Food and Agriculture Organization of the United Nations

FISH4ACP

Unlocking the potential of sustainable fisheries and aquaculture in Africa, the Caribbean and the Pacific

BLUE FOOD VALUE CHAIN SOLUTIONS

SMART TECHNOLOGY

Zimbabwe

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Boosting tilapia farming with black soldier fly-based fish feed

LOCATION	Manicaland province
PARTNERS	Chinhoyi University of Technology
TARGET	Smallholder tilapia farmers
DURATION	9 months
COST (USD)	95 000

ISSUE

Tilapia consumption in Zimbabwe has gained in popularity, but remains expensive because of the high production cost, mainly due to Zimbabwe's strong reliance on imported feeds and feed ingredients that are often the largest contributor to the cost of production. More affordable options to feed tilapia would encourage smallholder farmers in particular to produce more for their own consumption and for sales in their communities.

ACTIONS TAKEN

Together with Chinhoyi University of Technology, FISH4ACP is trialling the production of local fish feed based on the black soldier fly (BSF) to assess if it is technically and financially viable for farmers. Chinhoyi University has trained 10 extension officers, feed suppliers and farmers to test BSF-based fish feed production on three pilot sites in the province of Manicaland in eastern Zimbabwe. Moreover, a cost–benefit analysis for different combinations of BSF-based feed and conventional fish feed was undertaken to understand the benefits of using the black soldier fly. Also, FISH4ACP and Chinhoyi University are working in close consultation with the University of Ibadan in Nigeria and the National Fisheries Resources Research Institute (NaFIRRI) in Uganda to share lessons learned and ensure regional coordination.

> BSF-based feed is a game changer for my business because production cost has gone down by almost half. This is a key enabler to sustaining me in fish farming.
>
> Cathrine Mbona
> Tilapia farmer

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RESULTS

The cost–benefit analysis showed significant benefits of using the black soldier fly. The trials are expected to ascertain if BSF-based feed can be a viable alternative fish feed for farmers in Manicaland province. They are will also provide the knowledge on how to produce the feed and how to use it. This includes the knowledge needed for small-scale feed suppliers to produce BSF-based fish feed, as well as best practices on tilapia feeding for smallholder fish farmers. In addition, production capacity will be supported with the upgrading of two small-scale feed processors and two BSF production units in Manicaland. This extra capacity is estimated to yield an additional 60 tonnes of fish per month in Manicaland on top of a total of production of 1800 tonnes.

POTENTIAL FOR SYSTEM CHANGE

Locally produced BSF-based fish feed and improved fish feeding practices have great potential to increase the productivity and reduce the cost of tilapia production for extensive smallholder farmers, thereby bolstering their means of subsistence and improving their livelihoods.

SUSTAINABILITY & TRANSFERABILITY

By demonstrating the cost benefits of alternative feeds, and working with pilot farms and in partnership with a local university, BSF-based fish feed production can be transferred to other areas of Zimbabwe and beyond. It is also adaptable to other smallholder value chains.

OUR GOAL

Make Zimbabwe's tilapia value chain stronger to boost food security and generate better incomes and jobs, focusing on women, youth and vulnerable people.

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CONTACT

Paul Mwera
National Professional Officer, FISH4ACP
fish4acp@fao.org

fao.org/fish4acp/zimbabwe

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Fisheries and Aquaculture – Natural Resources and Sustainable Production
FISH4ACP@fao.org

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