

Get Growing NFT 4K

Farmers Market Bundle





Get Growing! NFT 4K Farmers Market Bundle

1/1/18

Hydroponics System:	NFT 4K	OvalTech
> Plant Sites:	4,320	Total sites
> Production:	1,080	Plants/week (6 week cycle)
> Configuration:	2,160	Finishing (2wks - 50% of NFT sites)
	2,160	Nursery (2wks - 50% of NFT sites)
	2,760	Propagation (2 wks. -Propagation Tray Sites)
> Green House:	32'x48'	Standard size (1,536sq ft.)

Get Growing! NFT 4K Farmers Market Bundle

Quantity Description

Hydroponics NFT 4K Kit:	
GroClean NFT Channel Kit:	120 Gro Clean NFT Channel (12' Finishing Sections - HDPE)
	30 Gro Clean NFT Channel (12' Nursery Sections - HDPE)
Table Frames/Benching Kit:	7 10' Table Frames
Collectors	7 10' Covered Collector
ManifoldsF	6 10' Finishing Manifolds
ManifoldsN	1 10' Nursery Manifolds
Pumps	2 1/2 HP pumps
Reservoir	1 575gal Cistern w 15in Manhole Extension
Plumbing	1 PVC package to plumb in system & reservoir
Nutrient/H2O Control Kit:	1 Water Meter
	1 Nutrient Controller w/Triple Peristaltic Pump
	1 pH probe
	1 Handheld EC/pH Meter
Propagation Kit:	1 Get Seeding 5 Tray Propagation system w/bottom heat package
	1 Vacuum Seeder
	7 Lighting for propagation & nursery
Other Important Items Kit:	1 30gal w Lid Nutrient Stock Tanks Kit (2)
	1 5gal Acid Tank Kit
	2 Channel Scrub Brush and handle
	1 NFT tool kit
	14 1.5" Flexy drain
	1 Kerrick float valve kit
	1 Venturi Tee
AmHydro Services	3 AmHydro supervision of system installation (2 days plus travel day)
	1 Plumbing design and plans
	1 Electrical panel with mounted controllers
	1 Annual Grower Support
	2 Day consulting at your greenhouse by an AmHydro Consultant (1 day + travel day)
	1 Packing and Freight to customer
	1 Custom shipping Pallets
	1 Consulting for seed varieties and nutrients
	2 Tee-Shirts
Greenhouse	1 Green house structure - includes heater, vent motors, HAF fans, doors.
	1 Environmental Controller (StepUP)
	1 CO2 burner & controller
	1 Ground Cover w/anchor pins-15'x300' roll
Pro Grower Subscription (3 months)	3 Seeds Variety
	3 Oasis LC1 5231 (Thin Cut)
	4 AmHydro Plant Specific Nutrients
	1 Essential Plus 1gal
	1 Buffer Solution pH 4&7 16oz
	1 Calibration Solution 27.7 16oz
	3 pH Down 10% 1 gal
	2 Plastic 'stakes' for labeling (2000 total stakes)
	3 Water Testing
Get Growing! NFT 4K Farmers Market Bundle TOTAL: \$ 60,000	

Not Included in this package. Owner responsible for:

Capital investment - \$60,000+

Site prep & construction for the greenhouse which includes:

- 1600+ sqft of space and building permits (if required)
- Utilities brought to the greenhouse site
- Level ground/ area for greenhouse
- Construction of greenhouse and AmHydro NFT system
- Ability to dig hole for the 575 gallon reservoir (approx. 10'x6'x4')
- 2-3 laborers to construct greenhouse (local tradesmen may be needed)
- Scissor lift or boom truck to raise greenhouse arches

Travel expenses for AmHydro growing consultant

Travel expenses for AmHydro Install Supervisor

- Finishing Tables
- Nursery Tables
- Propagation Tables

NFT System Specifications

Harvest:

Crop Turn (CTT) - A number determined by harvested plants per year, per finishing plant site.

13 CTT - 540 plants per week (8 week harvest cycle)

17 CTT - 720 plants per week (7 week harvest cycle)

26 CTT - 1,080 plants per week (6 week harvest cycle)

System:

Finishing sites: 2,160 (120 channels)

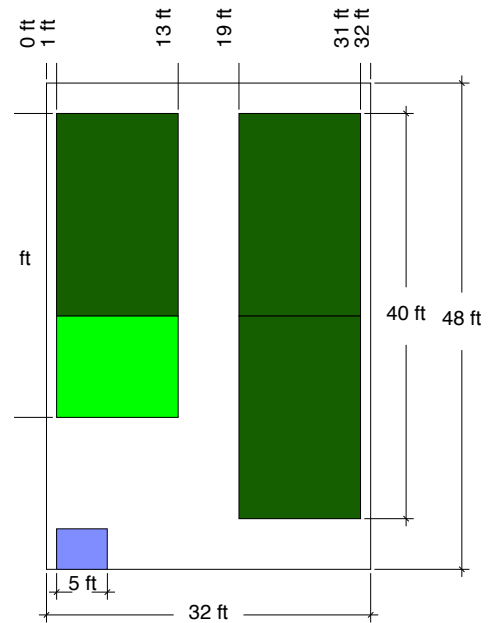
Nursery sites: 2,160 (30 channels)

Propagation sites: 2,760 (5 trays)

Reservoir size: 575 gallons

Greenhouse square foot: 1,536

NFT growing area square foot: 840



AmHydro's Get Growing - Farmers Market 4K Bundle

System Specifications

Total Square feet of NFT system:	840
Lineal feet of NFT system:	70
Water usage per day (Gallons):	203
Recommended reservoir size (Gallons):	575
Greenhouse size:	32x48
Number of bays:	1
Number of finishing plant sites:	2,160
Number of nursery plant sites:	2,160
Number of propagation plant sites:	2,760

Projected harvest numbers per week

13 Crop turns per year (8 week seed to harvest):	540
17.33 Crop turns per year (7 week seed to harvest):	720
26 Crop turns per year (6 week seed to harvest):	1,080



NFT System Details

Our AmHydro Pro NFT system has been used in the field for over 30 years and has been refined for ease of use, longevity and versatility.

Each NFT system is comprised of 10 foot modules that connect together to make desired table length. The **4K NFT System** uses 7 of these 10 foot modules.

Each AmHydro Pro NFT module is made from **five** components that have been designed and refined over 30 years.

TABLE FRAME - Table frames are made from 10ga to 18ga galvanized steel that come pre-drilled for ease of assembly. Table frames are put together using a 5/16" hex bit, power drill and speed square.

FEEDER - Each feeder manifold feeds a 10' section of table and is made from virgin LDPE plastic. These manifolds feed from the center for even pressure. Each manifold comes with a clean-out fitting on each end for maintenance and is controlled with a heavy duty PVC ball valve. Our leak-proof AmHydro grommet secures a 1/4" micro-tube for even delivery to each AmHydro channel. No glue is required when assembling feeder for ease of assembly and maintenance.

COLLECTOR - Each covered collector returns nutrient water from a 10' section of table and is made from dual-wall LDPE pipe. Collectors have a hinged cover to keep sunlight off draining end of channels. No glue is required when assembling collector for ease of assembly and maintenance. Our AmHydro Drip Cap is attached, in conjunction with each collector, to eliminate leaks.

FINISHING CHANNEL - Finishing channels are 144" long and come with 1.75" holes on 7.75" center's. There are 18 holes per channel. Our channels are made from 100% virgin FDA approved HDPE.

NURSERY CHANNEL - Nursery channels are 144" long and come with 1.6875" holes on 2" center's. There are 72 holes per channel. These channels are also made from 100% virgin FDA approved HDPE. Both channel types are ready to use, right off the pallet.

Tank House Components

The tank house components are the heart of the NFT system. These components can be housed inside the working greenhouse or in a separate building we term as head house. We can source the main reservoir, 500 gallon - below grade, but usually recommend the grower to source due to shipping requirements.

INTELLIDOSE CONTROLLER (ID) - The ID takes care of your reservoir so you don't have to. This unit will monitor the pH and Nutrient concentration (EC/CF) of your working solution and make the necessary adjustments.

STOCK TANKS - Nutrient stock tanks are made from thick HDPE and will last a lifetime. pH stock tank is made to withstand breakdown form acidity of pH adjuster.

PUMP - The *4K NFT System* uses (1) 1/2HP pump. We use Max-E-Pro centrifugal pumps made by Sta-Rite for durability and longevity. We always include an extra pump.

FLOAT VALVE AND WATER METER - Float valve is a 3/4", 37 GPM Kerick valve and the water meter measures how much water your system is using per day/week.

Propagation System

We have a handful of propagation systems. The *4K NFT System* utilizes the Get Seeding 5-tray propagation system. This system is the perfect size and most importantly, provides the necessary number of propagation sites to feed your nursery channels. All of our propagation systems are recirculating and use our commercial grade AmHydro propagation trays (cMPT). The Get Seeding 5-tray Propagation System is a stand-alone system that comes complete with everything required

The propagation stage is one of the most important as it sets the pace for your harvest times. Strong seedlings make for quicker crop turns. The *4K NFT System* comes with a bottom heat package to keep your seedling at optimum temperature.

Growing Supplies

NUTRIENTS - Our mineral fertilizers are manufactured right here at AmHydro and have been used in the field for over 25 years. Our two-part powders are made from the purest commercial grade minerals that follow California's strict guidelines on standards and quality. The **4K NFT System** comes with a 3 month supply (4 cases).

GROWING MEDIUM - We offer exclusively Oasis propagation cubes manufacture my Smithers Oasis. We have found them to be the most reliable and consistent and the easiest to work with. The **4K NFT System** comes with 1" LC1 Oasis.

BUFFERS - Standard 4&7 buffers for calibrating pH probes on DBC controllers and hand-held meters as well as standard 27.7 calibration solution for CF probes.

pH ADJUSTER - Standard food grade 10% pH down and pH up.

WATER TESTING - The **4K NFT System** comes with (3) water tests. One will be used in the very beginning to see if water treatment is necessary. The remaining (2) are for monitoring the nutrient balance within the recirculating NFT system.

SEEDS - The **4K NFT System** comes with high quality, pelleted seeds. We provide enough for 3 months supply.

Growers Support - The AmHydro Advantage™

All AmHydro systems are designed and manufactured to be the best in the industry. The equipment purchase, however, is only a first step in setting up a successful hydroponics business. That is why the **4K NFT System** come with AmHydro Advantage™, a specialized service and support program aimed at giving you the information you need.

Grower/Technical Support: American Hydroponics provides the grower with growing and technical support regarding any phase of the Hydroponic System for a twelve-month period commencing the date the customer receives system. Grower and technical support will be provided through faxes, email, Skype, and/or telephone communication. Our support covers installation assistance of the hydroponic system and includes advice/recommendations related to seed selection, propagation techniques, crop turn strategy, ergonomics, nutrient/water/tissue analysis, problem resolution, environmental control, how to anticipate and address upcoming climate change adjustments, packaging and general marketing strategies. Our goal is to maximize crop production at every stage and assist growers in becoming competent and successful in their growing operation. Extra charges for site visit, travel, custom parts and systems.

Ovaltech III Greenhouse



SCOPE OF PROPOSAL: This proposal is for the supply of a Harnois Ovaltech III Autoimated Vent High Tunnel Greenhouse Systems, complete with foundation kit, Ovaltech III pre-engineered structure with the following specifications and scope of work:

Number of Buildings	1 Greenhouse
Building Style	Ovaltech III
Width	32 feet
Length	48 feet
Area	1,536 square feet
Arch Spacing	6 feet
Post Spacing	12 feet

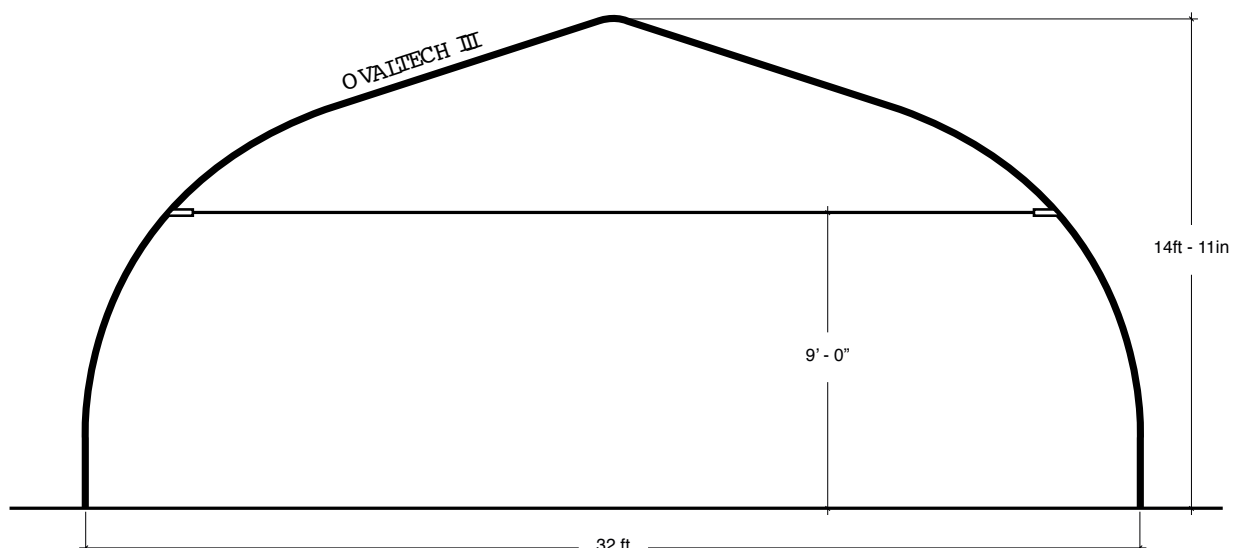
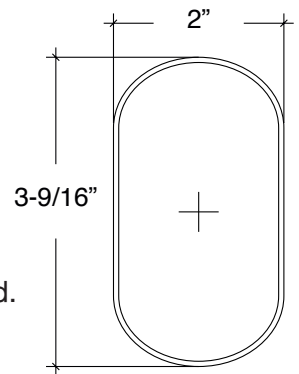


Design

- Commercial Greenhouses generally fall under the greenhouse section of the Farm Building Code section of the international Building Code.
- The Ovaltech III Greenhouse exceeds the requirements of this section of code.
- The Ovaltech III with the oval arches spaced every 6 feet, has the following load specs:
 Max Snow Load: 30 pounds per foot squared
 Max Wind Load: 105 MPH

The Ovaltech III Gothic shape provides the following benefits

- Minimum snow build-up on the structure.
- Helps the condensation to flow to baseboard of greenhouse.
- High side clearance maximizes the available space for your crop.
- All steel components are Galvalume and clear coated (no black poly markings).
- Curved braces and gable end diagonals ensure the structure stays properly aligned.
- “Swedged” ends simplify and shorten the set up time.
- Ovaltech III’s larger oval tube (2 inch by 3-9/16 inch) arch which offers more light transmission, less shadowing and increasing span without reducing loading capacity, no ‘webbing’ required.
- Bolt Fasteners: Nickel/Cadmium for high strength/corrosion resistant performance.



Foundation

- STANDARD FOUNDATION KITS: Anchor with base plate for existing concrete, Installed with Hilti anchor bolts.

Structural Components

- OVALTECH III STRUCTURE FOR DOUBLE POLY COVER: Including 32' galvanized steel pre-drilled 3-9/16 inch by 2 inch oval rib arches every 6 feet. Straight ridge tube, corner diagonals, end ribs with wire lock and 6 foot poly splice, tie plates for wood baseboard (wood supplies locally), nuts/bolts and attachments.
- 2 EXTRA RUNS 6 FOOT CURVED BRACES: 1-1/4 inches diameter includes attachments.
- CROSS-TIE SETS: 1.25 inch galvanized steel tube with two supports on each arch. Allows for superior snow and wind load as well as crop and equipment support.
- 2 STANDARD STEEL GABLE ENDS FOR 8MM TWIN-WALL POLYCARBONATE COVERING: Including vertical oval tube posts with anchor tubes, horizontal purlins (1.25 inch by 1.25 inch), steel baseboard, aluminum profiles, nuts/bolts and attachments, top vinyl flashing.

Doors

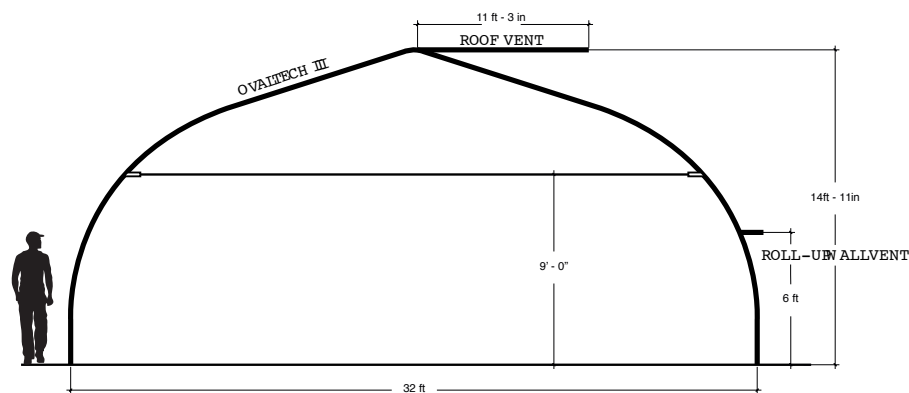
- 2 SLIDING DOOR KITS: for steel end walls, 8 foot wide by 8 foot tall, consisting of two sliding doors, of galvanized steel construction, complete with track, supports, stoppers, wheels, and all nuts and bolts.
- ONE SERVICE DOOR: Overall dimension: 35-3/8 inches wide by 82-3/8 inches tall insulated door. With frame, hinges, handle and key locking hardware.

Roll-up sidewalls

- 2 ROLL UP SIDE KITS: Including 'Wire-Tek' combined poly locking system and base support (wood stringer NOT required at roll-up height), geared/self-stopping manual crank, roll-up tube with film collars, air inflation jumper and skirting support.

Mid-roof vents

- ONE CONTINUOUS VENT SYSTEM: aluminum top/bottom sills and rails, galvanized vertical steel stiffeners, screws and closures for glazing. Double toothed steel rack and pinions, including couplings and shaft brackets, includes couplings and shaft hangers, stop collars.
- ONE MOTORIZATION KIT: for vent, includes Ridder motor/gear box, relay kit and motor starter.



Covering materials

- ROOF SECTION: Sun Selector™ films are highly advanced, long lasting multi layer photo selective films for use in greenhouse and tunnel covering applications. Anti-drip effect by increasing the surface tension of the film through AD additives, we have a significant reduction on the water droplets under the films, improving light transmission and preventing dripping over the crops.
- One roll of polyethylene file, SUPER UVA 4 year, 6 mil, 54 foot outer layer
- One roll of poly file, 4 year THERMAL with anti-fog, 6 mil, 54 foot inner layer
- LS Econet 4045 Max. It has holes of .40 mm by .45 mm, allowing 96% direct light transmission and only 25% air reduction. Located on wall vents.
- END WALLS: Lexan 'Thermo clear' plus sheet has on two sides, proprietary UV protected surface providing long-term optical quality under intensive UV exposure. 8mm twin walled polycarbonate glazing with anti-condensate, as required to cover two complete end walls.
- ROLLUP SKIRTING: Two rolls of Sun Selector polyethylene film, SUPER UVA 4 year, 6 mil at 6 feet.
- LS Econet 4045 Max. It has holes of .40 mm by .45 mm, allowing 96% direct light transmission and only 25% air reduction. Located on wall vents.
- INFLATION KIT: One inflation fan system, complete with fan for outside install, steel shroud, Styrofoam insulation, adjustable blower with 5 inch tee, poly adapters, 20 feet of 5 inch diameter poly tube.



Equipment

- **AIR DISTRIBUTION SYSTEM:** Canarm's HAF18 Horizontal airflow fan is designed to provide gentle circulation of air in greenhouses and other agricultural applications. It features open guard spacing for better air distribution and a hanging bracket, 115 V, 8 foot grounded cord and plug included. When suspended, the fan can be rotated up and down in swivel 360° for optimal control of airstream. Suitable for wet locations.
- **UNIT HEATERS:** Modine heating units. 200K BTU each. Powered by natural gas or propane. Designed especially for greenhouses.
- Stainless steel heat exchanger come standard on all units to withstand corrosive combustion air found inside a greenhouse.
- 10 year heat exchanger warranty is standard.
- Constructed with Modine's proven tubular heat exchanger design
- Installs quickly and easy with field wiring connections and knockouts for quick access to gas and electricity
- Standard power exhaust simplifies side-wall or roof venting with small 4 inch diameter vent pipe
- Permanently-lubricated motor for trouble-free dependability
- 80% thermal efficiency
- Made in the USA
- Includes heater hanger kits and horizontal exhaust chimney.

