

# *Aqua-culture*

## *A growing industry*



A GINA Publication

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The Aqua-culture industry in Guyana is growing gradually in all parts of the country. Farmers in Essequibo, Demerara and Berbice are investing in the new industry, which has improved significantly over the last few years.

Aqua-culture or inland fishing as it is commonly known is being promoted by the Ministry of Fisheries, Other Crops and Livestock to reduce the dependency on Guyana's oceanic resources and also to provide employment. The Aqua-culture Industry is one of the fastest growing industries in the country.

There are approximately 3,000 acres of land under aqua-culture cultivation. Prior to 1992, there were 200 acres of land under aqua-culture farming.

Over the last year, the Department of Fisheries harvested a large quantity of red tilapia from the Freshwater Aqua-culture Demonstration Farm and Training Centre at Mon Repos, East Coast Demerara. It was noted that three sets of fish were harvested and sold.

About 600 ponds of red tilapia were harvested and sold from the fish farm. In an interview with the Government Information Agency (GINA), Fisheries Officer responsible for the farm, Mr. Tejnarine Geer explained that the New Guyana Marketing Corporation (NGMC) is the agency that sells the product whereby the general public can access it. "We have thrice given them fish over the past year. Sales have been good because the first time we gave them about 200 pounds of fish, which were sold out in about 3 days. Two weeks ago, I dropped 161 pounds of fish and that also sold out in three to four days; also another set of over 200 pounds were sent this week" said Mr. Geer.



**Ministry of Fisheries, Other Crops and Livestock officials harvesting red tilapia at Mon Repos farm.**

Farmers who have red tilapia are being urged to make contact with the NGMC because there is a great demand for the fish. It was noted that there is a market for the fish and it should be maintained.

Mr. Geer explained that the final pond of red tilapia which was used for feed trials were harvested. About four ponds of fish, which represented work concerning the two feeds were evaluated.

Evaluation was done on the floating pellet feed, which is produced by the National Flour Mills of Trinidad and Tobago and the sinking pellet produced by Guyana Stockfeeds Limited.

The Aqua-culture Demonstration Farm and Training Centre was commissioned in July 2001 by President Bharrat Jagdeo. The facility was constructed by the Government of Guyana in collaboration with the Food and Agricultural Organisation (FAO) and the Canadian International Development Agency (CIDA), at a cost of approximately \$36 M.

The facility was constructed as part of a unique partnership between the Government, FAO and CIDA. It comprises of a laboratory, ten spawning ponds, inlets and outlets, supply and drainage canals, internal roadways, bridge and a live-in accommodation.

The facility since last year has five earthen ponds which are being used to rear hassar and freshwater prawns. Another five earthen ponds will be constructed.

The fish farm was constructed to stimulate and promote aqua-culture; create skilled manpower to support fish farming; practice adaptive research in support of potential farmers, improve extension services and provide fish seed.

The main objectives of the fish farm are to train farmers, so they can practice scientific and sustainable aqua-culture; provide high quality fingerlings and breed stock; enable farmers to attain high yields; conduct performance trials and provide information collected to farmers.

It was noted that the facility is there to assist farmers. Research information collected is available for interested persons. Farmers are advised to consult with the demonstration farm before digging ponds to rear fish. A simple study of water testing and other important aspects should be done before any infrastructure is put in place. The information is available to farmers at no cost.

Mr. Geer said that the functions of the facility are being executed each year. He explained that training programmes are conducted, fingerlings are produced, trials are done and the information collected are available to persons who are interested in investing in the industry.

He explained that since the opening of the facility, about 30 or more farmers purchased fingerlings. It was noted that so far for this year about 5,000 fingerlings were sold while last year about 7,000 were sold. Farmers have been encouraged to establish their own breeding ponds, so that they can supply themselves with fingerlings. It is cheaper for farmers to create their own breeding ponds.

During 2002, a number of trials and training courses was conducted. About 50 persons received training through five courses. Trials have been completed with red tilapia and different kinds of feeds.

The training programmes attracted participants from Berbice, Essequibo and Demerara.

Highlighting some of the activities for last year, Mr. Geer said, “We had five earthen ponds, which will be used for tilapia and hassar as well as fresh water prawns. We have expanded our staffing whereby we now have two fish station attendants. We have also done several of the preliminary works to embark on a few more trials.”

Revealing plans for this year, Geer said there would be two more trials with red tilapia. He added that there are plans to conduct some trials with hassar, but firstly they have to be bred. Plans are also in place to culture freshwater prawns, which are being bred at present.



**Tilapia produced at Mon Repos fish farm packed for market**

He said, “Majority of the time this year will be spent on breeding prawns because they are a bit complicated. We also plan some training courses on the red tilapia and hopefully with freshwater prawns and hassar.”

It was noted that many farmers now recognise that aqua-culture is a lot more difficult than it seems as first. Mr. Geer said, “You can get good harvest repeatedly, but it requires management and training and in addition it requires a certain level of commitment. You could make lots of money from it, but it is farming and farming requires commitment, dedication and it needs you to take care of your stock.”

Farmers are now cautiously investing in aqua-culture, as they only start with two ponds. The Fisheries Department is trying to avoid a situation whereby someone excavates a large portion of land and they are unable to manage it. The Ministry of Fisheries is satisfied with the progress because aqua-culture takes many years to develop.

Geer said the industry has a far way to go, but there is more work that needs to be done. He explained, “We have to work with different species as well. Different species are suitable for different water conditions. Tilapia can’t grow in acidic water, but hassar could. We need to look at different species in terms of their income-earning capacity. Hassar has more value than tilapia and freshwater prawns are more valuable than hassar.”

It was noted that a variety of options is being provided so that the best one can be selected for both expected income and the environment. Plans are in place to conduct hormonal sex reversal on tilapia during this year.

The reason for hormonal sex reversal is to ensure that there is no reproduction taking place in the production ponds. This will allow for a better growth rate and in terms of tilapia males have a better growth rate than females. One of the problems with tilapia is that if male and females are reared in the same pond, they will start to reproduce and that leads to overcrowding. If both males and females are reared in the same pond there are problems also with the size of the fish.

Farmers are encouraged to invest in the industry because it is the way forward. Aqua-culture encourages optimum use of resources in an environmentally-sound manner and assists in reducing rural poverty. It can promote income diversity and increase export earnings.

A private joint venture aqua-culture farm was established at Hubu, Region Three (West Demerara/Essequibo Islands) where freshwater prawns are being cultured and exported to the United States of America.

**Red tilapia harvesting at Mon Repos**



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