

# **CAPTURE AND CULTURE FISHERIES..**

**BACTERIAL AND VIRAL DISEASE**

**IV SEMESTER MSc ZOOLOGY**

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BACTERIAL DISEASES

VIRAL DISEASES..

## Vertical Scale Disease

- ✓ It is a *bacterial disease* characterized by *pine cone – like scales*. This disease is also called *pinecone disease*.
- ✓ This disease affects common carp , grass carp, silver carp and gold fish.
- It is caused by *pseudomonas punctata*

## Symptoms

- The skin is rough
- Some scales are stretched out resembling pine cones.
- The scale capsule contains a semiopaque or sanguineous *liquid* that makes the scale vertical.
- If slight pressure is applied to the scale the liquid will exude from the scale base and the scales will immediately drop off.
- Congestion on the fin bases

➤ *Bleeding and inflammation of the skin*

- Reddish ulceration on the skin .
- Exophthalmos (protruding eyes)
- Abdominal distension
- The fish swims slowly, show *dyspnea* and the abdomen turn upward
- The fish will die 2 or 3 days later

## Treatment

- Disinfect the pond with *quicklime* or *bleaching powder* .
- *Mix aureomycin* or *terramycin* with feed in a dose of 5% of the feed
- Inject 2 to 4 mg of chloramycetin into the abdominal

- ***Infectious dropsy***
- is a *bacterial disease* characterized by the accumulation of yellow fluid inside the body cavity.
- It is caused by the bacterium *pseudomonas punctata*
- *Yellow fluid* accumulates in the body cavity.
- *Intestinal dropsy.*
- *Ulcerative dropsy.*
- *Scales protrude .*
- *Exophthalmic conditions.*
- *Ulcers on the skin, fin , etc.*
- *Deformation of backbone.*
- *Fishes jump.*

## Treatment

- Isolation and destruction of infected fish.
- Dip in *KMnO<sub>4</sub> solution (5mg)* for 2 min.
- Addition of *streptomycin* or *chloromycetin* in the feed .

## Furunculosis

- Furunculosis is a *bacterial disease* of *salmons* characterized by the appearance of *body boils*. (*furuncles = boils*)
- It is caused by by the bacterium *Aeromonas salmonicida* . It is a Bacillus (rod – shaped bacterium).
- *Bloody boils* develop on the skin and internal organs.
- The boils burst and pus exudes

# Treatment

- *Liming* the pond.
- Affected fish is isolated and supplied feed with *sulphonamide*.
- *Disinfection with 1% providone- iodine solution.*



# Viral Diseases

Epizootic Ulcerative Syndrome EUS

Infectious pancreatic Necrosis IPN

Infectious Dropsy Spring Viraemia

Viral Haemorrhagic Septicaemia VHS

Erythrocytic Necrosis

Infectious Haematopoietic Hypodermal Necrosis IHNV

## **EPIZOOTIC ULCERATIVE SYNDROME EUS**

- EUS is a viral disease affecting Indian Major Carp
- It is commonly called fish cancer.
- It is caused by Rhabdo virus.
- A wide variety of pathogenic forms such as bacteria, fungi, protozoans, Argulus, and Gyrodactylus are found in the infected fish.
- It is characterised by haemorrhagic ulcers on the body, fins, and gills.
- Ulcerative skin lesions.
- Kidney and liver are affected.
- Sloughing off of scales.
- Degeneration of epidermis.
- Histopathological changes occur in the gills.
- Gill lamellae degenerate.

- Caudal fins become weak and break with slight pressure.
- Respiration is affected.
- Death results due to breathlessness.

### **TREATMENT:**

- It is controlled by the application of quicklime at the rate of 200kg/Ha
- Dip treatment in chloramphenicol (1.5ppm) for two minutes.
- Addition of nalidixic acid and erythromycin in fish feed at the rate of 30 to 50 mg/kg of feed.

### **INFECTIOUS PANCREATIC NECROSIS ( IPN)**

- It is caused by RNA virus

- Fry are affected.
- The fry looks darker.
- Necrosis of pancreatic cells.
- Swim in a spiral fashion.
- Poor management enhances this disease.