

Potential and Re-establishment of the Ornamental Fish Industry

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PHOTOGRAPHS BY THE AUTHOR

Jamaica has a history of being a minor exporter of ornamental fish and, indeed, the current level of exports is negligible. In the past, a number of large-scale farms and exporters were in operation, but these closed down for a variety of reasons. A significant factor in this was a series of massive hurricanes between 2003 and 2005, which wiped out hundreds of millions of dollars in agriculture production in the country.

Companies affected included several large ornamental fish farms that were flooded or filled with debris, resulting in the loss of tens of thousands of fish and farm buildings or infrastructure. In the face of these setbacks, many farm owners never re-established their farms. In addition, the largest remaining exporter of ornamental fish passed away in 2009 and his operation was shut down.

Regional potential

Despite the above, there is significant potential within Jamaica and the Caribbean for the region to develop as a major production and collection area for both freshwater and marine ornamental fish. Both Jamaica and the Caribbean are, literally, on the doorstep of the single largest market for ornamental fish in the world, the USA, and are therefore able to access markets on the east coast of the USA and Canada, both cheaply and easily. The EU is also easily accessed through direct flights.

The region has some significant competitive advantages that could help develop Jamaica as a major exporter, and the Caribbean, generally, as a major production centre:

- Suitable tropical climate for production of almost any species;
- Direct flight connections into target markets in North America;
- Existing capacity for farming and collection of marine and freshwater species;
- Demand for Caribbean fish, particularly, sustainably harvested marine fish;
- Working frameworks for regional collaboration in the form of CARICOM; and
- Improving regional transport and logistics.

Gradual re-establishment

Jamaica is gradually re-establishing an ornamental export industry. Currently, there are, at least, two exporters shipping fish from the country. One of these, OFI member, The Competitiveness Company (TCC), which is an NGO that works on developing economic opportunities in Jamaica, identified the development of ornamental fish exports as an opportunity to create viable and sustainable livelihoods in Jamaica's inner cities.

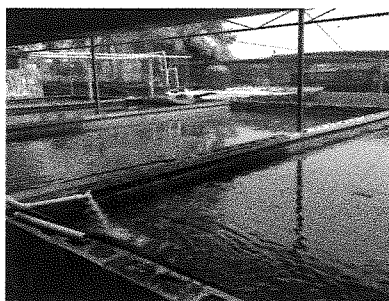


Earthen ponds are used to grow a variety of species.

In 2009 TCC secured funding through a global challenge for urban development provided by the Bill and Melinda Gates Foundation to carry out significant work in developing the sector. Through this funding, TCC was able to develop a training program for farmers and refine the design of a 'backyard' farm that was easy and cheap to build, but would allow enough fish to be produced to provide a viable income for the farmers.

TCC was able to leverage the work done in that project to secure funding from USAID in 2012 to form an Urban Ornamental Fish Cluster and to implement a value chain approach to the development of the cluster and wider industry. The objective of the three-year project was to develop a functioning, effective ornamental fish value chain that engaged urban fish farm clusters to export ornamental fish in order to improve the standards of living of the farmers and their families.

Through this program, they developed a comprehensive high-quality training curriculum, and provided capacity building to over 150 new urban farmers with productive model backyard aquaculture farms.



Some farms use large concrete ponds, rather than earthen ones.



While some backyard farms may be small, they are highly productive and provide welcome income.

They also worked on developing a Quality Assurance System, along with the Jamaican Veterinary Services Division, to assist in meeting international standards for bio-security and fish health.

Commercial production

While each farm is small, their collective capacity could allow production of fish in export quantities. This program could be replicated across other parts of the country and in other Caribbean countries as markets and export volumes increase.

Production is also carried out in more traditional pond farms, etc., in a number of centers around Jamaica. Typically, ponds are earthen, but a couple farms do have extensive concrete ponds for production. The water in Jamaica is generally fairly hard and

alkaline, and, thus, species such as livebearers and African cichlids breed and grow really well here.

In fact, there are also many other species of cichlids grown by hobbyists and farmers alike. Work is therefore ongoing into introducing new species for production and improving the quality of local fish for export markets.

The future for Jamaican exports is looking better with the development of new facilities and a growing interest by large-scale producers in growing ornamental species for market. For example, there was once a large tilapia industry producing fish for the table, but this has been shrinking owing to cheap imports. Consequently, many of these farmers are now looking at alternative production species, including ornamentals. As demand for Jamaican exports grows, the industry will continue to grow to meet this demand. ■



Plastic tanks are popular, since they are relatively cheap and are easily sourced.

Did you know?

As has been well-publicized in recent years, aquarium keeping (or even aquarium watching) has numerous health benefits, from aiding recovery from serious illnesses, to helping control health-threatening factors, such as high blood pressure.

In addition, pets can help children develop a sense of responsibility and self-efficacy, as well as assist them in the development of relationship skills while, at the same time, generally promoting physical and emotional well-being. It now seems there may be yet another important benefit: fishkeeping may help control diabetes.

In a pilot study carried out by researchers from the University of Massachusetts Medical School and the University of Texas Southwestern Medical Center, a group of adolescents suffering from Type 1 Diabetes Mellitus (T1DM) were split into two. The members of one group were given a tank and a fighter (*Betta splendens*) to look after, along with daily feeding and weekly maintenance instructions, as well as their (the children's) usual diabetes self-management tasks, such as blood glucose testing. The other children were supplied only with their diabetes self-management tasks, plus the promise of a gift card at the end of the study.



Looking after a betta and, by extrapolation, other fish, may help diabetes-affected children control their blood sugar levels.

PHOTO: JOHN DAWES

After three months, those caring for their fish showed a distinct decrease in an important diabetes indicator (A1C), while those in the control group showed an increase. The researchers therefore concluded that "Structured care of a pet fish can improve glycemic control in adolescents with T1DM, likely by providing cues to perform diabetes self-management behaviors."

So... there we have it... yet another important benefit that we may have to add to all the others that our industry already contributes to! ■

FURTHER READING

Louis Maranda, May Lau, Sunita M. Stewart and Olga T. Gupta, A Novel Behavioral Intervention in Adolescents with Type 1 Diabetes Mellitus Improves Glycemic Control (Preliminary Results From a Pilot Randomized Control Trial), *The Diabetes Educator*, Jan. 22, 2015.