

Aquaculture Gets a Second Chance in SA

Aquaculture, also known as fish farming, has been tried many times in South Africa, and failed as many times. Today, with food security a priority, there is a move to start it up again. Can it work this time?

By Robert Berold.



Much is being done to revive aquaculture in South Africa.

A recent study published by the Water Research Commission (WRC) indicates there is much potential if things are done right. Qurban Rouhani and Peter Britz of the Department of Ichthyology and Fisheries Science at Rhodes University, who did the baseline study, believe that aquaculture can provide

protein for many poor people, and even make some money for emerging farmers. "But," they say, "We need to know why we are doing it, where, and for whom."

The problem with past attempts, says Britz and Rouhani, was "a complete lack of direction." During the 1980s

several fish hatcheries and production units were set up in the former homelands to contribute to food security, but by the 1990s all of these had failed. The reasons, say the researchers, were mostly that there was little or no backup in the form of extension services and financial support. "The history of these

community-based projects was pretty dismal," says Britz. "They were so badly conceived that they were non-starters."

Projects set up as commercial ventures fared slightly better, with some of the warm water species projects still surviving in Limpopo province, as well as the Western Cape, with small farmer trout cage-culture projects. There are less than 100 farmers involved in commercial aquaculture throughout the country, and they tend to earn very little – between R1 000 and R2 000 per annum.

DOING THINGS RIGHT

The WRC and the Department of Agriculture (DoA) have been combining efforts to promote a national policy for aquaculture. This is already a big step, as historically aquaculture work has been undertaken piecemeal by provinces or nature conservation departments. It is said that often the DoA was not even aware of these initiatives.

Part of Rouhani and Britz' brief is to engage provincial support for the national initiative. In the next phase they will work with provincial departments, formulate objectives and get provincial buy-in for a national policy. As Rouhani puts it: "This project is different from efforts in the past since it is putting policy in place. To date there has been no national policy. Without policy there is no plan, there is no comprehensive funding, resulting in things becoming disjointed."

Keith Ramsay, the senior livestock specialist in animal and aqua production services at the DoA believes the new policy will work. "Before, people did not do their homework properly. They were thinking too big, too fast. Instead we are looking at a lower scale, not just for food security, but also for small commercial farmers." They idea, continues Ramsay, is to have one-stop resource centres where one can get fingerlings (small fish) and training, as well as support. "We want to revive the old provincial fish farming centres to provide these services."

At the food security level, much can be done with small farm dams. "Farm dams can be highly productive," explains Rouhani. "They provide opportunities for stock enhancement – taking fish from hatcheries and putting them into dams. This will not be commercially viable, but it could be a State-supported source of protein. There is no operational cost apart from the fingerlings, as the farmers would just put in enough fish the dam can support naturally."

WORKING TOGETHER FOR PROFIT

Commercial production is a different matter altogether. It needs good organisation since the market demands consistent quality and quantity. The success stories show that commercial aquaculture needs both sustained technical support and a link with the private sector. In the Western Cape, commercial buyers are willing to buy as much trout as the farmers can produce, but the quality of the fish is still not good enough. This,

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notes Britz, can be rectified with more technical support.

Commercial trout farmers in the Western Cape are getting that kind of support from Stellenbosch University. Danie Brink from the university's Department of Genetics, who is driving much of the work in the province, explains that most of their aquaculture promotion is on irrigation dams on the fruit farms. "We are working with communities and individuals living on or near the farms. Of course, this is only possible with the cooperation of the farmers.

They do not subsidise the projects directly, but they can provide essential supervision and transport. If we secure the supervision of a farmer, we know we are already halfway to a successful project."

Currently, there are eight producers under Brink's guidance, and he aims to build this up to 30 producers in all, which will be equivalent to 200 t of trout a year, with a market value of R50-million. For marketing purposes, the producers have formed themselves into a cooperative called the Hands-On Fish Farming Cooperative.

"It is a huge effort," says Brink. "Already we can see that we underestimated the aftercare requirements. Most of the producers have never been in business of any kind before, and we should not have expected them to have the necessary entrepreneurial commitment."

REVIVING EXISTING FACILITIES

Rouhani and Britz' survey found that there are R100-million worth of facilities and hatcheries in the country. Most of them are dormant, and some have fallen into disrepair. "The revival of these facilities needs to occur in parallel with groundwork in the communities," notes Rouhani. "We are looking at some of the provinces sharing facilities. For example, Tlofop has a warm water species facility which could be shared by North West, Limpopo and Mpumalanga. They could be a source of fingerlings such as tilapia, cat fish and carp. In turn, Marble Hall has a training centre that can be shared, and at Lydenburg there is a trout hatchery."

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Is there a market for warm water species? "Sure there is," maintains Rouhani. "We have seen men in Limpopo selling fish out of a sack on the side of the road. Within 20 minutes all of the fish were sold. And this despite the price of R10 a kilogram."

The WRC-funded survey, *Contribution of Aquaculture to Rural Livelihoods in South Africa: A Baseline Study*, makes a number of recommendations for food security-focused aquaculture. Among these

are that projects are designed correctly, farmers have access to fingerlings at affordable rates, and farmers are provided with good technical extension support. "You always need someone there to troubleshoot. If provincial and local departments of agriculture are serious, they must dedicate some of their extension staff to aquaculture," says Rouhani. For commercial aquaculture, the research team recommends that variability studies, markets, and species selection should be undertaken more thoroughly.

William Gertenbach, head of animal production for the Western Cape Department of Agriculture at Elsenburg, expresses his concern over the human resources needed for aftercare. "One of the challenges facing the whole aquaculture industry is a shortage of expertise. To overcome this, my division has been bringing in young professionals from previously disadvantaged backgrounds to work with senior scientists. We will be doubling our extension staff to 60 in the near future, and we will make sure that at least some of these extension officers will be dedicated to aquaculture," he says.

Britz and Rouhani are now on to the second phase, again sponsored by WRC, spending a lot of time on the road, persuading the provincial departments of agriculture to support the national strategy. They want to focus mainly on three provinces, one with good capacity (the Western Cape is the best candidate), one with moderate capacity (Limpopo is the logical one here), and one with poor capacity (probably the Eastern Cape). So far, it looks like aquaculture is well on the way to revival. 



A trout processing facility.

**To obtain a copy of the report, *Contribution of Aquaculture to Rural Livelihoods in South Africa: A Baseline Study*, Report No TT 235/04, contact the Water Research Commission's Rina Winter or Judas Sindana at:
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