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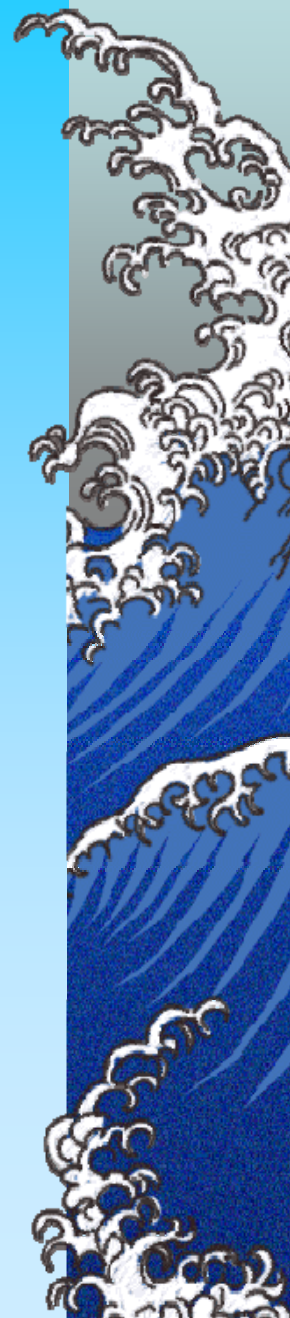
Société de développement et de recherche en aquaculture continentale inc.

Overview and Status of Percid Culture in Canada

Workshop on Percid Culture - From Research to Production

January 23 – 25, 2008, Namur, Belgique



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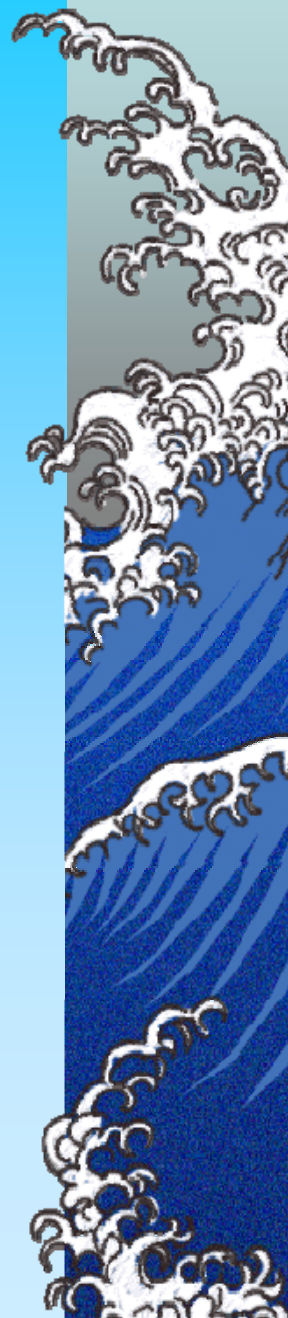
Presentation Plan

- Introduction
- A few economic statistics
- Percid farming
- Percid production
- R & D – Technology transfer
- Conclusions



Introduction

- Diversification of Canada's aquaculture industry
- Percid culture research and technology transfer toward commercial production
  - egg-to-egg production achieved
  - promising pure strains for percid culture and domestication
- Major constraint = no availability of egg supplies from domestic strain broodstocks
  - wild broodstock dependance for quality eggs supplies

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Few Economic Statistics

- 2006 Canadian aquaculture production
  - 171 829 tons (salmon, shellfish, trout, charr, other freshwater fishes)
  - value: 912 million CND
- Trout farming = 3.4 % of total production
  - 5 924 tons
  - value: 31.1 million CND
- Percid farming = less than 0.1 % of Canada's freshwater aquaculture sales

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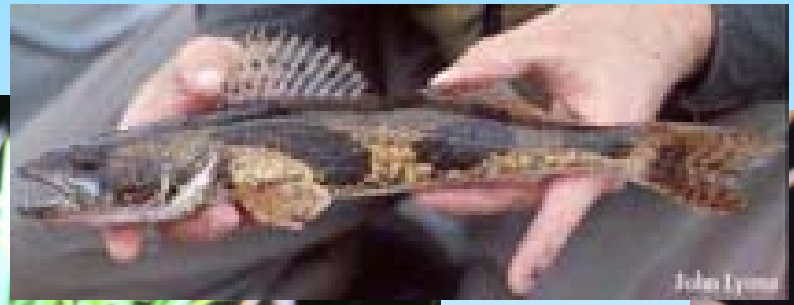
Percid Farming in Canada

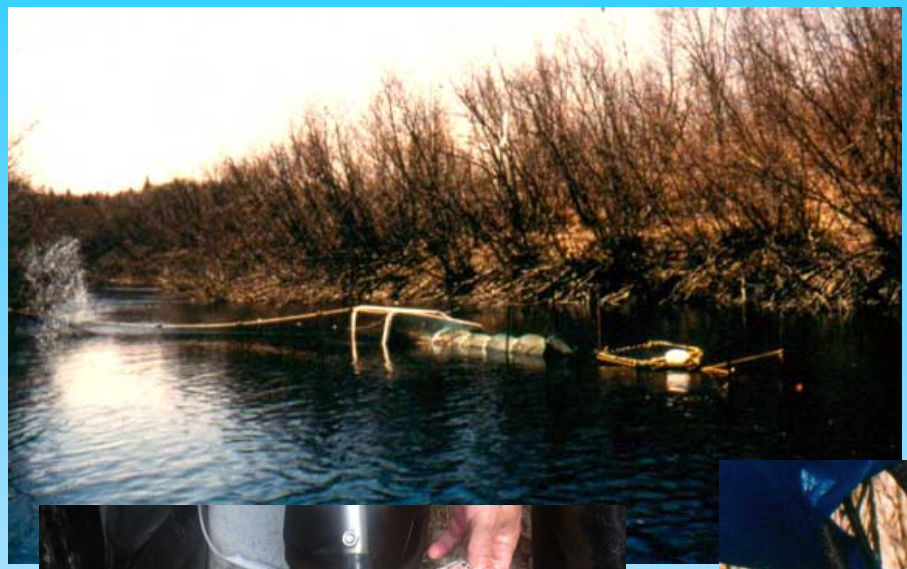
- Species under investigation
  - Walleye (*Stizostedion vitreum*)
  - Sauger (*Stizostedion canadensis*)
  - Yellow perch (*Perca flavescens*)



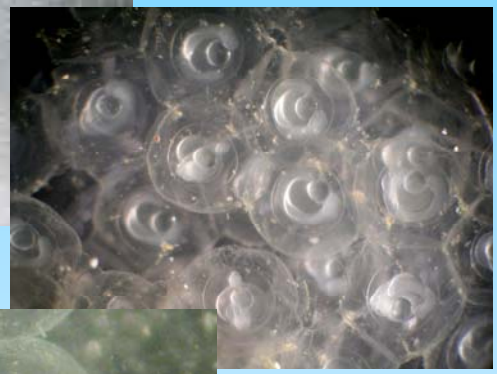
Percid Farming in Canada

- Egg supplies mainly from wild broodstock until now
- Culture methods and systems
  - Introduced by technology transfer
  - methods and systems locally adapted and improved by producers

Egg supplies from wild broodstock



Incubation and hatching



Larval culture in fertilized outdoor ponds

Intermediate and final growout

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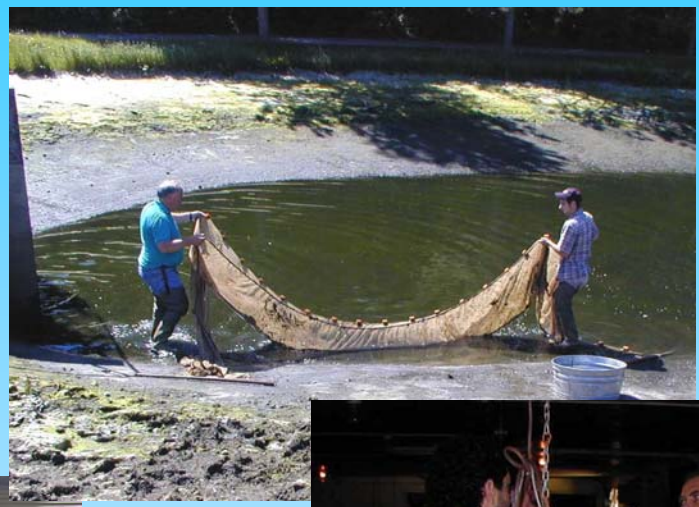
Percid Production in Canada

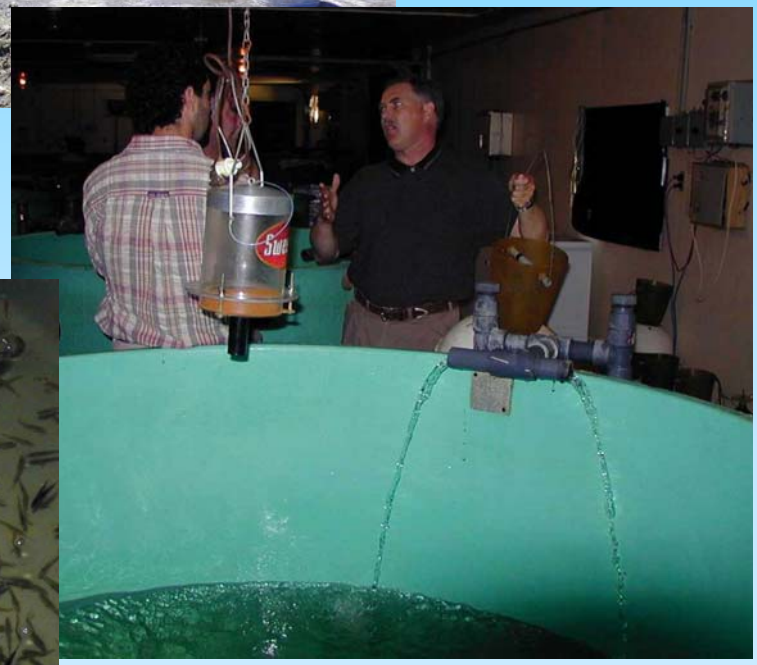
Production

- Public sector
    - Walleye
- Private sector
    - Walleye
    - Yellow perch

Public sector/Government facilities

- Walleye (Ontario & Québec)





Private fish farming operations

- Walleye (Ontario & Québec)
- Yellow perch - experimental and pilot-project phases to produce Yellow perch (Manitoba, Ontario & Québec)

Percid Production in Canada

Sales and Markets

- Stocking market
  - walleye sales to fish stocking market
  - demand outstrips supply for walleye (Qc)
- Table market
  - current initiatives in yellow perch focus on table market
  - current prices for walleye higher than other farmed species

R & D – Technology Transfer

- Recent projects
  - Genetics, selection and domestication (Mb, On, Qc)
  - Delayed reproduction (Qc)
  - Genetic tools
  - Weaning strategy for selected strain fry in closed system

R & D – Technology Transfer

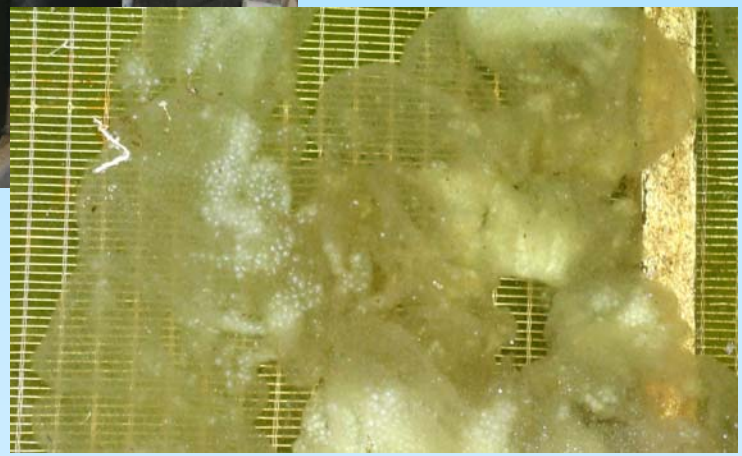
Current projects:

- Start up of a commercial aquaponic facilities – recirculating Yellow perch culture & greenhouse (Manitoba)
- Document technical & economical Yellow perch production in pond (Ontario)

Source: Windsor University, Ontario, 2007

R & D – Technology Transfer

- Development and optimization of broodstock culture techniques (Québec)



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Conclusions

In order to ongoing development of domesticated pure strains of percid, Walleye and Yellow perch, we need:

- improvement of techniques for intensive broodstock rearing and reproduction
- better knowledge about nutritional requirements of broodstock and juvenile fish
- availability of affordable artificial feed for broodstock and juvenile weaning

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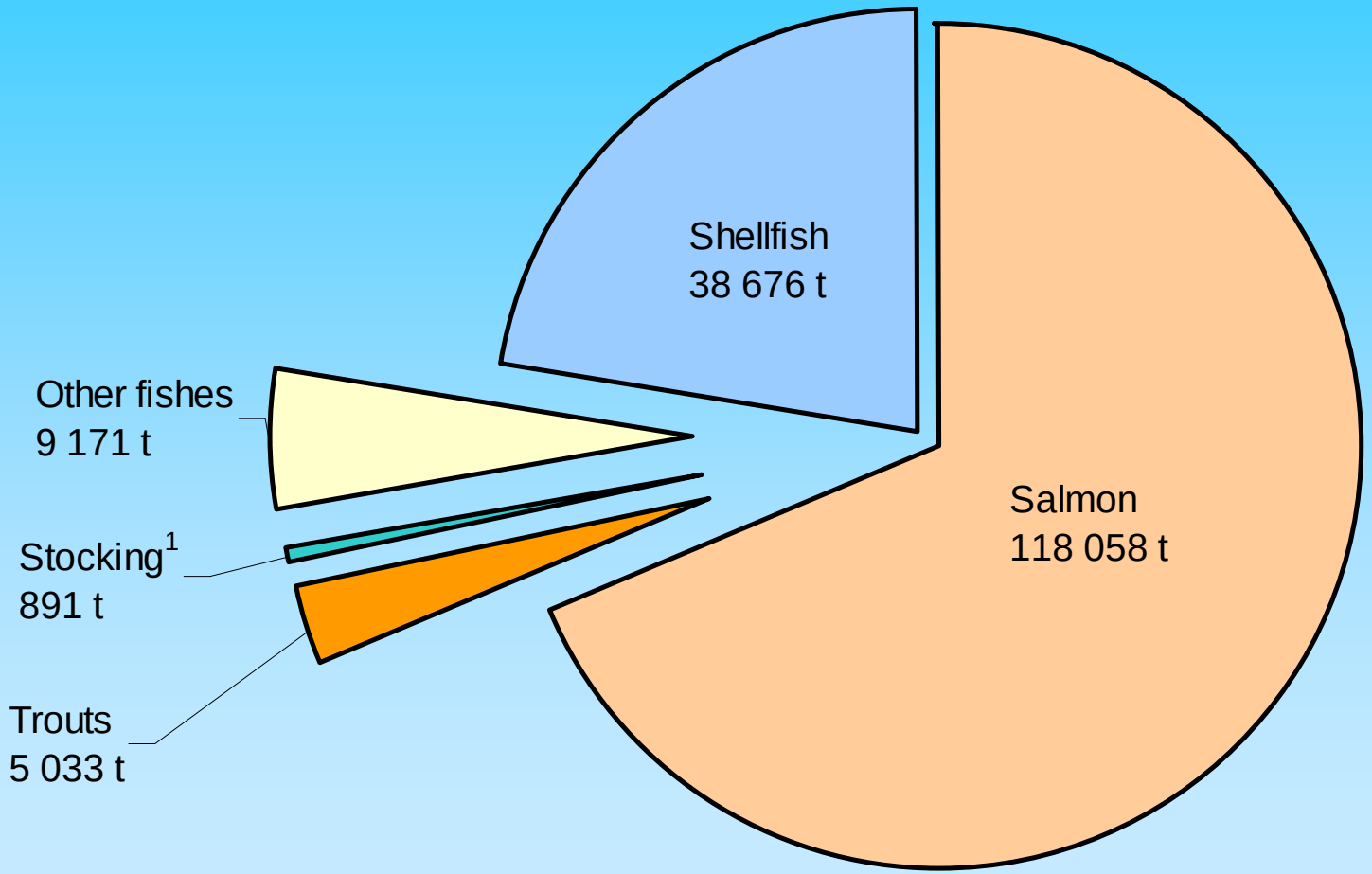
Canadian aquaculture production 2006

171 829 metric tons



[1] : Freshwater fishes

Data source: Statistics Canada, 2007

Percid Farming

- Culture methods review
  - Incubation and hatching
  - Larval culture in fertilized outdoor ponds
  - Weaning on artificial feed
    - Walleye
    - Yellow perch
  - Intermediate and final growout
    - Walleye
    - Yellow perch