AQUACULTURE CENTRE

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'AQUASTATS'

Ontario Aquacultural Production in 2017

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INDUSTRY SNAPSHOT 2017	
Major Species Produced	Rainbow trout
Minor Species Produced	Tilapia, Arctic charr, brook trout, walleye, shrimp, cyprinid baitfish, largemouth and smallmouth bass
Total Rainbow Trout Production	5,530 tonnes
Total Other Fish Production	370 tonnes
Farm-gate Value of Rainbow Trout	$31.0 million
Farm-gate Value of Other Fish	$3.0 million
Economic Contribution	$110 million
Job Creation	195 person-years direct and 150 person-years indirect employment
Projected Production of Rainbow Trout	approximately 6,200 tonnes in 2018

OVERVIEW

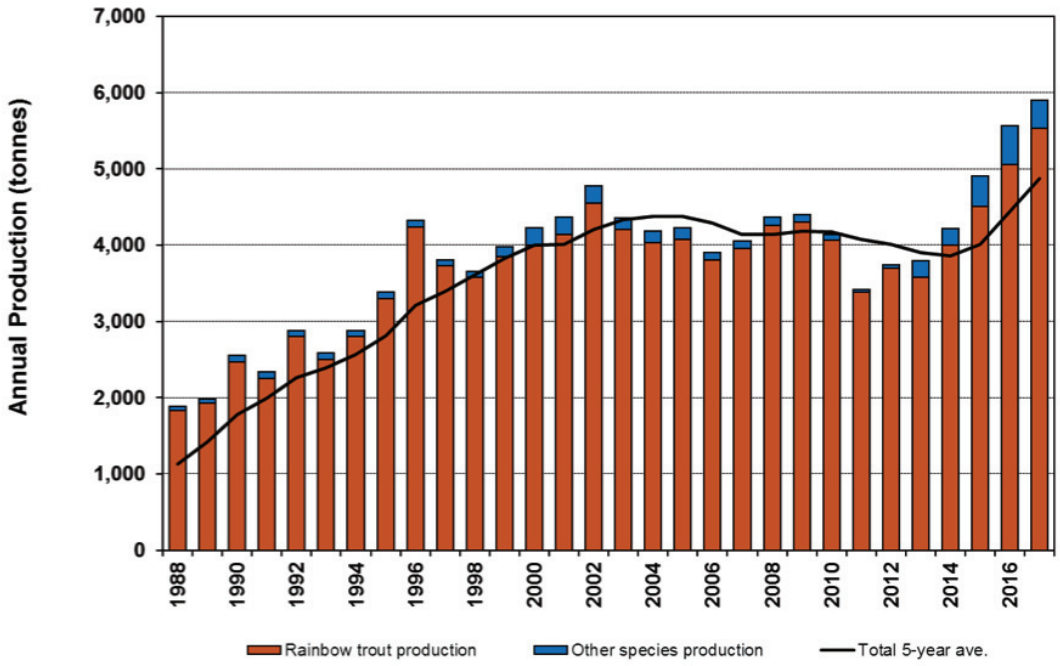
In 2017, we estimate that Ontario aquaculture farms produced 5,900 tonnes of fish and shrimp, primarily for human consumption (Figure 1). Survey questionnaires were received from 34% of the facilities surveyed accounting for 91% of the total production. Estimates for non-reporting facilities were based on prior surveys and extensive personal experience gained through years of tracking industry progress.

The majority of the production was of rainbow trout: 5,530 tonnes, (12.2 million pounds). Lake-based, net-pen production of rainbow trout in the Georgian Bay and Lake Huron area continues to dominate all other forms of land-based production systems, accounting for 89% of the total aquacultural output. Land-based production of Arctic charr, tilapia and shrimp is limited to a few facilities in southern and north-central Ontario, with tilapia production dominating. The production of brook trout, bass and other fish species is primarily geared towards pond stocking and recreational, sports-fishing purposes. These operations provide an important diversity to the Ontario industry, although quantifiable information to measure production capacity is scarce. Our records indicate that approximately 75 facilities culture one or more of the following species: tilapia, Arctic charr, shrimp, brook trout, bass, walleye and other species, with an estimated total production of at least 370 tonnes in 2017.

The total farm-gate value of the 5,530 tonnes of rainbow trout produced is estimated to be $31.0 million, with an average farm-gate price of $2.54/lb or $5.60/kg. Other fish and crustaceans are estimated to add an additional $3.0 million in farm gate sales revenue, and this has been gradually increasing in recent years. More than 80 facilities province-wide are also involved with pond stocking, typically with rainbow trout, brook trout and/or bass species. The value of this aquaculture sub-sector is conservatively estimated to be at least $1.5 million annually in farm-gate revenues.

The Ontario aquaculture industry is estimated to have generated a total of 195 person-years of direct, on-farm employment in the primary producer sector, consisting of 135 person-years of full-time employment (40 hours per week for 12 months) and 60 person years of part-time employment. Indirect employment is very conservatively estimated at an additional 150 person-years. The total annual contribution that aquaculture makes to the Ontario economy is estimated to exceed $110 million, with additional economic value realized via the recreational and very significant aquaria trade. Although these are large sectors, they have not been the subject of economic assessment in our annual surveys due to the complexity and wide-spread dispersed nature of the sector, and the fact that our primary interest has been in quantifying aquatic animal production for human food.

Figure 1. Ontario aquaculture production between 1988 and 2017.



Situation Outlook

For the first time in over a decade, we are confident in reporting that strong evidence now exists of significant and sustained growth in Ontario's aquaculture sector. This follows nearly a decade and a half of relatively stagnant production output. The industry is undergoing a gradual metamorphosis, with growth in the rainbow trout sector, new species being raised, improved technologies being used, and new opportunities being exploited with creative approaches to both land-based AND open-water aquaculture. Of particular note is the significant expansion in indigenous (First Nations) aquaculture, growing primarily rainbow trout in net pens in the Great Lakes. At the same time, recent consolidation in the industry, with now fewer, but larger players, is expanding production of rainbow trout which continues to account for approximately 90% of the province's tonnage and dollar value of aquaculture products. Significant enhancements in fish processing and product development infrastructure also means that this expansion in production will be quickly absorbed into the marketplace. Import replacement alone accounts for perhaps a 40% market share opportunity without the need to grow consumer demand. Recent advances in land-based, recirculation systems has also enabled growth in several new species, and there are now small quantities of locally grown, Pacific white shrimp, barramundi and Artic charr coming on-stream, to supplement Tilapia production from closed-containment systems. Organic certified rainbow trout, and Ocean Wise sustainability recommended Arctic charr are also being produced in the province. These new products have attracted the attention of executive chefs who see them as unique foods which are bringing a positive image to aquaculture. As well, there has been a recent surge in the aquaponics sub-sector, fueled in part by anticipated changes in marijuana legislation, but also because improvements in systems design has enabled the coupling of production of fish with other edible plant crops like tomatoes, kale, basil, zucchini, lettuce and others. These systems are large, capital intensive, and complex to run, requiring highly skilled personnel and solid business plans to ensure success.

In summary, we are seeing significant, new private sector investment in Ontario aquaculture, which is a recognition of both the market potential in Canada's most populated province, as well as the proximity to sizable and affluent markets in the north-eastern quadrant of the USA. All these developments have occurred in spite of a still cumbersome and complex regulatory system which continues to act as a disincentive to many investors. Notwithstanding this, there is good evidence to suggest that production is likely to increase 10-15% per year for the foreseeable future, mostly in the trout sector. A more enabling regulatory framework for Ontario would allow significant further expansion, with important jobs and economic wealth being generated in many of the rural parts of the province where these are needed.

Most importantly, the products of Ontario's aquaculture industry continue to be seen as ultra-high quality, safe and affordable food items on the plates of local consumers, and are increasingly being recognized as important contributors to Ontario's agrifood economy.

Earlier Aquastats factsheets are available at: http://www.aps.uoguelph.ca/aquacentre/information/publications.php
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