

ASSESSING IMPACTS IN FOOD SECURITY OF HOUSEHOLD FISHCULTURE IN TOCANTINS STATE (BRAZIL)

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Fish production from aquaculture has grown sharply around the world in the last decades, while fish capture has kept stable. Fishculture plays one important role in promoting rural development by contributing to poverty alleviation, food security and social well-being. In Brazil, fishculture has been developed as one alternative for small household farms in order to improve food security and diversification of rural activities. This country presents good conditions for fishculture, especially in terms of freshwater availability, climate characteristics and diversity of native species. This article was based on field work carried in Tocantins state, North region of Brazil. State government has implanted projects of household fishculture with small agricultural producers. These projects are focused in the development of fish production in order to reinforce food security and improve household income. The principal species concerned in the project is the “Tambaqui” *Colossoma macropomum*. The main objective of this article is to evaluate the socioeconomic impact of the household fishculture project carried by Tocantins government in terms of food security. Specifically, we look to assess the real changes in terms of availability and quality of food; and the improvements on income. Method was based on a multiple case study in with *in person* interviews were conducted with project participants.

Household fishculture in Tocantins is based on the use of processed food (ration), and on agricultural by products available at the property (e.g. corn). Natural food has also an important role in fish growth, especially for “Tambaqui”. All work force used in the activity is composed by family members. These feeding features lead to a low-cost fishculture based system and contribute to the sustainability of this activity. Fishculture does not compete with other farm economic activities, taking a mean of 30 minutes per day of man work. The main activities developed in the farms surveyed are cattle, agriculture, poultry and apiculture. An important consideration is the benefic impact of fishculture on the household fish consumption. Before this project, farmers were not able to consume fish regularly, as they do currently. Most of project participants have their production oriented for home consume only, while only few of them sell part of their production locally. This local trade plays one important role in terms of food security also for neighbors that increase strongly their consumption of fish. The household fishculture project reached successfully its goal related to the reinforcement of food security. These achievements are confirmed through the changes verified in the family food habits, notably the increase in the fish intake frequency. The sales of the surplus production allow a small increase in the income, especially in the period which production of other main activities is low. Results show also a local technology diffusion effect related to the introduction of other producers located nearby to the project members. Research related to economic viability and technical practices (e.g. water and feeding management) is necessary in order to provide a complete sustainability (social, economic and environmental) of the activity.