

A story of Aquaculture in Cameroon



Aquaculture is defined as the production of plants, animals, or both in a controlled aquatic environment. Fish farming is a major component of aquaculture. The conditions for aquaculture are good in Cameroon. The climate is ideal for raising tilapia and many other species, water quantity and quality are outstanding, there is an abundant labour force, and the country has enough agricultural resources to supply a large fish feed industry.

In the past, people in some parts of Cameroon relied heavily on fishing for sustenance. But natural sources of fish have largely disappeared because of a variety of causes, including overfishing, using inappropriate fishing gear, deforestation and degradation of watersheds, climate change, urban development and destruction of water bodies. Cameroon produces only about 50% of its fish demand, so there is a great potential for local farmers to fill this shortfall with farmed fish.

There are two challenges to making aquaculture a reality in Cameroon: the lack of readily available tilapia fingerlings and the lack of readily available, standardized and affordable pelleted fish feed.

Let me tell, my story.

It was one rainy season back in the month of July, 2015. In the sudano savanna agro ecological zone of Cameroon, at about 9 a.m The ground was muddy and slippery. I had to remove my shoes and wade through the water and mud. Frogs and toads jump everywhere as I walked towards the fish ponds. There were five ponds in all, close to a stream that has overflown its banks due to continuous rainfall over the past weeks. There were other farmers cultivating rice around the ponds. One could hear the croaking of frogs everywhere.

As recommended in the raining season, I went there to tend my rice and okra. There was a heavy downpour that morning and all the plants were submerged in water for a long time. I remember seeing so many toads and frogs. And even remarked to my wife that it was as if it had been raining toads and frogs.

I wondered what kind of business waterlogged land could be good for. But my wife told me the land could be suitable for fish farming. At first, I did not like the idea. But later on changed my mind, today I am enjoying the proceeds. Since I consulted with some people and decided to give it a try. So we used pick axes and shovels to dig a 50 foot by 50 foot by six foot deep trench.

The trench was filled up with water by the time we finished digging it. A fish farmer advised me to drain the water from the pond and remove all pieces of wood, dead insects, reptiles and leaves from the water.

After a week, the pond was full again. I was advised to wait about three weeks before putting fingerlings in the pond. Many said this would allow the mud to settle and air to pass over the water in the pond, so that a harmful substance from cut tree roots around the pond would not affect the fish. After three weeks, the water was clear and one could see the bottom of the pond. This showed that the water was clean enough for fish.

After cleaning the water, I fenced the pond with a net to prevent toads, frogs and snakes from getting into the pond before I put the fingerlings in. These animals eat the fingerlings. Also, snakes and other reptiles can multiply and take over the pond. This is dangerous to human beings too.

The banks of my pond was slanted away from the pond, to prevent the banks from caving in and polluting the water. The pipe at the corner of the pond was to drain excess water out of the pond so the fish cannot escape if the pond overflows. I grew grasses around the pond to prevent erosion of the banks.

Then started the pond with 1000 tilapia fingerlings. The first fingerlings were not for breeding. I grew them for sale, because I did not have the money to buy compounded feed from the store. So I mixed maize and rice chaff with grated fish. It was not good feed, but I had no other option. The compounded feed from the store was sold for 21,000 FCFA (\$35 US) for a 50-kilo bag. One bag is enough to feed 1000 fingerlings for three days.

But my local feed did not make the fish grow well. I wanted to harvest them after nine months but they were too small to sell well. I had to leave them for another nine months. Out of the 1000 I initially added to the pond, I sold about 750 after 18 months. I got a little profit, apart from lots of

fish that I ate myself, and those I gave to friends and family members. But I got hooked on fish farming from that first trial.

After the first harvest from my first pond, I got more interested in fish farming because people started coming from Limbe to buy tilapia from me, even though I had only one pond. Marketing was not a problem; I sold all the fish the same day I harvested them! I sold one kilogram of fish for 5,000 FCFA.

In 2017, I financed the construction of three additional ponds. Officials from the Ministry of Food and Agriculture advised me how to construct the ponds. I hired an excavator for the digging. The three ponds are 100 by 100 feet square.

Hiring an excavator was effective but costly and about \$405 US dollars, for each pond. This is high for most farmers. In fact, I used the money from selling the fish from the first harvest to finance this construction.

A commercial fish farmer based in Limbe, sold one thousand fingerlings to me at a cost of 166 US dollars. Each pond took about 2,500 tilapia fingerlings. I had to transport them about 25 kilometres to my farm. Farmers must transport fingerlings either in the morning or evening to prevent them from dying because of heat. I hired a Toyota pickup with water tanks to take the fingerlings to my farm.

With four ponds filled with 10,000 fingerlings, I had to feed them well so that they could grow at the appropriate rate. I must say that fish farming is a profitable venture worth doing. I am now able to pay my children's school fees with the income from fish farming.

In the second phase of production, I faced the same feeding challenge as with the first pond. But I developed an effective local feed made of maize, rice and cowpea mixed with fish and dried. The mixture is slightly soaked with water and rolled to form pellets. One 50-kilo bag of rice and one maxi-bag or 90 kilos of maize and a basket of *nseaaawa*, a type of fish sold in the local market, can feed four ponds for two weeks when you do caged feeding. This is far cheaper than buying imported feed.

It should be noted that, cage feeding is a local technique where metal net is put into the pond to enclose a number of fish, who are fed at one time. This stops the feed from getting into the rest of the pond.

There is everything to gain from fish farming. It is not difficult to care for the fish. But there are some challenges. The first of these is the cost of fingerlings. This can account for up to 40% of the cost of mature fish.

Also, fish feed is difficult to get. It is imported, and is too expensive for most local small-scale farmers. This makes farmers resort to using unapproved local feeds made up of household leftovers. This can be harmful to the fish.

Regular cleaning of the ponds is also difficult. There is no equipment for cleaning or discharging fish effluent effectively. So the pond is sometimes not cleaned for a long time, and this can affect the quality and quantity of the fish.

Nets for harvesting are also difficult to find. You have to travel to the coast to buy them. One of our biggest problems is the influx of tilapia from China. Fish farmers do not have a real problem with marketing in Cameroon. But since the import of tilapia from China, our market prospects have gone down. Although the government has banned the import of tilapia, some still find their way into the country.

Life before fish farming was not all that good. But when I diversified into fish farming, I saw an increase in my income. I can go to the pond and take fish for meals at any time. My children like fish more than meat. They tell me that feeding them makes them happy. My annual income has gone up by about 40%.

We have an association of fish farmers in the region. I have attended many workshops that have helped me learn new ways of tending the fish. I have also learnt record keeping for all my farm activities. I keep records of the amount of feed I give to the fish and I monitor the water quality and other safety measures of the fish and the ponds. I check the fishes' weight as they grow. I also keep records of my income and expenditures. This helped me to secure a loan from a credit union so I could purchase some equipment for the farm.

This story of mine explains how I happened to have diversified from crop farmer into fish farming, and was able to meet all my obligations as a family man. Maybe you can also try fish farming. After all, fish are a good source of nutrition and selling fish can fetch a good income.

Author: Mike Achanyi Fontem, Freelance Journalist, Cameroon.

Reviewed by: Anyi Akenji Fermillen, Editor-in-chief, Department of Fisheries and Watershed Management.