

III SEMESTER
Course No.: 8 - Brackish water Aquaculture
credits :3

Course Outcomes:

CO1:Knowledge on development and present status of brackish water farming in India.

CO2::Learn about the types of culture systems

CO3:Gain knowledge on commercial value of prawns in India

CO4:Know about the biology of important shrimps

CO5:Know about the species of crabs and edible oysters cultured

Unit – I Introduction

1.1 Introduction, History, Development and present status of brackish water farming in India.

1.2 Brackish water as a medium for aquaculture, ecological factors – Abiotic and biotic factors.

1.3 Types of culture systems – Traditional, extensive, semi-intensive and intensive culture systems of shrimp, their management and economics.

Unit – II Culture of brackish water prawns

2.1 Culture practices of *Penaeus monodon*/ *P.vannamei*

2.2 Brackish water prawns of India – Commercial value.

2. Morphotypes and harvesting

Unit – III Biology of Shrimp

3.1 Biology of *Penaeus monodon*,

3.2 Biology of *P.indicus*

3.3 Biology of *P.vannamei*.

Unit – IV Management practices

4.1 Nutritional requirements of cultivable prawns.

4.2 Natural food and artificial feeds and their importance in shrimp culture

4.3. Pond preparation, stocking, of Hatchery, Nursery, grow out ponds. and harvesting of shrimp.

Unit – V Culture of Brackish water species

5.1 Species of crabs cultured, biology and culture technique, prospects in India.

5.2 Species of edible oysters, culture techniques used for farming edible oysters.

5.3 Important species of pearl oysters and method of artificial pearl production.

III SEMESTER
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Identification of cultivable fresh water and marine water prawns (any 3 each)

Identification of marine crabs and oysters of commercial importance (any 2 each).

3. Identification of Phytoplankton and Zooplankton (any 5 each).

4. Identification of different live feed organisms for shrimp larvae (any 4)

5. Identification of larval stages of prawn. 6. Demonstration of eye stalk ablation in penaeus monodon.

References :

1. Pillay, TVR. Aquaculture principles and practices, Fishery News (Books) Ltd., London 1990.

2. Prawn and prawn fisheries by Kurain and Sebestain.

3. Shankar KM & Mohan CV 2002. Fish and Shell Fish Health Management UNESCO. Publ. Sundermann CJ 1990.

4. Johnson SK 1995. Hand book of shrimp diseases Texas A & M university, Texas.

5. Guland J.A. (ed) 1984. Penaeid Shrimps – Their Biology and Management.

6. Raymond T et al., 1990. Crustacean Sexual Biology, Columbia University Press, New York.

7. Identification and mounting of appendages of prawn / shrimp.

8. Field visit to prawn / shrimp hatchery

. 9. Field visit to prawn / shrimp culture ponds.