Aquaculture Development in NY

Michael B. Timmons*, Biological and Environmental Engineering - mbt3@cornell.edu
Gregg J. Rivara, Cornell Cooperative Extension of Suffolk County – gjr3@cornell.edu
Marine District (Rivara):

The commercial shellfish farming industry is made up of mostly cottage-scale companies that primarily grow oysters for the half shell trade, some selling directly to restaurants, wineries and at farmers markets. There is renewed interest in eating locally-produced food including oysters, whether from the North Shore, South Shore or the Peconic Estuary and these are fetching premium prices. Wineries on the East End are pairing their wines with these oysters, attracting customers and forming new links between land and sea farming. Some of these shellfish farms may sell seed stock for grow out to other farmers in Suffolk as well as in other east coast states. While oyster production dominates, many firms are looking into culturing other species such as the hard clam and bay scallop, which the CCE Shellfisheries Program has much experience with. The annual farm-gate value of oysters alone is estimated to be two million dollars. With a conservative economic multiplier of four (purchase of boats, trucks equipment, restaurant and winery sales), the economic value of oysters to Suffolk County is at least $8 million. It is expected that local oyster demand will increase over at least the next decade, causing new companies to form and established firms to grow. The leasing of underwater lands for shellfish cultivation in the Peconic Estuary by Suffolk County is allowing for significant growth over the first 10 years of the program, while legitimizing and stabilizing existing farms in terms of underwater land access and financing. In 2015 there were 66 private on/off bottom shellfish culture permits in New York (mostly in Suffolk County).

The Suffolk County Marine Environmental Learning Center acts as an incubator for shellfish farming businesses. This includes new business startup assistance; help with permit applications, problem solving (e.g. disease prevention, predation reduction, improved marketing, and gear improvements) as well as demonstrations on new equipment and techniques that growers can see for themselves before risking their time and money. Information on shellfish aquaculture as a new business was provided to 40 Suffolk County residents.

We worked with the community of Bellport, Brookhaven Town and Fire Island National Seashore to plant 100,000 oysters using volunteers from the community.

Tours of the Suffolk County Marine Environmental Learning Center at Cedar Beach County Park were given to New York Sea Grant staff (2), New York Harbor School teachers (2), Quality Parks Program (12 individuals), Oyster Farmers from Virginia (3), Maryland (2) and members of the public at our open house on April 18th (45).

Shellfisheries Staff worked with the following local and regional entities as they relate to shellfish: Cornell University Aquaculture Program Work Team, Northeastern Regional Aquaculture Center, NYS Aquaculture Association, NYS DEC Shellfish Advisory Committee, Stony Brook University, Long Island University, New York University, New York Harbor School, Billion Oyster Project, Long Island Farm Bureau, Peconic Land Trust, Slow Food East End, National Marine Fisheries Service Milford Laboratory, Long Island Oyster Growers Association and the East Coast Shellfish Growers Association.

The aquaculture specialist, along with colleagues from Maine to Connecticut, worked with three commercial shellfish farms to trial flip bag oyster culture, where the oyster cages move with the tide, creating an oyster with a deeper cup. These oysters, known as Kusshi in Japan and the West Coast of the US, fetch premium prices. The work in 2015 was promising and we will continue with these trials in 2016.
The SPAT (Suffolk Project in Aquaculture Training) program ended its sixteenth year with a total of 226 returning families and new participants. Twenty two-hour lectures were given during 2015. Two SPAT programs initiated in 2009 in the Town of Southampton continue to operate, the first with the cooperation of the Town Trustees and the Town Recreation Department at Tiana Beach with 42 members and the second at Sag Harbor (Sag Harbor Oyster Club and Noyack community gardens) with 16 participants. Volunteer hours logged at the marine center total approximately 10,000 hours in 2015. An additional ~2,000 hours are assumed by volunteers at their docks that have not logged the time officially.

The community aquaculture specialist developed and operated a number of educational opportunities for youth and adults including working with the marine educator at the SCMEIC. Schools visited included West Hampton Beach High School and Quogue Elementary School. SPAT participated in the Westhampton Beach Career Café and Mentors Breakfast. A new lecture series was established for the Moriches Bay Project. They were held in Westhampton Beach and were well attended. SPAT hosted the 4th annual Shellabration in Greenport to a sold out attendance. SPAT members conducted a pre-trail study as part of a NY Sea Grant-funded project looking at using algal concentrate as a replacement for live algae for feeding oyster larvae.

 Gregg Rivara
 Aquaculture Specialist
 Cornell University Cooperative Extension of Suffolk County
 3690 Cedar Beach Road
 Southold, NY 11971
 Voice: 631-852-8660 ext 35
 Fax: 631-852-8662
 GJR3@cornell.edu

Aquatic Animal Health (Marquis/Getchell/Bowser):

The Aquatic Animal Health Program (AAHP) located at the College of Veterinary Medicine, Cornell University continues to provide fish disease diagnostic assistance to the aquaculture community in New York State as well as disease outbreaks in wild populations that are submitted by NYSDEC fisheries staff. These cases originated primarily from disease events in finfish from Upstate New York, although several menhaden die-offs were also submitted in 2015. During 2015, 48 disease diagnostic investigations were processed. The AAHP continues to have representation at the Aquaculture Intersector meetings held each year. The Aquaculture Intersector meetings are ad hoc meetings of the commercial aquaculture community, NYS government agency representatives and university faculty and staff where contemporary issues of concern to the aquaculture community are discussed. Dr. Hélène Marquis, Professor of Microbiology in the Department of Microbiology and Immunology (the home department of the AAHP) now provides the leadership of the Aquatic Animal Health Program. Dr. Rodman Getchell, Research Scientist, provides the majority of the diagnostic services with assistance from Dr. Marquis and Kelly Sams, our technician. Upon his retirement, Dr. Bowser was granted the status of Professor Emeritus of Aquatic Animal Medicine. He continues, on a more limited basis, to assist the ongoing efforts of the AAHP when asked.

Rod Getchell, PhD
Program Work Team (PWT) General (Timmons):

The PWT continues to maintain its website, www.fish.bee.cornell.edu. This site is our main avenue for information transfer and access to information about various aquaculture topics and is the avenue to sign up for the 2016 Cornell Aquaculture summer short course which will be held June 21-23 (2016) on the University of New England campus (Biddeford, ME) and is hosted by the UNE Marine Science Program and its director Dr. Barry Costa-Pierce. The PWT’s previous output of a 72-page white paper “New York Aquaculture Industry: Status, Constraints, and Opportunities” continues to be an important document in documenting the current status of our industry (available at www.fish.bee.cornell.edu). This document continues to be requested and has been mentioned by many individuals as being extremely useful in describing the current industry and the potential for future development.

The annual short course (June 2015) was cancelled this past year due to illness of the lead instructor. However, over 25 individuals enrolled in our Distance Learning Course that is a self-guided course covering the same material as the hands-on lecture course. The course covered the basics of water recirculation, health and biosecurity. The course was changed in 2012 to include coverage of hydroponics and aquaponics. The short course is also offered as a distance learning course.

Michael B. Timmons, PhD & PE
Professor Biological & Environmental Engineering
Riley Robb Hall—111 Wing Drive
Cornell University, Ithaca, NY 14853
607.255.1630 (o), 607.227.5638 (cell), 607.255.4449 (fax)
Website https:\fish.bee.cornell.edu
www.cambridge.org/9781107607408 (book on entrepreneurship)
www.c-a-v.net (book on Aquaculture)

NYS Aquaculture Association (Universal)
Working for Positive Growth in Aquaculture

During 2015 the Association continued to lay the groundwork for diversification while maintaining and improving current hatchery operations. New York’s upstate aquaculture program is built mainly around bait and stocking programs. There is significant demand for these products and many growers are making a good living marketing fish to tourism and sport fishing clientele. Aquaculture however, has many varied centers of attention, all of which have potential for commercial development.

One major area of the industry that's gotten little attention upstate is the raising of fish for
food. Few growers have configured their businesses for food production, yet New York's market for seafood is arguably the largest in the world. The development of efficient, cost effective recirculation systems has made the raising of fish in tanks and on a massive scale, a potentially profitable business venture. Moving the industry in the direction of food production however, will not take place overnight, nor will it be an easy or inexpensive venture.

New York's highly restrictive regulations governing the distribution and sale of food grade fish and shellfish continues to be a major impediment to the growth of the industry. In 2012 some improvements in the regulation of food fish sales and distribution were made, but more still needs to be done. In 2014 several growers in the down state area expressed an interest in growing sturgeon on a large scale basis, but found regulations governing this specie highly restrictive. With other states leading the way in the culturing of sturgeon, New York's resistance to sturgeon culture is tragic and continues to stymie important growth in the Aquaculture Industry. The NYS Aquaculture Association will continue to strive for the establishment of Sturgeon Culture in New York during 2016.

2015 also saw changes in the Intersector Forum Group. For those of you who may not be familiar with the Intersector Forum, it was first created in the mid 1980's as a non-partisan group to help bridge the communication gap between private fish and shellfish growers, government regulators and College Educators. The Forum is a non-binding, informal group of people dedicated to advancing the aquaculture industry in New York State. Its goal is to promote and strengthen New York State Aquaculture statewide by being a neutral ground for discussing all types of issues effecting New York aquaculture including, but not limited to, regulatory interpretation and reform, fish health issues, disease outbreaks, hatchery bio-security and other issues facing the aquaculture industry in New York State. At its regular meeting on March 5, 2015, Chairperson Laurie Trotta announced she would be giving up her position at SUC Morrisville and her chairpersonship for the Intersector Forum and will be moving to Alaska. As part of the proceedings, it was decided that Forum operation and management would be divided and two people be named as chairperson. Two could more easily share meeting planning, manage agendas and deal with Forum business. Nominations were solicited and a vote taken as to who should take over the Forum chairpersonships. Jim Kennedy from National Pond Service in Canandaigua, NY and Daren Hickling from Hicklings Fish Farm in Edmeston, NY, were elected to be joint chairpersons of the Intersector Forum for the coming years. Both men are Association Officers, and will, I'm sure, do a fine job in their new posts.

Ted Universal
President, N.Y.S. Aquaculture Association
5109 Booher Hill Road
Geneseo, New York 14454
585-243-3543
nysaquaculture@rochester.rr.com