

DISEASE INCIDENCES AND THEIR CONTROL IN EXOTIC CARPS

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The purpose of the present study is to provide relevant information on the diseases and their control in exotic carps under sub-temperate agro-ecological conditions of lower Kullu valley of Himachal Pradesh. The bacterial, fungal and protozoan disease incidences were either recorded during summer or rainy season. It was also observed that there is no complete chemical control for Myxosporidiasis.

Some bacterial, fungal and protozoan diseases in exotic carps were recorded. The disease incidences were either recorded during summer or rainy season. The dip treatment in Malechite green 1:1000, 3 percent common salt solution, Quinine solution 1:5000 and an addition of 15 kg/ha/1/2m of copper sulphate were found the most effective to control *saprolegina*, *Trichodinosis* and *Cyclochaetosis*, *Ichthyophthiriasis* and *Gill rotting* respectively in sub-temperate agro-ecological conditions of lower kullu valley of Himachal Pradesh.

The exotic carps *i.e.* *Cyprinus carpio* and *Ctenopharyngodon idella* were studied for the incidence of different diseases from 1991 to 1993 under the sub-temperate conditions of lower kullu valley. During the study period air day temperature varied from 1°C to 36°C and water temperature from 2°C to 38°C. The pH of pond water was recorded 7.4 to 8.5 and dissolved oxygen concentration 6.2 mg/l to 9.8 mg/l. The disease incidences were either recorded during summer or rainy season. The *saprolegina* and *Gill rotting* (fungal diseases), *Fin and Tail rotting* (bacterial disease), *Ichthyophthiriasis* or white spot disease, *Trichodinosis* and *Cyclochaetosis* and *Myxosporidiasis* (protozoan diseases) were recorded main diseases of exotic carps in the valley. However, incidence of fish leach (worm) was also recorded once. For the control of *Saprolegina*, the dip treatment in 3 percent common salt, 1:2000 copper sulphate (till tolerance), 1:1000 potassium permanganate (5 to 10 minutes) and malechite green (4 seconds) were tried. But the dip treatment in malechite green was found more effective. The 12 kg/ha/1/2m, 15 kg/ha/1/2m and 18 kg/ha/1/2m copper sulphate were added to the ponds to control *Gill rotting*. Addition of 15 kg/ha/1/2m of water level was found the most suitable dose. However, it is also observed that an addition of fresh and cool water and temporary break in supplementary feed during treatment also played a significant role to stop the disease from further spreading. Dip treatment in 1:50000 quinine solution every day for 1 hour upto 4 days given an effective measure to control *Ichthyophthiriasis*. The dip treatment of diseased fishes in 3 percent common salt solution every day till tolerance upto 5 days gave encouraging result to control *Trichodinosis* and *Cyclochaetosis*. As there is no effect of any chemical on the cysts of myxospores (Sinha & Kumar, 1981), the most effected fishes with *Myxosporidiasis* were discarded and dumped away from the fish farm. However, treatment of ponds with candis fluid, addition of fresh water and proteinous supplementary feed controlled further spreading of the disease.

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