

P49. Epidemiological studies to identify risk factors for *Saprolegnia* infections in Italian trout farms

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INTRODUCTION. *Saprolegnia* spp. are widespread oomycetes in freshwater environment and are among the main sources of economic losses due to disease in salmonid aquaculture. Our study was aimed at investigating risk factors influencing the emergence of Saprolegniosis in Italian trout farms.

MATERIALS AND METHODS. Five trout farms in northern Italy were selected on the basis of the documented presence of different management risk factors, besides temperature, for Saprolegniosis (e.g. vaccination, stripping, grading, frequent tank change). The study included rainbow trout *Onchorhynchus mykiss*, marble trout *Salmo trutta marmoratus* and brown trout *Salmo trutta fario*. In each farm, periodic visits were carried out every month during the cold season, at higher risk for Saprolegniosis, and once during summer, for a total of 8 visits from February 2017 to January 2018. A selected tank from each farm was equipped with a data logger for continuous monitoring of water temperature during the study period. Furthermore during each visit pH, temperature and dissolved oxygen were collected and clinical inspection of fish to assess prevalence of lesions referable to Saprolegniosis was performed. During each visit detailed information about management practices/fish handling, concurrent infections and mortality were collected. Only during the first visit, five fish with Saprolegniosis were sampled from each farm in order to characterize the circulating species of *Saprolegnia*.

RESULTS AND CONCLUSIONS. As expected, the prevalence of *Saprolegnia* was on average higher during the cold months (< 10 °C) and in strict correlation with different handling practices. Only in one farm Saprolegniosis prevalence increased at relatively higher water temperature (14 °C) after intraperitoneal vaccination. All isolates from fish with clinical signs during the first visit belonged to the species *Saprolegnia parasitica*. Preliminary results of this survey highlight the combination of low temperature and handling practices as relevant risk factors for Saprolegniosis. The complete statistical and epidemiological analyses of the collected data will be processed together with the results obtained from parallel surveys in Spain and Scotland in order to identify the main risk factors and design biosecurity and management strategies to control Saprolegniosis in salmonid farms.