



AQUASTATS - 1990

Ontario Aquacultural Production in 1990

Richard D. Moccia and David J. Bevan
University of Guelph

SUMMARY

In 1990, the Ontario aquaculture industry produced 2,470 tonnes of Rainbow trout. There were 130 production farms who sold a total of 2,100 tonnes of trout. An additional 370 tonnes were sold by the 147 known fee-fishing preserves. The farm-gate value of the 2,470 tonnes produced exceeded \$12 million and generated a minimum of 200 person-years of direct employment. The total value of the industry is estimated to be in the order of \$40 million. The average wholesale price of trout was \$4.40 per kilogram. In 1991, the industry is expected to expand annual production by 25% to 3,100 tonnes, with a farm-gate value exceeding \$15 million.

ANNUAL PRODUCTION

In 1990, Ontario fish farms produced a total of 2,470 tonnes (5.45 million pounds) of Rainbow trout for human consumption (Figure 1). This value was determined from a survey conducted between November, 1990 and February, 1991 of the 235 known fish farms. Production data was reported by 121 farms (52%) accounting for 1,807 tonnes (73%). Estimates of production were made for the remaining 114 farms, accounting for 489 tonnes. After including an additional correction factor of 5 - 10% for missing data and under reporting, the total 1990 production of trout was estimated to have been 2,470 tonnes.

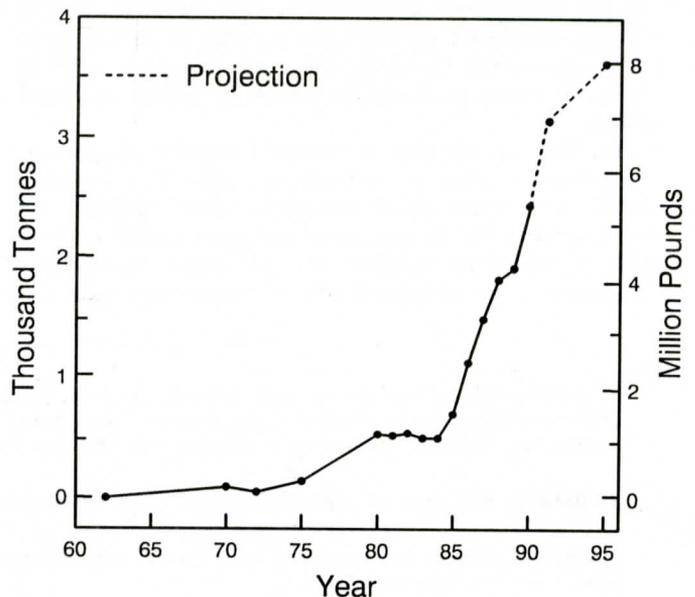
In our previous summaries of Ontario's aquacultural trout production, the contribution by fee-fishing preserves was not included. This year's inclusion of fee-fishing production reflects numerous requests for this factsheet to address a wider perspective on the Ontario aquacultural industry.

INTRODUCTION

This report summarizes data collected through an ongoing survey conducted by the Aquaculture Extension Centre at the University of Guelph, in consultation with federal and provincial regulatory agencies and representatives of the Ontario trout industry¹. The information compliments our reports "AQUASTATS - Ontario Aquacultural Trout Production in 1988 with an Historical Perspective of the Industry's Development" and "AQUASTATS - 1989: Ontario Aquacultural Trout Production in 1989"².

A total of 235 private fish production facilities were identified from the Ontario Ministry of Natural Resources records as well as in-house data files. These farms consisted of 45 hatcheries, 130 production trout farms, 147 fee-fishing preserves and nine bait-fish or other farms. Six fish farms in Ontario are dedicated hatcheries producing only seedstock - i.e. eggs, fry or fingerlings. Many of the 235 fish farms operated under more than one type of facility description.

Figure 1. Ontario Farmed-Trout Production.



Of the 235 known fish farm operations in Ontario, 45 reported having hatchery facilities - six being dedicated to seedstock production only. Sales of 20.1 million rainbow trout eggs, fry and fingerlings, worth \$2.23 million were reported. Eight hatcheries reported sales of brook trout, totalling 654,000 fish and a value of \$96,000.

Ontario's production trout farms are typically small to medium sized operations. Of the 60 farms that produced five or more tonnes of rainbow trout in 1990, 41 farms produced between 5 and 25 tonnes, accounting for 27% of the total production. Nearly 40% of the production came from 17 farms that produced between 26 and 75 tonnes in 1990. A further 31% of the total production was from the two Ontario farms whose individual annual production exceeded 100 tonnes. "Hobby" farms - those producing less than five tonnes per year accounted for less than 5% of the total production.

There was some production of fish species other than rainbow trout, including: Brown trout, Atlantic salmon, Chinook salmon, Brook trout, Arctic char, Largemouth bass and Smallmouth bass³. Total production was approximately 80 tonnes, and predominantly of Chinook salmon.

The importance of recreational fee-fishing as a component of the aquaculture industry is difficult to assess. Very conservative estimates suggest that at least 147 operations are involved with fee-fishing. The actual number is probably between 300 and 350 operations. The 1990 survey attempted to determine the level of production and value that this component might represent. A total of 53 facilities reported selling 103 tonnes of fish in 1990. Total sales by the 147 known facilities were estimated at 370 tonnes of trout with a value of \$2.48 million. The average reported price of trout sold via fee-fishing was \$6.69 per kg (range \$4.41 - 14.35 per kg).

The final aquaculture facility type surveyed were bait-fish and other farms. Nine establishments reported raising cyprinid bait-fish. However, the data was too limited to permit analysis. Wild bait-fish harvesters were not surveyed.

PRICE AND ECONOMIC VALUE

In 1990, the average wholesale price of Ontario trout was \$4.40 per kg (range \$3.31 - \$8.71 per kg) and the average retail price was \$6.33 per kg (range \$3.31 - \$13.78 per kg), compared to \$4.59 per kg and \$6.77 per kg in 1989, respectively (Table I). The total farm-gate value of the 2,470 tonnes produced in 1990 is estimated at \$11.88 million.

In 1990, the industry generated a total of 201 person-years of employment at the farm-gate level⁴. This consisted of 120 person-years of full-time employment (40 hours and over per week for 12 months of the year) and 81 person-years of part-time employment (all other employment schedules). The additional indirect employment by the

Table I. Wholesale Price Structure of Ontario Farmed Rainbow Trout, Sold "In the Round", from 1985-1990.

Year	Wholesale Price (\$ per kg)		
	average	minimum	maximum
1985	4.50	-	-
1986	4.75	-	-
1987	5.00	-	-
1988	5.06	3.97	11.02
1989	4.59	3.31	7.05
1990	4.40	3.31	8.71

- = not available

industry is conservatively estimated at 200 person-years. This includes persons employed in the equipment, feed, processing and marketing sectors linked to aquaculture.

FUTURE DEVELOPMENTS

In 1990, Ontario continued to be the major Canadian producer of rainbow trout for human consumption, accounting for 78% of the 3,150 tonnes total national production⁵. Projected increases in production from established facilities and the development of new farms suggests that Ontario's production will increase by 25% to 3,100 tonnes in 1991, with a further increase to 3,600 tonnes by 1995.

We have an optimistic outlook for the medium to long-term future of Ontario aquaculture, based on several reasons.

Beneficial changes to Ontario's aquaculture legislation governing the variety of cultured species are imminent. Ontario is on the threshold of establishing commercial stocks of Arctic char and Atlantic salmon; both of which are expected to open up new markets.

Per capita consumption of fish is expected to rise significantly in North America over the next decade as: consumers diversify their diet; demographic and racial changes continue; marketing of fish becomes more aggressive; and evidence is further accumulated for the health benefits of fish consumption.

A significant opportunity exists for the displacement of fish consumption now supplied by a declining wild harvest fishery, with that of a farm-raised product.

Finally, Ontario continues to import approximately 60% of the trout consumed. The Ontario trout industry has demonstrated its capabilities and the displacement of imported trout is an open opportunity for future expansion.

1. Department of Fisheries and Oceans, Ontario Ministry of Agriculture and Food, Ontario Ministry of the Environment, Ontario Ministry of Natural Resources, Ontario Aquaculture Research & Services Co-ordinating Committee, Ontario Aquaculture Association and the Ontario Trout Producers Co-operative Ltd.

2. Ontario Ministry of Agriculture and Food Factsheet. Order No. 89-113 and Order No. 91-007.

3. Special permits are required for raising some of these species. Largemouth and Smallmouth bass are raised for pond stocking purposes only.

4. The additional employment by farms producing less than 5 tonnes per year or those under development are not included due to a lack of data.

5. Northern Aquaculture, 1991. Vol.7 No. 3.

