Investigation of Disease Incidence and Management Practices to Build a Database to Fill the Knowledge Gap of Ornamental Fish Farmers in Sri Lanka

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The freshwater ornamental fish industry is one of the economically important, home entertainment industry in the world. During the last few decades, the ornamental fish industry in Sri Lanka has become one of the highest potential exporters in the global market. However, fish diseases are one of the major constraints to the failure of the ornamental industry. To avoid economic losses and to prevent disease outbreaks proper identification and diagnosis of fish diseases are crucial. Hence, this study was aimed to evaluate the present status of farmer's knowledge of fish disease; management measures to avoid disease outbreaks and prevalence of fish diseases with seasonal and regional variation in the freshwater ornamental fish industry. Sixty farmers cultivating various ornamental fish were selected using stratified and simple random sampling techniques from the National Aquaculture Development Authority (NAQDA) website. Data were collected using a telephone-interviewed method through a pretested questionnaire survey. Collected data were analyzed using the descriptive statistical methods in SPSS. . Major disease incidence caused by parasites (33.57%), followed by bacterial (23.57%), fungal (16.43%), viral (5%), and non-infectious diseases (21.43%). The most frequently observed disease was white spot disease (11.4%), followed by *Columnaris* (10.8%), *Dactylogyrus* sp. (9.5%), and fin rot (8.9%). The prevalence of fish diseases varied with season. The average prevalence of fish diseases was highest in the southwest monsoon period (49%). Common treatment methods that farmers used to treat the diseases were isolation (20.9%), water exchange (19.9%), adding salt (15.7%), methylene blue (13.6%), copper sulphate (11.5%), and antibiotics (7.1%). However, most of the farmers were able to identify diseases by using behavioral changes (40.5%) and symptoms (37.3%) although they were incapable of recognizing the disease-causing agents. Preventive and prophylactic measures were practiced by 91% of the farmers, the majority of them tend to find solutions through online sources, and some of them get advice from either colleagues or veterinarians. Furthermore, insufficient materials or lacks of awareness regarding fish diseases prevent farmers from gaining new reference knowledge. Thus, the results obtained from this study can be used to fill the knowledge gap by developing an awareness tool that enhances their knowledge on fish health management.

Keywords: Ornamental fish; Fish Disease; Seasonal variation; Awareness tool