

MoU Report – Feb 09, 2022

Based on the MoU signed between CUK with CIBA, Department of Zoology, CUK has implemented a research-oriented Aqua Lab. Small-scale experiments are being conducted in commercial and economically valuable Kerala fish *Etroplus suratensis*. The list of activities associated with the MoU is given below.

No.CUK/MZLAB/CIBA/2021/1

Dated, 4th March, 2021

Dr. K.K Vijayan, the Director of CIBA, had visited the Marine Zoology laboratory, Department of Zoology, Godavari Block, CUK, on 04.03.2021 and discussed the possible experimental trials for innovative and sustainable farming of *E. suratensis* and other fish species.

E. suratensis is a costly affair, but the aqua-farmers of *E. suratensis* are constantly facing inevitable setbacks, majorly the low survival rates of this farmed fish. The low survival rates were due to various diseases caused by biotic factors (bacterial/fungal/ viral/ parasitic). The farmers face difficulty diagnosing the disease conditions, especially at the early stage of infection. Lack of awareness about infectious diseases and the inaccessible scientific instrumental facilities (such as a PCR machine and higher microscopes, etc.) around the corner would seriously affect the farmers to achieve their fish products to a desired marketable size.

So, it was proposed to work on the rearing of *E. suratensis* from seeds to the market size using various modes of feeding and controlled conditions. The ultimate goal is to raise protein-rich, high-weight and disease-free fish.

After the discussion, our research team realized the scope of working together by sharing the technologies and facilities.





A meeting was conducted with Shri. Purushothaman, Chairman of the Aquaculture Development Corporative Society(ADCOS), Payyannur, Kerala, facilitates collaboration opportunities by sharing the findings of our Aqua-Lab research with the Aquaculture Society. The Chairman of ADCOS agreed to extend their support on large-scale feeding experiments, growth rate assessments and disease diagnosis of brackish water cultured fishes like *E. suratensis*. The discussion and further activities would undoubtedly benefit many aqua farmers throughout Kerala.





No.CUK/MZLAB/CIBA/2021/3

Dated, the 8th September, 2021

A meeting of the Marine Zoology laboratory research team with the Scientists of Central Institute of Brackishwater Aquaculture, Indian Council of Agricultural Research, was held on 08.09.2021 at Rm No. 112, Department of Zoology, Godavari Block, CUK

A preliminary meeting on the proposed project “Experimental trials on Pearl spot (*Etroplus suratensis*) to enhance the protein and meat content” in part of MOU between CUK and ICAR-CIBA. The following members were present.

From ICAR-CIBA:

Dr. Prasanna Kumar Patil (Principal Scientist and Officer-in-charge, Aquatic Animal Health and Environment Division), Dr. Kumaraguru Vasagam K. P. (Principal Scientist & Officer In-Charge, PME Cell, Nutrition, Genetics and Biotechnology Division) & Dr. Raymond Jani Angel (Scientist)

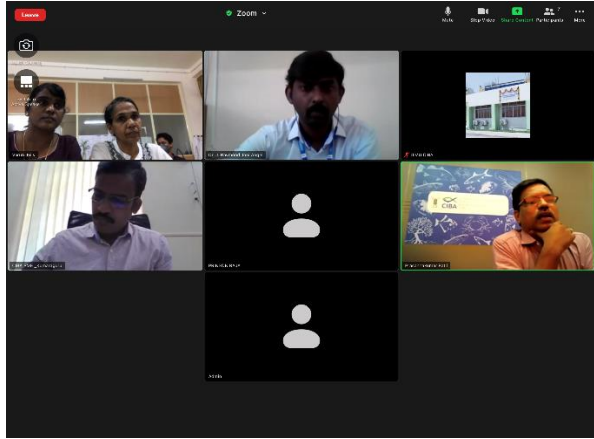
From CUK:

Prof. Sudha Kappalli, Dr. Jose Priya, Ms. Amrutha Vani, Mr. Aishwarya Nath, Ms. Nikhila Reshmi, Ms. Varun Jolly, Ms. Sreya Ashokan and Mr. Swaraj.

The committee has made the following decisions

1. Prof. Sudha Kappalli began the discussion session with a welcome address. She further explained the aim of the meeting. She highlighted the current status of aquaculture facilities at CUK, the members involved in the project and the nature of collaboration CUK required from CIBA.
2. Dr. Prasanna Kumar Patil delivered an introductory remark on the Scientists who participated in the meeting and narrated the process of Pearl spot culture at the experiment level. He shared his ideas for the successful rearing of Pearl spot right from the adult broods. He agreed to provide technical assistance and guidance to start the project early as possible.
3. Dr. Kumaraguru Vasagam presented his ideas and experiences of his experimental trials on Pearl spot breeding and assured his guidance and valuable advice during the project.
4. Dr. Raymond Jani Angel agreed to visit CUK as advised by Dr. Patil. He also accepted the request to provide initial training on breeding the native and wild variety of Pearl spot.

The meeting ended with a vote of thanks from Prof. Sudha

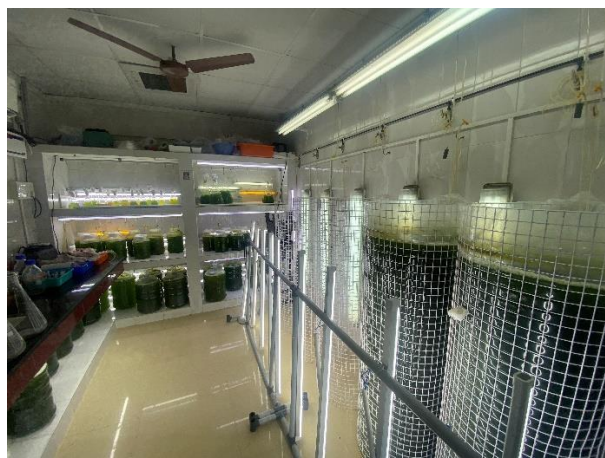


Training at CIBA

Mr. Varun Jolly, PhD scholar, and Mr. Swaraj, Project Assistant of the Department of zoology, CUK, have received a week-long training at the Experimental field station of ICAR-CIBA located at Muttukadu, Chennai.

They have acquired hands-on training on brood-stock development, induced breeding and hatchery seed production of shellfishes and finfishes. The training session was in the multi species finfish hatchery, *Penaeus indicus* (Indian white shrimp) hatchery and mud crab hatchery (*Scylla serrata*). The scholars have visited the pilot scale research feed mill, wet labs for conducting experiments, laboratories (animal health laboratory, soil and water laboratory, finfish and shellfish physiology laboratory, and feed biotechnology laboratory), experimental ponds and live feed culture facilities (microalgae, artemia and zooplankton production units).





At the end of the training session, the scholar learned to set up wet labs with recirculating and flow-through systems for conducting experiments with finfish and shellfish in controlled conditions.

The pictures below show the Aqua Lab set up at CUK based on CIBA training.



Scholars listening to a demonstration at the hatchery facility in Payyanur, Kerala



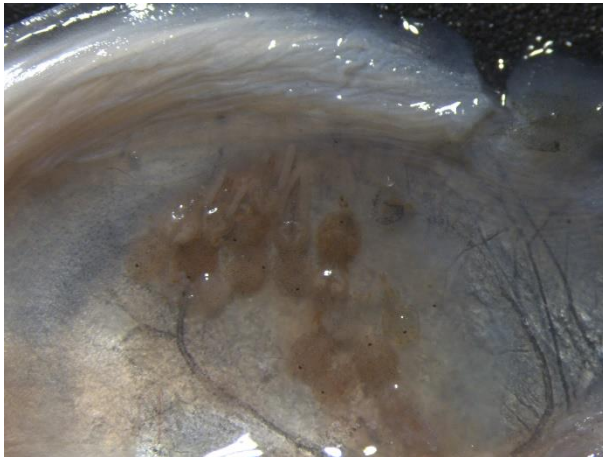


Other activities

Farm-level/Aquarium level fish disease diagnosis conducted at Marine Zoology laboratory, Department of Zoology, CUK



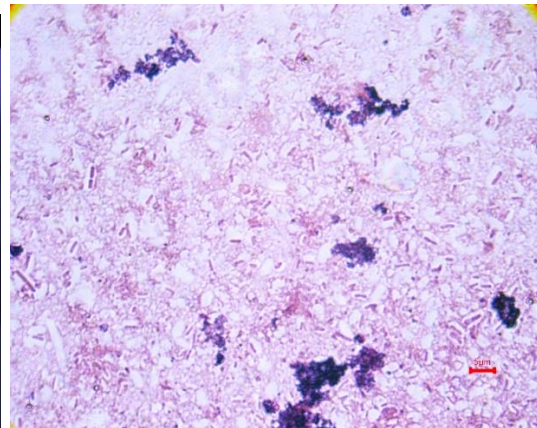
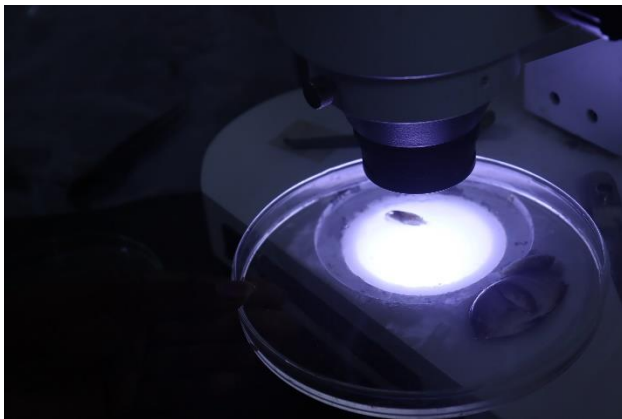
Caligus infection in *Etroplus suratensis*



Lernaea infection in Gold fish



Bacterial infection (Pseudomonas) in *Etroplus suratensis*



Argulus infection in goldfish

