

**Possible vector species and live stages of susceptible species not transmitting disease as regards certain mollusc diseases**

**Scientific Opinion of the Panel on Animal Health and Welfare**

**(Question No EFSA-Q-2007-061)**

**Adopted on 06 December 2007**

**Summary**

Following a request from the European Commission as regards certain aquatic animal diseases, the Panel on Animal Health and Welfare (AHAW) was asked to deliver a scientific opinion on possible vector species and live stages of susceptible species not transmitting the diseases. The mandate was accepted by the Panel on Animal Health and Welfare on the 1st of February 2007. The mandate included diseases affecting three different groups of aquatic animals: molluscs, crustaceans and fishes. This opinion focuses exclusively on mollusc diseases.

The mandate was composed of two questions: i) which species may be responsible for the transmission of a specific disease by acting as vector species for a disease listed in Annex IV Part II to Directive 2006/88/EC, and in particular which life stages and under which conditions those species can transmit diseases, and, ii) which life stages of the susceptible species listed in column II of the table in Annex IV part II to Directive 2006/88/EC may not transmit the diseases listed in the same annex.

Concerning the question of life stages of susceptible species not being able to transmit the listed diseases it was concluded that any life stage (with the possible exception of gametes, eggs and larvae) of the listed susceptible species is susceptible. Current practices in hatcheries do not prevent contamination of the commodities via water and fomites, and it is recognised that this may lead to disease transmission.

Article 17 of the Directive that regulates the introduction of live aquaculture animals of vector species into disease-free areas requires that a list of vector species is drawn up.

Published scientific literature and practical evidence from farming and trading practices combined with disease surveillance demonstrate that certain non-susceptible aquatic animal species are not vectors of the listed diseases. However, scientific evidence exists to support a list of non-susceptible aquatic animals that can be considered as non-vectors in the transmission of the listed diseases. Following a qualitative release and exposure assessment, potential species or groups of species and the conditions under which they may act as vectors for listed pathogens were identified. The likelihood of transfer and also the establishment of the hazards ranked from very low to moderate under stated conditions. Significant lack of data on prevalence, distribution and infectivity of the listed diseases/agents, as well as pathogen survival parameters outside the host, contributed to a high degree of uncertainty about the likelihood estimates of transfer and establishment of the

hazards. Although the consequences of establishment were assumed to be high, the actual acceptable level of risk did not form part of the mandate.

In relation to the question of life stages of susceptible species not able to transmit the listed diseases, peer reviewed scientific literature has established susceptibility of mollusc species at all juvenile and adult stages. There is no specific information about susceptibility of gametes, eggs and larvae, but expert opinion is that these life stages are unlikely to be susceptible. However, considering current practices in hatcheries, contamination of gametes, eggs and larvae may happen via water and fomites, and it is recognised that such contamination may lead to disease transmission. Consequently, it was recommended that all life stages of the listed susceptible species should be considered as being able to transmit the listed diseases.

During the development of the report, a number of significant issues were identified which were relevant to the mandate but were not included in the terms of reference: i) if live molluscs intended for human consumption are re-immersed in open waters prior to commercialisation, although this activity is only allowed under certain conditions in disease-free areas with regard to the five listed diseases, this constitutes a serious uncontrolled risk of introduction of pathogens; ii) the published peer reviewed literature identifies a group of non-listed susceptible species, for which scientific evidence exists that also demonstrates their susceptibility, and, therefore, these were excluded from the risk assessment as potential vectors, although they clearly represent an un-controlled route of introduction and spread of listed pathogens; iii) given the wide variation in strains and genotypes of the listed mollusc pathogens, there is concern that occasionally a particular disease condition may not be controlled because the causal agent can not be accurately diagnosed. All of these issues require further consideration in relation to their impact on disease introduction and transmission.

**Key words:** Aquatic Diseases, Listed Mollusc Diseases, *Bonamia*, *Mikrocytos*, *Marteilia*, *Perkinsus*, Susceptible Species, Vectors, Risk Assessment, Import Risk Analysis