Healthy Harvest



Tammy E. Cole, Director of Operations





Aquaponics

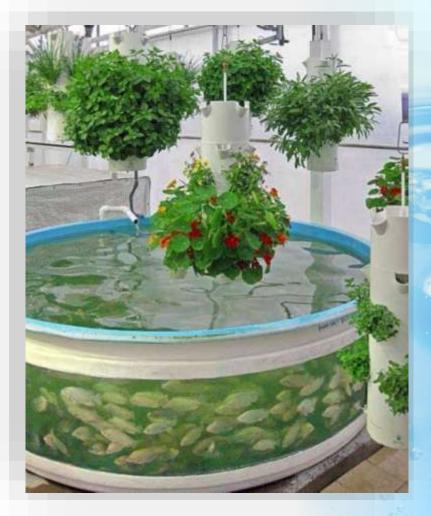


Cultivating Innovation in Agriculture





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Our Mission:

To educate and empower individuals of all ages while continuously producing fresh locally grown food

Our Vision:

To inspire and teach innovative farming techniques and provide sustainable, healthy food options through aquaponics

Why Aquaponics?

- A True STEAgM Approach to Education
 - Aquaponics demonstrates principles of science, technology, engineering, and math through an agriculture medium.

~A symbiotic, recirculating system, combining the production of lettuce, tomatoes, herbs, or other vegetative plants with a high value fish culture.~





Healthy Harvest Fresh Aquaponics Production & Education Center

An attractive 15,457 ft² facility showcasing a cutting-edge Controlled Environment Agriculture operation.

Located in the Northern Neck of Virginia, "Virginia's Garden Spot".

11,700 ft² Aquaponic Production Greenhouse

- Deep Water Culture Plant Production
- Nutrient Film Technique
- Living Filter Media Beds
- Fish Production Tanks
- Fingerling Nursery
- Plant Nursery
- Applied Research Opportunities
- Mobile Lab Equipment for Food Safety, Water Quality & Biological Monitoring

2700 ft² Education Center

- State of the Art Technology for Inperson or Distance Delivered Instruction
- Comfortably accommodate 30 seated students
- Demonstration Kitchen
- + Outdoor Classroom Space available
- Available for use by community organizations & special events

Fresh Features

A State of the Art
Educational &
Production Center
Partnering with Local
School Systems

Experiential learning linked to STEAM instruction; Science, Technology, Engineering, Agriculture, & Math.

On-site and Virtual Learning Options

Healthy Food Production & Nutrition Education

Rigor, Relevance, & Relationship

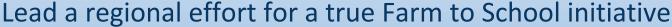
Feeding our schools and communities

Modeling Innovation in Controlled Environment Agriculture



Healthy Harvest Fresh Programmatic Goals

Youth Education - Growing Healthy Minds, Bodies, & Futures



- Infuse school environment with a culture of healthy living and eating for wellness
- Provide cross-curricular infusion units that support healthy eating and scaffold academic instruction
- Provide supporting promotional materials keeping Healthy Living Concepts as part of school culture
- Serve as a vendor to local schools providing fresh produce for student meals



Build A Team to Realize the Dream

A team of highly qualified and experienced educators, extension specialists, school food service directors, community members, agricultural producers, and food safety specialists will come together to form the Healthy Harvest Action Team.

- Develop cross-curricular aquaponics and health and nutrition infusion units.
- Ensure the SOL and CTE Competency correlation to reinforce necessary academic concepts.
- Plan for pre-learning modules related to academic areas
- Facilitate the participation of students and teachers in on-site experiential learning components

Salad Bars For Our Schools

- Partner with Northern Neck and Upper Middle Peninsula Schools to provide fresh healthy produce to area schools for service in school food programs
- Tastings conducted in lunch rooms
- Harvest of the Month
- Invite other local producers to join the effort

GROW FRESH ~ EAT FRESH

- CEA Aquaponics as a Sustainable Food Production Model
 - Potential and/or Existing Producers
 - Supplemental Operation
 - Home Growers or Hobbyists
- Healthy Food Farmacy
- Safe & Healthy Food Preservation
- Move toward Certifications in Aquaponics
- · & More





Healthy Food



Nutrition-Related Diseases/Conditions

Cellulitis Fron Deficiency Anemia
Back Pain Deviation Sleep Apnea Hernia Diabetes

Cout Stan Infections

Cout





Safe Home Food Preservation

In partnership with local certified VCE agents conduct the following programs:

- Water Bath & Pressure Canning
- Freezing
- Dehydrating
- Vacuum Sealing
- In-solution (oil, alcohol or pickling)
- Other



Industry Training

Promoting the growth and development of aquaculture, hydroponic and aquaponic food production operations across the Northern Neck and Middle Peninsula















Building Partners in Education

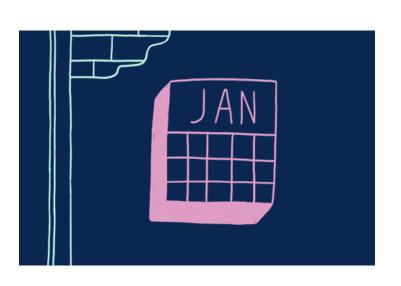
Turning Hunger Into Hope

Aquaponics allows us to provide a continuous supply of fresh healthy greens to our clients and to the community.





A YEAR-ROUND CONTINUAL HARVEST OF FRESH HEALTHY FOOD



Plants can be harvested between 18-24 turns per year. The flexibility is in the light. Grow lights emulate natural sunlight and providing the ability to simulate a 20-hour growing day, accelerating production and harvest.

Healthy Harvest Fresh greenhouse will be the equivalent of just over $\mbox{\em 4}$ of an acre production space.

	Traditional Field Farming per ¼ acre	Healthy Harvest Fresh Aquaponics
Heads of Lettuce	1 crop rotation 8,000 heads/1/4 acre	Multiple turns/yr = 125,000/1/4 ac
Production	12,000 #	187,500 #
Fertilize Inputs	\$418 of synthetic fertilizer/1/4 acre	Organic nutrients provided from fish solids
Water required per head	20 gal/head	<1 gal/head
	nothing	+ 8500 # of tilapia



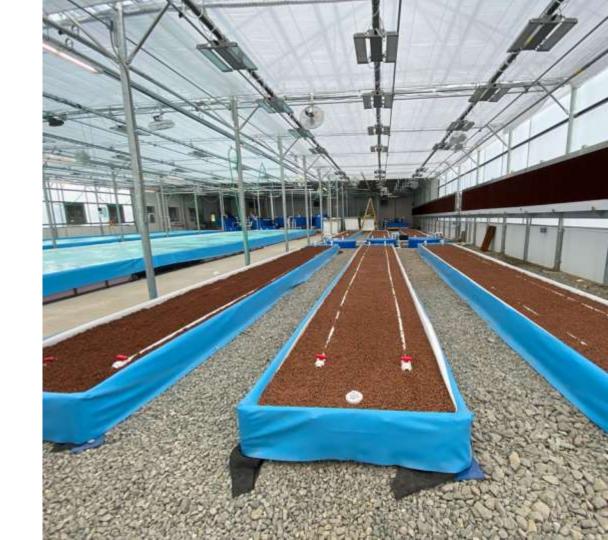
NFT- Nutrient Film Technique





Deep Water Culture Tanks

Living Filter Media Beds-Mimic the function of traditional Raised Garden Beds



Purge System & Biofilter System



Fish Nursery-Fingerling Rearing and Herb Production Beds



Fish Production
System w/
Biofilter, Sump &
Degassing Tanks





Kills free floating bacteria in the water column.



Classroom & Demonstration Kitchen

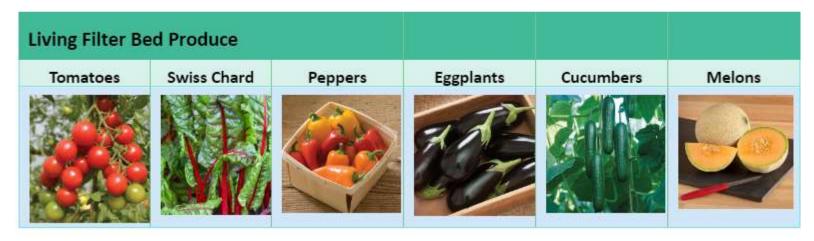


Healthy Harvest Solar Initiative

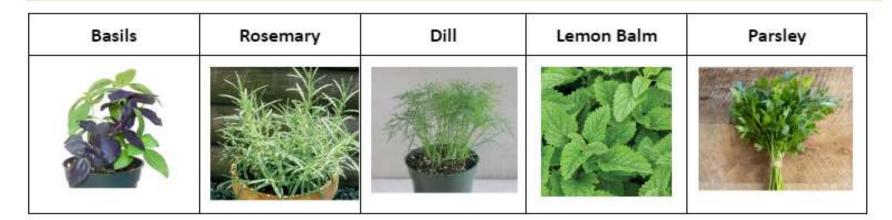
Installation by Commonwealth Power, LLC.

Raft Bed Produce





Herbs



| Nasturtiums | Pansies | Hibiscus | Amaranth | Strawberries | Blue Oyster | Mushrooms | Mushrooms |







Tilapia

- Blue Tilapia
- · Nile Tilapia
- Mozambique Tilapia







Aquaponics Production

Education Center

Cultivating Innovation in Agriculture

Boldly bridging the gap between foodinsecurity & education by demonstrating
innovative & sustainable farming techniques
while continuously producing fresh, locally
grown food.

Scan Me to Donate

Building Dreams

Harvesting Hope

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