

FIRST SEMESTER M.SC ZOOLOGY PROGRAMME 2019-2020
ABILITY ENHANCEMENT COURSE IN "INNOVATIVE AQUA
FARMING TECHNIQUES' COURSE CODE: ZOL1A01

COLLABORATING INDUSTRY



Total Instructional Hours: 30 Hrs

No of students: 12

Total No of Days: 5

Syllabus

Unit 1: BASICS CONCEPTS OF AQUACULTURE

(20 Hrs)

1.1 Pond based aquaculture system

1.2 Flow through System

Introduction, advantages and disadvantages, procedure for flow through system, capital investment, Energy requirement, marketing

1.3 Biofloc aquaculture system

Introduction, advantages and disadvantages, protocol and procedure for Biofloc farming of Tilapia, Capital Goods , Consumables for one batch of operation, Manpower requirement, Energy requirement, marketing

1.4 Recirculation aquaculture system

Setting up of RAS, procedure of farming, precautions to be taken, advantages and disadvantages, investment, income generated and harvesting

1.5 Aquaponics

Basic principle and procedure, success rate, factors affecting the system

L.6 Aquaculture management and marketing

UNIT 2: PREPARATION OF AQUACULTURE PROJECT PROPOSALS BASED ON THE HI.TECH FARMING METHODS DESCRIBED IN UNIT 1

(10 Hrs)



VIMALA COLLEGE (AUTONOMOUS)
(NAAC Re-accredited(3rd Cycle): A Grade, CGPA-3.50)

Affiliated to University of Calicut
M.Sc. DEGREE PROGRAMME IN ZOOLOGY
Under Credit and Semester System (CSS)
Audit Courses (Ability Enhancement course)

REPORT

Report of Ability Enhancement Course (Audit Course) Conducted by Department of Zoology - Innovative Farming Techniques in collaboration with Rosen Fisheries, Marathakkara, Thrissur as a part of curriculum for increasing skill development in Aquaculture

As a part of Ability Enhancement Course (**Audit Course**), twelve first year M.Sc Zoology students visited Rosen Fisheries, Marathakkara, a private ownership aquaculture farm established in 1987 which is run by Mr C D Sebastian. Aim of the course was to get hands-on experience on new aquaculture techniques which can be utilised for their future employment opportunities and for improving their skill. The fee of this programme is Rs. 1500/-. The syllabus of the course include, Basic Concepts of Aquaculture, Pond based aquaculture system, Flow through System, Biofloc aquaculture system, Recirculation aquaculture system, Aquaponics and the recent trend on Aquaculture management and marketing.

The course started in July 2019. During the course the proprietor Mr C D Sebastian gave a talk on the importance of aquaculture and need for developing a Hi-Tech Aquaculture Farm and also a brief introduction on Biofloc aquaculture system he is practising in the farm. He explained the reduced availability of fish and shrimp from sea and other resources and the demand and enhancing price for seafood. Considering the advantage of natural facilities, quick turnover, assured return on investment, ready market and availability of vast stretch of suitable area at a cheaper rate etc. offer a golden opportunity for fresh water fish culture in Kerala and he started this farm in this vision. The species found suitable for this area are Tilapia, Nutter and Rohu. He also explained on the importance of Bio floc system, which is a super intensive system of aquaculture in which the production level can be increased to 5 times of the conventional level. Students also learned on the bio flock system of aquaculture in detail and familiarized with the *Azolla* pond and small nursery tanks rearing the young ones. They also attended a detailed class on common cultivable fishes of Kerala like Catla, Rohu, Mrigal, Silver carp, Tilapia etc. They also learned the marketing and management techniques for fishes, aquaculture equipments, fish feeds (artificial and live), water quality test kits for testing ammonia, nitrate, nitrite etc. A class on aquaponics, which is the integration of recirculating aquaculture and hydroponics in one

production system and the recirculation aquaculture system (RAS) and other traditional techniques is also conducted for students.

After completing their internship, a written examination was conducted and the certificates were issued to all the students.



Proprietor of the firm: Shri C D Sebastian, X/432-B, Puthur Panchayat, Marathakkara-p.o. , Thrissur-680 320. Kerala India

Faculty in Charge: I st year PG Tutor, Dr Meera K M

HOD: Dr Honey Sebastian, Department of Zoology, Vimala College, Thrissur