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# Fisheries and Aquaculture Newsletter



## Introduction:

The Department of Fisheries & Aquaculture, UVAS aims to provide excellence in higher education, training, research and development, services and advice in the fields of sustainable Fisheries and Aquaculture consequently contributing to economic and social development of the country.

## Mission:

Produce highly skilled professionals in the field of Fisheries and Aquaculture to meet the demand of growing fisheries industry by resolving food and environmental problems.



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## Working Group Meeting



Third meeting of UVAS Industry Liaison Working Group of Fisheries & Aquaculture was held on 24-03-2016 at Department of Fisheries and Aquaculture, University of Veterinary and Animal Sciences, Ravi Campus. All members of the working group attended this meeting. The main agenda of the meeting was revision of courses curricula of BS Fisheries & Aquaculture degree program. The members actively participated in discussion of courses curricula and gave their valuable suggestions/inputs which were included and finalized through University statutory bodies.

While the fourth meeting of UVAS-Industry Liaison was held on 21-06-2016 in the office of the Director General, Punjab Fisheries Department, Lahore. Representatives of Punjab Fisheries Department, Oryza Organics, AMG Aquafeed and Fisheries Development Board have attended the meeting. The agenda of this meeting was to discuss the funding possibility for 6th International Fisheries Symposium & Expo 2017 and to finalize Symposium Chair, Technical Session Chairs, Co-Chairs and Moderators to review international speakers expertise. Punjab Fisheries Department, Pakistan Fisheries Society, Pakistan Fisheries Development Board, Oryza Organics, Feed, Pvt. Ltd., AMG Feed, Pvt. Ltd., ASA/SoyPak, Umer Fisheries, Pvt. Ltd. Multan, Royal Fisheries, Pvt. Ltd. and Tawakal Fish Hatchery, Pvt. Ltd. were agreed as silver sponsor for this event.

## 6th International Fisheries Symposium & Expo 2017 at UVAS, Lahore

The department of Fisheries & Aquaculture, UVAS is organizing 6th International Fisheries Symposium & Expo 2017 "Innovative and Sustainable Aquaculture for Blue Revolution" on 8 – 9, February, 2017 at UVAS, Lahore with joint collaboration of Pakistan Fisheries Society, Department of Punjab Fisheries, Fisheries Development Board, UVAS-Industry working group on Fisheries & Aquaculture including public and private partners. 12- 15 renowned international speakers including President and Ex-President of the World Aquaculture Society will participate and present finding from their recent research work. The event is also expected to provide opportunities for developing strong linkages among industry, research community, academia, civil society and regulatory bodies in the field of fisheries & aquaculture.

## Significant Increase in Demand of Tilapia Seed

Tilapia is becoming popular among Pakistan fish farmers. Demand of tilapia is increasing very rapidly. Last year Tawakkal Tilapia Hatchery, the only Tilapia Hatchery in Pakistan, supplied 1.7 million mono-sex tilapia seed to the fish farmers. This year tilapia seed production target was set 2.5 million, keeping in view about 50% increase in demand. But this 2.5 million tilapia seed was supplied within only two months, April



and May, and still there was much demand. Tilapia seed imported from abroad is additional to this. Tilapia is playing an important role in increasing the production and profit of the fish farmers.

## First Ever Shrimp Feed Production in Pakistan

Oryza Organics have started supplying shrimp feed to the Reliance Shrimp Farms since the early May 2016. M/S Reliance are the only corporate shrimp farms in the country and are pioneer in shrimp farming in marine waters. Employing the best farming practices, latest technology and having the support of technical experts from the region, Reliance is all set to give sustainability to shrimp farming in the country. Producing extruded shrimp feed (Starter, Grower

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& Finisher) with technical support of foreign experts has been a pleasant experience for Oryza. Despite many global suppliers producing shrimp feeds from non-extrusion technologies, fact remains that extruded shrimp feeds are superior in many ways over other technologies. Extrusion involves thorough mixing, kneading, conditioning, shearing and gelatinization of materials followed by pressure cooking, densification and



## UVAS, Lahore opens admission for BS Fisheries & Aquaculture



Admissions for BS Fisheries & Aquaculture will open in August, 2016 at Ravi Campus. The program was initiated first time in 2007. After completion of four successful batches, the placements of the fisheries graduates in the fields and growing need of the sector it is going to re-initiated in 2016.

Fisheries and Aquaculture is an important vibrant sector witnessed as the primary source of protein for millions of people. The fisheries sector as a whole contributes to about 1 % to the country's GDP. During the last decade

the sector has been strengthened with the much needed technical manpower and competent extension personnel with effective transfer of technology. Research and Development has helped the sector in addressing various issues like good quality fish seed, artificial pelleted feed and introduction of new species. Being highly progressive sector it has been considered as a major source of employment generation and career avenues in various fields of fisheries and aquaculture sector in coming years.

## Feeding Pakistan: U.S.A. Two-Week Aquaculture Short Course



Under Feeding Pakistan program of American Soybean Association (ASA)/WISHH funded by United States Department of Agriculture (USDA) a trade team of Pakistani Aquaculture stakeholders was sponsored for Two-Week Aquaculture Short Course in February 2016 in USA.

The objective of the course is to provide participants with the practical knowledge necessary to improve the productivity and output of the Pakistani aquaculture sector. The instructional facilities of the International Grains Program (IGP), which is part of the KSU Department of Grain Science and

Technology, as well as the instructional and research facilities of the University of Arizona located in Tucson, Arizona will be utilized to inform and give hands-on instruction to participants besides field trips including visit to intensive production farms. Course topics include:

- fish feed manufacturing
- fish husbandry techniques
- fish nutrition
- fish diseases and remedies



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## First Ever Shrimp Feed Production in Pakistan

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drying. Exposure of feed ingredients to proper temperature for set time neutralizes many anti-nutritional factors and eliminates any pathogens etc. Good quality shrimp feed has to be fully sinking, stable in saline water for at least couple of hours (do not disintegrate), maintains water quality and are highly palatable. Extrusion provides more digestibility, maximum nutrients availability and minimal wastage of feed. There is

more freedom to add oils and liquid preparations in extrusion system comparing to any other means of production. In shrimp farming, feed cost remains a key element, which needs due attention and special care to have desired growth and FCR, water quality and environment integrity. This remains an epoch making event with great deal of satisfaction that Pakistan is now self-sufficient in the production of shrimp and fish feeds of global standard.

## Feeding Pakistan: U.S.A. Two-Week Aquaculture Short Course

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- fish feed formulation
- fish feed manufacturing
- integrated fish productions systems
- food safety related to fish production
- marketing and best business practices

The program included a number of tours designed to introduce participants to state of the art aquaculture and feed manufacturing technology and best management practices.

As part of the program, participants attended the Aquaculture America 2016 which was an annual event of World Aquaculture Society held at the Paris Hotel and Convention Center, Las Vegas, Nevada, USA. The programs and technical sessions focused on topics

and key issues important to producers, and the event had one of the largest aquaculture trade shows with nearly 100 booths.

R.S.N. Janjua, Country Rep, ASA/WISHH led the team to have training of usage of soybean meal to replace fishmeal in manufacturing extruded floating feed at IGP Kansas State University. Team had field trip to Milford Hatchery in Manhattan, KS and very intensive Tilapia production unit having lining ponds and plastic lined raceways at Desert Tilapia, Gela Bend, Arizona.

Prof. Dr. Kevin Fitzsimmons, Past-President, WAS assisted the team at WAS conference and training at The University of Arizona.

## Federal Budget 2016-17: Implications on Fisheries Sector

By Dr. Noor Khan  
Fisheries is an important sub-sector of agriculture providing quality protein and source of livelihood for

coastal and rural inhabitants. The share of fisheries in GDP is very nominal but it adds substantially to national economy through export

## Project Worth Rs. 3.2409 Million



US Pakistan Centre for Advance Studies in Agriculture & Food Security "USPCAS-AFS, UAF" in its 1st Phase has awarded a research project, entitled "Growth and Breeding Potential of Genetically Male Tilapia (GMT) Through Artificial Feed and Molecular Approach in Pakistan" worth Rs. 3.2409 million for a period of 24 months to Dr. Noor Khan, Associate Professor & Chairman of the Department of Fisheries & Aquaculture, UVAS as Principal Investigator of this project. The project comprises various steps/stages like introduction of GMT tilapia in Pakistan, survival and growth potential of GMT in semi-intensive system, breeding potential and dissemination of GMT seed to small as well as progressive fish farmers and studying genetic variability and development of species markers.

### Outcomes:

This project will be helpful in strengthening the present aquaculture of Pakistan through diversification of species and culture practices. Successful breeding of GMT in natural conditions to produce all male tilapia will be another breakthrough in aquaculture industry and will directly benefitted to small as well as progressive fish farmers who importing GIFT from Thailand or getting sex reversal through hormonal treatment locally. It will also increase the availability of best quality protein through introduction of fast growing species (GMT) which will ultimately improve the socio economics of the country by increasing per acre yield and income of fish farmers and will save national income by importing GIFT strain or tilapia from Thailand. When this project will be a success story then it will be helpful to increase quality protein and per acre fish production and will increase farmer's income with minimum inputs. The project will also help to improve livelihood of small scale fish farmers and village community by engaging them to rear this hardy fish in village ponds for subsistence. Brackish water of the country will be used for valuable purpose to cultivate this hardy fish species.

earnings. The fishing sector contributes 2.17 percent in agriculture value addition recorded a growth rate of 3.25% compared to 5.75% last year. A total of 91,965 tons of fish and fish products was exported during 2015-16 (July-March) and earned US \$ 240.108 million compared to last year 2014-15 US\$ 253.497 million. The Government of Pakistan has taken number steps to improve fisheries sector in the budget 2016-17 but still there needs to be addressed some issues:

► Import duty on fish and products increased from 10% to 11%.

► Duty reduction on machinery items such as

- Feed making machine 3%
- Fish preparation and processing 3%

- Compressors 5%
- Generators 5%
- Condensers 5%
- Blast freezers 5%
- Fiberglass tubs 5%
- Insulating panels 5%
- Flaking ice plants 5%
- Water aerators 2%
- Feed pellet (floating) machine 2%
- o Import of shrimp and fish feed 0%

■ **General:** agriculture specific but implied on fisheries include

o Price reduction DAP Rs. 300/-

o Reduction in electricity rates (off peak hours) from 8.85 to 5.35/unit

o Import of submersible pumps (upto 75lbs & head 150 meters) 0%

The Government has given zero rating to textile, sports,

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leather & surgical goods but ignored fisheries sector. The Pakistan Fisheries Exporters Association and Feed Manufacturers urged and demanded zero rating for sea food export, all sea food processing machinery be exempted from any import duties so that value addition plants be imported to increase export, reduction of withholding tax on exports to 0.5% from 1.0%, incentives/concession of custom duties for fish farming, tax/duty exemption

on export of fish feed except import of shrimp feed which reduced to 0% and discouraged local manufacturer. The consumption of shrimp feed is quite nominal which is about 120 tons and can be easily managed by local industry. The custom duties on raw material of fish feed be exempted from 10pc to 0% to facilitate the local manufacturer instead of exemption of finished product.

## Job Opportunity (Assistant Directors Required in Forestry, Wildlife & Fisheries Department)

There are 8 vacancies for the post of Assistant Director in Forestry, Wildlife & Fisheries Department. Candidates having BS (Hons)/ MSc Zoology or Fisheries & Aquaculture can apply. Interested candidates are requested to please visit [www.pppsc.gov.pk](http://www.pppsc.gov.pk) for further details.

## Upcoming Aquaculture Conferences

- AQUACULTURE EUROPE 2016 Edinburgh, Scotland September 20-23.
- LATIN AMERICAN & CARIBBEAN AQUACULTURE 2016 Lima, Peru, November 28 –December 1.
- 6th International Fisheries Symposium & Expo-2017, UVAS, Lahore, Pakistan
- AQUACULTURE AMERICA 2017 San Antonio, USA – Feb. 19-22.



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This news letter is jointly initiated by UVAS-Industry Liaison Working Group on “Fisheries & Aquaculture” and HEC-BC KEP Project titled “**To STRENGTHEN PUBLIC/PRIVATE PARTNERSHIP AMONG FISHERIES & AQUACULTURE COMMUNITIES THROUGH EDUCATION & TRAINING IN PUNJAB PAKISTAN**”.



Office Secretariat:

Department of Fisheries & Aquaculture, UVAS Lahore-Pakistan

Email Address: [noorkhan@uvas.edu.pk](mailto:noorkhan@uvas.edu.pk)

[mhafeezurehman@uvas.edu.pk](mailto:mhafeezurehman@uvas.edu.pk)