

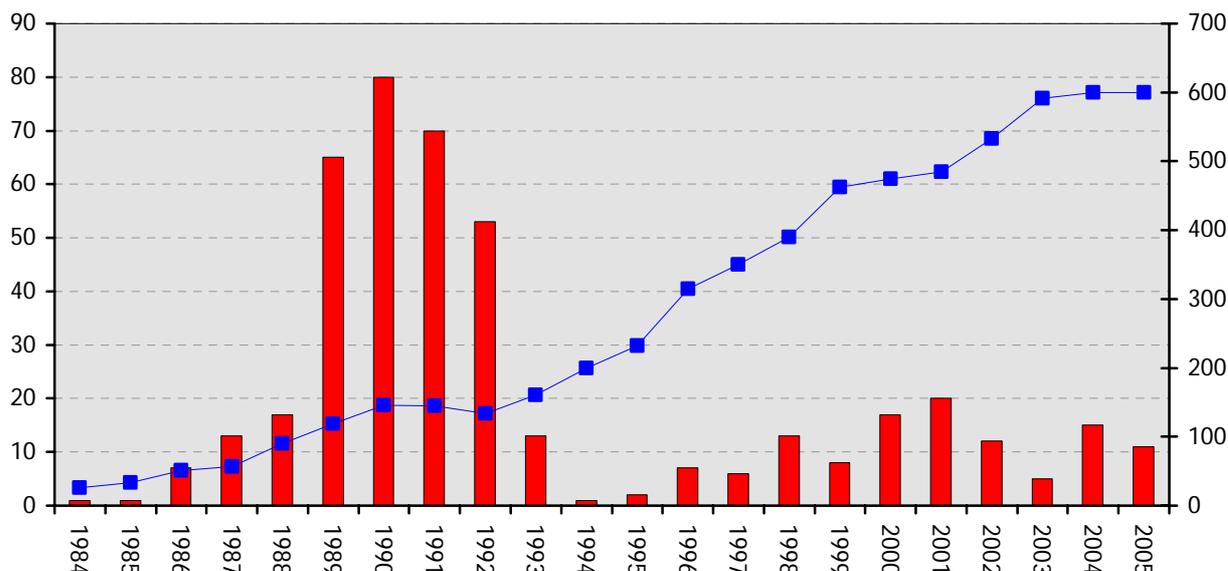
Risk-based management – Which risk factors relating to spread of Infectious Salmon Anaemia (ISA) require development of management strategies?

Infectious salmon anaemia (ISA) is a serious infectious viral disease of Atlantic salmon, first diagnosed in Norway in 1984.

Since then, the disease has been registered in Canada (1996), Scotland (1998), the Faeroe Islands (2000) and USA (2001). ISA-virus has also been detected in rainbow trout in Ireland in 2002.

A total of 437 outbreaks of ISA have been reported in Norway between 1994 and 2005.

The annual number of outbreaks peaked in 1990, with a total of 80 cases. Figure 1 shows the number of outbreaks and annual salmon production figures on a national basis for this period.



Figur 1. Total confirmed ISA outbreaks (red columns) and salmon production in 1000 tonnes (blue line) in Norway from 1984 until 2005.

Management of ISA

The authorities decided in 1988 that ISA should be listed as a notifiable group B disease. As new knowledge relating to spread of the disease became available, various counter measures were implemented e.g. prohibition of seawater use in hatcheries, prohibition of transfer of fish between sea sites, mandatory health certification for aquaculture operations, requirement for disinfection of waste water from slaughter houses and various transport regulations.

Although the number of outbreaks of ISA has decreased significantly since the peak year of 1990, between 5 and 20 outbreaks continue to be registered annually in Norway.

The disease is now managed in accordance with a contingency plan, which involves establishment of zones, clearing of affected sites within a short deadline, followed by wash, disinfection and fallowing. ISA outbreaks lead to large losses and consequences for the producer, the industry and society in general.

New knowledge relating to ISA

During recent years the scientific community has increased levels of knowledge relating to ISA virus, and has proposed new hypotheses relating to reservoir and paths of transmission. The hypotheses have been promoted and discussed in various national and international fora, including a national ISA seminar arranged by the National Veterinary Institute in October 2004. The subsequent report from this seminar provided good background information on the various problems and is appended here. Many articles relating to themes raised at the meeting are published or are in preparation for publishing.

The Norwegian Food Safety Authority's management of infectious diseases shall be risk-based and adequate in relation to current knowledge on ISA-virus transmission i.e. ISA-virus characteristics, reservoir and infection pathways. A process to examine current management strategies in light of the continuing debate was therefore rapidly set in motion. There remains, however, disagreement between the research establishments involved regarding interpretation of research results on ISA and ISA virus, and how these results should be utilised in management of the disease.

Assignment to the Scientific committee

To ensure that the Norwegian Food Safety Authority bases its management on internationally accepted knowledge the Scientific committee is asked to consider the following questions:

Can ISA virus transmit vertically? How high is the probability of spread of the agent and/or development of disease, as a result of vertical transmission?

Do present levels of knowledge relating to the virus and disease provide a good enough basis for tracing the source of infection and routes of transmission of ISA? Is screening for ISAV in apparently healthy fish appropriate for limiting ISA distribution?

Of what importance are the different production stages, including transport, slaughter and other related activities for spread of infectious materials? How long does ISA-virus remain infective under different conditions?

Does infection with different variants of the virus pose greater or lesser risk of disease outbreak?

What are the reservoirs for ISA virus? What is the importance of various reservoirs for outbreak of disease?

The report from the Scientific committee shall be written in English.

Deadline for delivery of the report (level 2): 10. January 2007

Responsible person in the Norwegian Food Safety Authority:

Stian Johnsen

Advisor

Head Office, section for infectious agents and biotoxins.

e-mail adress:

stijo@mattilsynet.no

Tel.:

23 21 67 20

Yours faithfully,

Nina Krefting Aas

Section leader