

FAO Expert Workshop on Improving fish farm biosecurity through prudent and responsible use of veterinary medicine (antimicrobials) in aquatic food production

15-18 December 2009, Bangkok, Thailand

Intensification and diversification of modern fish farming have created an ideal environment for disease-causing organisms to flourish in the environment. Irresponsible trading of aquatic animals paved the way for the transboundary spread of many pathogens together with host movement and thus have caused serious damage to aquatic food productivity.

One of the most effective management responses to emergencies associated with infectious disease problems is the use of appropriate antimicrobial therapy. However, such measure created problems related to the increase in the frequencies of bacterial resistance, occurrence of antimicrobial residues in aquaculture products, and the potential transfer of resistance genes in bacteria from the aquatic environment to other bacteria through horizontal gene transfer and eventually possibly reaching human pathogens. Using antimicrobials in aquaculture farming operations, or any agricultural farming systems, on a routine and regular basis, to control infectious diseases will be difficult to sustain. Since disease emergencies will occur even in well-managed fish farming operations, careful planning on the use antimicrobials is essential in order to maximize their efficacy and minimize the pressure for increased frequencies of resistant variants. Chemotherapy and vaccination are traditional ways of managing aquatic animals diseases. However, in isolation, they cannot prevent diseases losses. A holistic approach can be achieved through effective biosecurity where disease-causing organisms are excluded from the environment. In modern fish farming, this is done by blocking external (spread of disease onto and off a fish farm) and internal (spread of disease within the fish farm) barriers.

Correct and responsible use of veterinary medicine (antimicrobials and other chemotherapeutants) is very important. These measures will help ensure that the pathogen challenge is minimized, the fish natural defence against infection is maximized, incidences

of disease and mortalities are reduced, and money saved on what would have been spent on containing, treating and/or eradicating the disease. Biosecurity plays a very important role in every stage of the life cycle of a fish from hatching to harvesting and processing and has thus become a necessary tool for ensuring sustainable and healthy aquatic production. The irresponsible use of veterinary medicine poses a great biosecurity risks. In order to develop appropriate strategies or guidelines that will enable the rational and prudent use of antimicrobials and chemotherapeutants, particularly for use by small-scale aquaculturists, we need to assess the current status of usage of these agents and to have a good general understanding of how these agents are being used in aquaculture.

FAO is convening the above workshop in collaboration with the Aquatic Animal Health Research Institute, Thailand's Department of Fisheries from 15-18 December 2009 in Bangkok, Thailand as part of the project Improving Fish Farm Biosecurity through Prudent and Responsible Use of Veterinary Medicine (Antimicrobials and Chemotherapeutants) in Aquatic Food Production, undertaken under the supervision of the Aquaculture Management and Conservation Service (FIMA) as part of the Aquatic Biosecurity Project funded by FAO's Multi-Partnership Programme (FMPP).

This project is being carried out to (1) understand the current status of the use of veterinary medicine in this rapidly growing and expanding aquaculture through survey, thematic reviews and an expert workshop, (2) identify effective and meaningful alternatives to therapeutic treatments for aquatic animal diseases and (3) use the above as basis for preparing technical guidelines.

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