

AP2.**INDUCING SPAWNING OF COMMON CARP (*CYPRINUS CARPIO*)
IN A NATURAL POND**

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Development of cost-effective propagation systems for common carp so as to eliminate the necessity of stocking reservoirs with fingerlings is essential for sustainable fisheries. To achieve this objective, preliminary investigations on developing a relatively cheap and easy propagation method was carried out under natural conditions in a mud pond (0.4 ha in extent) in the Department of Animal Science, University of Peradeniya.

To understand the breeding pattern, standard techniques were used to determine the fecundity and the gonado-somatic indices of monthly fish samples collected from the pond. Fecundity of pond cultured females ranged from 15, 734 to 65,642 with total length and weight varying from 18.5 to 31.5 cm and 143.0 to 542.9 g respectively. Analysis of gonado-somatic indices revealed year round breeding with four spawning peaks corresponding to the onset of heavy rain.

Common carp could be "trained" to lay eggs on artificial egg collectors called "kakabans" to increase survivorship of eggs, using stimulants such as edible plants, aquatic macrophytes such as the water hyacinth, or artificial water currents. "Kakabans" made of coconut or kitul fibre were more suitable than plant material since they were resistant to decay and could repeatedly be re-used. Horizontal placement was preferred to vertical hanging. The fertilization and hatchability rate on "kakabans" made of fibrous substrates was 92-96% and the hatching period of eggs was between 2-3 days.

These results highlight the potential for developing appropriate systems whereby common carp could be propagated at least cost in large, deep Sri Lankan reservoirs such as the Victoria, where common carp show successful natural recruitment to the fishery.