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AQUACULTURE SITUATION AND OUTLOOK REPORT 2007: NEW YORK

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Industry Trends and Outlook

New York State is diverse both geographically and in terms of aquaculture species and systems. The industry ranges from flow through raceways to bottom culture of shellfish to intensive water reuse systems. Reliable production statistics are difficult to come by, but it is estimated that the State's aquaculture industry annually generates \$20 million in farm-gate sales. These figures do not include state, county and municipal finfish and shellfish production for resource enhancement purposes. The predominant cultured species in New York are trout, baitfish (e.g. golden shiners), oysters, hard clams, large and smallmouth bass, bluegills and tilapia. Other products include bay scallops, koi, crawfish, winter flounder and aquatic plants (e.g. water lilies, hyacinths, arrowheads).

Commercial Species List

- Bay scallop, *Argopecten irradians irradians*
- Eastern oyster, *Crassostrea virginica*
- Northern quahog, *Mercenaria mercenaria*
- Brook trout, *Salvelinus fontinalis*
- Brown trout, *Salmo trutta*
- Rainbow trout, *Oncorhynchus mykiss*
- Tilapia (*Oreochromis niloticus*)

Addressing Industry Needs

Researchers, extension specialists, resource managers, industry associations and concerned stakeholders all play a role in addressing industry



Bill Pell of Southampton Oyster Company (Photo: Gregg Rivara)

needs. The following sections outline the new initiatives and recent accomplishments in these areas.

Aquaculture Research

Facilities conducting aquaculture research in the State include Cornell University, Stony Brook University, Long Island University, Brooklyn College, Dowling College, Morrisville State College and various field stations including the Suffolk County Marine Environmental Learning Center operated by Cornell Cooperative Extension of Suffolk County.

Much of the funded research in the State is for shellfish restoration and closed system engineering. Some of the first salmonid and shellfish hatcheries in

Emerging Issues and Critical Needs

- Lower cost electrical power would benefit all land-based farms, especially water reuse systems and shellfish hatcheries/nurseries.
- There is a need for better marketing of cultured product. While there is a generic campaign for New York seafood, some growers would like to see a program tailored to their industry. The danger is alienating the fishing industry (by comparing farmed to wild) to which a number of growers belong.
- With the growth of cottage-scale shellfish farms comes the need for more underwater land. While there are a number of ways to access these lands, it has become a constraint for growth. A solution on the horizon is the leasing of underwater land owned by the State by the County of Suffolk (the eastern-most county in New York State). While the county has had this capability since 1969, nothing was done due to the onerous requirements of the enabling legislation and baymen opposition. Since the brown tides of the 1980's and 1990's and greater restrictions on finfish landings, baymen have looked at shellfish farming as another tool to maintain their lifestyle and remain on the bay. In 2004, with support from the baymen, a revamped lease law was put into effect. This law made it easier for the county to lease lands for shellfish cultivation. The county has devoted staff and approximately \$600,000 to develop a leasing program which must be in place by the end of 2010 when the law sunsets.
- Shellfish farmers that culture on bottom need to quantify the ecological effects on the benthos during harvest.



Commercial fisher Steve Gauger with oyster cages in Peconic Bay
(Photo: Gregg Rivara)

the nation started in New York. Some of the State's "breakthroughs" in aquaculture include innovative water reuse systems for finfish culture, an axial-flow floating upweller nursery system for shellfish, lipid enrichment of oyster broodstock for increased production, innovative mechanical harvesting and sorting devices for northern quahogs and oysters, and hormonal manipulation of fish to increase production.

Aquaculture Extension

There are two full-time extension specialists in the state and a number of personnel that have part-time aquaculture extension responsibilities. The primary extension program is shellfish aquaculture which includes both private and government-operated shellfish farms. Assistance is given to established culturists (diseases, marketing, technology) as well as new start-ups (permit assistance, business planning). A major extension program accomplished with state and federal funds and in cooperation with a town shellfish hatchery was retraining commercial fishers (mainly inshore fishers or "baymen") to culture oysters. The program became the nucleus for the still expanding, cottage-scale shellfish aquaculture industry on eastern Long Island.

Aquaculture Education

There are two "aquaculture education centers" in New York. One is at the Suffolk County Marine Environmental Learning Center (SCMELC), operated by Cornell Cooperative Extension (CCE) of Suffolk County and focuses on shellfish aquaculture; the other is at CCE-New York City in the Bronx, and deals largely with water reuse systems and aquaponics.

Both programs send representatives to schools as well as have students come in to learn the basics of



Juvenile winter flounder raised for stock enhancement program.
(Photo: Mark Abramson)

Research Contact Information

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| John Aldred | East Hampton Town Shellfish Hatchery (631) 668-4601 jaldred@town.east-hampton.ny.us | municipal shellfish enhancement/ restoration |
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| Michael Timmons | Department of Biological and Environmental Engineering- Cornell University (607) 255-1630 mbt3@cornell.edu | recirculating system design |
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| Aquaculture Industry Association(s) | | |
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| Karen Rivara | East End Marine Farmers Association (631) 765-1808 keeno@juno.com | |
| Testing Laboratories | | |
| Paul Bowser | Cornell University College of Veterinary Medicine (607) 253-4029 prb4@cornell.edu | finfish |
| Bassem Allam | Marine Disease Pathology and Research Consortium (631) 632-8745 bassem.allam@stonybrook.edu | shellfish |

aquaculture. The Suffolk County program operates summer day camps that expose children to an intensive program that includes information on growing shellfish from egg to market size.

In 2000, a shellfish gardening program SPAT (Southold Project in Aquaculture Training) was initiated by CCE-Suffolk. Incorporating monthly classes, thrice weekly volunteer workshops, a community shellfish garden and social events, the program has grown to 200 member families. SPAT volunteers work closely with the resource enhancement hatchery and nursery at the SCMELC and run their own hatchery on the site.

Aquaculture Resources

Cornell University Cooperative Extension
<http://www.cce.cornell.edu/~suffolk/Programs/MARhome.htm>

Northeastern Regional Aquaculture Center
The NRAC is one of five Regional Aquaculture Centers established by the U. S. Congress which supports research and outreach efforts to promote the development of the aquaculture industry. <http://www.nrac.umd.edu>

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