



Growing Confidence

..... One Fish At A Time

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With warm weather, the thoughts of many anglers drift to New York's lakes and streams. For them, it's time to grab their rods and equipment and head for a favorite fishing spot. If they're lucky, in addition to hours of recreational fun, they'll also come home with a successful catch.

Fishing for youth residents of the Industry Residential Center in Rush, New York, has taken on an entirely new meaning thanks to a partnership with the NYS Aquaculture Association. Youth grow fish and plants as part of an aquaculture/aquaponics system. Largemouth bass, catfish, tilapia and goldfish are currently being cultured in tanks while lettuce, cucumbers, tomatoes, microgreens and ornamental flowers grow in aquaponics beds, fertilized by nutrient-rich fish water circulating through the beds.

The aquaculture/aquaponics program provides a multi-faceted, hands-on learning environment for male juveniles through age 17, who have been placed at Industry by Family Court. The Center is operated by the New York State Office of Children and Family Services and provides counseling, academic education and work experiences designed to put residents on a positive track for re-entry into their home communities. The aquaculture/aquaponics program is one of the Industry's newest efforts to accomplish this goal.

Initiated in September 2012, the program connects Industry's counseling and classroom educational endeavors with interesting life science experiences such as the aquaculture and aquaponics systems.

Photos courtesy of OCFS

Residents build and operate the systems that will grow the fish and plants they will be raising. This first-hand experience with plumbing, electrical systems, design, animal husbandry, greenhouse management and other important skills complements the academic learning taking place in the classroom. For residents, the skills learned may spark interest in pursuing careers in these skilled trades.

Character, responsibility, work ethic, organization and systematic job completion are also important personal development skills the program nurtures. Being able to say "I grew this meal" offers youth confidence and pride in their product.

The NYS Aquaculture Association has provided technical assistance, as well as donations of fish, tanks, biofilters, pumps, and PVC piping.

The entire operation is organic. Since every aspect of the project emphasizes organic farming, all organic waste material (vegetable harvest waste, scrap vegetables from the kitchen, etc.) is composted and re-used in the growing of the next cycle's vegetable crop. Nothing in this operation is wasted. Everything that can be reused and recycled is planned into each phase of the program. Residents learn and practice the importance of recycling and reusing.



Once completely up and running, it is estimated the project will produce over 400 bushels of tomatoes, more than 200 bushels of cucumbers, 127,000 pounds of salanova lettuce (approximately 240 heads per day) and hundreds of pounds of microgreens in a 10 month growing cycle. Fish take between 12 to 21 months to grow to size with an estimated 1,500 pounds of fish produced each growing cycle. Both the fish and vegetables will be used in Industry's kitchen to feed the youth, with any excess being sold to local restaurants and farm produce markets.

In the warmer months, outdoor vegetable beds will be added to the project's activities. This will increase overall crop production and variety. Carrots, onions, melons, beets and other crops are planned for the outdoors.

The next major phase of the project will be the development of an aquaponics-based greenhouse. The greenhouse will hold two floating raft aquaponics systems approximately 12 ft. wide 56 ft. long and six inches deep. This will enable Industry to grow vegetables

year-round.

With the success of the aquaculture/aquaponics program, Industry has now initiated an animal husbandry program to include four pigs and five chickens. Youth and staff built a fenced pen and chicken coop with shelters to house the animals. Youth will be responsible for feeding and caring for animals. With an incubator, they will learn how to hatch eggs and tend to the young chicks.

Like the aquaculture/aquaponics program, animal husbandry provides hands-on learning and life skill development. At the same time, it's fun and a chance to enjoy the outdoors while caring for the animals. Youth are enthusiastic about the new arrivals and have already nick-named the chickens and pigs.

For more about the New York State Office of Children and Family Services visit ocfs.ny.gov
To contact the New York State Aquaculture Association contact nysaquaculture@rochester.rr.com