

# YELLOW PERCH REFERENCES

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## *Summary*

New regulations under the Game & Fish Act allow the culture and sale of yellow perch (*Perca flavescens*) in Ontario. The decline in yellow perch harvested from Lakes Erie and Michigan, coupled with the apparent success of perch farms in the northcentral United States, has encouraged the establishment of commercial perch production in Ontario. The culture of yellow perch at any particular location in Ontario is still subject to approval by the local District Office of the Ontario Ministry of Natural Resources. The following is a brief listing of research publications, popular press articles and reports which should be useful to anyone wishing to learn more about yellow perch. Published research papers can be accessed through most University libraries. Any questions concerning this reference listing can be directed to the Aquaculture Centre, University of Guelph, 519-824-4120 ext. 52689.

## **General**

1. Garling, D.L. 1995. NCRAC research programs to enhance the potential of yellow perch culture in the North Central Region. *In* Combined North Central and Ninth Annual Minnesota Aquaculture Conference and Tradeshow, Feb. 17 & 18, Minneapolis, MN.
2. Garling, D.L. NCRAC research programs to enhance the potential of yellow perch culture in the North Central Region. *In* Proceedings of the North Central Regional Aquaculture Conf., Kalamazoo, MI, March 18 to 21, 1991.
3. Heidinger, R.C. and T.B. Kayes. 1993. Yellow Perch. *In* Culture of Nonsalmonid Freshwater Fishes, 2nd edition. R.R. Stickney (Ed.) CRC Press, Boca Raton, Fla., pp. 215-229.

## **Husbandry and Production Systems**

1. Calbert, H.E. and H.T. Huh. 1976. Culturing yellow perch *Perca flavescens* under controlled environmental conditions for the upper midwest market. *Proceedings of the World Mariculture Society* 7: 137.
2. Hokanson, K.E.F. 1977. Optimum culture requirements of early life phases of

- yellow perch. *In* Perch Fingerling Production for Aquaculture. Soderberg, R.W. (Ed.), University of Wisconsin Sea Grant Advisory Rep. 421, Madison, 24.
3. Hokanson, K.E.F. 1977b. Temperature requirements of some percids and adaptations to the seasonal temperature cycle. *Journal of the Fisheries Research Board of Canada* 34: 1524.
  4. Huh, H.T., H.E. Calbert and D.A. Stuber. 1976. Effects of temperature and light on growth of yellow perch and walleye using formulated feed. *Transactions of the American Fisheries Society* 105: 254.
  5. Malison, J.A. and J.A. Held. 1992. Effects of fish size at harvest, initial stocking density and tank lighting conditions on the habituation of pond-reared yellow perch (*Perca flavescens*) to intensive culture conditions. *Aquaculture* 104: 67-78.
  6. Mancini, W.E., J.A. Malison, T.B. Kayes and T.E. Kuczynski. 1983. Harvesting photopositive juvenile fish from a pond using a lift net and light. *Aquaculture* 34: 157.
  7. Muzzall, P.M. 1995. Parasites of pond-reared yellow perch from Michigan. *Progressive Fish-Culturist* 57: 168-172.
  8. Post, J.R. and D.J. McQueen. 1994. Variability in first-year growth of yellow perch (*Perca flavescens*): Predictions from a simple model, observations, and an experiment. *Canadian Journal of Fisheries and Aquatic Sciences* 51: 2501-2512.
  9. Schott, E.F., T.B. Kayes and H.E. Calbert. 1978. Comparative growth of male versus female yellow perch fingerlings under controlled environmental conditions. *In* Selected Coolwater Fishes of North America, Special Publ. No. 11. Kendall, R.L. (Ed.), American Fisheries Society, Washington, D.C., p. 181.
  10. Starr, C.J. 1995. Commercial production of yellow perch (*Perca flavescens*). From: Combined North Central and Ninth Annual Minnesota Aquaculture Conference and Tradeshow, Feb. 17 & 18, Minneapolis, MN.
  11. Wang, N. and R. Eckmann. 1994. Effects of temperature and food density on egg development, larval survival and growth of perch (*Perca fluviatilis* L.). *Aquaculture* 122: 323-333.

## **Nutrition and Feeding**

1. Bouguenec, V. 1992. Oligochaetes (Tubificidae and Enchytraeidae) as food in fish rearing: a review and preliminary tests. *Aquaculture* 102: 201-217.
2. Conner, J.L., E.L. Mills and L. Obryan. 1990. Influence of prey abundance on species and size selection by young yellow perch (*Perca flavescens*). *Canadian Journal of Fisheries and Aquatic Sciences* 47: 882-887.
3. Malison, J.A., T.B. Kayes, B.C. Wentworth and C.H. Amundson. 1988. Growth and feeding response of male versus female yellow perch (*Perca flavescens*) treated with extradiol-17. *Canadian Journal of Fisheries and Aquatic Sciences* 45: 1943.
4. Paszkowski, C.A. and W.M. Tonn. 1994. Effects of prey size, abundance, and population structure on piscivory by yellow perch. *Transactions of the American Fisheries Society* 123: 855-865.
5. Ramseyer, L.J. and D.L. Garling Jr. 1994. Amino acid composition of the ovaries, muscle, and whole body of yellow perch. *Progressive Fish-Culturist* 56: 175-179.

6. Reinitz, G. and R. Austin. 1980. Experimental diets for intensive culture of yellow perch. *Prog. Fish-Cult.* 42: 29.
7. Wahl, C.M., E.L. Mills, W.N. McFarland and J.S. Degisi. 1993. Ontogenetic changes in prey selection and visual acuity of the yellow perch, *Perca flavescens*. *Canadian Journal of Fisheries and Aquatic Sciences* 50: 743-749.

## Physiology

1. Carlson, A.R., J. Blocker and L.J. Herman. 1980. Growth and survival of channel catfish and yellow perch exposed to lowered constant and diurnally fluctuating dissolved oxygen concentrations. *Progressive Fish-Culturist* 42: 73.
2. Ramseyer, L.J. and D.L. Garling. 1994. Amino acid composition of the ovaries, muscle, and whole body of yellow perch. *Progressive Fish-Culturist* 56: 175-179.
3. Schwalme, K. and W.C. Mackay. 1991. Mechanisms that elevate the glucose concentration of muscle and liver in yellow perch (*Perca flavescens* Mitchell) after exercise-handling stress. *Canadian Journal of Zoology* 69: 456-461.

## Reproduction and Genetics

1. Ciereszko, A., L. Ramseyer and K. Dabrowski. 1993. Cryopreservation of yellow perch semen. *Prog. Fish Culturist* 55: 261-264.
2. Ciereszko, A. and K. Dabrowski. 1993. Estimation of sperm concentration of rainbow trout, whitefish and yellow perch using a spectrophotometric technique. *Aquaculture* 109: 367-374.
3. Dabrowski, K., A. Ciereszko, L. Ramseyer, D. Culver and P. Kestemont. 1994. Effects of hormonal treatment on induced spermiation and ovulation in the yellow perch (*Perca flavescens*). *Aquaculture* 120: 171-180.
4. Goetz, F.W. and H.L. Bergman. 1978. The effects of steroids on final maturation and ovulation of oocytes from brook trout (*Salvelinus fontinalis*) and yellow perch (*Perca flavescens*). *Biology of Reproduction* 18: 293-298.
5. Goetz, F.W. and H.L. Bergman. 1978. The *in vitro* effects of mammalian and piscine gonadotropin and pituitary preparations on the final maturation in yellow perch (*Perca flavescens*) and walleye (*Stizostedion vitreum*). *Canadian Journal of Zoology* 56: 348.
6. Kayes, T. 1977. Reproductive biology and artificial propagation methods for adult perch. In *Perch Fingerling Production for Aquaculture*, Advisory Report 421. Soderberg, R.W. (Ed.), University of Wisconsin Sea Grant Program, Madison, 6.
7. Kayes, T.B. and H.E. Calbert. 1979. Effects of photoperiod and temperature on the spawning of yellow perch (*Perca flavescens*). *Proceedings of the World Mariculture Society* 10: 306.
8. Malison, J.A., T.B. Kayes, C.D. Best, C.H. Amundson and B.C. Wentworth. 1986. Sexual differentiation and use of hormones to control sex in yellow perch (*Perca flavescens*). *Canadian Journal of Fisheries of Aquatic Science* 43: 26.
9. Malison, J.A., L.S. Procarione, J.A. Held, T.B. Kayes and C.H. Amundson. 1993. The influence of triploidy and heat and hydrostatic pressure shocks on the growth and reproductive development of juvenile yellow perch (*Perca flavescens*).

- Aquaculture 116: 121-133.
10. Malison, J.A., T.B. Kayes, J.A. Held, T.P. Barry and C.H. Amundson. 1993. Manipulation of ploidy in yellow perch (*Perca flavescens*) by heat shock, hydrostatic pressure shock, and spermatozoa inactivation. *Aquaculture* 110: 229-242.
  11. Malison, J.A., T.B. Kayes, C.D. Best, C.H. Amundson and B.C. Wentworth. 1986. Sexual differentiation and use of hormones to control sex in yellow perch (*Perca flavescens*). *Canadian Journal of Fisheries and Aquatic Sciences* 43: 26.
  12. Theofan, G. and F.W. Goetz. 1983. The in vitro synthesis of final maturational steroids by ovaries of brook trout (*Salvelinus fontinalis*) and yellow perch (*Perca flavescens*). *General and Comparative Endocrinology* 51: 84-95.
  13. West, G. and J. Leonard. 1978. Culture of yellow perch with emphasis on development of eggs and fry. *In Selected Coolwater Fishes of North America*. Kendall, R.L. (Ed.), Special Publ. No. 11, American Fisheries Society, Washington, D.C., p. 172.
  14. Whiteside, M.C., C.M. Swindoll and W.L. Doolittle. 1985. Factors affecting the early life history of yellow perch, *Perca flavescens*. *Environmental Biology of Fishes* 12: 47.
  15. Wiggins, T.A., T.R. Bender, V.A. Mudrak and M.A. Takacs. 1983. Hybridization of yellow perch and walleye. *Progressive Fish-Culturist* 45: 131.

## Sources of Yellow Perch

The Annual Buyers Guide published by *Aquaculture Magazine* has a listing of fish farms in North America that have yellow perch for sale. Copies of the Annual Buyers Guide are available from *Aquaculture Magazine*, P.O. Box 2329, Asheville, North Carolina, 28802, USA or call (704) 254-7334 or FAX (704) 253-0677.

## Sources of Other Information

Aquaculture Information Centre  
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