AN INTERDISCIPLINARY EVALUATION OF THE BEST MANAGEMENT PRACTICES IN AQUACULTURE IN TOCANTINS STATE, BRAZIL: PRELIMINARY RESULTS AND TRENDS

Adriano Prysthon*, Giovani T. Bergamin, Eduardo S. Varela, Manoel X. Pedroza Filho, Lucas S. Torati and Ariovaldo Luchiari Júnior

Empresa Brasileira de Pesquisa Agropecuária
EMBRAPA Pesca e Aquicultura
Quadra 103 Sul - Av. JK, Cj. 01, Lt. 17
CP 77.015-012 – Palmas/TO, Brasil
adriano.prysthon@embrapa.br

Despite of growing aquaculture production in Tocantins state (20% between 2008 and 2009) there are still many obstacles to overcome, especially on the technology issue which there is a systemic difficulty aiming Best Management Practices (BMP). A strong influence of participatory tools for the measurement of indicators has been successfully adopted in several productive sectors including aquaculture. The participatory process promotes appropriation of sustainability development, bring the actors together and consider their representations. The display space in diagrams simplifies the measurement of an attribute, it reduces the complexity of a system and points out trends for the balance of an activity. On the 2nd Course of Updating Technologies in Tambaqui *Colossoma macropomum* Production (nov-10), Palmas, Tocantins, there were listed and quantified some indicators for Best Management Practices in Aquaculture. Attending the meeting 27 stakeholders from several representations including federal, provincial and municipalities institutions promotions, regional development agencies, private companies and technical and graduation education institutions who work directly and indirectly in the aquaculture production sector. The identified dimensions and their attributes were: ***(i)*** Environment (capability to recycle nutrients, filters and sedimentations basins ponds, waste); ***(ii)*** Social (family, friends, employment creation, crony relations with neighbors, associations or cooperatives, leadership capability); ***(iii)*** Management 1 (site selection, soil type and quality, construction and maintenance of dikes, canals, locks, supply and runoff water , liming, fertilizing); ***(iv)*** Management 2 (fingerling stocking, acclimation, feeding management, biometrics, harvest methods); ***(v)*** Water (access, quality and quantity, licensing, use, technology for physical, chemical and biological monitoring variables) and ***(vi)*** Economic (cash, savings, investment, credit, gross revenue, control of expenses, overall profit). The dichotomy "good" and "bad" was used to describe the best and worst attributes of each dimension. Preliminary results show that there was no isometry in the diagram (Figure 1), indicating imbalance on the integrated system of BMP. There was a special attention given to the economic indicator, which was considered normal. This phenomenon probably arised because of a low technical level of producers and the economic model adopted. The Environment indicator was the most discussed. However, Social, Water and Management 1 indicators has received the lowest scores, which indicates they are vulnerable points and should be seen as a priority. In order to build a systemic and integrated vision of these results, we suggest this diagram to be replicated in the future with the same institutions and stakeholders, to provide a better evaluation of the potential and vulnerabilities of aquaculture in the state.

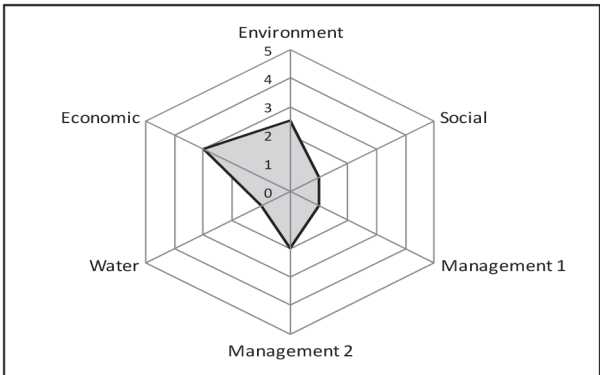

Fig. 1. Situation and trends of Best Management Pratices of Aquaculture in Tocantins State-Brazil