NEWSLETTER

OF

AQUACULTURE ASSOCIATION OF SOUTHERN AFRICA &

AQUACULTURE INSTITUTE OF SOUTH AFRICA

http://www.aasa-aqua.co.za/ http://www.ai-sa.org.za/

Volume 5: 2 ▪ March 2009

Aquaculture Association of Southern Africa

Tel: +27-(0)12 807 6720
Fax: +27-(0)12 807 4946
E-mail: info@aasa-aqua.co.za

Aquaculture Institute of South Africa

Tel: +27-(0)21 556 7339
Fax: +27-(0)21 556 4428
E-mail: lbotes@ai-sa.org.za

A Word from the AASA Chairman and the CEO of AISA

Etienne Hinrichsen

Given the global economic crisis I can still say that I remain motivated about aquaculture development in southern Africa. I saw some of you (my colleagues) at the Cape Town event organised by the Mozambique Investment Promotion Centre (CPI) to expose aquaculture entrepreneurs to the aquaculture development procedures and opportunities in Mozambique. Events and regional cooperation like this gives me great hope for regional aquaculture growth.

The BIG current news is the AASA conference for 2009 which will be held in Swakopmund between 7 and 11 September. Larry Oellermann from Namibia has played a key role in sourcing and unlocking the initial funding for the event and from here on we (the small AASA team) will do all we can to make this event memorable. Organising such an event is a mammoth task and I want to ask that all of you assist Natasha in the AASA office as she dedicates the next few months to pulling this conference together. Futhermore, I trust that most of you will attend the event. The first announcements have been circulated, the call for papers has been distributed and the conference registration documents are due shortly. At this stage we are looking into attracting international speakers and from my side I want to do my best to use the conference as a platform on which we can continue with the discussions and work that others have done around the formation of an African Chapter for the World Aquaculture Society.

If you have any other suggestions for the conference or if you are prepared to assist – in any small way – please make contact with Natasha in the AASA office. For those of you that cannot support directly, your attendance will ensure that we make a success of this event.

After much deliberation in the AASA Executive about the role, future, structure and functioning of AASA, I can report that AASA will remain as independent as possible and continue to work towards becoming a representative voice for the aquaculture industry and all its participants in the southern African region. We will need to remain innovative around the funding of these core functions, but ultimately AASA's success lies in your hands and its ability to serve you as sector players. I hope to report further on these matters in a next issue.

……..see you at the conference in September!

Dr. Lizeth Botes

From Lizeth Botes lbotes@ai-sa.org.za

Dear readers, it is with mixed feelings that I recently informed the Chair of AASA that we at AISA have decided to temporarily suspend the collaborative production of the Aquaculture Newsletter with AASA due to the fact that both AASA and AISA are going through their own evolution/transformation processes. The AISA Interim Board of Trustees feel that both AISA and AASA should complete their respective processes after which we should again negotiate how we would like to continue with our future collaborations. I would however continue to submit contributions to the Newsletter in order to keep our readers informed of progress within the Aquacultue Sector.
It has been a pleasure to collaborate with AASA and we look forward to doing so again in the near future. With appreciation, Dr Lizeth Botes.

The Editor's choice

Adrian Piers newsletter@aasa-aqua.co.za

FAO State of the World Fisheries and Aquaculture Report

The above report is now available (link below). An excerpt of relevance:-

In the last three decades, aquaculture has grown rapidly. In the 1970s, it accounted for about 6 percent of fish available for human consumption; in 2006, the figure was 47 percent. However, overall the rate of growth in aquaculture (measured in production volume) has started to slow. For the world as a whole, while the average yearly growth rate had been 11.8 percent in the period 1985–94, it was 7.1 percent in the following decade. This slowdown is also reflected in the quantities of fish and fish products made available for human consumption. Per capita availability, which grew, albeit slowly, in the 1990s and early years of the following decade, seems to be levelling off. The question is whether per capita supplies of fish for human consumption will remain steady or peak in the near future and then start to fall.

However, the popular assumption – that aquaculture production will grow as long as demand does, and do so in volumes that will virtually match demand growth – is unfortunate as it sends a surreptitious message that there is a considerable degree of automatism in the expected aquaculture response and, thus, little need for enabling public polices. Such a view of the seafood sector is misleading for those who formulate public policies towards aquaculture and capture fisheries. Aquaculture-enabling policies are essential for the steady and sustainable growth of the sector.

For entrepreneurs, good governance means providing law and order. In practice, it may mean: drafting a legislative framework; ensuring property rights; administering aquaculture regulations transparently; processing aquaculture licences rapidly and equitably; encouraging self-regulation through voluntary codes of practice; and promoting innovative, less-polluting production technologies. Many countries, both developed and developing, have enacted (or are in the process of drafting) national aquaculture legislations and regulations that govern the licensing, monitoring and control of aquaculture. These legal instruments ensure that any development of the industry is founded on sustainable ventures, is appropriately located, and is carried on in accordance with high standards of environmental and ecological protection. Most laws and regulations cover several aspects of the supply side of aquaculture, including planning and access, water and wastewater, seed, feed, aquaculture investment, and fish movement and disease control.

ftp://ftp.fao.org/docrep/fao/011/i0250e/i0250e.pdf

An amusing review of a recent posting on an animal rights website!

By Bruce Cameron bruce@wbrucecameron.com

The People for the Ethical Treatment of Animals (PETA) recently announced that they've gone insane. Of course, that isn't exactly how they worded it. What they say on their website is that from now on, we should all refer to fish as "sea kittens."

http://www.peta.org/Sea_Kittens/about.asp

PETA, you see, is against eating fish and figures that renaming the sea creatures will cause people to think twice before they head off to Ocean Basket or Fishmongers. Don't think that, in terms of eating fish, ordering a lobster lets you off the hook, no pun intended. According to the 1904 Entente Cordiale between France and England, a lobster is a fish. As PETA says on its Web site, "People don't seem to like fish." But isn't that exactly wrong? People love fish. They love it broiled, baked, grilled . . .

No, says PETA, "they're slithery and slimy, and they have eyes on either side of their pointy little heads." (They mean the fish here, not the people working at PETA.) Apparently, PETA believes calling them sea kittens will make the fish cuddly and cute. Who wouldn't want to sleep with a purring sea kitten curled up on the pillow?

Ashley Byrne, PETA's sea-kitten campaign coordinator, is quoted as saying, "Knowing that the fish sticks in the school cafeteria are really made out of tortured sea kittens makes most kids want to lose their lunch." Is this what this country needs, a campaign to make kids throw up at school? That way, they'll be sent home and will never be forced to learn that in 1904 some French and English diplomats took a look at a lobster and declared, "Yup, that thing sure is a fish."

While at home, the kids can log on to PETA's Web site and read some cheerful stories about sea kittens. There's the story of Tara the Tuna sea kitten, who lives on a fish farm and "looks forward to the end." Yes, Tara is a suicidal sea kitten. Then there's Sally the sea kitten, who is "bitter and insane," PETA says. "She spends her days plotting revenge against the land kittens." In case you miss the point, there's a drawing of Sally staring glumly at a drawing of a kitten. That's right, kids, those cuddly little sea kittens want to kill your cat!

The irony here is that PETA chose kittens over, say, puppies or piglets. Because what do kittens love to eat? Fish! Yes, your little land kitten will tell you, "Please bring home a whole school of sea kittens for me to play with and devour!" Lots of animals beside humans feast on sea kittens, including other sea kittens! I doubt that grizzly bears will stop eating salmon if we tell them they're actually kittens; in fact, I suspect bears would love to eat kittens.

I hate to have to be the one to tell PETA this, but renaming something doesn't change what it is. No one is going to be more receptive if we call a terrorist attack "ping-pong by poop-heads." Small comfort will be gained by saying the federal budget deficit is "a cuddly little love bunny."

I know that PETA means well. I just think they have eyes on either side of their pointy little heads.

http://www.rockymountainnews.com/news/2009/jan/30/cameron-peta-discovers-kittens-of-the-sea/

Letters to the Editor

Winter is coming in the Western Cape !!!! Tunnels (3) for sale, dimensions 30m X 8.5m suitable for housing fish tanks, have been used for herb and vegetable production.

Contact Basil Williams on 076 633 3219

Abalone

Interest in Abalone Aquaculture industry growing

Premier Fishing will not be holding back at its aquaculture initiative which could enhance the export revenue lines from the group's core lobster business. While much of the focus is on the export lobster business, which is understandable considering the Rand's recent weakness to major currencies, there seems to be a strong push at Premier Fishing around bringing the abalone farming initiative to critical mass. While initially viewed as a promising sideline business, it seems

Premier Fishing is now looking for significant returns from the aquaculture division, which is headquartered in Gansbaai.

http://www.cbn.co.za/dailynews/3600.html

DEAT explains ban on wild abalone harvesting

In response to a query sent by Hermanus Times to the Department of Environmental Affairs and Tourism of South Africa about the plight of commercial abalone divers, Ishaam Abader, deputy director general of corporate affairs answered:

"It is regrettable that the minister had to make a decision to suspend the harvesting of wild abalone as from 1 February 2008. This decision was not taken lightly and consideration was given to the sustainability of the resource as well as the implications of such a decision on legitimate right holders. There is no doubt that the abalone resource has declined to such an extent that it was not possible to sustain commercial activity.

Full story from the Hermanus Times at:-

http://www.news24.com/Regional_Papers/Components/Category_Article_Text_Template/0,,486_2472397~E,00.html

Catfish

No submissions

Crayfish and Lobsters

Developments in Namibian aquaculture

The development of Aquaculture is a key priority as outlined in VISION 2030 and NDP. This Sector is expected to enhance food security, reduce poverty, generate employment, improve rural livelihoods and increase investment. The potential for culture of rock lobster, freshwater prawn, marine shrimp, dusky kob, rainbow trout, scallops and clams is promising.

Mariculture production comprises, predominantly oysters, mainly *Crassostrea gigas*, abalone *Haliotis midae,* and seaweed, farmed in Luderitz, Walvis Bay and Swakopmund. Growth of both oysters and abalone continues as farms expand and production is intensified. Pilot culture of rock lobster *Jasus lalandii* and mussels *Mytilus galloprovincialis* began in Lüderitz in 2007 and has been flourishing since then.

Lobster culture in Luderitz has been represented by an experimental station which employs a total of 12 persons on a permanent basis and 16 casual employees. Lobster is a slow-growing species and if the experimental stages are successful, can generate profits for the industry.

http://www.newera.com.na/article.php?articleid=3204

Eels

No submissions

Ornamentals

Spotted Green Pufferfish bred in captivity

Spotted green puffer fish seldom reproduce in captivity, but University of Florida experts have created the first commercial breeding method reported which could benefit both the tropical fish industry and genetics researchers. Native to brackish waters in South and Southeast Asia, the fish grows to about six inches. When frightened, its body rapidly inflates into a spiny ball.

It has the smallest genome of any vertebrate that has been genetically sequenced, about one-tenth the size of the human genome. Some genomics researchers use it as a model animal. But because only juveniles and adults have been available, the species had little value in fields such as embryology and genetics."The people who jump on it will have very specific questions, when genes are expressed and where," said Roest Crollius, who helped sequence the fish's genome. "It will be of real interest for people who want to take advantage of the compact genome for techniques based on molecular genetics." The method, known as ovarian lavage, is a twist on an older approach to breeding commercially valuable fish that won't spawn naturally in captivity, Watson said. In the standard approach, breeders inject female fish with a chemical that promotes egg development. The eggs are gently removed and fertilized. Spotted green puffers aren't suitable for injection because they have little muscle mass and their skin is unusually elastic. So the UF team used a catheter to introduce the chemical directly to the female's ovaries. After several trials they reached nearly 100 percent success in egg fertilization and hatching.

They've demonstrated the method for several Florida producers, including Marty Tanner, owner of Plant City's Aquatica Tropicals Inc. Tanner plans to sell spotted green puffers to the pet and research markets. "We supply zebrafish for research so this will be a good item for us," he said. "We're not sure of the demand for puffers but there's never been enough supply."

Watson said he's investigating other species that might be bred using ovarian lavage. One is the fire eel, an expensive aquarium fish that can't be injected because its body is too muscular. Another is the Japanese fugu fish, a popular delicacy.

http://news.ufl.edu/2009/02/17/puffer-fish/

Oysters & Mussels

Research on Pea Crabs in Mussels

Typically, mussel seeds (essentially miniature mussels) are collected in the wild on submerged lines or from existing farming operations. When the seed is large enough, it is stripped from the lines and then transferred elsewhere to grow. One option is to take them to fairly shallow sites on the sea floor, common in Maine and Europe. Another is stuffing long mesh bags, called "socks," full of mussel seed and then suspending them from lines that are attached to floating buoys and

anchored to the bottom. There the mussels mature — “like grapes growing in the water,” Silkes says.

The problem in Southern New England waters is that pea crab larvae that hatch in August begin looking for a host by mid-September. Soon after, a substantial percentage of mussels becomes infested. The crabs leave a few months later to reproduce, but find a host again the following summer. At various mussel farming trials in the region, the typical rate of infestation has ranged from 20 percent to 60 percent, but as high as 98 percent. Full story at:-

http://www.projo.com/news/content/MUSSEL_FARM_EXPERIMENT_02-15-09_0LCV9JL_v58.33fc14b.html

Shrimp and Prawns

Vaccine To Fight Prawn Disease Discovered

A University of Malaya Professor has discovered an edible stimulant vaccine to fight White Spot Syndrome Virus (WSSV), a serious shrimp disease which causes losses amounting to billions of US dollars annually. Professor Dr Phang Siew Moi, who is leading the research on the vaccine, said it could trigger the immune system in penaeid prawns towards the WSSV, using the VP28 viral coat protein that could protect the prawn from the deadly disease. "When the shrimp eats the vaccine, it will start producing immunisation. So, the vaccine just stimulates the immune response. "It's interesting. We are not transforming the prawn. We can eat the prawn," Dr Phang said.

She said the finding was the first of its kind in the country and further testing was currently being conducted before it could be commercialised. The RM2 million vaccine formulation research project is funded by the science, technology and innovation ministry and expected to be completed in November, this year. The project, in collaboration with shrimp farm company Global Satria Sdn Bhd here, began in September 2007.

White Spot Syndrome Virus is currently the most serious viral patogen of prawns worldwide and can cause up to 100 per cent mortality within seven to 10 days, resulting in losses to prawn farmers. Losses due to WSSV are estimated at US$1 billion annually, out of the US$13 billion global cultured prawn market. A solution to WSSV is required if Malaysia is to attain her ambition to be a global player in prawn farming. If this works on large-scale pond trials, this will be the world's first algal DNA vaccine for WSSV. On the university's success, Dr Ongkili said: "This project has great potential for commercialisation and can solve high mortality in prawn farms."

http://www.bernama.com/bernama/v5/newsgeneral.php?id=394207

Brine Shrimp boosts local government revenues

By Mike Stark in the Associated Press

A big payoff from tiny Great Salt Lake shrimp eggs is coming. This year, the state of Utah stands to make one of its biggest windfalls ever from the pursuit of tiny brine shrimp eggs at the lake. State royalties collected from the annual harvest, which ends soon could exceed $700,000. That's on top of the $1 million the state collects in shrimp permits. "It's definitely good for us," said John Luft, the state's Great Salt Lake ecosystem program manager.

But for the companies that pursue the valuable eggs, mostly for sale and hatching overseas as food for table shrimp, the picture isn't so rosy. The shrimpers are taxed based on how much raw material is scooped out of the lake in search of the eggs. But the amount of useable product is

below-average this year, said Don Leonard, chairman of the Great Salt Brine Shrimp Cooperative, a collection of companies that plies the desert lake in search of the eggs. So while the companies may pay out more in state royalty taxes this year, they'll likely see a smaller-than-normal percentage of sellable product. "It's kind of a double-whammy," Leonard said.

Since the season started Oct. 1, 19 million pounds of "raw biomass", a mix of shrimp, eggs, brine flies, empty shells, algae and other material have been scooped up. That's the third-highest amount in records going back to 1985. Feathery and prehistoric-looking, the half-inch brine shrimp are among the few creatures able to survive the super-salty waters of the Great Salt Lake. They feed on algae and are a key food themselves for millions of birds that stop by the lake each year.
The shrimp have become a lucrative product, particularly those sold as food for fish being raised in commercial hatcheries. Companies began collecting and selling tiny brine shrimp eggs (50 can fit on the head of a pin) in the early 1950s. Today, spotter planes, night-vision technology and global positioning systems help identify floating mats of reddish eggs in the lake, sometimes called "slicks." A boom is used to surround the eggs, which are then sucked into sacks on boats. Companies also scoop up pungent wind-blown rows of eggs on the lake's shores. The eggs are washed, dried and vacuum-sealed. The prices varies. Last year, the eggs typically went for about $11 a pound, Leonard said. Prices for this year's product haven't been settled yet, he said.

Buyers rehydrate the eggs with salt water, and the hatched shrimp are then used as feed in commercial hatcheries.

Leonard said about 70 percent of the eggs go to Asia. In recent years, U.S. companies have been battling with Russian and Chinese companies for a share of the market. Some years, though, the eggs just aren't there on a large scale. In 2003, the four-month season yielded just 5 million pounds of biomass. The eggs' availability varies widely year to year based on complex interactions between freshwater inflow, water circulation, weather conditions and other factors not completely understood. "No two years are ever the same," Leonard said. "That's why it's such a challenging industry." State officials keep track of the eggs in the lake by sampling at 17 sites and measuring how many turn up per liter. If the number dips too low, the shrimp season can be cut short. The state collects 3.75 cents for each of pound of unsifted "biomass." This year, the royalties will bring in about $708,000. That's in addition to the 79 state permits, each costing $13,000, required to go after the shrimp. Over the previous three years, the state has collected more than $2.6 million in royalties and permit payments from the brine shrimp, according to Charlie Roberts, a spokesman for the state Tax Commission. It's a fraction of the state's overall budget, which is about $10 billion this year, but helps pay for managing the Great Salt Lake. Some of the money also goes to helping species struggling elsewhere in Utah such as the least chub minnow and the Utah prairie dog, said Greg Sheehan, administrative services chief for the state Division of Wildlife Resources.

But like nearly every other industry, the business of catching and selling brine shrimp at the Great Salt Lake is bracing for a tumultuous 2009. As faraway commercial hatcheries cut back production, demand for shrimp eggs will likely follow. And on top of that, seafood consumption seems to be easing up a bit, Leonard said. "We're a little bit nervous about that," he said.

http://www.sltrib.com/business/ci_11572862

Tilapia

Five West African countries agree to Nile Tilapia introduction

Experts from five west African countries gathered in Ivory Coast to discuss a plan to introduce tilapia, or the Nile carp, into waters of the Volta basin for fish farming. "We need to take precautions before undertaking such a large enterprise," Ivory Coast's Minister of Animal Production and Fisheries, Alphonse Douati, said. He also said that, if successfully managed in line with a fish farming scheme drawn up by the UN Food and Agriculture Organisation (FAO), the "TIVO project" could deliver a fivefold increase in freshwater fish supplies in the region.

The nations involved in the project are Benin, Burkina Faso, Ghana, Mali and Togo. The three-day Abidjan meeting was to assess studies of the environmental and biodiversity risks of introducing these fish into the Volta basin. Spain has offered a million euros (1.3 million dollars) in funding for the TIVO project. "The interest is economic and will give breeders stocks that grow faster to put a more interesting product on to the market," Christopher Nugent, the FAO official responsible for the TIVO scheme, said. Aquaculture accounts for 50 percent of fish food production in the world but Douati pointed out that the majority comes from Asia. "Africa has been slow to take off in spite of its rich potential," he added.

Trout and Salmon

Trout Newsletter for the Cape launched

The Western Cape Trout association (WCTA) will see the hatch of its own trout newsletter this month, after much deliberation by its chairman on how to communicate with its members on a regular basis. Most WCTA members are active farmers, who usually find it difficult to be away from their farms for meetings and the aim of the newsletters is therefore to keep the members updated on local and international trout related matters that might affect or interest them.

There will be monthly inserts on both the local and international markets for salmon and trout products by local processors, as well as updates on the ingredient markets for the local trout feed industry. Every month there will also be a special news item on a specific piece of equipment or farming principle used on local farms to keep everybody informed.

The WCTA newsletter will be distributed to its members only, but interested parties will be able to receive the newsletter once they sign up with the WCTA as an interested party for a nominal amount.

For more information, please contact Krijn Resoort at Krijn@molapong.co.za

Scottish Salmon industry booming

For Scottish salmon farming, an industry traditionally targeted by the powerful lobbies of anglers and environmentalists, it is a golden opportunity. Scott Landsburgh, new chief executive of the Scottish Salmon Producers Organisation, is well aware of the need to blow the industry's trumpet.

“It's important we are as proactive as we can be,” said the 53-year-old Dundonian. “We need to put over what we have achieved. The industry has taken enormous strides forward in recent years, there has been significant investment and we are highly efficient. We are the world's third largest producer of farmed salmon after Norway and Chile.” Figures for 2008 show that salmon plays a major role in Scotland's balance of payments. One in three Scottish salmon is exported - about 38 per cent of the total production.

http://www.timesonline.co.uk/tol/news/uk/scotland/article5914686.ece

Opinion piece contradicts Salmon critics

Farmed salmon yields have remained steady or slightly increased over the past five years. Research shows sea lice levels have dropped significantly in the Broughton Archipelago since 2004 and salmon returns are at or above historic values. If salmon farms threaten wild fish these data are not consistent. No amount of mathematical modeling or statistical analysis can change these facts. The ultimate testament of the silliness of the critics of salmon aquaculture is their stand

on eating wild salmon. They claim to want to protect wild salmon, yet they urge the public to avoid eating farmed salmon. They urge all of us to eat the wild salmon they claim are in danger.

Full story:-

http://web.viu.ca/wager/new_page_4.htm

Other

Brave New World of farmed Cod

By Gerald Traufetter in Der Spiegel

The world's first major cod farms have been established in Norway. They are meant to ease the burden on overfished wild populations, and as a bonus gourmet chefs claim farmed cod tastes better. Norwegians have domesticated the species, and farm-raised cod even has its own lucrative niche in the culinary jet set. If fish farmers have their way, cod may regain its status in the food chain as an abundant fish, for the British, who like it deep-fried, for the Spaniards and Portuguese, who prefer it salted, and for the Icelanders, who use the liver and stomach for sausage. The British and Icelanders engaged in the so-called cod wars in the 1950s and 1970s. But as fishing fleets grew, the predatory fish was almost wiped out.

Cod from the North Sea, for example, is considered environmentally questionable because populations are low and bottom-trawling destroys life on the ocean floor. Environmental organizations also advise against buying cod from the Baltic, which is hopelessly overfished. Environmental groups recently sounded the alarm when the European Union fishery ministers and Norway raised North Sea catch quotas by 30 percent, to 28,800 tons. Environmentalists consider the populations just too fragile. Last week experts writing in the scientific journal Nature criticized the major fishing nations for disregarding the Code of Conduct for Responsible Fisheries issued by the United Nations Food and Agriculture Organization (FAO).Environmentalists are more sanguine about fish farms. The World Wide Fund for Nature (WWF), for example, has specifically praised farm-raised fish as the saviors of wild populations.

A good full article at:-

http://www.spiegel.de/international/europe/0,1518,607266,00.html

Regional Roundup

Egypt assists Uganda with dam construction

Egypt, in partnership with the Ugandan Agriculture ministry, is digging five valley dams in Kitgum district to provide safe water for internally displaced persons (IDPs). The construction of the valley dams started in February 2008. According to fisheries officials, each of the dams would be stocked with at least 20,000 tilapia and Catfish to improve the diet of the displaced persons who are returning to their homes. The dams would also provide water for their animals and irrigation during dry seasons. "The duration of the project is one year and a half years. It takes us about three months to complete one dam," Raymond Oluk, the site supervisor, said recently. "These dams are to boost the crops, fisheries and livestock production."

The acting district fisheries officer, Alfred Omony, said Egypt and the Government were piloting a model fish farm project in Kitgum. "We surveyed all the sites although work has started on a few." Omony said. Olaa appealed to development partners to establish more projects to compliment the dams. He advised the residents to plant vegetables as a source of nutrients and to improve their incomes since they were now assured of water.

http://allafrica.com/stories/200903020048.html

Kenya small scale Aquaculture growing

What began as a hobby is slowly but steadily growing into lucrative business as North Rift residents turn to fish farming as an alternative source of livelihood. Traditionally, residents in this region rely heavily on maize and wheat farming apart from dairy production for income generation. However, fish farming is proving to be among the fastest growing commercial ventures for locals.

Statistics from the fisheries department indicate that more than 300 farmers in the region have embraced fish production also referred to as aquaculture. In an effort to enable them grow in the new investment, Moi University department of fisheries and marine provides farmers with fingerlings and sensitises them on modern techniques including construction of ponds. According to the head of the department, Dr Boaz Kaunda, Nile, tilapia and Catfish are the common breeds reared by farmers in the region. “The high cost of farm inputs has forced some farmers in the region to adopt fish farming which they consider to be less costly, and fetches attractive market prices,” explains Dr Kaunda. He disclosed that there is an unlimited market for fish in the region due to change of diet which has seen most residents start consuming it.

Dr Kaunda says that fish production from aquaculture amounted to 1,012 metric tonnes last year valued at over Sh138 million. “Aquaculture, apart from supplying proteins, has proved to be a source of self-employment, income generation and contributes towards the government’s overall goal of poverty reduction,” he says.

http://www.nation.co.ke/business/news/-/1006/540342/-/j19c5iz/-/

Feeds

Development of “green” fish feed for poor countries

Poor peasants in the tropics could be thrown an economic lifeline after a lucky discovery by French scientists involving a palm oil by-product and the lowly maggot. The synergy of two otherwise nuisance agents produced a virtually cost-free feed for farmed fish while reducing a pungent source of pollution, a potential boon in countries like Indonesia, one of the world's largest palm oil producers.

"This process will allow us to recycle palm oil refinery waste and turn it into cheap food for fish farms and to produce 'green' fertiliser," Saurin Hem, a researcher at the Institute for Research and Development (IRD). After an IRD team stumbled onto the discovery they perfected the technique with partners from Indonesia, which churns out almost 2.3 million tonnes of palm oil a year.
The unlikely players in this are the tiny, squirming larvae reviled the world over, maggots, and a by-product from an industry in tropical Africa and Southeast Asia. Palm oil production generates millions of tonnes of biomass called palm kernel meal that can foul nearby waters and produces methane, a potent greenhouse gas. Some palm kernel meal is exported to Europe, the United States and Australia as cattle feed, but the majority is largely left to rot, emitting the foul-smelling, polluting gas in hot tropical settings.

Parallel to this, local populations eking out a living in palm-growing developing states have increasingly turned to fish farming to earn a bit of income and provide themselves with an

important source of protein. The problem is that many of these rural dwellers don't have enough money to nourish the fish to maturity until now, when the IRD team stumbled across a new way to convert the unwanted meal into fish food. The French scientists at IRD had been tasked with finding a way of making palm kernel meal, which is rich in fats and proteins, suitable to feed to fish.

Testing began in the west African state of Guinea with a mixture fed to a 400-strong shoal of tilapia fish, commonly farmed in Asia and Africa for their large size and rapid growth. But the experiment failed and the fish left the palm kernel meal untouched. Researchers dumped the fermented mixture well outside the IRD's laboratory owing to its strong smell. Two weeks later they noticed something strange. Chickens and other birds were pecking furiously at the rotting refuse, feasting on maggots. A species called black solider flies had been attracted by the smell and laid eggs.That was the scientists' eureka moment: enzymes secreted by the fly larvae, it turned out, had changed the chemistry of the fermenting mixture. Wondering if the fish would find it more digestible, they tried again. This time, the tilapia grew 3.5 times faster than with previous feeds, and gained three times as much weight per day.

http://technology.iafrica.com/news/science/1556462.htm

Minister inaugurates new fish feed plant in Namibia

By Kalilo Kambo

Onavivi Fish Feed Plant at Omahenene village in Outapi Constituency was inaugurated last Saturday by the Minister of Fisheries and Marine Resources, Dr Abraham Iyambo. Fish feed is one of the most important components in any fish farming operation. The correct type of fish feed allows fish farmers to grow fish to the desired market size, in a desired time period. Speaking at the inauguration, Iyambo said: “The journey has been long and at least in the end we are here and it is pleasant. When we realized that there is a need to strengthen our aquaculture projects, I started travelling extensively to various countries and continents in the world – sourcing the best ideas of aquaculture to be implemented here in Namibia. I travelled to countries such as Cuba, Spain, Japan, Portugal, China, Chile and many others for the same purpose,” said the fisheries minister. He said the Ministry of Fisheries brought two specialists from Cuba specifically to strengthen aquaculture projects in Namibia. “We even brought a professor from China for the same purpose. This project or factory was made possible by the Government and not by the private sector since the private sector failed to do so. Initially we sold the idea to them (private sector) and it seems like they were not sure if this is viable and now we managed, here it stands. That is why we set it up here at Onavivi in the Omusati Region,” Iyambo said.

The main reason is that the ministry used to buy tonnes of fish feed from South Africa or Zambia, who usually take the fishmeal from Walvis Bay to their countries and add a few ingredients before selling it back to Namibia for a hefty price per ton.

“Now we are producing even quality fish feed here at Onavivi after adding mahangu, beans, maize and a bit of oil to make it the best meal for fish. Thus it will be called fishmeal made in Namibia by Namibians,” Iyambo boasted to a cheerful gathering. He said they took mahangu to Spain for a scientific test and it was proven that it is one of the best ingredients for fish feed.
“We therefore would like to assist our local people by buying their mahangu surplus for fish meal, so that they get some income into their pockets,” he said. “What we want in future is a laboratory to ensure we are producing quality fish meal,” said the minister. At the moment, Namibia is exporting about 100 000 metric tonnes of fishmeal to other countries.

http://www.newera.com.na/article.php?articleid=3392

Environment, Health and Disease issues

Nile Perch fish processing waste can be turned into profit

Research paper by Robert Gumisiriza et al. Abstract

Worldwide, fish industry wastes are an important contaminant having an impact on the environment. The recovery of value added products from these residues constitutes an important waste reduction strategy for the industry. In East Africa, Nile perch fish processing into chilled fish fillet for export along Lake Victoria generates large proportions of both solid and liquid wastes. However, no thorough auditing and characterization of the waste has been done that would guide potential value addition through bioconversions and waste management. Auditing by surveying and mapping the fish processing industries was conducted along the lake. Waste quantification was done using specific guidelines for assessment of fish wastes. Analysis of the waste was carried out using standard methods. Annual solid waste and wastewater generation was estimated at 36,000 tonnes and 1,838,000 m3, respectively. The current fish waste management systems in place were found to be neither efficient nor profitable, thus profitable options of fish waste utilization and waste reduction strategies are imperative. Modern and economically viable options of fish waste value addition, a decision scheme and waste reduction strategies have been highlighted in this paper. In conclusion, the large amounts of fish waste generated are a rich source of lipids and proteins, which could be utilized for production of value added products through bioconversions.

http://www.academicjournals.org/AJEST/PDF/pdf%202009/Jan/Gumisiriza%20et%20al.pdf

Chile takes steps to rehabilitate its lucrative Salmon Industry

By Alexei Barrionuevo

When a devastating virus swept through Chile's farmed salmon stocks last year, some of the industry's biggest players laid off thousands of workers, packed up operations and moved to unspoiled waters farther south along the Chilean coast. But the virus went with them.

Chile is the world's second largest exporter of salmon. Last month, the Chilean government began hashing out tougher measures to improve the sanitary and environmental conditions of the troubled industry. But producers expect still deeper losses this year, as the virus continues to kill millions of fish slated for export to the United States and other countries. Government and industry officials say they have already taken important steps to improve the ways salmon are farmed. But the persistent problems, critics say, reveal that neither the industry nor the government has fully grasped the need for the far-reaching changes required to protect not only consumers and the environment, but also one of Chile's most important industries from itself. They are not the only ones concerned. In the midst of the virus crisis, Chile has continued to raise salmon for export with chemicals and medications not approved for use in the United States and Europe, according to documents from regulators. While the United States Food and Drug Administration says Chile made some progress in tackling its problems, it will keep Chilean imports of farmed fish under special scrutiny for the time being.

Chilean government officials and industry officials say the troubles are part of the growing pains of a $2 billion industry that in less than two decades built itself into the world's second largest exporter and the biggest supplier of salmon to the United States. Officials, concerned about job losses in the south, say they are determined to reform the industry. "But this has to be done with incentives," said Hugo Lavados, Chile's economy minister. In November, the government announced that it would provide $120 million in loan guarantees to help producers meet the new regulations quickly. But this year, producers still expect salmon output to drop by about 30 percent, said César Barros, president of SalmonChile.
http://www.nytimes.com/2009/02/05/world/americas/05salmon.html?_r=1&ref=world

Research matters, Reviews & Training

Cod farming research in Canada gets the Go Ahead

From the Fish Site

A new research project could once again have Atlantic cod on dinner plates all over the world. Genome Atlantic received essential federal funding that gives the green light to their four-year, $5.8-million cod aquaculture genomics project. "It's a great day for aquaculture in Atlantic Canada," says Dr. Steve Armstrong, President and CEO, Genome Atlantic. The not-for-profit organization received $3 million from ACOA's Atlantic Innovation Fund to solve the aquaculture industry's challenge of early maturation in cod, which can account for significant financial losses due to increased production time and decreased product quality. "This project builds on our world-recognized cod expertise to help bring the industry to a point where it can compete globally," says Armstrong.

Based on global demand for food protein, cod farming has the potential to become a $545-million industry in the Atlantic region.

"What makes this project different is our combined expertise," says Armstrong, explaining that the new C-ADAP3T project (Comparative Assessment of Diploid & Polyploid Physiology & Production Traits) will use genomics and selective breeding to develop sterile production fish to overcome the early maturation barrier.

Genome Atlantic led the development of this project, and will manage its overall progress. The research component will be conducted with the region's leading genomics and aquaculture researchers and resources from Fisheries and Oceans Canada's St. Andrews Biological Station, Memorial University's Ocean Sciences Centre, Cooke Aquaculture, the Huntsman Marine Science Centre, University of New Brunswick and University of Guelph.

Computer model to track fish waste from cages

From Science Daily

Computer modelling of fish waste movement has been done by creating a virtual coastal marine area, conducted by Oliver Fringer, an assistant professor of civil and environmental engineering Stanford University. Previous software, he said, has not been up to the task of accurately predicting where the effluent from fish pens will end up, and should probably not be used by state or federal regulators when they approve locations for fish farms. Existing software is typically derived from models that attempt to describe the drift of effluent from sewage outfall pipes, even though the substances and situations are different from fish farms. Sewage outflow, for example, is often warmer than the ocean water. The fine details of modelling the flow from a submerged cage are not as simple as it may seem. The design of the cage itself can affect the outcome. How much of the current flows through the cage, and how much goes around? Does the moving water swirl into eddies at the edges of the pen? Even the effects of the rotation of the earth on the waste plume comes into play.

Fish farmers would prefer that currents flush out his pens frequently, but as those currents take out the garbage they might unfortunately deliver it to a mangrove ecosystem or a public beach. On the other hand, insufficient flow through the pen can create a "dead zone" on the ocean floor as the fecal matter and uneaten food pile up beneath the fish. Fringer is designing his software so that it can be used to asses any site where sufficient digital mapping of the area already exists. SUNTANS, as the program is called, comes just in time, said Stanford oceans expert Rosamond

Naylor, as federal and local officials begin spelling the details of new health and environmental regulations for fish pens.

Stanford scientist Oliver Fringer spoke about what happens to the dangerous wastes produced by fish farms in the ocean at the AAAS Annual Meeting in Chicago on Feb 15. The presentation, "Characteristics of Waste Plumes from Aquaculture Pens in the Marine Environment," was part of the session, "Aquaculture Impacts, Standards, and Sustainability." Full story at:-

http://www.sciencedaily.com/releases/2009/02/090215151758.htm

Design of breeding programmes for aquaculture

Aquaculture training course. Wageningen University, in cooperation with the Norwegian research Institute Nofima Marine and the French scientific institute for agricultural research INRA, is organising a training course on the 'Design of breeding programmes for aquaculture' from 21 -23 April 2009

http://cordis.europa.eu/search/index.cfm?fuseaction=events.document&EV_LANG=EN&EV_RCN=30366

http://www.aquabreeding.eu/Portals/2/Course%20design%20of%20breeding%20programs%20in%20aquaculture.pdf

Use of Fish Genetic Resources Training Course

A course with application to environmentally friendly Aquaculture and Fisheries will be held from 7-16 April 2009 at the WorldFish Center Egypt.

Contact aelgamal@worldfish-eg.org

Regulatory matters

No submissions

Conferences, Upcoming events

Postponement of Fish Africa 2009 – Fish Africa and Aquaculture Africa, the 7th International Fishing Industry Exhibition, Southern Africa's event for the commercial fishing and Aquaculture industries scheduled for 16 -18 March 2010 organised by Exhibition Management Services announced its postponement from October 2009 to March 2010.

International Aquaculture Biosecurity Conference

Practical Approaches for the Prevention, Control and Eradication of Disease. This conference will provide practical and effective tools for the aquaculture industry in the prevention, control and possibly eradication of many priority diseases.

August 17-18, 2009, Trondheim, Norway

http://www.iabconference.org/

Genomics in Aquaculture

International symposium hosted by Bodø University College, Norway

5-7 July 2009

http://www.gia2009.com/index.html

7th International Abalone Symposium

Phuket Thailand July 19 – 24, 2009

http://www.mascat.org/ias2009/

Global Fisheries and Aquaculture Research Conference and Exhibition

Global Fisheries and Aquaculture Research Conference. Challenges facing the growth of Fisheries and Aquaculture Production. Cairo 24-26th October 2009. Cairo International convention center.

If you have a research paper please send it to Hussein Elghobashy helghobashy46@yahoo.com

Phone: +202 24501591 +20224528528
Fax: +202 22566653
E-mail: conference@fishtechexpo.org
Website: www.fishtechexpo.org

Other Conferences

WORLD AQUACULTURE 2009 - Veracruz, Mexico - May 25-29, 2009

ASIA PACIFIC AQUACULTURE 2009 - Kuala Lumpur, Malaysia - November 3-6, 2009

AQUACULTURE 2010 - San Diego, California, USA - March 1-5, 2010

AQUACULTURE EUROPE 2010 - Porto, Portugal - Oct 6-8, 2010

WORLD AQUACULTURE 2011 incl Giant Prawn 2011 - Qindao, China - June 6-10, 2011