

Whether you’re looking for a 2 day introduction or a 5 day intensive, we have something to fit your needs!

Turn to page 60 for more details.
**Fertilizers**

**BiOWiSH™-Hydroponic**

BiOWiSH™-Hydroponic is an organic enzymatic additive that stimulates microbial activity in hydroponic systems, helping to increase micronutrient uptake in plants and improve plant vigor.

Developed for the protected cropping and hydroponics industries, BiOWiSH™-Hydroponic also prevents sludge build-up and problematic scaling in dripper lines, micro-tubes and Nutrient Film Technique (NFT) gulley floors.

**BiOWiSH™ helps increase micronutrient uptake in plants and improves plant vigor.**

BiOWiSH™ technology creates a composite biocatalyst that enhances biochemical reactions more quickly than available alternatives, and performs effectively in a wide range of environmental conditions.

Derived from a proprietary manufacturing process, the robust blend of biocatalysts enhances the beneficial role of microbial activity to break down organic matter and increase nutrient availability. Use 2 teaspoons of biowish for every 250 gallons of water per day.

**LEAFY GREENS**

**GUARANTEED ANALYSIS**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Total Nitrogen (N)</td>
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<tr>
<td>Available Phosphoric Acid (P₂O₅)</td>
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<tr>
<td>Soluble Potash (K₂O)</td>
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<tr>
<td>Magnesium (Mg)</td>
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**TRACE ELEMENTS**

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<tr>
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<td>Molybdenum (Mo)</td>
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<tr>
<td>Zinc (Zn)</td>
<td>210 mg/kg</td>
</tr>
</tbody>
</table>

**VINE CROP**

**GUARANTEED ANALYSIS**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nitrogen (N)</td>
<td>4.40%</td>
</tr>
<tr>
<td>Available Phosphoric Acid (P₂O₅)</td>
<td>13.00%</td>
</tr>
<tr>
<td>Soluble Potash (K₂O)</td>
<td>34.00%</td>
</tr>
<tr>
<td>Magnesium (Mg)</td>
<td>3.70%</td>
</tr>
</tbody>
</table>

**TRACE ELEMENTS**

<table>
<thead>
<tr>
<th>Element</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron (B)</td>
<td>275 mg/kg</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>95 mg/kg</td>
</tr>
<tr>
<td>Iron (Fe)</td>
<td>1000 mg/kg</td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>800 mg/kg</td>
</tr>
<tr>
<td>Molybdenum (Mo)</td>
<td>40 mg/kg</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>270 mg/kg</td>
</tr>
</tbody>
</table>

**KEY BENEFITS**

- Improves yield and plant vigor
- OMRI listed
- Reduces growth time, more harvests per year
- Improves nutrient availability, consistency across harvest, budding and root development
- Promotes longevity of flowering
- Increase storage life of produce
- Stimulates microbial activity
- Completely water soluble and can be placed directly in the tank with no need for filter bags

<table>
<thead>
<tr>
<th>BiOWiSH™-Hydroponic, 100 grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item BIO0164</td>
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</table>

<table>
<thead>
<tr>
<th>BiOWiSH™-Hydroponic, 1,000 grams (2.2 lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item BIO0159</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Nylon Mesh Bag, 50 micron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item STR4001</td>
</tr>
</tbody>
</table>

**HYDRO-GRO Hydroponic Fertilizer**

Hydro-Gro fertilizer is the premier hydroponic fertilizer! It can be shipped easily by UPS or by motor freight.

**LEAFY GREENS**

**GUARANTEED ANALYSIS**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nitrogen (N)</td>
<td>4.30%</td>
</tr>
<tr>
<td>Available Phosphoric Acid (P₂O₅)</td>
<td>9.30%</td>
</tr>
<tr>
<td>Soluble Potash (K₂O)</td>
<td>35.00%</td>
</tr>
<tr>
<td>Magnesium (Mg)</td>
<td>3.90%</td>
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**TRACE ELEMENTS**

<table>
<thead>
<tr>
<th>Element</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron (B)</td>
<td>200 mg/kg</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>105 mg/kg</td>
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<tr>
<td>Iron (Fe)</td>
<td>250 mg/kg</td>
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<tr>
<td>Manganese (Mn)</td>
<td>190 mg/kg</td>
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<tr>
<td>Molybdenum (Mo)</td>
<td>42 mg/kg</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>210 mg/kg</td>
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</tbody>
</table>

**VINE CROP**

**GUARANTEED ANALYSIS**

<table>
<thead>
<tr>
<th>Nutrient</th>
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</tr>
<tr>
<td>Magnesium (Mg)</td>
<td>3.70%</td>
</tr>
</tbody>
</table>

**TRACE ELEMENTS**

<table>
<thead>
<tr>
<th>Element</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Boron (B)</td>
<td>275 mg/kg</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>95 mg/kg</td>
</tr>
<tr>
<td>Iron (Fe)</td>
<td>1000 mg/kg</td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>800 mg/kg</td>
</tr>
<tr>
<td>Molybdenum (Mo)</td>
<td>40 mg/kg</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>270 mg/kg</td>
</tr>
</tbody>
</table>

**HYDRO-GRO Vine Crop, 50 Pounds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FER1000</td>
<td>2-4</td>
<td>$117.00</td>
</tr>
<tr>
<td>FER1000</td>
<td>5-9</td>
<td>$104.00</td>
</tr>
<tr>
<td>FER1000</td>
<td>10-19</td>
<td>$99.00</td>
</tr>
<tr>
<td>FER1000</td>
<td>20-39</td>
<td>$94.50</td>
</tr>
<tr>
<td>FER1000</td>
<td>40+</td>
<td>$91.00</td>
</tr>
</tbody>
</table>

**HYDRO-GRO Vine Crop, 5 Pounds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FER3022</td>
<td></td>
<td>$19.00</td>
</tr>
</tbody>
</table>

**HYDRO-GRO Vine Crop, 1 Pound**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FER3021</td>
<td></td>
<td>$9.50</td>
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</tbody>
</table>

**HYDRO-GRO Leafy Greens, 50 Pounds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FER1500</td>
<td>2-4</td>
<td>$117.00</td>
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<tr>
<td>FER1500</td>
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<td>FER1500</td>
<td>10-19</td>
<td>$99.00</td>
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<tr>
<td>FER1500</td>
<td>20-39</td>
<td>$94.50</td>
</tr>
<tr>
<td>FER1500</td>
<td>40+</td>
<td>$91.00</td>
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</tbody>
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**HYDRO-GRO Leafy Greens, 5 Pounds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>FER3020</td>
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**HYDRO-GRO Leafy Greens, 1 Pound**

<table>
<thead>
<tr>
<th>Item</th>
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</thead>
<tbody>
<tr>
<td>FER3019</td>
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<td>$9.50</td>
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**Calcium Nitrate, 50 Pounds**

<table>
<thead>
<tr>
<th>Item</th>
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<th>Price</th>
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</thead>
<tbody>
<tr>
<td>FER3014</td>
<td></td>
<td>$29.95</td>
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**Calcium Nitrate, 5 Pounds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FER3025</td>
<td></td>
<td>$7.00</td>
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</table>

**Calcium Nitrate, 1 Pound**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FER3024</td>
<td></td>
<td>$2.60</td>
</tr>
</tbody>
</table>
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 packages 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
- Can be used with supplemental fertilizers, insecticides and fungicides
- Around a pH of 4, which reduces amount of pH Down required

Fertilizers

<table>
<thead>
<tr>
<th>Item FER3003</th>
<th>1 lb.</th>
<th>$3.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Sulfate, 1 Pound</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For PH Testing see page 45

5 Gal Sample

| Item FER3001 | 5 Gal Sample | $130.00 |

275 Gal Tote

| Item Fer3000 | 275 Gal Tote | $3,300.00 |

MICRO NUTRIENTS

Copper Sulfate, 1 Pound

<table>
<thead>
<tr>
<th>Item FER3003</th>
<th>1 lb.</th>
<th>$3.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item FER3003</td>
<td>50 lbs.</td>
<td>$120.00</td>
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</tbody>
</table>

Iron Chelate, 5 Pounds

<table>
<thead>
<tr>
<th>Item FER3015</th>
<th>1-5</th>
<th>$67.50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item FER3015</td>
<td>6-9</td>
<td>$61.50</td>
</tr>
<tr>
<td>Item FER3015</td>
<td>10+</td>
<td>$56.50</td>
</tr>
</tbody>
</table>

Manganese Sulfate, 1 Pound

| Item FER3005 | 1 lb. | $9.20 |

Micro Fine Sulfur, 1 Pound

| Item FER3042 | 1 lb. | $4.45 |

Sodium Molybdate, ¼ Pound

| Item FER3033 | 1 lb. | $16.00 |

Sodium Molybdate, ½ Pound

| Item FER3033 | 1 lb. | $30.00 |

Sodium Molybdate, 1 Pound

| Item FER3033 | 1 lb. | $40.00 |

Solubor (Boron), 1 Pound

| Item FER3006 | 1 lb. | $4.40 |

Zinc Sulfate, 1 Pound

| Item FER3016 | 1 lb. | $3.90 |

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

<table>
<thead>
<tr>
<th>Item FER3014</th>
<th>1-20</th>
<th>$29.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item FER3014</td>
<td>21-40</td>
<td>$28.05</td>
</tr>
<tr>
<td>Item FER3014</td>
<td>41+</td>
<td>$27.60</td>
</tr>
</tbody>
</table>

GUARANTEED ANALYSIS

Total Nitrogen (N) ....................................................... 15.5% 
Available Phosphate (P2O5) ...................................... 51.5% 
Soluble Potash (K2O) ............................................... 34%

Potassium Nitrate, 50 Pounds

<table>
<thead>
<tr>
<th>Item FER3012</th>
<th>1-20</th>
<th>$69.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item FER3012</td>
<td>21-40</td>
<td>$65.00</td>
</tr>
<tr>
<td>Item FER3012</td>
<td>41+</td>
<td>$56.00</td>
</tr>
</tbody>
</table>

Potassium Nitrate, 1 Pound

| Item FER3012 | 1-5 | $5.10 |

Potassium Sulfate (Potash), 50 Pounds

| Item FER3010 | 50 Pounds | $60.75 |

GUARANTEED ANALYSIS

Soluble Potash (K2O) ............................................... 52% 
Sulfur (S) ................................................................ 18%

** Ships as HAZARDOUS: Add $31.36 per carton

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Shop online at www.CropKing.com

FERTILIZER COMPONENTS

Citric Acid, 1 Pound

| Item FER4000 | 1 lb. | $4.95 |

Citric Acid, 50 Pounds

| Item FER4000 | 50 lbs. | $108.00 |

Magnesium Sulfate, 1 Pound

| Item FER2900 | 1 lb. | $1.65 |

Magnesium Sulfate, 50 Pounds

| Item FER2900 | 50 lbs. | $45.00 |

Mono- Potassium Phosphate, 1 Pound

| Item FER3009 | 1 lb. | $3.50 |

Mono- Potassium Phosphate, 50 Pounds

| Item FER3009 | 50 lbs. | $70.00 |

GUARANTEED ANALYSIS

Total Nitrogen (N) ...................................................... 0%
Available Phosphate (P2O5) ..................................... 51.5%
Sulfur (S) ................................................................ 18%
Total Nitrogen (N) ...................................................... 0%
Available Phosphate (P2O5) ..................................... 51.5%
Sulfur (S) ................................................................ 18%

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

OXIDATE 2.0
Broad Spectrum Bactericide/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 FUNG000 .......................................................... $136.00**
OXIDATE, 5 Gallons
Item FUNG001 ......................................................... $260.00**

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.

CEASE, 1 Gallon
Item FUNG000 .......................................................... $73.95

GREENCURE
GreenCure®, a potassium bicarbonate-based fungicide, is a safer alternative to chemical fungicides.
- Kills powdery mildew and other diseases on contact and provides up to 2 weeks of residual protection
- Fully dissolves in water
- Odorless - no foul smell
- Sprays on evenly and sticks to plant surfaces
- Fruit and vegetables can be harvested as soon as 1 hour after spraying
- Does not restrict plant growth
- Compatible with many beneficial insects
- For organic production. Fulfills USDA's National Organic Program requirements.

GREENCURE, 8 Ounces
Item FUNG000 .......................................................... $15.95

MYCOSTOP
A biofungicide for vegetable & garden 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 occurring 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.

MYCOSTOP, 5 Grams
Item BEN4000 .......................................................... $27.00
4 – 5
MYCOSTOP, 2 Grams
Item BEN4002 .......................................................... $13.95
4 – 5

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.

SUFFOIL-X, 25 Gallon
Item FUN5002 .......................................................... $65.00

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 .......................................................... $81.00

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.

DIPEL, 1 Pound Bag, Dry
Item INS1000 .......................................................... $18.30

PYRETHRUM TR
Simply place in the center of area to be treated. Safe on greenhouse vegetables and herbs up to day of harvest. Effective on ants, aphids, beetles, cabbage worm, calderia, centipedes, crickets, flea, 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 .......................................................... $22.00

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 .......................................................... $22.00

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.

M-Pede, 2.5 Gallons
Item SAF1001 .......................................................... $106.00

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. AzaGuard's natural botanical formula meets all of the requirements of the National Organic Program.

Azaguard, 1 Quart
Item INS1030 .......................................................... $145.00

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 .......................................................... $43.25

6 x 12 inch Yellow Sticky Strips, 50/Box
Item STI1005 .......................................................... $76.00

2 inch Sticky Tape, 530 Foot
Item STI1009 .......................................................... $39.00

Sticky Strip Stakes, 100/Box
Item STI1007 .......................................................... $39.95

** 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 sqft. 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 lacewaving larvae and eggs. Lacewaving larvae arrive ready to work as soon as released. Lacewaving eggs should be sprinkled around the plants that are infested with aphids. To stop the growth in population of aphids, release approximately one lacewaving for every 10 aphids that are present. Two to three releases, two weeks apart, should be made.

<table>
<thead>
<tr>
<th>Item BEN1428</th>
<th>Larvae</th>
<th>$73.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item BEN1202</td>
<td>Eggs</td>
<td>$175.00</td>
</tr>
</tbody>
</table>

**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)

| 1/2 Pint       | Item BEN1880 | $39.00 |
| 1 Pint         | Item BEN1881 | $48.00 |
| 1 Quart        | Item BEN1882 | $63.00 |
| 1/2 Gallon     | Item BEN1883 | $95.00 |
| 1 Gallon       | Item BEN1884 | $120.00|

**GALL-MIDGE**
Gall-midge (Aphidoletes aphidimyza) adults are active at night. They find aphid colonies by the smell of the honeydew. The female gall-midge deposits small orange eggs near the aphids. The emerging larvae paralyze one aphid after another and sucks each dry.

**Aphidoletes Aphidimyza**

**APHIDEND**
Target: Wide range of aphid species; recommended especially when aphid colonies are present. To use: Open bottle in the greenhouse, hang the bottle in between the plants. Store in the dark.

**Aphidend, 100 ml bottle (2,000 pupae)**
| Item BEN1250 | $101.75 |

**Aphidius 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 | $54.25 |

**Aphidius Erin:**

**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 | $104.75 |

**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 | $175.00 |

**Fungus Gnat Control Use:**
- Steinermema Feltiae
- Hypoaspis

**Steinermema 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 | $32.50 |

**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**.

Lacewaving 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.
**Pest Control**

**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 ............................................................. $32.50

**Vine Weevil Control Use:**

• **Heterothabditis Megidis**

**LARVENEM**

**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.

**Larvenem,** 50 million larvae
Item BEN1451 ............................................................. $36.50

**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 eremicus, 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 ............................................................. $35.30

**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 ............................................................. $47.75
**Ercal,** Box of 250 cards (15,000 pupae)
Item BEN1434 ............................................................. $205.50

**Whitefly/Thrip Control Use:**

**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 BEN1490 ............................................................. $107.00

**Spider Mite Control Use:**

• **Phytoseiulus Persimilis**
• **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 persimilis** 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.

**Spiderex,** 100 ml bottle with dosage-plug (2,000 adults)
Item BEN1318 ............................................................. $26.75

**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,** 500 ml bottle (5,000 all stages)
Item BEN1490 ............................................................. $66.75

**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 bottle and put it on the rockwool slab. Protect against direct sunlight. Store in the dark.

**Spidend,** 750 ml bottle, from which 250 gall-midges will emerge
Item BEN1435 ............................................................. $125.75

**Whitefly/Thrip Control Use:**

**Phytoseiulus Persimilis**

**ERTE**

**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 ............................................................. $47.75
**Ercal,** Box of 250 cards (15,000 pupae)
Item BEN1434 ............................................................. $205.50
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 ...........................................$2,995.00
  * $1,795.00 with purchase of greenhouse package

Technical Assistance Packages

Technical Services:

- Custom fertilizer recipe designed for grower’s water source
  Item TEC1007 .................................................................$200.00
- One 15-minute increment of technical support (phone only)
  Item TEC1009 .................................................................$25.00
- Review, interpretation, and advisement on leaf, tissue and solution analysis
  Item TEC1010 .................................................................$35.00
- Site visit to your greenhouse, per each 8 hour day (travel expenses are additional)
  Item TEC1011 .................................................................$500.00

DVDs

Introduction to Soilless Controlled Environment Agriculture

Item DVD1200 .............................................$FREE
  * $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 ............................................$59.95

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 .............................................$59.95

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 ...........................................$29.95
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:
$595.00 per person
(bring 1 guest for free, each additional guest is $250)

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.

This workshop is perfect for the novice or potential hydroponic grower.

Five Day Intensive Workshops

This five day immersive course provides expanded practical experience working in a production greenhouse featuring 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 (2-person max) 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.

Five Day Intensive Workshop:
$2500.00 per person

Includes:
- 5 days of hands-on instruction
- Coursework tailored to individual skill levels
- Small group attention (2-person max)
- All education materials
- Lunch each day

Workshops are filled first-come, first-served. Please call our sales team for more information.
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 ............................................. $99.00
‘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 ............................................ $295.00

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 .............................................. $35.00

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 ............................................. Each $6.95

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 ............................................. $26.95

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 ............................................... $59.95

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 .................................................. $15.50
Hydroponic Tomato Production
By Jack Ross

A practical guide for growing tomatoes in containers. Over 200 pages of tomato information, from nutrients to schedules. For greenhouse growers and hobbyists alike, hydroponics has become recognized as a way of producing tomatoes with flavor. This book looks comprehensively at the range of soilless techniques available and how to manage them successfully. Includes a listing of 20 tomato varieties for hydroponic production in containers, and how to grow them successfully. Chapters included on physiology of tomatoes, nutrient levels, and pH requirements, growth factors, pests & diseases, harvesting and packaging. Jack Ross has been involved in producing hydroponic tomatoes for over 16 years.

Item BOO0080 ......................................................................................................... $39.95

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 ..................................................... $16.00

Hydroponics “A Practical Guide for the Soilless Grower”
By Dr. J. Benton Jones

Gives detailed descriptions of the most commonly used hydroponic 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 BOO0084 ....................................................................................................... $87.00

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 ................................................................. $16.85

Knowing & Recognizing: The biology of glasshouse pest and their natural enemies
By M. Malais and W.J. Ravensberg

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 ..................................................................................................... $180.00

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 ........................................................................................................ $88.30

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 .......................................................................................................... $79.95

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 .......................................................................................................... $79.95

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 .................................................................................................... $495.00
**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/FoL1.2/For/Va:1/Vd1  
**Disease Resistance (IR):** On

**DRW 7749**  
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, FFa-E, FoL1.2, For, Va:1, Vd1  
**Disease Resistance (IR):** On

**Geronimo**  
Vigorous plant with good vegetative growth for warmer and more stressful production conditions. Average fruit weight is 240 grams, but can be variable under summer conditions. Powdery mildew resistance along with good crack resistance and flavor.

**Disease Resistance (HR):** ToMV:0-2, FFa-E, FoL1.2, For, Va:1, Vd1  
**Disease Resistance (IR):** On

**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, FFa-E, FoL1.2, For  
**Disease Resistance (IR):** Ma, Mi, Mj

**Tomimaru Muchoo, 250 Seeds**  
Item TOM1950________________________ $100.00

**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, FFa-E, FoL1.2, For, Va:1, Vd1  
**Disease Resistance (IR):** -

**Torero, 250 Seeds**  
Item TOM1500________________________ $153.00

**Trust**  
Older greenhouse beef tomato cultivar with a more generative habit. This cultivar can be an easy to manage crop, but is not as strong through summer heat as some of the newer, more vegetative cultivars. Average fruit weight of 180-280 grams.

**Disease Resistance (HR):** ToMV:0-2, FFa-E, FoL1.2, For, Va:1, Vd1  
**Disease Resistance (IR):** -

**Trust, 250 Seeds**  
Item TOM1037________________________ $103.00  
**Trust, 1000 Seeds**  
Item TOM1738________________________ $405.00

**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.

**Disease Resistance (HR):** ToMV:0-2, FFa-E, FoL1.2, For, Va:1, Vd1  
**Disease Resistance (IR):** -

**Big Dena, 250 Seeds**  
Item TOM1760________________________ $130.00  
**Big Dena, 1000 Seeds**  
Item TOM1760________________________ $480.00

**Beorange**  
Beorange is an orange beef tomato hybrid with good taste and flavor.

**Disease Resistance (HR):** ToMV:0-2, FFa-E, FoL1.2, For, Va:1, Vd1  
**Disease Resistance (IR):** -

**Beorange, 250 Seeds**  
Item TOM1210________________________ $222.00

**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, 250 Seeds**  
Item TOM1275________________________ $160.00

**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, FoL1.2, Va:1, Vd1  
**Disease Resistance (IR):** Ma, Mi, Mj

**DRC 564, 250 Seeds**  
Item TOM1900________________________ $391.00

**Micro-Tom/Tiny Tim**  
Dwarf cherry variety. Good for hanging baskets and small containers.

**Micro-Tom, 200 Seeds**  
Item TOM1001________________________ $750.00

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**Disease Resistance (HR):** ToMV:0-2, FFa-E, FoL1.2, For

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**Disease Resistance (IR):** -
**Seeds**

**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.

**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.

**Komeet**
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.

**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
- Ff: A-E, Fo: L1,2, For: Va: 1, Vd: 1

**Disease Resistance (IR):**
- Ma, Mi, Mj

**Favorita, 100 Seeds**
Item TOM1023 .............................. $44.75

**Conchita, 250 Seeds**
Item TOM1034 ............................. $190.00

**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.

**Disease Resistance (HR):**
- ToMV: 0-2
- ToTV: Ff: A-E, Fo: L1,2, For: Va: 1, Vd: 1

**Disease Resistance (IR):**
- Ma, Mi, Mj

**Red Delight, 250 Seeds**
Item TOM1109 ............................. $285.00

**TOMATO, Cluster**

**DRC 1183**
This cocktail truss tomato has an open, labor-friendly plant habit with a high yield potential. The firm, light red fruit (35 to 40 grams) is strong against cracking and has good shelf life.

**Disease Resistance (HR):**
- ToMV: 0-2
- ToTV: Ff: A-E, Fo: L1,2, For: Va: 1, Vd: 1

**Disease Resistance (IR):**
- Ma, Mi, Mj

**DRC 1183, 250 seeds**
Item TOM1550 ............................. $365.00

**TOMATO, Roma**

**Italia**
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.

**Disease Resistance (HR):**
- ToMV: 0-2
- ToTV, Ff: A-E, Fo: L1,2, For: Va: 1, Vd: 1

**Disease Resistance (IR):**
- Ma, Mi, Mj

**Italia, 250 Seeds**
Item TOM1650 ............................. $163.00

**EGGPLANT**

**Taurus**
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.

**Disease Resistance (HR):**
- ToMV: 0-2
- Ff: A-E, Fo: L1,2, For: Va: 1, Vd: 1

**Disease Resistance (IR):**
- On

**Taurus, 100 Seeds**
Item EGG1001 .............................. $97.00

Greenhouse peppers are available by special order only. Please call 330-302-4203 for varieties and pricing.

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WE ACCEPT ALL MAJOR CREDIT CARDS ON ORDERS AT 330-302-4203
CUCUMBER

Denali- Long English
This vigorous and productive long English cucumber 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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUC1900</td>
<td>Denali, 100 Seeds</td>
<td>$81.00</td>
<td></td>
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</table>

Unistar- Cocktail
This cocktail cucumber produces approximately 4 inch fruit. Under reproductive conditions, multiple fruit per node are produced.

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<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>CUC1950</td>
<td>Unistar, 100 Seeds</td>
<td>$106.00</td>
<td></td>
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</table>

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>CUC1600</td>
<td>Camaro, 100 Seeds</td>
<td>$75.00</td>
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DRL9510
Good low light option similar to Camaro with slightly smaller fruit size.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>CUC1700</td>
<td>DRL9510, 100 Seeds</td>
<td>$89.00</td>
<td></td>
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</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>CUC1800</td>
<td>Eldora, 100 Seeds</td>
<td>$89.00</td>
<td></td>
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</tbody>
</table>

Avaya
Avaya is a summer cucumber hybrid with improved fruit quality. Avaya has the potential to produce a high percent of medium fruit with a nice dark-green color, good shape, and strong ribbing. Avaya has intermediate resistance to cucumber green mottle mosaic virus and high resistance to powdery mildew.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUC2050</td>
<td>Avaya, 100 Seeds</td>
<td>$77.00</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUC1700</td>
<td>Jawell, 100 Seeds</td>
<td>$75.00</td>
<td></td>
</tr>
</tbody>
</table>

Manar
This powdery mildew tolerant cultivar has strong vigor and excellent fruit quality. Slightly larger fruit than Jawell.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUC1600</td>
<td>Manar, 100 Seeds</td>
<td>$57.00</td>
<td></td>
</tr>
</tbody>
</table>

Avaya

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2009</td>
<td>Alexandria, 5,000 Seeds</td>
<td>$110.00</td>
<td></td>
</tr>
</tbody>
</table>

Flandria
A thick-leaved butterhead lettuce with high resistance to downy mildew and a wide range of disease resistance. The large plant can produce a large head and has a thick stem, making it suitable for year-round production.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2015</td>
<td>Flandria, 5,000 Seeds</td>
<td>$110.00</td>
<td></td>
</tr>
</tbody>
</table>

Natalia
A blonde butterhead lettuce for spring and summer production that tolerates the heat and has high resistance to downy mildew.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2003</td>
<td>Natalia, 5,000 Seeds</td>
<td>$114.00</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2013</td>
<td>Rex, 5,000 Seeds</td>
<td>$110.00</td>
<td></td>
</tr>
</tbody>
</table>

LETUCE, 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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Seeds</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2003</td>
<td>Teodore- Red Bibb, 5,000 Seeds</td>
<td>$121.00</td>
<td></td>
</tr>
</tbody>
</table>

All lettuce seeds are pelleted unless otherwise noted.
**Santoror 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.

**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.

**Gardia**
Butterhead variety similar to Flandria. Strong against tipburn and bolting.

**Santoro, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2011</td>
<td>Santoro, 5,000 Seeds</td>
<td>$133.00</td>
</tr>
</tbody>
</table>

**Skyphos, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2014</td>
<td>Skyphos, 5,000 Seeds</td>
<td>$133.00</td>
</tr>
</tbody>
</table>

**Gardia, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2040</td>
<td>Gardia, 5,000 Seeds</td>
<td>$114.00</td>
</tr>
</tbody>
</table>

**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.

**Carmesi, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2025</td>
<td>Carmesi, 5,000 Seeds</td>
<td>$131.00</td>
</tr>
</tbody>
</table>

**Orville- Lolla Rossa**
This double red lolla rossa is similar to Carmesi in size and growth characteristics, but with a lighter red coloration on the edges of the leaves.

**Orville, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2030</td>
<td>Orville, 5,000 Seeds</td>
<td>$122.00</td>
</tr>
</tbody>
</table>

**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.

**Lozano, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2035</td>
<td>Lozano, 5,000 Seeds</td>
<td>$135.00</td>
</tr>
</tbody>
</table>

**LETTUCE, Oakleaf**

**Kireve**
Green oakleaf solid producer in greenhouse production.

**Kireve, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2045</td>
<td>Kireve, 5,000 Seeds</td>
<td>$131.00</td>
</tr>
</tbody>
</table>

**Rutilai**
Red oakleaf with strong coloration on tip. Strong resistance to edge burn and bolting.

**Rutilai, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2050</td>
<td>Rutilai, 5,000 Seeds</td>
<td>$109.00</td>
</tr>
</tbody>
</table>

**LETTUCE, Romaine**

**Salvius- Green Romaine**
A tall, dark green romaine cultivar with medium savoyed leaves.

**Salvius, 5,000 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2020</td>
<td>Salvius, 5,000 Seeds</td>
<td>$107.00</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2100</td>
<td>Summer Picnic, 1000 Seeds</td>
<td>$75.00</td>
</tr>
</tbody>
</table>

**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 edible. 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**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2200</td>
<td>Mix Wonder Wok, 1000 Seeds</td>
<td>$75.00</td>
</tr>
</tbody>
</table>

**SEED PACKETS**
Seed packets are non-pelleted

**Basil, Packet**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS1001</td>
<td>Basil, Packet</td>
<td>$4.50</td>
</tr>
</tbody>
</table>

**Basil, 1 Ounce**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS1000</td>
<td>Basil, 1 Ounce</td>
<td>$9.95</td>
</tr>
</tbody>
</table>

**Cucumber, 10 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUC1001</td>
<td>Cucumber, 10 Seeds</td>
<td>$3.60</td>
</tr>
</tbody>
</table>

**Lettuce, 100 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LET2000</td>
<td>Lettuce, 100 Seeds</td>
<td>$8.00</td>
</tr>
</tbody>
</table>

**Pepper, 10 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEP1000</td>
<td>Pepper, 10 Seeds</td>
<td>$7.00</td>
</tr>
</tbody>
</table>

**Tomato, 20 Seeds**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOM2000</td>
<td>Tomato, 20 Seeds</td>
<td>$20.00</td>
</tr>
</tbody>
</table>
High Level of Support and Expertise

One of the biggest advantages of purchasing a hydroponic greenhouse package from CropKing has always been the ongoing technical support. Our techs and horticulturists keep up to date with the newest products and the best growing methods by testing them first in our research greenhouse. This allows us to make good, practical suggestions to our family of growers.

We offer services that our competition cannot match, from our knowledgeable sales staff to our in-house technical support team with many years of hydroponic growing experience. Our products and competitive pricing create CropKing customers, but our customer service and support keeps bringing them back.

For nearly three decades, we have been the nation’s hydroponics leader and have been helping hydroponic growers throughout the U.S. and in several countries to grow premium hydroponic vegetables. CropKing provides everything needed for hydroponic food production: from greenhouse structures, to state of the art growing systems, training, consulting and supplies.

Why Buy Local?

Locally produced vegetables taste better and are fresher than produce which has been shipped over long distances. Today’s consumers demand produce that is not only fresh, but also safe and free of pesticides for their family. Hydroponic tomatoes and lettuce, grown locally and without chemical pesticides will meet that demand. Most of our hydroponic growers are delivering their product within a 100 mile radius of their greenhouse. Why are locally grown vegetables more nutritious? Because the average fruit or vegetable at a grocery store may have already traveled more than 1500 miles and lost much of its nutrition along the way.

There are several possibilities for growing and marketing local, hydroponic produce in a greenhouse setting including vine ripened tomatoes, flavorful gourmet lettuce, herbs, and European cucumbers.

Buying local produce helps build communities. You can help ensure that small farms survive in your community and that future generations will have access to nourishing, flavorful and abundant produce by supporting your local farmers.
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:

<table>
<thead>
<tr>
<th>Hydroponic:</th>
<th>Organic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hydroponics feed the plants directly.</td>
<td>1. Organics feed the soil.</td>
</tr>
<tr>
<td>2. Hydroponics uses clean water.</td>
<td>2. Organics use rain water and other available irrigation water.</td>
</tr>
<tr>
<td>3. Plants use less energy to find the nutrients as they are dissolved in water that is fed directly to the roots.</td>
<td>3. Plants must spend more of their energy creating root mass to search out the necessary nutrients in the soil.</td>
</tr>
<tr>
<td>4. Hydroponics uses approximately 1/10 of the amount of water that traditional soil growing uses.</td>
<td>4. Organic production requires more water because much of it leaches away down into the soil.</td>
</tr>
<tr>
<td>5. Soil quality is not a factor as there is no soil involved.</td>
<td>5. Soil quality is very important to plant growth.</td>
</tr>
<tr>
<td>6. Hydroponic vegetables are grown in a controlled environment.</td>
<td>6. The organic environment is dependent on the weather (rain, wind storms, etc).</td>
</tr>
<tr>
<td>7. Hydroponic produce is clean because it does not come in contact with soil.</td>
<td>7. Organic produce can have soil or animal residue on it, from the environment and should be washed.</td>
</tr>
</tbody>
</table>

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.
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Paul Brentlinger, President ................................. paulbrentlinger@gmail.com
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 44243
Phone: 330-302-4203
Fax: 330-302-4204

Hours:
Monday through Friday:
8:00 a.m. to 5:00 p.m. E.S.T.
Customer pick up
8:00 a.m. to 3:30 p.m. E.S.T.

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.

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 manufacturer. 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 back-ordered items shipped when they become available; or,
• CropKing can hold the order until all the items are available, then ship the entire order together.