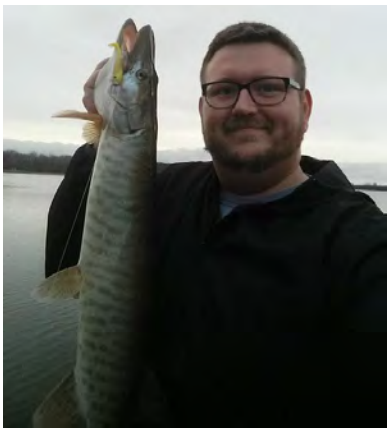
CFAES

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES

GRADUATE EXIT SEMINAR

JOHN GRAYSON

Concerns in Baby Fish Feeding: Utilization of Different Dietary Lipid and Vitamin E Sources in the Early Life Stages of Freshwater Finfish.



The first few weeks of exogenous feeding by young fish after endogenous nutrient absorption is a critically important period for metamorphosis and growth. Providing an adequate amount of omega-3 (n-3) polyunsaturated fatty acids (PUFA) and vitamin E in fish feeds during this period can be a unique challenge for aquaculture producers. The research carried out in this dissertation evaluated the supplementation of n-3 PUFA and vitamin E in the live zooplankton feeds provided to yellow perch (*Perca flavescens*) and walleye (*Sander vitreus*) larvae. The three experiments on yellow perch consistently found that increasing vitamin E concentrations in the live feeds resulted in improved survival and growth rates during the first ten days of feeding. The experiment on walleye found faster growth during the first ten days of feeding on n-3 PUFA supplemented live feeds, but the addition of vitamin E did not provide clear benefits. The final experiment evaluated the replacement of fish oil with fatty acid ethyl ester (FAEE) oil in the formulated (dry) first feeds for rainbow trout (*Onchorhynchus mykiss*), and found that 25% of fish oil in the feed can be replace with FAEE oil without affecting fish growth or health. Overall, these findings can help fish producers to successfully rear fish through the critical period of early life development.

Advisor: Dr. Konrad Dabrowski

THURSDAY, NOVEMBER 19, 2020
8:00 A.M.

Join the seminar via Zoom:
https://osu.zoom.us/j/92825291035?pwd=dUJabUQxMmUzL2R5d3RrUlBXS1hoQT09

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