Comparative Economic Performance of Aquaculture Centers in Brazil

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Aquaculture production is increasing over time in all the world and so does in Brazil. The country has a number of natural and built advantages for the development of the sector, besides growing domestic and external demand. Nevertheless, some bottlenecks persist, like the insufficiency of aggregated statistics on a regular basis, as well as economic data at the farmer level. Qualified information is essential for the farmer decision-making process and also to support public policies on issues such as insurance, credit, development policies, environmental licensing, research, technology transfer and technical assistance.

This paper aims to outline an analysis of comparative economic performance of aquaculture centers in Brazil by collecting management information in twenty six selected aquaculture centers in nine different states/regions of the country: Tocantins, Mato Grosso, Bahia/Pernambuco, Paraná, Ceará/Rio Grande do Norte, Rondônia, Minas Gerais, Santa Catarina and São Paulo. Five species were considered: tilapia (Oreochromis niloticus), tambaqui (Colossoma macropomum), pintado (Brazilian catfish), piranucu (Arapaima gigas) and shrimp (Litopenaeus vannamei), farmed in three different production systems: earth pounds, dams and cages.

Data were collected along with fish farmers and technicians in a technical meeting held in each center by using the panel methodology. In this assembly, the local typical aquaculture farm was described and aquaculture most frequent production costs, and zoo technical coefficients were gathered and inserted into a specific spreadsheet developed for this purpose. At the end of the event, the attendants were able to check important indicators that would provide a general view of the activity in that place at that moment. Subsequently, input costs and market prices of the centers were monitored in a monthly basis, what provided inputs for intertemporal analysis in benefit of all actors in the production chain and aquaculture sector.

The results of the analysis enabled the authors to draw a comparison chart that shows the performance of economic indicators reached in aquaculture centers surveyed, which varied according to production system, intensity in the use of technology, chosen species, organization of producers, control of inputs usage, access to markets and technical assistance monitoring. In general, the centers that promoted the best use of these items achieved better financial indicators.

The main financial indicators considered in the investigation in order to evaluate profitability and economic viability of aquaculture centers were: unit profit rate, unit gross margin indicator, unit net margin.

Key words: aquaculture, costs, seafood, profitability, economics