

## Recent Improvements in the Channel Catfish ♀ x Blue Catfish ♂ F<sub>1</sub> Hybrid Catfish Production

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*Abstract:* The catfish industry has stagnated during the last 7 years and production actually decreased by a third in an industry that was once doubling in size every 10 years. The industry is struggling to keep pace with the increasing cost of feed, high cost of fuel, production inefficiencies, and foreign imports. To lower the cost of production, production efficiency needs to be improved. The channel catfish (*Ictalurus punctatus*) ♀ blue catfish (*Ictalurus furcatus*) ♂ F<sub>1</sub> hybrid catfish is an ideal candidate for pond culture with several desirable traits. Hybrid catfish represents a major improvement in catfish production efficiency with potentially preferable growth rates, feed conversion efficiency, disease resistance, and processing traits. Hybrid catfish production is a hormone-based synchronization protocol consisting of collecting eggs from ripe, induced, channel catfish females, fertilizing with blue catfish sperm, and incubating the fertilized eggs to hatch fry. The first commercial production of hybrid catfish (1 million fry) in the catfish industry occurred in 2001. Efforts of researchers, extension personnel, and catfish farmers combined with USDA and other funding for improving efficiency in reproduction in catfish has contributed to continued success in the subsequent years, resulting in 60 million hybrid fry in 2009. Efficiency and management of various processes in artificial spawning has the potential to control reproduction in contrast to the unpredictable natural spawning of channel catfish. The reproductive success of channel catfish in artificial conditions exceed the ovulation and fry production in natural pond spawning conditions.

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