

# Aquastats

## Ontario Aquacultural Production in 2006

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### INDUSTRY SNAPSHOT 2006

<b>Major Species Produced</b>	- rainbow trout
<b>Minor Species Produced</b>	- tilapia, Arctic charr, brook trout, smallmouth and largemouth bass, cyprinid baitfish
<b>Total Trout Production</b>	- 3,800 tonnes
<b>Farm-gate Value of Trout</b>	- \$15.7 million
<b>Economic Contribution</b>	- \$55 - 60 million
<b>Job Creation</b>	- 180 person-years of direct and 200 person-years of indirect employment
<b>Projected Production of Trout</b>	- 4,100 tonnes in 2007

### Overview

In 2006, we estimate that Ontario fish farms produced approximately 3,800 tonnes (8.38 million pounds) of rainbow trout, primarily for human consumption. This is a 6.75% decrease from the 4,075 tonnes produced in 2005. Lake-based cage production of trout in the Lake Huron and Georgian Bay region, continues to dominate other land-based production systems, accounting for 78 % of the total provincial production (Figure 1). Arctic charr production is very limited and production has remained at nominal levels for several years now, with only a few farms having any production. Similarly, tilapia farming has not increased, and most of its value is from the export of fingerling-sized fish. Data suggests that the combined production of tilapia is approximately 75 tonnes annually. The production of brook trout and bass is primarily geared towards pond stocking and recreational fishing markets. These operations provide an important diversity to the industry, although quantifiable information is scarce, and we do not specifically survey this industry subsector. Our records indicate that more than 60 facilities culture brook trout, bass and other species, with a total production of approximately 25 tonnes annually.

The total farm-gate value of the 3,800 tonnes of rainbow trout produced is estimated to be \$15.66 million, with an average price of \$1.87/lb (\$4.13/kg). The sale of tilapia, charr, bass and other fish species is estimated to add an additional \$1.0 million in farm gate revenues in 2006. More than 60 facilities are involved with pond stocking, typically of rainbow trout, brook trout and bass. The value of this aquaculture sector is conservatively estimated to be \$1.5 million annually.

In 2006, the Ontario aquaculture industry is estimated to have generated a total of 180 person-years of direct, on-farm employment. This consisted of 114 person-years of full-time

employment (ie. 40 hours per week for 12 months) as well as 66 person years of part-time employment. Indirect employment is conservatively estimated at 200 person-years.

The total annual contribution that aquaculture makes to the Ontario economy is in the order of \$55 - 60 million, with additional economic value realised via the recreational and aquaria trade.

The decrease in Ontario's annual trout output between 2005 and 2006 is primarily the result of the decline in production at the cage facilities in Lake Huron. Fluctuations in production are to be expected when output is concentrated in so few a number of facilities, and this is made more extreme since two of the cage facilities, accounting for nearly 60% of the provincial cage output, both showed declines in 2006. Reasons for these declines are multifold, but can be partially attributed to the curtailment of expansion plans as a result of licencing issues. Projected production levels for 2007 indicate that 325 tonnes of production should be regained, and initial reports of stock performance in the current growing season are supportive of this optimism. Ontario's trout production stability is also affected by the small number of hatcheries that provide fingerling stock to the grow-out cages. This issue became significant when concerns about the movement of fish between geographic regions was limited because of Viral Hemorrhagic Septicemia Virus (VHSV) control measures.

### Situation Outlook

The aquaculture industry in Ontario is facing a very difficult and volatile future. This situation is mostly a result of internal factors that constrain its growth, rather than foreign competition, effectively limiting more successful market penetration, and thus reducing profitability and discouraging new investment. At a time when world seafood consumption continues to expand, the Ontario industry is languishing in one of its worst periods in the last decade.

Market demand and consumer acceptability for Ontario aquaculture products is very strong, and imports of farmed fish products still dominate the marketplace. The major constraint to Ontario's aquacultural development remains the complex and confusing legislative, regulatory and policy barriers that confront cage aquaculture expansion in the public waters of the Great Lakes, where 80% of Ontario's market size fish production occurs. The Ontario Ministry of Natural Resources, and other key federal and provincial agencies, are currently developing a Decision Support Tool (DST) to assist with the approval process of cage aquaculture licences and their respective site licences. Public consultation during the summer of 2007 is complete, and further review of the process is underway. One of the possible outcomes of this project will be the establishment of a much more enabling – and efficient – regulatory system in Ontario to permit expansion of existing farm sites, as well as the establishment of new farm sites. On the other hand, lengthy delays in restructuring and implementing an enabling policy framework for cage aquaculture will almost certainly result in further declines in production and continued disinvestment by the private sector. Other factors, such as inconsistent seed stock supply and unusual weather events during 2005-06, have also influenced the somewhat lacklustre industry performance in 2006.

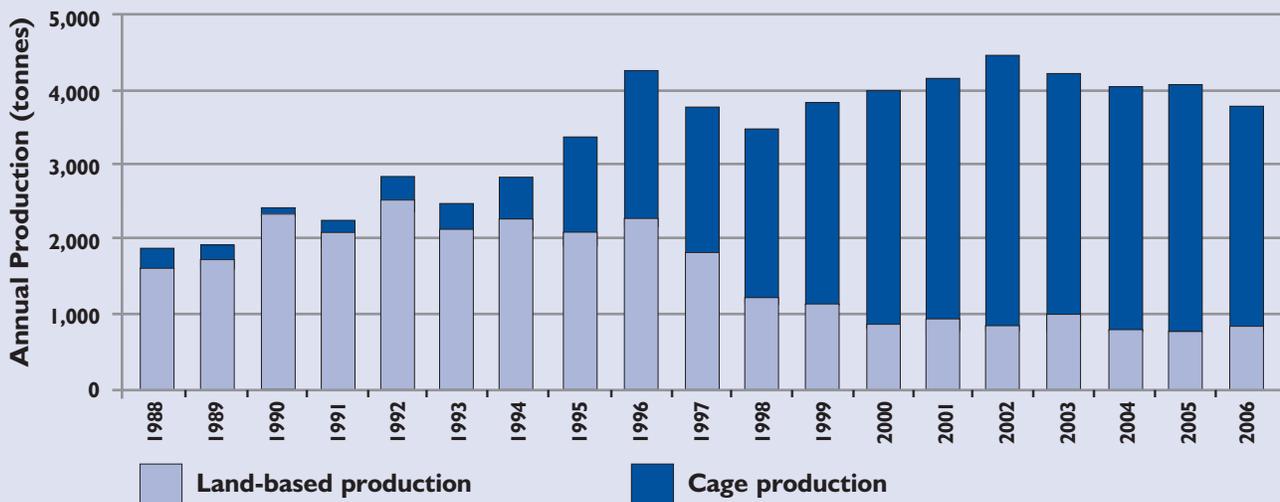
Ontario's aquacultural production has fallen well behind the other provinces, now accounting for less than 3% of total

Canadian production in 2005, compared to more than 10% in 1986, although the province still dominates **freshwater** fish production in Canada, and still accounts for nearly 40% of the total, national freshwater fish production.

Changes to Ontario's Water Resources Act (WRA) and the Water Taking and Transfer Regulation (O. Reg. 387/04) have also resulted in increased, and potentially costly requirements for the monitoring and reporting of water use by all holders of a Permit to Take Water (PTTW), which includes most land-based fish farms. All new PTTW permits will reflect these additional monitoring requirements. The Ontario Nutrient Management Act (NMA) and its potential impact on fish farming operations is still being reviewed. Cultured fish are defined in the act, and at a minimum, additional vigilance in the disposal of aquacultural waste will be required through development of an approved nutrient management strategy. Several research projects that address the science requirements necessary to comply with these legislative requirements have recently been completed, or are in progress.

However, in spite of the many impediments to growth, Ontario's aquacultural potential remains intact, with a strong market, a highly skilled workforce, and an abundant infrastructure of goods and services that would drive much needed expansion given the appropriate legal framework. 🐟

**Figure 1. Comparison of Ontario land-based and cage aquaculture production between 1988 and 2006.**



I Earlier factsheets and methodology are available online at: <http://www.aps.uoguelph.ca/~aquacentre/aec/publications>. This work was supported by the Ontario Ministry of Agriculture, Food and Rural Affairs through funding provided to the Aquaculture Research Program.

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