DRAFT

MEDIA LINES & Qs and As

ISAv interim results – Ongoing Investigation

Issue

There is strong international media and stakeholder interest about the ongoing ISAV investigation in Canada's Pacific waters, especially because activist Alexandra Morton has repeatedly published alleged "positive" ISAV results on her website. The issue has also started to affect international markets for Canadian salmon. The joint DFO/CFIA investigation into the suspicions of this virus continues, with final results not expected for another few weeks. Under normal circumstances, preliminary results are not released to the public. However, both CFIA and DFO senior management feel strongly that details and preliminary results of this investigation are now required to maintain public confidence.

Note: As this is a joint CFIA/DFO lead, some of these media lines/Qs and As will be better handled by either DFO or CFIA. CFIA approval will be sought.

Media lines

General

- The Canadian Food Inspection Agency (CFIA), in close collaboration with Fisheries and Oceans Canada (DFO), and the Province of British Columbia, continues to investigate suspicions of infectious salmon anemia virus in Pacific salmon in BC.

- In Canada, under the CFIA's National Aquatic Animal Health Program, suspected federally reportable diseases such as infectious salmon anaemia virus must be confirmed at the DFO national reference laboratory, which is located in Moncton, NB.

- DFO has conducted preliminary tests on all 48 samples received as part of the original investigation and the results are ALL negative for the virus. The test conducted is the same testing that resulted in positive results reported by other sources.

- IF PRESSED: Additional samples have also been collected and analysed as part of this investigation. These have also tested negative; however, these supplementary results must be considered inconclusive at this time because of poor quality of the samples that were provided. Further required testing to confirm the absence of the virus in these samples continues in the DFO national reference laboratory.

- With these results, the fact remains that there has never been a confirmed case of ISA in British Columbia salmon – farmed or wild.

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- To date, no attempts to isolate the suspect virus in cell culture have been successful by any laboratory in the world; nor has any nucleic acid sequencing data been produced that would support the presumptive positive results reported to date.

- CFIA and DFO would like to remind Canadians that recent reports stating that ISA has been found in British Columbia salmon have not been verified through established processes.

- Testing for infectious salmon anemia virus in samples collected as part of this current investigation has been ongoing at the national reference laboratory in Moncton, New Brunswick since mid-October. DFO regularly tests salmon in BC for a number of pathogens; between the federal government and government of BC, we have tested over 5000 salmon and all have tested negative for the disease.

- The protection of Canada's natural resources is a top priority of the Government of Canada. We have and will continue to work diligently to ensure there are stringent federal regulations in place to protect Canada's aquatic species (farmed and wild) from disease.

Questions & Answers

Q1: What is the next step:

A1: Internatinally recognized protocols require either cell culture of RNA quality tests to be completed in order to confirm the presence or absence of the virus. This second phas of testing at the national reference laboratory continues to help collaborate the reported findings and to assist in the ongoing investigation. The Government of Canada, through CFIA, will share the results of our tests that verify the presence or absence of Infectious Salmon Anaemia as soon as they become available. Until such time as this testing is finalized, we urge all Canadians exercise patience and let this thorough investigation run its course.

Q. 2: How does the official testing process work?

A.2: Every virus has a unique genetic fingerprint. The national reference lab, through strict and established protocols, has conducted polymerase chain reaction testing on the nucleic acid (RNA) of the salmon samples it received. This is more commonly known as the PCR test. This test analyzes samples for the unique RNA fingerprint of the virus. If this is found a preliminary "positive" result occurs. To then confirm the presence or absence of the live virus, a cell culture test is conducted. Where cell culture is not possible, RNA quality testing must be done to assess the quality of the sample being tested. Cell culture test attempts to grow the virus, and results typically take approximately four weeks. A conclusive positive finding of ISAv must include cell culture testing; this was not completed by the original source of the assertions of the presence of ISA in BC waters.

Q.3: Can you elaborate on your results?

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The results from the national reference laboratory, based on strict and internationally established protocols, are as follows:

- From the original 48 sockeye salmon samples that prompted this investigation, all PCR results on kidney extracts are negative (These extracts were collected from the same batch of fish from which the original reports of preliminary positive results from heart extracts, prompting this investigation).

- CFIA also received 299 sockeye salmon fish samples that were thought to be collected at the same time as the original 48 that prompted this investigation. From these, all 299 samples have been tested, and all results are negative; however these results must be considered as inconclusive at this time because of the poor quality of the samples received which prevent the detection of the virus with any reasonable confidence.

- Testing on the 11 wild-salmon species specimens provided to DFO by Dr. Kibenge (these included tissue homogenate from sockeye, coho, Chinook and chum salmon), was completed and found to be negative; however, the RNA quality testing for these samples is ongoing.

    - IF PRESSED: NOTE - Dr. Kibenge reported 3 positives (one heart and two gills) form this batch, however RNA quality testing on the heart sample was completed and was deemed to be very poor; therefore, this result is considered inconclusive. Other RNA testing continues.

Q4: Why do you have some "inconclusive" results?

A4: The nature of the PCR test requires the sample to be fresh or well preserved. Because both host (fish) and viral RNA degrades rapidly after death, virus detection can quickly become impossible by PCR or any other accepted test methods. Fish can be frozen to preserve the RNA, but tissue and virus degradation occurs even at -20 degrees Celsius. Storage at -70 degrees Celsius, or in a specialized storage system known as an "RNAlater," is required for long term preservation.

The national reference lab is testing the RNA from the 299 fish samples that were reportedly collected at the same time as the original 48. However, before being collected by CFIA, these samples were stored in the freezer of a private individual's home. It has since been determined by the national reference lab that the quality of the fish samples had degraded likely due to the storage conditions before they were received by DFO, to the point that conclusive testing is impossible for these fish.

Q5: How did these initial positive reports happen. Is that being investigated too?

A5: As part of the investigation, the CFIA and DFO are also looking at how the samples were collected, handled, transported and stored before and after being sent for testing. This information

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will be critical in validating the virus test results and establishing Canada's health status for this disease. Many scenarios are possible, including cross contamination, poor sample quality or improper processes.

As well, an assessment of both laboratories will be conducted. This dual laboratory assessment between the Atlantic Veterinary College and the national reference laboratory in Moncton is being conducted to help clarify how the preliminary positive results from the Atlantic Veterinary College were established.

Q6: On November 2nd, Alexandra Morton published on her website that she has received confirmation that one of the samples of the original 48 samples that she sent to Dr. Nylund at a Norwegian ISA laboratory was found to be positive:

A6 The DFO national reference lab conducted its own testing from the RNA of the kidneys from this sockeye salmon. That result, conducted under strict and established protocols, was negative for ISAV.

It is important to note that according to Dr. Nylund himself, the sample was of poor quality and required many runs to obtain a borderline result. Dr. Nylund attempted to replicate his positive findings and stated that he could not. This result cannot be viewed as conclusive until it has been collaborated by additional testing.

Dr. Kibenge also noted concerns in his preliminary results and stated that further testing is required.

Q7: What happens if ISAV proves to be in BC wild/farmed salmon?

A7: (CFIA LEAD) - Recommendation not to speculate in advance of the investigation outcome.

Q8: Will testing be increased:

A8: Canadians can be confident in the current level of management and review. The CFIA and DFO regularly assess the current testing levels for this virus in both wild and aquaculture populations in BC and are prepared to increase surveillance activities as required.

Q9: Will there be a trade ban on Canadian Pacific salmon if positive results occur?

A9: (CFIA LEAD). **Recommendation not to speculate in advance of the investigation outcome.**

Q10: What if it's in BC but we don't know it yet?

A10: Infectious salmon anaemia is a "federally reportable disease" in Canada. This means that all suspected or confirmed cases must be immediately reported to the CFIA.

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The disease poses no risk to people, but could have serious impacts on aquatic animal health and the economy.

Spokesperson

CFIA/DFO - TBD

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