A Comparative Study of Indigenous Fishes in Paddy Fields for Pest Control and Mosquito Control in Avitanallur Village

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Biological control of pests and mosquitoes using indigenous fishes is an eco-friendly approach towards sustainable agriculture and health. Objectives: To collect and identify different indigenous fishes in Avitanallur village and to find out their role in pest and mosquito control in paddy fields. Methodology: Collected and identified indigenous fishes in paddy fields. Collected rice case worms (Parapoynx stagnalis) and stem borer larvae (Scirpophaga incertulas) from paddy fields and grown mosquito larvae. Predatory potential of indigenous fishes is analysed for a period of 24 hours. Analysed water samples. Visited the zoological survey of India and interviewed scientists. Interviewed zoology and botany professors, agricultural officer, and farmers. Spread awareness of the importance of indigenous fishes in pest and mosquito control through seminars and pamphlet distribution. Designed an Automated Paddy Fields Water Level Management System for maintaining proper water level. Observations: Identified 14 varieties of native fishes namely Rasbora daniconius, Puntius mahecola, Puntius vittatus, Puntius ticto, Aplocheilus lineatus, Pseudosphromenus cupanus, Haludaria fasciata, Laubuka dadiburjori, Mystus malabaricus, Lepidocephalichthys thermalis, Mastacembelus armatus, Puntius filamentosa, Clarias batrachus, Channa striata. Puntius mahecola and Mystus malabaricus belong to endemic species of fishes. Rice case worm feeding efficiency and stem borer larvae feeding efficiency is maximum for Pseudosphromenus cupanus. Mosquito larvae feeding efficiency is maximum for Rasbora daniconius. Conclusion: We should plan an eco-friendly and effective integrated pest and mosquito control using indigenous fishes and modern water level management technology.

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