



School of Environment and Natural Resources

Aquaculture

Production of tropical Amazonian fish in North America eases pressure on native populations and provides opportunities for the U.S. aquarium industry.

SITUATION

Imports of tropical fish to the US have linearly increased in value from 20 to \$26.2 million between 2000 and 2006; whereas, US exports of tropical fish declined from 4.3 to \$3.1 million during the same period. One of the missions of aquaculture is to prevent over fishing of natural populations of ornamental and/or endangered fish as well as to promote the utilization and conservation of wild stocks. The controlled culture of tropical fish, such as South American catfish or arowana, could reduce the illegal international trade of these species.



RESPONSE

The commercial larval rearing of tropical fish species presents a great challenge to farmers because of the high mortality that occurs during the larval phase. OARDC/OSU scientists have generated critical information on the nutritional requirements of several major species in the laboratory, and survival rates have significantly improved. Specific studies on silver arowana have addressed the transition from endogenous yolk sac feeding to external feeding, as well as feed acceptance.

IMPACT

The culture of tropical fish has a potential to become a fast growing industry in North America because of the high level of “know-how” required by professional aquaculturists and the extremely high value of “the product”. Some ornamental fish, such as koi carp or discus, fetch a price of \$1,000 per individual. At present, wholesalers in the USA offer juvenile surubim or arowana at prices of \$20-60 per fish. Export of silver arowana from the Amazon reached \$560,000 in 2005 but is unethical because parent fish are killed in the process of collecting offspring. Ohio and other Midwest producers of tilapia for human consumption can transition to the production of ornamental fish and receive a much higher unit price per live fish than the current price for live tilapia, at \$4-6 per lb.

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