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## AQUACULTURE SITUATION AND OUTLOOK REPORT 2009: VERMONT

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### Industry Trends and Outlook

The number of trout producers in Vermont has declined over the last 15 years from 15 farms to six, including two full-time, food-fish producers. All produce rainbow, brown, and brook trout. Most fish are used to stock public and private ponds, often through various Vermont Conservation Districts' pond-stocking programs. They also supply trout fingerlings. A small amount of trout is produced on farms for sale to local markets.

Current production and economic information exists for four companies engaged in fish production in the State. Taken together these companies had estimated 2008 annual sales of \$388,000 and employed an estimated eight people. Hatcheries operating at capacity can each produce 40-50,000 fingerlings for stocking annually. A listing of active trout fingerling producers approved by the Vermont Fish and Wildlife Department is available at:

[http://www.vtfishandwildlife.com/library/Factsheets/Fisheries/Pond\\_Stocking\\_Information/Trout\\_Source\\_List.pdf](http://www.vtfishandwildlife.com/library/Factsheets/Fisheries/Pond_Stocking_Information/Trout_Source_List.pdf)

There are two limited permits in place for research and education pertaining to tilapia production. No active, sustained research production is underway. An educational permit is in place to determine economic feasibility of tilapia production as part of an integrated closed system facility at the proposed Burlington Food Works. If successful, the State expects the holders to apply for commercial production permits.



Most fish are used to stock public and private ponds. (Photo: Lucas James Williams Memorial Youth Fund <http://www.lucasjameswilliamsyouthfund.org/>)

There are not any active baitfish producers in Vermont at this time, although several farms have produced small quantities sporadically in previous years.

Culture Tools of Monkton has produced a commercial ultrasonic waste feed controller for salmonid aquaculture, a critical tool for industry.

### Commercial Species List

- Brook trout (*Salvelinus fontinalis*)
- Brown trout (*Salmo trutta*)
- Rainbow trout (*Oncorhynchus mykiss*)
- Tilapia (*Oreochromis niloticus*)

## Emerging Issues and Critical Needs

- Baitfish are an important commodity which support an economically important recreational fishing industry (both open water and ice fishing). Vermont State baitfish regulations changed in 2007 to reduce the risk of introducing exotic invasive fish species into the State and the Lake Champlain Basin. Regulations limit the types of baitfish permitted (golden shiner, emerald shiner, and white sucker only) and phase out imports of baitfish from outside the basin. New regulations will further restrict baitfish movement within the State. On the other side of the Lake Champlain Basin, New York is also restricting baitfish movement to prevent the eastward spread of Viral Hemorrhagic Septicemia (VHS). Cutting off external supply and limiting movement of baitfish provides multiple opportunities for in-state bait fish production.
- Financial, marketing, and technical information on small-scale cold weather baitfish production is limited, providing opportunities for applied research. Adapting existing information and developing a pilot demonstration facility may encourage indigenous small-scale baitfish production.
- Only two out-of-state sources are permitted to import trout into Vermont. Because several trout fingerling producers are reported to be at capacity, there may be additional opportunities for expanded trout hatchery production in the State. New, approved in-state fingerling sources may become more important due to the threat of VHS spread.

## Addressing Industry Needs

Researchers, extension specialists, resource managers, industry associations, and concerned stakeholders all play a role in addressing industry needs. The following sections outline new initiatives and recent accomplishments in these areas.

## Aquaculture Research

There is little information on current aquaculture research underway in Vermont. Ocean Arks International, in collaboration with the Intervale Corporation and the City of Burlington, is engaged in periodic research on tilapia and shrimp production. No aquaculture research has been reported from any other institution active in the State.

## Aquaculture Extension

Currently, there is not an aquaculture Extension Specialist in the State. The University of Vermont (UVM) Extension and local Conservation Districts have periodically partnered to bring in aquaculture specialists from neighboring states to lead pond owner workshops on recreational and small-scale food fish production and pond management.

UVM Extension provides regionally appropriate aquaculture information upon request to the public. UVM Extension has also presented State information at national and regional aquaculture meetings.

## Aquaculture Education

Aquaculture education facilities are in place at the Essex, Vermont Technical Center, but no courses are currently offered. Ocean Arks International provides specialized education involving fish production in Eco-Machines, and integrated, closed-system agricultural production systems. [http://www.oceanarks.org/edu60/John\\_Todd\\_At\\_the\\_University\\_of\\_Vermont.php](http://www.oceanarks.org/edu60/John_Todd_At_the_University_of_Vermont.php).

The University of Vermont does not have any formal undergraduate and graduate programs in aquaculture education. However, UVM Extension hosts training workshops in pond management and small-scale aquaculture in collaboration with Extension aquaculture specialists from neighboring states.

## Aquaculture Resources

### Lake Champlain Sea Grant

<http://www.uvm.edu/~seagrant/>

### The Intervale Center

<http://www.intervale.org>

The **Vermont Aquaculture Association** is inactive and the website is no longer available.

**Northeastern Regional Aquaculture Center** 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>

## State Aquaculture Coordinator

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