



Fish Tidings

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Did You Know That?

- Eating fish once or twice a week may reduce the risk of diseases ranging from childhood asthma to prostate cancer
- Eating fish during pregnancy may help reduce the risk of delivering premature babies
- Eating fish help us to reduce the risk of heart disease and stroke.

Masvingo province being situated in ecological regions 4 and 5 recorded relatively low rainfall over the years and local farmers have not realized meaningful returns from farming maize, groundnuts and round nuts among others. As a result there has always been a need for diversification of farming activities to complement decreasing production and incomes and the landing of Aquaculture Zimbabwe must cast a ray of hope on farmers who were literally being shortchanged by the low and erratic rainfall patterns.

The organization realized that much of the fish sold in grocery stores and restaurants comes from capture fisheries and decided to engage the less privileged and vulnerable members of local communities in fish farming activities which involve participatory systems designing, construction, stocking, breeding, rearing, harvesting and post harvest technology skills transfer. This is one unique project which is targeting not only Masvingo province but the nation at large.

It is a fact that fish production has always been practiced in Masvingo

province, since time immemorial. However these production activities lack the depth and insight embedded in Aquaculture Zimbabwe's model notwithstanding the legal and environmental implications of these practices. Many a time hordes of men and women operate

"Aquaculture Zimbabwe has come to compliment the farming activities that people in the province already engage themselves into"

under the cover of darkness poaching dams, lakes and rivers and they emerge during the day marauding as legitimate fish suppliers to an existing market constituting of city dwellers and the rural folk alike. Aquaculture Zimbabwe has therefore stepped in to transform and equate fish production in the province to a transparent, regularized and reliable fish farming base.

It is our joy to announce that Aquaculture Zimbabwe has secured a decent amount of funding to start such a program in



Potential site identified in Masvingo Rural District Ward 14

two districts of Masvingo Province namely Chivi and Masvingo rural. This is a 13 month long project which began in September 2011 and will end in September 2012. The Aquaculture Zimbabwe team has so far registered beneficiaries of the project in both districts. In Chivi the project is covering 16 wards targeting 300 households whilst in Masvingo rural there are 10 wards targeting 200 households. The criteria used for the selection of beneficiaries laid its focus on chronic poor labor endowed households and the youths. This was done because beneficiaries will construct their own ponds with help from the organization. The process of selecting beneficiaries was made easy with the help of other Non Governmental Organizations namely: CARE

Hope in Masvingo Province

International, CAFOD, OXFAM, BHASO and government departments: Zimbabwe Parks and Wildlife Management Authority and the Department of Livestock Production and Development. Ponds are still being constructed in the 26 wards.



A great potential site identified

AZ team chose the earthen pond concept since it is a much cheaper option and allow management to stimulate natural production much easier. It has increasingly been proven that fish farming has got many advantages that is why the organization chose to empower the communities with this project. Some of

the advantages of fish farming are that, it can easily be localized and managed while it is capable of producing a high food yield from a small production area. Fish are low in fat but high in protein compared to land animals, so the amount of useful food per acre produced by a fish farm is greater than that of traditional livestock. Fish farms also require less maintenance and labor as compared to some traditional livestock systems. With the declining number of fisheries worldwide and a steady increase in the demand for fish, fish farming has become a vital alterna-

tive for the supply of fish and fish products. Fish production in coming years will depend more heavily on aquaculture, which will help preserve the natural ecosystems of our over-fished oceans, lakes and rivers. It takes between five to six months before harvesting a particular stock after which returns can be realized. This project will be able to sustain itself after the 12 months support period as the organization intends to empower young people and the chronic poor in the country to start businesses through fish farming.



Another great potential site

Celebrating the festive season in style!

As we celebrate the birth of our Savior Jesus Christ and as we travel to different parts of the world let us not forget to eat wisely and maintain our healthy bodies. It is advisable to eat at least 16kgs of fish a year. Ask yourself then if you are doing likewise, if not, consider doing so. Eating fish helps us to reduce the risk of heart diseases and stroke by reducing blood clots and inflammation, improving blood vessel elasticity, lowering blood pressure, lowering blood fats and boosting 'good' cholesterol.

"It is advisable to eat at least 16kgs of fish a year. Are you doing this?"

A fish diet is low in fat and high in protein. So let us celebrate this festive season in style by eating healthy.

The AZ Team wishes you a Merry Christmas and a prosperous new year!!! Be Blessed....



Reflections of 2011...The year that has been...

Before everyone leaves for the holiday, we would like to take this opportunity to thank you for your support. We wish you all happy holidays and a great New Year's celebration. We are grateful for your comments, support and suggestions for improvement. This is the time we plan and look forward to the coming year and also reflect on our successes and failures of the past year. Aquaculture Zimbabwe has made great milestones this year towards fulfilling its

mandate and purpose. We appreciate your presence at every corner that we navigated together, all our partners and colleagues in the development of this sector for the engagement that has turned out to be so fruitful, all for the benefit of the marginalized persons in our midst. We have managed to positively touch the lives of so many deserving households in the country side, making sure that life will never be the same again for those benefiting from our various fish interven-

tions through out the country. The year has brought smiles on the faces of both the young and the old as they saw a glint of hope in their ponds. Jobs have been created, SMEs emerged, cooperatives have found a new reason to stick together, the elderly have regained strength to hope for something different. It is with great happiness and optimism that we approach 2012, hoping to further build on our current successes to set up a formidable freshwater aquaculture industry.

Update on the year's Activities

Aquaculture Zimbabwe in collaboration with the University of Zimbabwe were instrumental in training individuals in fresh-water aquaculture, a curriculum which to date has managed to train 50 prospective farmers who graduated with certificates. Some of these graduates have gone on to venture into successful fish farming projects with the knowledge and skills they acquired from the course. Urban aquaculture has also been a success with individuals taking interest and some actually setting up their own viable aquaculture systems. Interest has been aroused in the public domain judging from the many enquiries being lodged at the Aquaculture Zimbabwe offices. Earlier this year Aquaculture Zimbabwe participated in the drafting of the National Organic Standards policy, a draft which was later launched by the Zimbabwe Organic Producers and Promoters Association and the Humanitarian Facilitation centre. The Organization also recently contributed to the skills empowerment of youths through the TREE program which was a huge success. Fisheries and Aquaculture Working Group is also now in place and is already on the road towards a national holistic engagement. At Aquaculture Zimbabwe we believe that with the right attitude and willpower, there are inexhaustible opportunities to be exploited through fish farming and we are optimistic about the outcomes and impact of our projects at community, district, provincial and ultimately national levels.



Unlocking the great potential of integrating fish farming with existing agricultural activities

“Earlier this year Aquaculture Zimbabwe participated in the drafting of the National organic Standards policy, a draft which was later launched by the Zimbabwe Organic Producers and Promoters Association and the Humanitarian Facilitation centre.”

Aquaculture Zimbabwe opens offices in Masvingo Province

The Masvingo project has seen Aquaculture Zimbabwe setting up fort in the city in order to facilitate communication and access to beneficiaries in Chivi and Masvingo rural districts. To steer operations, a dedicated team which is constituted of experienced cadres who will provide the technical assistance required. These are Mr. P. Nyungu, Mr. V. Zvarevashe, Mr. J.Machingura, Mr. A. Mutatavikwa, Mr. M. Nyabereka and Miss M. Nyakuengama and Miss T. Chikupe. The senior project officers are Mr. G. Tongowona and Mr. M. Dingwa. The thrust of the organization is to reduce chronic poverty and improve people's livelihoods by empowering them through fish farming.

People in the City have shown their appreciation of the new project and their wish is

to realize the project extending to all the districts of the province which have very low rainfall and on the same low crop yields. The project promises to be a success because people even those who are not the beneficiaries have welcomed it and are helping the beneficiaries in the construction of ponds. Fish farming took the hearts of many people even those in the town; many of the perplexed people have been flocking the office desiring to know how they can become farmers as well as their chances of making it into the project. If it happens that many people undertake this project, poverty will be reduced and crime levels lowering for they will be busy taking

good care of their fish for six to nine months which is the harvest time.



“Our doors are always open!”

Entrance to the new offices in Masvingo region

Tonight's menu: The tasty Christmas catfish!

The African Sharp tooth Catfish grows big-very big! The angling record for one caught in South Africa is more than 33 kilograms! The ones we catch in Botswana are usually much smaller, 5 to 6 kilograms, writes Ulf Nermark.

It is a quite remarkable fish and can survive under very harsh conditions. It is the last fish to be found in receding pools of water. It can even crawl for some distance over land to reach new pools! In very muddy water or in water with very little oxygen it can still breathe air. It collects a volume of air and closes it inside a small compartment, in which there is a breathing organ, looking like a small very fine branched tree. Here, the oxygen from the air is transferred to the blood. I once had a catfish in my aquarium in the house. One morning my daughter screamed. While eating breakfast she had suddenly seen the catfish lying on the floor beside the sofa. It looked very dry, but it still moved slightly when I touched it. I immediately put it back into the aquarium and believe it or not, it did survive. A few of its whiskers and the tip of the fins fell off, but they grew back again! Catfish makes for a very different dish. It's a pity that so many people have got the wrong impression of this fish. Some believe it tastes of mud. I have eaten this fish regularly over the past 10 years and I have never had one that tasted bad, even if it was caught in a small, rather murky dam. Another reason people shun the catfish, is that it looks like a snake as it has no scales. Please don't let this keep you from utilizing this superb fish.

And now into the kitchen!

It's important to have fun in the kitchen. Like this month for example, it's Christmas time. Back home in Scandinavia there's a lot of cooking going on in preparation for the family gatherings during the Christmas and New Year celebrations. I wanted to play around with old traditional Scandinavia Christmas meal, where a whole piglet with a red apple in the mouth

was put on the table. As you can see from the opening photo the apple is there, even it is in the mouth of a big African catfish. Today's recipe is for a starter. Gravlax is a Scandinavian dish in which we use salmon. It has become a dish served in many international restaurants and follows a very old tradition of preserving food. It's not really raw like sushi, but it is not cooked either.

Clean a relatively large catfish properly and cut away the head. Take a knife and cut along and down from the back fin and follow the backbone down along the ribs down to the stomach and then back along the tail. (It takes a little bit of practice but, catfish is probably one of the easiest fishes to fillet.) Make an herb/spice mixture of one big bundle of dill (Approx 1 dl finely cut), ½ tablespoon sugar, 1 tablespoon salt, 1 tablespoon oil and ½ teaspoon crushed white pepper. Put a little of the mixture on the bottom of a shallow tray. Place the first dish fillet skin down on the mixture onto the fillet and place the other fillet on top with the skin up.

"it is important to have fun in the kitchen like this month for example, it's Christmas time"

Place the fillets head to tail. Put a cutting board on top and place a weight on top of that. Put the whole inside a plastic bag and place it in the fridge for two to three days, turning the fillets after one day. That's all there is to it. After the three days, the fish is ready for the table.

For the Gravlax sauce (4-5 portions) mix 2 tablespoons of mild sweet mustard, 1 tablespoon non sweetened French mustard, 2 table spoons sugar (add an egg York for milder taste). Beat hard for a few minutes and add 1 ½ -2 dl of cooking oil. Initially add only a few drops and increase slowly while still beating hard. Mix in 1 tablespoon of vinegar, some salt

and white pepper as well as 1 dl of fined chopped dill.

Let the sauce stand in the fridge for at least ½ hour before serving. Take up the fish fillets, scrape off the herb/spice mixture and cut thick slices down towards the skin. Then arrange the slices on a plate, garnished with fresh lettuce leaf and a few slices of lemon



Bon appetite!
(Marung:Botswana)



Positive attitude towards fish farming project in Masvingo Province.

The Aquaculture Conference for Africa: Malawi 2011

The tenth biannual conference of the Aquaculture Association of Southern Africa (AASA) which was held in Malawi during September 2011 was a success. The conference cemented AASA's relationship with the rest of Africa where 19 countries were represented at the week-long event that was themed "*Aquaculture for a Growing Continent*". The trip to Lake Malawi required considerable transport arrangements and logistical planning due to many delegates. Good food, comfortable accommodation, picture book sunsets, beach barbeques, good people and aquaculture were offered at Sun n 'Sand Resort.

The 2011 conference kicked off with a field day that provided delegates with the opportunity to visit either the Mangochi or Zomba districts. For those who went to Mangochi, they visited both the Solace International Fish Farm and the Maldeco Tilapia (*Oreochromis shiranus*) production facilities on the lake. This gave delegates a first-hand view of the significant cage culture potential of Lake Malawi. The Zomba group visited the Aquaculture Centre at Domasi, a typical small-scale aquaculture operator from the area, as well as the Mandevu integrated fish farm where various tilapia species and catfish are farmed.

The field day was concluded with the AASA AGM, which mainly focused on how best people can take AASA forward in a manner that we allow greater African cooperation around aquaculture. Ideas were tabled towards the establishment of an African Aquaculture Association (AAA) which will ensure greater inter-country coordination, but which could also serve as a platform for the establishment of an African chapter for the world aquaculture society (WAS). The first full day of conferencing saw delegates assem-

ble where the Malawian minister of agriculture and food security welcomed all. This was followed by a key note address (Dr R Brummet) titled "Aquaculture in Africa :From subsistence to sustainability" that provided an in-depth analysis of the challenges that are faced in African Aquaculture Development and how best these challenges can be met.

The two days of conferencing saw the presentation of number less than 46 papers and a dozen posters under categories that ranged from country matters to tilapia, fresh water and marine aquaculture, bio security, feeds and more. The 2011 prize for the best oral presentation went to Alida Pieterse (University of Stellenbosch) with her paper titled "*Growth and condition of the pacific oyster crassostrea gigas at three climatically district farms in South Africa.*" The best poster prize was taken by Henk Stander (University of Stellenbosch) for his poster "*The artificial breeding of rainbow trout in Jonkershoek*"

The award for the 2011 Aquaculturist of the Year was presented to a well deserving Professor Emmanuel Kaunda, who is, amongst many other titles, the Technical Coordinator of the Aquaculture and Fisheries Science Department at Bunda College. As a champion of Malawian and

African aquaculture, this year's award went to a man that has worked tirelessly in promotion of the sector and particularly in ensuring access to the sector for many young students and entrepreneurs Cooperation, the Malawian Government, Afri-Fishnet, the African Fish Node and in particular Bunda College that partnered with AASA to arrange the event.

The conference week was concluded with a stimulating workshop that looked into common causes of failure and success in aquaculture generally and specifically in aquaculture funding. From this workshop delegates managed to identify the three top aspects that would lead to more successful aquaculture in Africa as being (i) support of farmer needs, (ii) the introduction of appropriate technology and (iii) the use of suitable candidate species.

This reflection back to the 2011 Malawi conference has already created an appetite for the 2013 event, the venue of which has not yet been finalized. (Etienne Hinrichsen)

"The 2011 prize for the best oral presentation went to Alida Pieterse"



Awards for outstanding members





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Some of the identified sites in Chivi and Masvingo districts where work has already commenced

Production of Safe Aquaculture Feeds

It is the responsibility of every aquaculture farmer to produce products of good quality and ensure the safety of aquaculture foods for human consumption. Proper management of aquaculture farms throughout the entire production cycle is required for product quality (FAO 1997). The FAO embodies the general principle and guidelines for the environmental sound design and operation of aquaculture for sustainable development. Included in the provision of F A O among others are banned chemicals shall not be used for any purpose, use of drugs, antibiotics and other treatments shall be in accordance with recommended practices and comply with national and international regulations.

Records shall be maintained regarding the use of chemicals in ponds. Dis-

charged water shall meet quality standard. Laboratory services for fish quality are essential in undertaking special chemical and microbiological investigations on fish products suspected to be toxic, contaminated and decomposed, or unfit for human consumption. It is also the responsibility of our nation to examine all fish products for export and import which may be sources of fish

pests or diseases to ensure quality of product and meet internal standards. This ensures a viable sustainable market for fish.

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**Sweet comes from sweat, hard work
rewards!!!!**

**Happy
Holidays!**