

STRATEGIES FOR RAPID TECHNOLOGY TRANSFER TO THE COBIA AQUACULTURE INDUSTRY

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The International Initiative for Sustainable and Biosecure Aquafarming (IISBA) was formed in the spring of 2005 as the result of an international marine aquaculture summit held on the island of Reunion in the S. Indian Ocean. The IISBA is based upon an open and transparent multi-dimensional international coalition, integrating both the public and private sector. The mission of IISBA is to foster academic and industrial collaborations to enhance present and assist establishment of new seafood manufacturing entities. The program is multidisciplinary and multi-dimensional in nature, harvesting the skills and experience of internationally respected scientists in the fields of research, development, production, and extension. Specifically, the objectives of the IISBA are to achieve, as rapidly as possible, successful elimination of industrially-limiting biological, technical and engineering constraints that are encountered during the intensive cultivation of a prioritized species. The initial species identified by IISBA members was cobia (*Rachycentron canadum*), with the goal of developing sustainable and biosecure commercial cobia production.

Since the inception of IISBA, several new research and industrial broodstock hatcheries have been established, egg quality indicators are being refined, and larviculture survival and fingerling production per unit volume have been enhanced to commercially viable levels. Furthermore, growout nutritional requirements with regard to protein, lipid, and carbohydrate have been established, alternate protein and lipid studies accomplished and novel dietary manipulations examined to enhance growth rates, immune response and welfare of cultured fish. Furthermore, progress is being made with regard to dietary formulations for the manipulation of end product quality in cobia which includes assessment of novel methods for the non-lethal determination of body composition and enrichment of fillet n-3 fatty acid levels. A central theme within the IISBA is for rapid transfer of developed technologies and protocols to academia, industry, and the public at large. To this end, IISBA incorporates trade journal and peer-reviewed publications, and presentations at meetings, with a special emphasis on hands-on training programs. To date, the IISBA has delivered over 100 communications since inception, and conducted intensive marine cobia larviculture workshops for 9 graduate students, and 14 industrial marine finfish hatchery managers and technicians. These workshops are 4 weeks in duration and incorporate all aspects of larviculture system design, hydrodynamics, and operation, along with learning live feeds production, enrichment, and cold-banking protocols. Attendees are further exposed to all aspects of the larviculture process, initiating with egg incubation, all the way through the production process and culminating with co-feeding, weaning, and final fingerling grading for transfer to phase rearing. This presentation will provide a brief review of the IISBA, and then focus upon the training program and recent improvements in cobia larviculture technologies and procedures.