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ABSTRACT BOOK



Diseases of Public Concern

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Risk mapping of zoonotic parasites in Italian aquaculture

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Introduction: The diffusion of new eating habits and the increase of fish products demand lead to a raising risk for consumers inherent food-borne parasitic zoonoses. In this scenario the scientific community and food security authorities are called to assess the possible risks linked to consumption of products from fishery and aquaculture and to set up strategies aimed to their management. Thus, the collection of epidemiological information on the presence of zoonotic parasites in fish products through extensive epidemiological surveys is necessary. Concerning aquaculture, according to EFSA (2010) and Regulation (EU) 1276/2011 only for the Atlantic salmon the risk of transmission of parasites to man can be considered negligible. At this purpose, in the framework of the EU funded project ParaFishControl a wide parasitological survey has been carried out on the main farmed fish species in Italy and other countries such as Spain, Greece, Denmark, Norway and Hungary. The present work reports the results from Italy.

Methodology: From 2016 to 2018 a total of 4728 farmed fish have been examined from 5 marine and 5 freshwater farms located in Italy: 1563 gilthead sea bream (GSB), 1571 European sea bass (ESB) and 1594 rainbow trout (RT) have been sampled. Besides harvest quality fish, runts were also examined. Parasitological analyses to search for anisakid nematodes, diphyllbothriid cestodes and Opisthorchioidea digeneans were performed utilizing different methodologies such as visual inspection and candling as provided by the EU regulation, implemented by UV-press method, muscular compression/artificial digestion followed by microscopic examination when required.

Results: No zoonotic parasites were found in any of the examined fish, including runts. Only one L4 specimen of the nematode *Hysterothylacium fabri* has been found on the surface of the liver in one ESB.

Conclusion: The results of this survey are very encouraging and allow to assess the risk of the presence of zoonotic parasites in farmed GSB, ESB and RT as negligible, similarly to Atlantic salmon.

Keywords: zoonotic parasites, gilthead sea bream, European sea bass, rainbow trout

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