ESTABLISHING MOSTLY-MALE BLUEGILL GROUPS AND EVALUATING THEIR GROWTH BENEFITS IN INDOOR REARING SYSTEMS

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ABSTRACT

Male bluegill have the greatest potential to reach food market size (≥0.5 lb.; 225g) within two growing seasons. However, establishment of monosex, juvenile bluegill groups does not currently exist. A male-percentage prediction (MPP) model was constructed to predict the percentage of males from a mixed-sex, juvenile bluegill group. The MPP model enables reliable establishment of mostly-male groups for culturing. Trenbolone acetate immersions provided a means of establishing these groups other than by size-grading. Sex reversal often yields aggressively feeding fish which ultimately grow faster. Where male recruitment was successful, many post-immersion males exhibited higher growth rates. After establishing mostly-male groups, the goal is to reduce the agonistic social costs of group confinement to promote growth to food market size in two years. Mixed-sex and mostly-male bluegill groups were cultured in parallel to evaluate the effect of sex ratio on growth. Mostly-male groups yielded higher growth rates, but not greater social costs.