IV SEMESTER

Course No.:10 - Shrimp Health Management

credits :1

.

Course outcomes:

1.Provide students with knowledge about shrimp diseases and pathological aspects of diseases.

2.Learn about Fungal, Viral and Bacterial diseases of shellfish.

3.Gain knowledge of Nutritional deficiency related diseases and antibiotic and chemotherapeutics.

4.Understand and learn the importance of diagnostic tools in identification of diseases and application and development of vaccines.

5.To know about production of disease free seeds and good feed management.

Syllabus

UNIT I: Viral Diseases of shell fish (Symptoms, Treatment and Prophylaxis)

1-1 Major shrimp viral diseases – Bacculovirus penaeii, Monodon Bacculovirus,

1-2 Bacculoviral midgut necrosis, Infectious hypodermal and haematopoietic necrosis virus,Hepatopancreatic parvo like virus,

1-3 Yellow head bacculovirus, white spot bacculovirus.

UNIT II: Bacterial Diseases of shell fish(Symptoms, Treatment and Prophylaxis)

2.1 Bacterial diseases of shell fish – aeromonas, pseudomonas and vibrio infections,

2.2Luminous bacterial disease, filamentous bacterial disease. Prevention and therapy

UNIT III: Protozoan Diseases of shell fish (Symptoms, Treatment and Prophylaxis)

3-1 Protozoan diseases- Ichthyophthiriasis, Costiasis,

3-2Whirling diseases, trypanosomiasis

UNIT IV: Health management

4-1 Diagnostic tools – immune detection- DNA/RNA techniques, General preventive methods and

prophylaxis. Application and development of vaccines.

4-2 Quarantine – Significance, methods and regulations for transplants.

UNIT V: Production of disease free seeds

5-1 Production of disease-free seeds. Evaluation criteria of healthy seeds.

5-2Good Feed management for healthy organisms, Zero water exchange, Probiotics in

IV SEMESTER

Course No.:10 - Shrimp Health Management

credits :1

---

1. Enumeration of Bacteria by TPC Method
2. Observation of gross pathology and external lesions of fish and prawn with reference to the common diseases in aquaculture
3. Examination of pathological changes in gut lumen, hepatopncreas, lymphoid organ, muscles and nerves of prawn and shrimp
4. Collection, processing and analysis of data for epidemiological investigations of viral diseases
5. Bacterial pathogens – isolation, culture and characterization
6. Antibiograms – preparation and evaluation
7. Molecular and immunological techniques; Biochemical tests; PCR; ELISA; Agglutination test; Challenge tests; Purification of virus for development of vaccines (Demonstration at institutes/labs)
8. Estimation of dose, calculation of concentration, methods of administration of various chemotherapeutics to fish and shell fish
9. Estimation of antibiotics used in aquaculture practices
10. Estimation of probiotics used in aquaculture

.