Preventive measures for Fish diseases

"prevention is better than cure"

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The concept that "prevention is better than treatment" is fundamental to the maintenance of a healthy stock of fish. Fish are schooling animals, they are hard to observe individually, thus making the diagnosis and treatment of disease difficult. In addition, some fish diseases are incurable. Therefore, preventive measures are essential to the control of disease.

Pond regulation

Pond regulation is effective in improving environmental conditions, preventing disease and raising fish yields. There are two main aspects to pond regulation: pond trimming and pond disinfection.

Rearing management

A reliable person should be responsible for the daily management of the pond (stocking, feeding, disease prevention, etc.). The scheduled feeding procedure, which benefits fish yield and disease prevention, should be used. Variations in water quality must be observed carefully.

Fish seed disinfection

Fish seed disinfection can be performed during their transfer or prior to stocking.

Feed, feeding platform and equipment disinfection

Contaminated or spoiled feeds may introduce pathogenic bacteria to the pond. Leftover feeds, which decompose in the water, facilitate the rapid multiplication of pathogenic bacteria. For this reason, feeds must be stored in dry and ventilated place. Use of prolonged stored feed should be avoided.

The equipment used during the epidemic season (nets, pails, dip nets, etc.) must be disinfected after each use.

Pond treatment

Spreading chemicals over the entire pond is a common method of disease prevention. Before seed stocking pond should be cleaned properly and must be disinfected with 1ppm potassium permanganate.

To improve deteriorated pond water quicklime should be added. This will improve water quality and prevent disease. The quicklime chunks should be dissolved in a little water, and the solution diluted, stirred, and sprayed evenly over the pond.

Establishing a quarantine system

Geographic and climatic conditions can produce epidemic diseases in certain regions. However, as the freshwater farming industry develops rapidly and the transportation of fry and fingerlings among provinces becomes more frequent, local diseases are tending to spread. Quarantine work should now be emphasized. The transportation of diseased fish should be strictly prohibited.

Diagnosis

The fish must be alive or recently dead and the body must be kept damp. Methods of diagnosis include surveying the pond and examining the fish with the naked eye and microscopically.

Survey the diseased pond

Determine if the water source is seriously polluted. If it is, find the source of the pollution. Observe the behaviour of the diseased fish and take an inventory of the rearing status (pond clearing, stocking density, feeding, preventive methods, and mortality, etc.).

Naked-eye observation

Put the diseased fish on an enamel ware plate and examine the head, eyes, gill cover, scales, and fins for visible pathogens such as nematodes, *Argulus, G lochidium,* and *Saprolegnia.*

How to cure a diseased fish?

In order to effectively control the health problem, desired dose of therapeutics could be given in three ways e.g. (i) adding medicine in the water (ii) Through feed (iii) through injection. First method is again divided into flush, dip, bath and pond treatment.

Flush Treatment : higher concentration of chemical is added at the inlet or incoming water site and allowed to pass through the tank. Uniform distribution of chemical depends on the flow of water.

Dip Treatment : In this method fishes are collected by net from the tanks or nurseries and dipped for 1-3 minutes in high dose of medicine and released back in tanks. In this process, attached parasites detach from the body and get killed. Dip treatment is extremely useful in small fry and fingerlings facilities.

Bath Treatment : Employed in small experimental tanks under controlled conditions and after adding chemical/medicine left for specified time. The fishes are kept under observation and as soon as fish shows stress symptoms, either fresh water is added or fishes are taken out from the tanks and released in freshwater.

Pond Treatment : In bigger grow out fish ponds smaller dose of chemical/medicine is used. This method although widely used however before application of medicine economic return of the fish pond should also be taken care of.

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