

BUILDING
DREAMS



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BUILDING A 21ST CENTURY



Aquaponics Production Facility and Educational Center

Healthy Harvest Fresh is an educational center and aquaponics production facility for the purpose of growing premium quality vegetables and fish and educating individuals on the importance of fresh food and sustainable agriculture.



Mission: To provide *hope* in the communities we serve through the *right food and education*



Vision: To create *healthy, self-sufficient and thriving communities*

DREAM

AQUAPONICS

THE COMBINATION OF AQUACULTURE (RAISING FISH) AND HYDROPONICS (THE SOIL-LESS GROWING OF PLANTS) THAT GROWS FISH AND PLANTS TOGETHER IN ONE INTEGRATED SYSTEM.



An innovative approach to teaching future generations sustainable, healthy food farming while providing fresh produce to those in need year-round.



GOALS

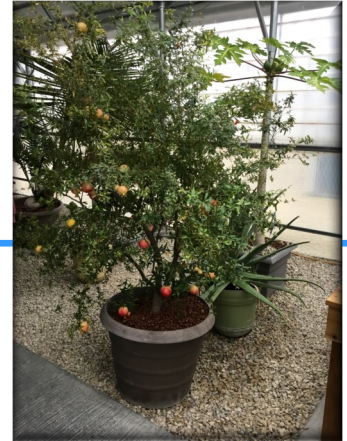
- ⇒ Provide fresh healthy produce with a shelf-life of 2-3 weeks to those in need locally and across the state of Virginia.
- ⇒ Educate children of all ages, allowing them to see the possibilities for the future through an innovative and forward-thinking approach to providing for their community and beyond.
- ⇒ Become the farm to table and farm to school source for regular local procurement of fresh produce and healthy protein.
- ⇒ Become the supplier that offers key items year-round with on-time delivery to other food banks, schools, institutions, and farm markets.

FRESH ~ LOCAL ~ SUSTAINABLE

INNOVATION YEAR'S IN THE

Our goals are simple yet systemic

- ⇒ Produce fruits, vegetables and fish that are more nutrient dense than food that is shipped to the area from across the country.
- ⇒ Resolve the food bank's challenge of maintaining or increasing the amount of fresh produce provided to each recipient monthly by growing produce in a controlled environment year-round, providing the equivalent of **106,667 meals per year** for children, seniors and working families in the region.
- ⇒ Resolve procurement issues for local schools by becoming a new local producer of a variety of fresh food, offering key items year-round with on-time delivery
- ⇒ Develop educational programs that give students the opportunity to explore a new career field in a growing industry that needs an educated workforce.



MAKING


THE SYSTEM

Unlike traditional agriculture, aquaponics uses 1/6 of the water to sustainably grow 8 times more food per acre, without the use of pesticides, herbicides or chemical fertilizers, year 'round, in any climate.

Healthy Harvest Fresh will use a Clear Flow Aquaponics System in a 10,650 square foot controlled environment greenhouse. Annual production yield:

- ⇒ Raft Tanks - 80,000-110,000 pounds of vegetables
- ⇒ Living Filter Beds - 10,000-12,000 pounds of vegetables
- ⇒ Fish Tanks - 6,000 pounds of fish

Fish and vegetables will be raised to enhance the offerings of Healthy Harvest Food Bank as well as a farming venture that provides fresh, nutritious food to local and regional schools, institutions, and farm markets. The vegetables can be harvested daily, 365-days per year, and the fish are harvested every 4 weeks, providing a steady supply of fresh food.



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



HARVESTING HOPE



Research shows the average fruit or vegetable travels approximately 1,500 miles from farm to plate. Miles and hours spent in transit packed away on a tractor trailer, train, boat, or airplane affects the quality in terms of taste and nutritional value.



The Need

The faces of hunger in our region are children who require adequate nutrition to succeed in school and grow to their potential; seniors on a limited budget; and families challenged by economic circumstances.

Food Bank Recipient Information: (8,753 individuals served each month)

- 30% under age 18
- 35% over age 60
- 35% age 18 – 59
- 32% of households with diagnosed case of Type I or Type II diabetes
- 62% of households have age/health related dietary needs

The food bank recognizes the following problems school systems in the region face:

- Local producers aren't bidding
- Hard to find year-round availability of key items
- Hard to coordinate regular procurement of local produce
- Vendors for local items don't offer a broad range of products
- Higher and often unstable product prices
- Lack of reliability in delivering ordered items on-time
- Hard to find new suppliers/growers or distributors
- Hard to get information about product availability

The Solution

An innovative approach to teaching future generations sustainable, healthy food farming.

Healthy Harvest Fresh can resolve these issues by providing year-round fresh produce while also educating school aged children. Through this innovative program the organization will:

- Provide a new local producer to submit bids
- Offer key items year-round
- Provide regular local procurement and a broad range of products at lower prices
- Provide reliable on-time deliveries
- Provide a full list of products and their availability
- Educate students in a hands-on environment on the importance of sustainable farming, healthy fresh produce and protein.
- Provide project-based learning for students



Education is one of the greatest empowering tools we can provide every child that might help them change the conditions of their lives by taking action with confidence, knowing they have the skills of a trade that will make them competitive in an innovative field.

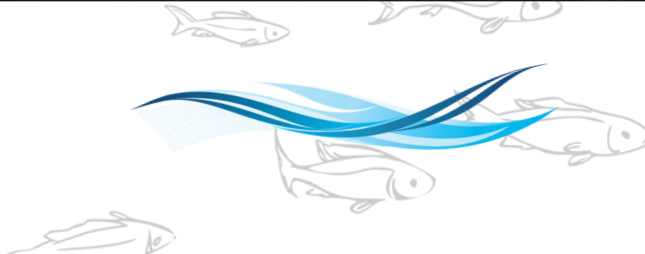


By mentoring and educating children through a state-of-the-art aquaponics greenhouse, not only are we bringing a new and innovative technology to the rural region we serve, but also providing children with the knowledge and experience that could guide them to be engineers or designers of food production systems of the future. Introducing this technology to students has the potential to lead them to a rewarding and necessary career for generations to come and instilling in them a sense of belonging by enabling them to see the possibilities for the future through an innovative and forward-thinking way of providing for their community and beyond.

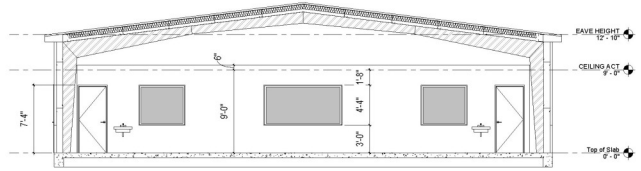
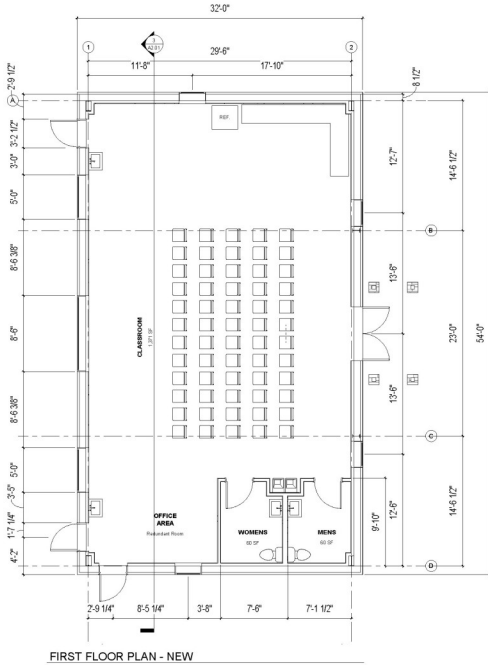
Aquaponics demonstrates principles of science, agriculture, math, and business in all grade levels. The hands-on monitoring and care of an aquaponics system by students helps instill a sense of responsibility, inspires creativity, and creates excitement in the learning environment.

THE TIME IS RIGHT FOR THE

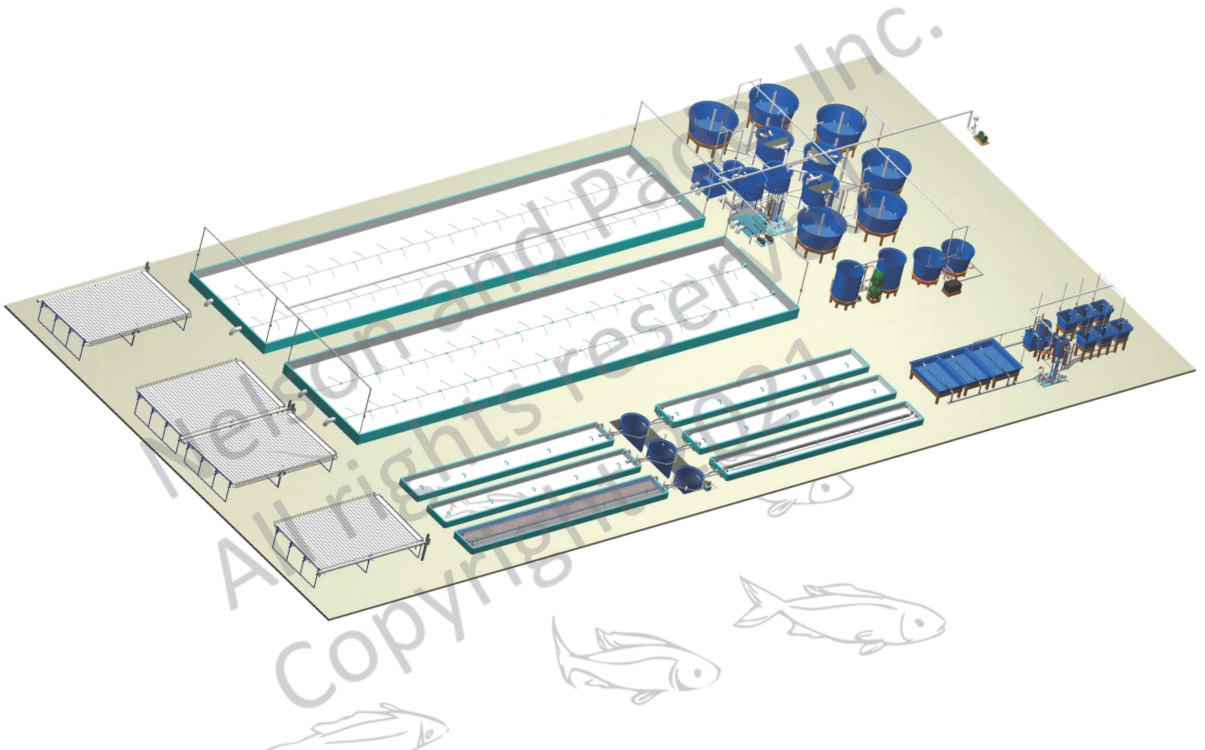
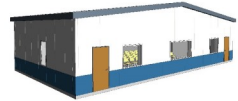
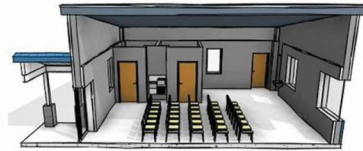
FUTURE SITE OF HEALTHY HARVEST FRESH



DREAM TO BECOME REALITY



SECTION INTERIOR





IF YOU CAN DREAM IT,
YOU CAN DO IT!

~WALT DISNEY

Establishing an aquaponics facility is similar in cost and operation to hydroponics, but aquaponics has many advantages over traditional hydroponics.

Unlike hydroponics, aquaponics is sustainable; it is free of pesticides, herbicides and fertilizers and it produces two crops (fish and plants).

The start-up cost of the project is \$1,200,000. This includes turn-key construction of the classroom and greenhouse, as well as installation of the aquaponics system.

The estimated annual operating cost of the system is \$160,000. The system has the potential to produce 90,000-122,000 pounds of vegetables per year and 6,000 pounds of fish at maximum capacity.

Guiding Principles

- ◆ We believe that everyone deserves access to healthy nutritious food.
- ◆ We will always make the most financially responsible choices for sourcing goods and services and managing the organization.
- ◆ We believe that education is essential for long-term systemic change.

FRESH ~ LOCAL ~ SUSTAINABLE



“One small change can have an enormous impact, creating a ripple effect for generations to come.”

~ Cindy Balderson, Vice-President & Development Director

Hands-on education in a cutting-edge environment

Teaching future generations:

*Responsibility ~ Creativity ~ Healthy Eating
Sustainable Farming ~ Plant Science
Biology ~ Nutrition*



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