Promoting Aquaculture for Sustainable Food Production *Volume-1 Issue-2:2016*

|U|V|A|S| Fisheries and Aquaculture Newsletter

Introducation:
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 & Aquaculture to meet the demand of growing fisheries industry by resolving food & environmental problems"

UVAS, Re-initiated BS(Hons.) Fisheries & Aquaculture Degree Program

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Academic Council Meeting

Department of Fisheries & Aquaculture, UVAS, re-initiated BSFisheries & Aquaculture, degree program after approval from 35th meeting of the Academic Council, UVAS held on 19-02-16. It was due to the increasing demand of fisheries sector to produce skilled human resource for uplifting the sector and meeting the challenge of food security. 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.

Presented paper in International Conference "Aquaculture, 2016"

Dr. Noor Khan, Associate Professor, Department of Fisheries & Aquaculture, UVAS attended 5-day International conference and Exposition titled "Aquaculture 2016, with the theme "All in for Aquaculture" at Las Vegas, Nevada, USA from 22-02-2016 to 26-02-2016. Dr. Khan presented a paper titled "Effect of *Moringa Oleifera* meal on the growth, body composition and nutrient digestibility of *Labeo rohita*".

Research Project Awarded on Genetically Male Tilapia (GMT) by USPCAS-AFS

Dr. Noor Khan, Associate Professor, Department of Fisheries & Aquaculture, UVAS has been awarded an international research project worth Rs. 3.2409 Million by USPCAS-AFS for a period of 24 months.

The title of the project is "Growth and breeding potential of Genetically Male Tilapia (GMT) through artificial feed and molecular approach in Pakistan". Following are the objectives of the project:

- Introduction of GMT tilapia in Pakistan
- To study the 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
- To study genetic variability and development of species specific markers

Significance:

This Project will be helpful in strengthening the local fish fauna by diversification in culture systems of Pakistan. 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 import ing GIFT strain or tilapia from Thailand.

Expected outcomes:

- The project will be helpful to increase quality protein and per acre fish production.
- It will increase farmers income with minimum inputs.
- The project will also help to improve livelihood of poor fish farmers and village community by engaging them to rear this hardy fish in village ponds for subsistence.
- Brackish water of country will be used for valuable purpose to cultivate this hardy fish species.
- Undergraduate and postgraduate students of the department will be directly benefited from the project.

A Landmark Decision: Inclusion of BS Fisheries and Aquaculture Degree holder for appointment in Education Department

In a recent verdict the Governor Punjab order dated 27-11-2015 on the petition filed by Mr. Hussain Mehdi versus School education department, Executive District Officer and District Education Officer (M-EE) Dera Ghazi Khan, has made eligible to compete for the appointment as SESE (Science) on the basis of BS. Fisheries and Aquaculture Degree. Accordingly, the Governor Punjab and Govt. of Punjab directed the School Education Departments to revise its eligibility criteria for appointment of SSE (Biology) and SESE (Science) by making BS Fisheries and Aquaculture Degree equally eligible.

Now BS Fisheries & Aquaculture Degree holder are also eligible for these posts in school Education Department as per policy issued by the Punjab School Education Department on January 20th , 2016.

Attended Training Course on Fish Culture Development at Egyptian International Center for Agriculture (EICA), Egypt

Dr. Muhammad Hafeez-ur-Rehman, Assistant Professor, Department of Fisheries and Aquaculture attended 76 days international training course on Fish Culture Development at Egyptian International Center for Agriculture, Arab Republic of Egypt. The training was based mainly on the tilapia aquaculture, finfish, shell fish, health and disease management, fish processing and marketing. This training will certainly have far-reaching impact in our emerging Tilapia aquaculture program in Pakistan that ultimately significantly contribute the overall socio-economic, food security and improving the livelihood of small fish farmers. The training will strengthen bilateral friendship and cooperation between Pakistan and Arab Republic of Egypt for a mutual benefit and interest in the field fisheries and aquaculture sector.

During the training program he delivered 04 lectures on different aspects of fisheries and aquaculture and developed a project "Establishment of the monosex Tilapia hatchery at the existing setup of the University of Veterinary and Animal Sciences, Lahore-Pakistan". It was a great honor for UVAS, to be selected from the 66 participants of 28 countries to deliver the oration of closing remarks and strongly gave the message for mutual cooperation in research among University of Veterinary and Animal Sciences, Lahore-Pakistan with 28 countries of the world to promote Fisheries and Aquaculture sector.

Proud Moments for Department of Fisheries and Aquaculture, UVAS

Department of Fisheries and Aquaculture, University of Veterinary and Animal Sciences, has produced 89 graduate, 10 M.Phil and 7 Ph.D. students in the field of Fisheries and Aquaculture which are playing a significant role for the betterment and uplifting of Fisheries and Aquaculture sector in the country. Recently two graduates from Department of Fisheries and Aquaculture, University of Veterinary and Animal Sciences, namely Mr. Sajid Mahmood (M.Phil. Fisheries and Aquaculture) has been appointed as Deputy Director (Muzaffargarh) and Mr. Syed Shafat Hussain Shah (M.Phil Fisheries & Aquaculture) as Assistant Director (Chakwal) has joined Department of Fisheries, Punjab in a development project.

Royal Fish (Pvt) Ltd has Started Recirculation Aquaculture System at UVAS

Royal Fish (Pvt) Ltd has developed state of the Art Recirculation Aquaculture System (RAS) in Pakistan. It has started its function at UVAS. By using this technology, high production, maintainance of optimal environmental conditions can be achived with minimal ecological impact.

ROYAL FISH
(PVT) LTD

FISH MARKETING IN PAKISTAN

by Haji Irshadullah Chatha

Fish is an important food item providing healthy proteins. It is well accepted lean and white meat in human food. In Pakistan its consumption is very low as compared to other meats. However, with the intervention of aquacultre industry, awareness is increasing among people due to its health benefits.

■ **Biggest fish market:**

Alipur Chatta is among the biggest fish market in Punjab. The fish is supplied to all big cities from here but due to various issues fish farmers are suffered.

■ **Some important recommendations:**

Here are some important recommendation for its betterment;

I-Need to maintain the fish price.

ii- Establishment of processing plants.

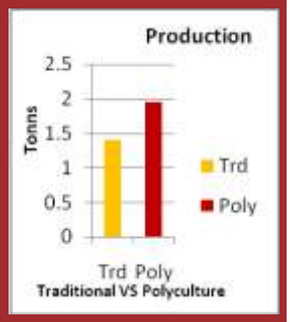
iii- Introduction of new fish species to obtain maximum production in less time.

iv- Incentives from government to promote fish industry.

v- Role of media to promote its nutritional value and health benefits to increase fish consumption.

Polyculture of Carp and Tilapia-Case Study (2015) received

Increasing cost of farming inputs mainly the feed, water and pond rents demand maximum use of fixed expenses. Farmers keep an eye on high per acre yield, more revenues and better return to his investment and effort. Polyculture of Carps (Rohu) and Tilapia is a route to achieve these objectives. Following features of polyculture farming during 2015 at RangPur (Muzaffargarh) reveal encouraging news for farmers;



i-TotalFarm area: 87 Acre
ii-Stocking of Rohu (P A): 678
iii-Stocking of Tilapia (P A): 804
iv-Harvest Size of Rohu: 2,146 g
v-Harvest Size of Tilapia: 635 g
vi-Per acre output (Rohu +Tilapia): 1,455 kg+510 kg= 1,965 kg
vii-Total output (87 acres): 1,965x87=171 ton
viii-Increase in Production (P A):471 Kg
ix-Total increase in Production (87 Acres): 41 Ton
x-Increase in Revenues (PA): Rs 80,000 (@Rs 170/kg-Tilapia)

Farmer Stocked Tilapia (Juveniles-around 260g) in ponds with Rohu, after rearing in nursery. Uniform feed sizes and protein was offered during the culture period (both Rohu & Tilapia). Farmer fertilized ponds as per practice. No additional inputs were offered. FCR was observed as 1.26.
It is however, indicative that Tilapia could be stocked @ 1,000/acre with Rohu without risking the growth size. This may lead to additional revenues of minimum of Rs. 90-100,000 per acre.

One Day Workshop on Fish Feed and Feeding at Fish Seed Hatchery, Bahawalpur

One day workshop was organized by the Department of Fisheries, Punjab entitled "Fish Feed and Feeding" on 17th February, 2016 at Fish Seed Hatchery, Bahawalpur. Three lectures were deliverd. Dr. M Hafeez-ur-Rehman, Assistant Professor, Department of Fisheries and Aquaculture, University of Veterinary and Animal Sciences, deliverd a lecture on the Feeds and Feedings in Snakeheads. He disseminated results and outcomes of four different experimatal trials on the feeding and induced breeding of *Channa marulius* to the fish farmers, fish seed producers, feed millers, and other officials of the Department. Mr.Shahid Iqbal, Tawakal Fish Hatchery on Tilapia farmings. At the end Punjab Fisheries Director General Dr. Muhammad Ayub said that fish is an important source of protein and other nutrients for humans throughout recorded history. He said that world total fish production is 158 million tons, out of which 136 million tons is used for direct human consumption while rest is processed for fish oil and fish meal. He further said that in South Punjab, a fish processing zone will be established with the cooperation of Fisheries Department to strengthen fishing industry through out the province.

Faculty of Fisheries and Wildlife attended 36th Pakistan Congress of Zoology (International)

The Zoological Society of Pakistan arranged the 36th Pakistan Congress of Zoology (International) held at Department of Zoology, University of Sindh, Jamshoro on 16-18th February, 2016. The students and the faculty members from the Faculty of Fisheries and Wildlife participated in the congress. 20 abstracts were presented on different aspects regarding fish processing and value addition, fish genetics, fish nutrition, environmental microbiology, and wildlife management. Two faculty members namely Dr. Shahzad Ali, and Mr. Muhammad Akmal delivered their presentations.

Forth coming International Conferences on Aquaculture

■ First International Conference on Advancement In Biotechnology at Govt College Women University, Faisalabad 30-31st March, 2106

■ Middle East & Central Asia Aquaculture (mecaa) 2016 Dubai, UAE March 13-16

■ Asian Pacific Aquaculture 2016, Surabaya, Indonesia April 26-29

■ Aquaculture Europe 2016, Edinburgh, Scotland September 20-23

■ Laqua16 Lima, Peru November 28-30 December 2016

■ Aquaculture Summit 2016 "2nd Global Summit On Aquaculture & Fisheries" July 11-13, 2016 Kualampur, Malaysia

A Series of seminars held by American Soybean Association

Under Phase-II FEEDing Pakistan Program of American Soybean Association/WISHH, (funded by United State Department of Agriculture), SoyaPak organized a series of three one-day seminars held in Karachi, Multan and Lahore January 2016. Prof. Dr, Kevin Fitzsimmons, Past President, World Aquaculture Society and Aquaculture Expert from University of Arizona was the main speaker and R.S.N. Janjua, Country Representative, ASA/WISHH/PK was the co-speaker. More than 200 hundred participants attended the seminars including fish farmers, feed millers, stakeholders, students, industrialists and government officials. These seminars were organized to provide the specialized information about the tilapia culture, benefit of using soy-based floating feed, feeding management and best farm management practice and value additions besides polyculture of Tilapia with common carps.

Group Photograph with participants at seminar in collaboration with Tawakkal Tilapia Hatcheryand Oryza Feeds dated January 06, 2016, Ramada Hotel, Multan

Group Photograph with participants at seminar in collaboration of Fisheries Development Board and Sindh Fisheries Department, dated January 04, 2016, Marriott Hotel - Karachi

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".**

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