



[Cabinet Secretary for Environment, Climate Change and Land Reform](#)  
[Cabinet Secretary for Rural Economy & Connectivity](#)

The Scottish Government  
St. Andrew's House  
Regent Road  
Edinburgh  
EH1 3DG

26 August 2020

Dear Cabinet Secretaries,

### **Bio-security Risks for 'Scottish' Salmon: Lack of Testing of Imported Ova for Infectious Salmon Anaemia & Piscine Reovirus**

Further to Scottish Salmon Watch's [letter dated 24 February 2020](#) and [letter dated 31 May 2018](#) (re-enclosed below for easy reference), what bio-security measures is the Scottish Government taking to ensure that infectious diseases, viruses and pathogens are not imported into Scotland via infected salmon ova? In view of the tightened security over COVID-19 to reduce the spread of Coronavirus why are Scottish Ministers allowing virus-laden ova and disease-ridden salmon farms and hatcheries to slip through the testing net? Scottish Salmon Watch urges the Scottish Government to close the borders and ban the import of ova as is already the case in Norway.



Don Staniford  
@TheGAAIA

#COVID19 has taught us that closing borders is vital in stemming the spread of infectious diseases, viruses & pathogens [tinyurl.com/yyrzsa6m](https://tinyurl.com/yyrzsa6m) Salmon farms using imported eggs should be quarantined until they can prove they're free of deadly viruses! @GreenerScotland #ISA #PRV



Fergus Ewing MSP and 9 others

11:09 AM · Aug 26, 2020 · Twitter Web App

Scottish Salmon Watch is alarmed by the lack of testing as [detailed in the FOI disclosure by the Scottish Government in April 2020](#).

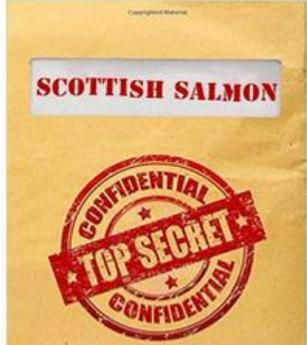


**Don Staniford** @TheGAAIA · Aug 20

In April 2020 @GreenerScotland admitted that imported salmon eggs (ova) are not tested for Infectious Salmon Anaemia or Piscine Reovirus [tinyurl.com/yxu64rve](#) Is 'Scottish' salmon infected with deadly viruses? @DefraGovUK @marinescotland @FergusEwingMSP @strathearnrose @scotgp

**FOI Reveals Virus-Laden Salmon Slip Net & Into Scottish Waters**

A Freedom of Information [reply from the Scottish Government](#) reveals an abject lack of testing of viruses, pathogens and infectious



1. How many salmon eggs imported into Scotland were tested for PRV pathogens and infectious diseases such as ISA?

No testing of salmon eggs, imported into Scotland, has been undertaken in relation to the pathogens and diseases you specify.

2. Has Marine Scotland Science conducted screenings of ova for PRV to avoid vertical transmission?

No screening of ova for PRV has been undertaken by Marine Scotland.

3. What % of ova used by 'Scottish' salmon farms are infected with PRV pathogens and viruses?

We hold no information on the percentage of ova, used by 'Scottish' salmon farms, infected with PRV, ISA and other diseases, pathogens and viruses.

4. What % of imported ova were screened prior to entry into Scotland for pathogens and viruses?

Marine Scotland holds no information on the screening of ova (testing in relation to ova imported into Scotland).



**Don Staniford** @TheGAAIA · Aug 20

Is deadly Infectious Salmon Anaemia already lurking in Scottish salmon farms & hatcheries? @FergusEwingMSP @marinescotland @strathearnrose @KateForbesMSP @MowiScotlandLtd @WeAreBenchmark @EWNutritionGmbH @scotseafarms @GriegShetland @salmon\_scottish @HGSalmonUK @SSPOsays #ISA ...



**Don Staniford**  
@TheGAAIA

What bio-security protocols & safety precautions are Scottish Ministers taking re. imports of ova for use on 'Scottish' salmon farms? [tinyurl.com/tbmols7](#)  
@FergusEwingMSP @strathearnrose @KateForbesMSP @MairiGougeon @GreenerScotland @marinescotland @WeAreBenchmark @HGSalmonUK



7:59 AM · Feb 26, 2020 · Twitter Web App

The [recent outbreaks of Infectious Salmon Anaemia plaguing salmon farms in Norway](#) surely demand increased vigilance including targeted testing of imported ova and farmed salmon in hatcheries and sea cages?

 **Don Staniford**  
@TheGAAIA

Infectious Salmon Anaemia "horror show" plagues #Norway  
[@InfoMattilsynet](#) [@fiskeridir](#) [@seafoodnorway](#)  
[@EFTAsecretariat](#) [@LeroySeafood](#) [@vetinst\\_no](#)  
[@IntraFishNorge](#)



Expert fears new ISA 'horror show' on Norway's salmon farms | Intrafish  
Norway's Veterinary Institute fears the salmon disease may be a greater threat than first thought.  
[intrafish.com](#)

6:48 AM · Aug 20, 2020

The salmon farming industry [claims that bio-security is paramount](#) but this simply do not hold water when there is a patent lack of testing (or at least a woeful lack of public transparency over testing results).

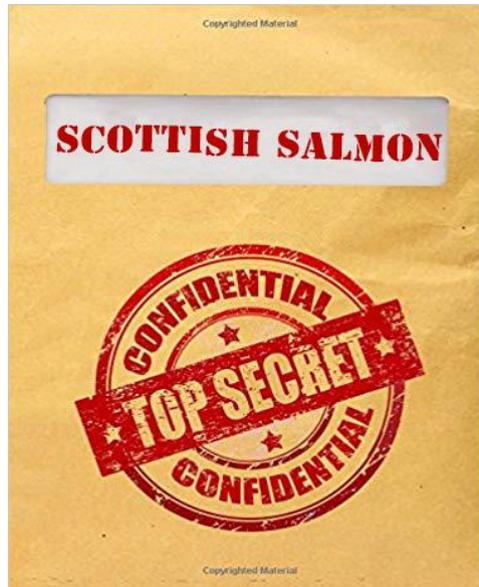
 **Don Staniford**  
@TheGAAIA

"Biosecurity is of crucial importance, not just on farms, but in hatcheries & in other sites" claims [@HamishMacdonell](#)  
[@SSPOsays](#) [tinyurl.com/yyuehjm9](https://tinyurl.com/yyuehjm9) So why are imported ova from #Norway & #Iceland not tested for diseases & viruses?  
[@marinescotland](#) [tinyurl.com/yxu64rve](https://tinyurl.com/yxu64rve)



6:12 PM · Aug 25, 2020

It is a disgrace that [Marine Scotland Science is privately testing farmed salmon for Piscine Reovirus and other viruses, pathogens and diseases - with a FOI from the Scottish Government revealing in June 2019 that over 50% of farmed salmon tested by Marine Scotland Science were positive for PRV](#) - but not making the results known publicly.



Surely the public have a right to know the extent of infectious diseases, viruses, bacteria and pathogens lurking in salmon farms and hatcheries rather than the Scottish Government deeming the information commercially confidential ([as Scottish Salmon Watch argued in our FOI review in April 2020](#))?



Isn't it ironic...don't you think. A little too ironic...and, yeah, I really do think...It's like salmon farmers exploiting the Coronavirus crisis when over 50% of farmed salmon tested positive for a virus [tinyurl.com/t5lgvox](https://www.tinyurl.com/t5lgvox) @marinescotland @SSPOsays #alanismorissette



Fergus Ewing MSP and 9 others

7:27 AM · Mar 13, 2020 · Twitter Web App

Scottish Salmon Watch is concerned that the Coronavirus crisis - which [since March 2020 has included the 'Passive Inspection' of salmon farms](#) (i.e. over the phone without a physical visit by the Fish Health Inspectorate) - is acting like a Trojan Horse to spread deadly diseases on salmon farm and hatcheries. The first line of defence of a strict bio-security regime should surely be a ban on all imported ova with the second line of defence a rigorous testing programme.

A [FOI disclosure by the Scottish Government on 7 August 2020](#) revealed that Scottish Government officials agreed in February 2020 to downplay disease risks in imported ova from Iceland. "I agree we need to head off accusations of disease in Icelandic eggs though suggest we don't address the accusation directly but respond re rigorous trade process, disease-free status etc.," wrote an anonymous Scottish Government official in an internal email in February 2020 to colleagues following a media enquiry by [The Ferret](#).

Could you please provide information - including data detailing test results - of all diseases, viruses and pathogens found in imported Icelandic, Norwegian and Irish ova during 2018 and 2019?

In April 2020, a Scottish Government official described the resumption of ova imports from Norway as "a good news story in light of all the COVID 19 issues" in a memo to the Cabinet Secretary for Rural Economy.

Date consignment due	Destination site name	Destination business name	Consignee Business name (if different from destination business)	Species	Stage	Number in consignment	Source Country	Import consignor
08/04/2020	Rysa Incubation Unit	Rysa Salmon Farm	Cooke Aquaculture Scotland	SAL	OVA	100,000	Norway	AquaGen AS
08/04/2020	Knock	Scottish Sea Farms Ltd		SAL	OVA	120,000	Norway	AquaGen AS

Has the Scottish Government - via Marine Scotland Science or another laboratory - tested the imported ova from AquaGen in April 2020 for Infectious Salmon Anaemia, Piscine Reovirus and other viruses, diseases and pathogens?

Scottish Ministers will be well aware that AquaGen ([owned by EW Group - a German-based company with interests in international poultry genetics](#)) has been [plagued by virus problems](#) and was [fingered by a scientific paper as introducing ISA into Chile via infected eggs from Norway](#). Faced with a ban on imported ova from [ISA-infected Norway](#), AquaGen bought a hatchery near Dumfries from [Norwegian-owned Scottish Sea Farms](#) in 2018 "[to offer Scotland's salmon farmers a reliable supply of eggs from locally farmed AquaGen broodstock](#)".

The [FOI data disclosed by the Scottish Government on 7 August 2020](#) reveals that since the ban on imports of salmon ova from Norway in late May 2019, [Iceland's StofnFiskur](#) (a subsidiary of [Norwegian-owned Benchmark](#) - the company behind the [controversial use of the neonicotinoid insecticide Imidacloprid](#)) has become the main supplier of so-called ['Scottish' salmon](#) ([99% of which is controlled/owned by foreign companies](#) and [ca. 90% of which is sourced from imported ova from Norway, Iceland and Ireland](#)).

Date consignment due	Destination site name	Destination business name	Consignee Business name (if different from destination business)	Number in consignment	Source Country	Import consignor
15/05/2019	Inchmore	Mowi Scotland Ltd		1,300,000	Norway	Mowi Norway
17/05/2019	Inchmore	Mowi Scotland Ltd		1,300,000	Norway	Mowi Norway
22/05/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		3,200,000	Norway	Mowi Norway
28/05/2019	Roslin Institute Hatchery	The Roslin Institute		3,000	Iceland	StofnFiskur Hf.
27/06/2019	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		1,751,000	Iceland	StofnFiskur Hf.
30/07/2019	Barcaldine Hatchery Incubation 2	Scottish Sea Farms Ltd		1,200,000	Iceland	StofnFiskur Hf.
30/07/2019	Barcaldine Hatchery Incubation 3	Scottish Sea Farms Ltd		1,200,000	Iceland	StofnFiskur Hf.
13/08/2019	Inchmore	Mowi Scotland Ltd		1,450,000	Iceland	StofnFiskur Hf.
20/08/2019	Roslin Institute Hatchery	The Roslin Institute		10,000	Iceland	StofnFiskur Hf.
15/10/2019	Kinlochmoidart Hatchery	The Scottish Salmon Company		537,810	Iceland	StofnFiskur Hf.
24/10/2019	Mingary Hatchery	Hebridean Smolts Ltd		955,500	Iceland	StofnFiskur Hf.
31/10/2019	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		1,800,000	Iceland	StofnFiskur Hf.
29/10/2019	Barcaldine Hatchery Incubation 3	Scottish Sea Farms Ltd		1,125,000	Iceland	StofnFiskur Hf.
29/10/2019	Barcaldine Hatchery Incubation 2	Scottish Sea Farms Ltd		1,125,000	Iceland	StofnFiskur Hf.
30/10/2019	Appleburn Incubation Unit	The Scottish Salmon Company		1,030,575	Iceland	StofnFiskur Hf.
12/11/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	Loch Duart Ltd	450,000	Iceland	StofnFiskur Hf.
12/11/2019	Barvas Hatchery	The Scottish Salmon Company		443,625	Iceland	StofnFiskur Hf.
13/11/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		1,900,000	Iceland	StofnFiskur Hf.
20/11/2019	Cairndow Hatchery	Lakeland (Cairndow) Ltd		1,000,000	Iceland	StofnFiskur Hf.
19/11/2019	Applecross Hatchery	The Scottish Salmon Company		1,800,000	Iceland	StofnFiskur Hf.
26/11/2019	Cairndow Hatchery	Lakeland (Cairndow) Ltd		1,500,000	Iceland	StofnFiskur Hf.
27/11/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	Organic Sea Harvest Ltd	675,900	Iceland	StofnFiskur Hf.
28/11/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon Cor	2,320,500	Iceland	StofnFiskur Hf.
11/12/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	Saumon de France	350,000	Iceland	StofnFiskur Hf.
17/12/2019	Roslin Institute Hatchery	The Roslin Institute		9,000	Iceland	StofnFiskur Hf.

The [FOI data disclosed by the Scottish Government on 7 August 2020](#) reveals that [Norwegian-owned Mowi Ireland](#) stepped up ova imports during 2020 with 17.8 million compared to compared to StofnFiskur's 28.5 million (including to [Norwegian/Canadian-owned Organic Sea Harvest](#) via [Dutch-owned Landcatch](#)).

Date consignment	Destination site name	Destination business name	Consignee Business name (if different from destination)	Number in consignment	Source Country	Import consignor
16/01/2020	Barcaldine Hatchery Incubation 4	Scottish Sea Farms Ltd		1,018,520	Republic of Ireland	Mowi Ireland
16/01/2020	Barcaldine Hatchery Incubation 1	Scottish Sea Farms Ltd		1,481,480	Republic of Ireland	Mowi Ireland
14/01/2020	Kinlochmoidart Hatchery	The Scottish Salmon Company		517,440	Iceland	StofnFiskur Hf.
21/01/2020	Ormsary Hatchery	Landcatch Natural Selection Ltd	Organic Sea Harvest Ltd	585,000	Iceland	StofnFiskur Hf.
21/01/2020	Mill Burn (Old Mill)	Kintail Hatchery	Migdale Smolts Ltd	2,100,000	Iceland	StofnFiskur Hf.
16/01/2020	Inverpolly	Finfish Ltd	Mowi Scotland	2,300,000	Republic of Ireland	Mowi Ireland
21/01/2020	Mill Burn (Old Mill)	Kintail Hatchery		2,100,000	Iceland	StofnFiskur Hf.
23/01/2020	Inchmore	Mowi Scotland Ltd		2,000,000	Republic of Ireland	Mowi Ireland
28/01/2020	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		146,000	Republic of Ireland	Mowi Ireland
04/02/2020	Appleburn Incubation Unit	The Scottish Salmon Company		876,330	Iceland	StofnFiskur Hf.
18/02/2020	Wester Fearn	Highland Salmon Company Ltd		450,000	Republic of Ireland	Mowi Ireland
12/02/2020	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		2,450,000	Republic of Ireland	Mowi Ireland
18/02/2020	Roslin Institute Hatchery	The Roslin Institute		6,000	Iceland	StofnFiskur Hf.
20/02/2020	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		1,800,000	Iceland	StofnFiskur Hf.
18/02/2020	Applecross Hatchery	The Scottish Salmon Company		1,800,000	Iceland	StofnFiskur Hf.
20/02/2020	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon Company	2,457,000	Iceland	StofnFiskur Hf.
25/02/2020	Inchmore	Mowi Scotland Ltd		2,500,000	Iceland	StofnFiskur Hf.
19/03/2020	Barcaldine Hatchery Incubation 3	Scottish Sea Farms Ltd		1,500,000	Republic of Ireland	Mowi Ireland
19/03/2020	Barcaldine Hatchery Incubation 2	Scottish Sea Farms Ltd		1,500,000	Republic of Ireland	Mowi Ireland
17/03/2020	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		125,000	Iceland	StofnFiskur Hf.
17/03/2020	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		1,225,000	Iceland	StofnFiskur Hf.
19/03/2020	Ormsary Hatchery	Landcatch Natural Selection Ltd	Organic Sea Harvest Ltd	670,000	Iceland	StofnFiskur Hf.
26/03/2020	Cairndow Hatchery	Cooke Aquaculture (Freshwater) Ltd		1,500,000	Iceland	StofnFiskur Hf.
31/03/2020	Inverpolly	Finfish Ltd	Scottish Sea Farms Ltd	2,450,000	Republic of Ireland	Mowi Ireland
31/03/2020	Inverpolly	Finfish Ltd	Mowi Scotland Ltd	2,450,000	Republic of Ireland	Mowi Ireland
22/04/2020	Inchmore	Mowi Scotland Ltd		2,500,000	Iceland	StofnFiskur Hf.
13/05/2020	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		3,250,000	Iceland	StofnFiskur Hf.
13/05/2020	Furnace (FW)	Cooke Aquaculture (Freshwater) Ltd		1,500,000	Iceland	StofnFiskur Hf.
03/06/2020	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		1,800,000	Iceland	StofnFiskur Hf.
02/07/2020	Barcaldine Hatchery Incubation 4	Scottish Sea Farms Ltd		1,200,000	Iceland	StofnFiskur Hf.

The [FOI data disclosed by the Scottish Government on 7 August 2020](#) reveals that during 2020 (up to 2 July), a staggering 46.5 million salmon ova were imported into Scotland including 18.9 million to Mowi; 9.3 million to Scottish Sea Farms; 5.7 million to The

Scottish Salmon Company; 3.6 million to Grieg Seafood; 3.1 million to Cooke Aquaculture and 1.3 to Organic Sea Harvest. This compares with 58.5 million salmon ova imported during the whole of 2019. Since 2003, 'Scottish' salmon farmers have imported around 700 million ova mostly from Norway but also from Iceland and Ireland.

StofnFiskur was [named as the company supplying virus-laden ova to Cooke Aquaculture](#) in the United States [leading to the culling of infected fish in 2018](#). In June 2019, Scottish Salmon Watch [revealed that over 50% of farmed salmon tested by Marine Scotland Science were infected with PRV but refused to name the companies affected](#).

More background on this issue is published via [Norwegian Salmon Ova Slip Back Into Scotland \(as Infectious Salmon Anaemia plagues salmon farms in Norway\)](#)



Don Staniford  
@TheGAAIA



Norwegian Salmon Ova Slip Back Into Scotland (as Infectious Salmon Anaemia plagues salmon farms in Norway)  
[tinyurl.com/yyrzsa6m](#) @GreenerScotland @marinescotland  
@APHAgovuk @DefraGovUK @InfoMattilsynet  
@FergusEwingMSP @HGSalmonUK @EWNutritionGmbH  
@WeAreBenchmark @scotseafarms



6:13 AM · Aug 26, 2020



"Whilst Norway continues to ban imports of Scottish salmon eggs due to disease and genetic risks, the Scottish Government is recklessly resuming imports from Norway where salmon farms are being plagued by Infectious Salmon Anaemia," said Don Staniford, [Director of Scottish Salmon Watch](#). "Importing salmon eggs from countries such as Norway and Iceland ravaged by diseases, viruses and pathogens is a recipe for ecological ruin. Scottish Ministers are presiding over the extinction of the King of Fish - a true Scottish icon - which is already genetically polluted by Norwegian salmon. Using foreign salmon eggs to spawn Scottish salmon is devious, deceptive and a deadly menace to wild salmon. So-called 'Scottish' salmon is a sham, scam and a consumer con."



"The import of salmon eggs from Norway, Iceland and Ireland - which come into Scotland without any disease and virus testing - is bad news for wild salmon and bad news for the Scottish environment," continued Staniford, author of '[Scottish Scamon](#)'. "It beggars belief that the Scottish Government is willing to sacrifice Scotland's iconic Atlantic salmon at the altar of the Norwegian-owned salmon farming industry. Scotland should immediately ban the import of all salmon eggs and test hatcheries and farms for Infectious Salmon Anaemia and Piscine Reovirus. If the COVID crisis has taught us anything it is that closing borders is vital in stemming the spread of infectious diseases, viruses and pathogens. Hatcheries using imported eggs should be quarantined until they can prove they're free of deadly viruses."

In conclusion, please consider the following questions under the relevant FOI and Environmental Information regulations:

Could you please provide information - including data detailing test results - of all diseases, viruses and pathogens found in imported Icelandic, Norwegian and Irish ova during 2018 and 2019?

Has the Scottish Government - via Marine Scotland Science or another laboratory - tested the imported ova from AquaGen in April 2020 for Infectious Salmon Anaemia, Piscine Reovirus and other viruses, diseases and pathogens?

Yours sincerely,

Don Staniford

Director, Scottish Salmon Watch



[Cabinet Secretary for Environment, Climate Change and Land Reform](#)  
[Cabinet Secretary for Rural Economy & Connectivity](#)

The Scottish Government  
St. Andrew's House  
Regent Road  
Edinburgh  
EH1 3DG

24 February 2020

Dear Cabinet Secretaries,

**Bio-security Protocols & Safety Precautions re. Ova Imports**

Further to Scottish Salmon Watch's letter dated 31 May 2018 (re-enclosed below and [available online here](#)), what bio-security protocols and safety precautions are Scottish Ministers taking in relation to the import of ova for use on 'Scottish' salmon farms?

Scottish Ministers are aware of a [damning report published by the European Free Trade Association Surveillance Authority](#).



Brussels, 23 September 2019  
Case No: 83033  
Document No: 1085525

**Final report**

**EFTA Surveillance Authority's mission to**

**Norway from 20 to 29 May 2019**

**in order to evaluate animal health controls**

**in relation to aquaculture**

Information disclosed by the Scottish Government via [FOI-19-02663](#) paints an [alarming picture of lax biosecurity and inadequate safety precautions with respect to Infectious Salmon Anaemia](#) - a deadly disease [which caused £100 million damage to the Scottish salmon farming industry back in 1998-9 with the losses of 200 jobs](#) (the outbreak originated at Norwegian-owned Norsk Hydro - now Scottish Sea Farms). A suspected ISA outbreak [occurred at Mowi's Loch Sheilavaig salmon farm in South Uist in 2004](#) with an [ISA outbreak](#)

[in Shetland in 2009 costing Norwegian-owned Grieg dearly](#) and [Norwegian-owned Scottish Sea Farms](#).

Scottish Salmon Watch reported today via [Norwegian Salmon Egg Exports Banned Due to Disease Risks](#):

**- In the few months preceding the ban in June 2019, 10 million ova were imported from Mowi Norway to Scotland at sites operated by Mowi Scotland and Finfish Ltd.**

Date consignment due	Destination site name	Destination business name	Species	Stage	Number in consignment	Source Country	Import consignor
04/04/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd	SAL	OVA	1,537,191	Norway	Mowi Norway
09/04/2019	Inverpolly	Finfish Ltd	SAL	OVA	1,322,403	Norway	Mowi Norway
10/04/2019	Inverpolly	Finfish Ltd	SAL	OVA	1,247,597	Norway	Mowi Norway
15/05/2019	Inchmore	Mowi Scotland Ltd	SAL	OVA	1,300,000	Norway	Mowi Norway
17/05/2019	Inchmore	Mowi Scotland Ltd	SAL	OVA	1,300,000	Norway	Mowi Norway
22/05/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd	SAL	OVA	3,200,000	Norway	Mowi Norway

**- Between January and 2 April 2019, another 13.8 million ova were imported from Norway including to AquaGen's Hollywood Salmon Farms in Dumfries, Landcatch's Ormsary Hatchery, Mowi's Lochailort Recirculation and Inchmore Hatcheries, Cooke Aquaculture's Ardtaraig Hatchery, Grieg Seafood's Girlsta Hatchery and The Scottish Salmon Company's Kinlochmoidart Hatchery.**

Date consignment due	Destination site name	Destination business name	Consignee Business name (if different from destination business)	Species	Stage	Number in consignment	Source Country	Import consignor
16/01/2019	Mill Burn (Old Mill)	Kintail Hatchery	Migdale Smolt Ltd	Salmon	Ova	2,000,000	Norway	Grieg Seafood Rogaland
17/01/2019	Hollywood Salmon Farm	AquaGen Scotland Ltd		Salmon	Ova	42,000	Norway	AquaGen AS
24/01/2019	Niall Bromage Freshwater Field Station	University of Stirling		Salmon	Ova	30,000	Norway	MOWI Norway
29/01/2019	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	682,500	Norway	Grieg Seafood Rogaland
30/01/2019	Allt Mhor	JS Salmon Ltd	Kames Fish Farming	Salmon	Ova	500,000	Norway	Grieg Seafood Rogaland
30/01/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon Company	Salmon	Ova	755,300	Norway	Grieg Seafood Rogaland
04/02/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,563,000	Norway	MOWI Norway
05/02/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,537,000	Norway	MOWI Norway
05/02/2019	Inchmore	Mowi Scotland Ltd		Salmon	Ova	1,000,000	Norway	MOWI Norway
07/02/2019	Kinlochmoidart Hatchery	The Scottish Salmon Company		Salmon	Ova	576,000	Norway	Grieg Seafood Rogaland
13/02/2019	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	30,000	Norway	Grieg Seafood Rogaland
20/02/2019	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,800,000	Norway	Grieg Seafood Rogaland
26/02/2019	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	367,500	Norway	AquaGen AS
28/03/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,350,000	Norway	MOWI Norway
02/04/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,562,809	Norway	MOWI Norway

**- In 2019, Scotland imported 60 million ova with 26.4 million from Iceland (the leading exporter for the first time), 24.7 million from Norway and 9.9 million from the Republic of Ireland.**

**- In 2019, the largest importers of ova were Iceland's Stofnfiskur Hf. (26.4 million); Mowi Norway (17 million); Mowi Ireland (9.9 million); Norway's Grieg Seafood Rogaland (6.3 million).**

**- The ban on ova exports from Norway in June 2019 led to zero Norwegian imports of ova to Scotland after a shipment to Mowi on 22 May 2019. All shipments after that date - at least up to the end of 2019 when data is available - were from Iceland's Stofnfiskur [\(a company named as supplying Cooke Aquaculture in the United States with ova](#)**

**infected with Piscine Reovirus leading to the culling of 800,000 farmed salmon).**

**Destinations for the ova included Scottish Sea Farms, Mowi, Grieg Seafood, The Scottish Salmon Company, the Roslin Institute, Landcatch, Lakeland and Organic Sea Harvest (via Landcatch).**

Date consignment due	Destination site name	Destination business name	Consignee Business name (if different from destination business)	Species	Stage	Number in consignment	Source Country	Import consignor
14/05/2019	Niall Bromage Freshwater Field Station	University of Stirling		SAL	OVA	18,000	Iceland	Stofniskur Hf.
28/05/2019	Roslin Institute Hatchery	The Roslin Institute		SAL	OVA	3,000	Iceland	Stofniskur Hf.
27/06/2019	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		SAL	OVA	1,751,000	Iceland	Stofniskur Hf.
30/07/2019	Barcaldine Hatchery Incubation 2	Scottish Sea Farms Ltd		SAL	OVA	1,200,000	Iceland	Stofniskur Hf.
30/07/2019	Barcaldine Hatchery Incubation 3	Scottish Sea Farms Ltd		SAL	OVA	1,200,000	Iceland	Stofniskur Hf.
13/08/2019	Inchmore	Mowi Scotland Ltd		SAL	OVA	1,450,000	Iceland	Stofniskur Hf.
20/08/2019	Roslin Institute Hatchery	The Roslin Institute		SAL	OVA	10,000	Iceland	Stofniskur Hf.
15/10/2019	Kinlochmoidart Hatchery	The Scottish Salmon Company		SAL	OVA	537,810	Iceland	Stofniskur Hf.
24/10/2019	Mingarry Hatchery	Hebridean Smolts Ltd		SAL	OVA	955,500	Iceland	Stofniskur Hf.
31/10/2019	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		SAL	OVA	1,800,000	Iceland	Stofniskur Hf.
29/10/2019	Barcaldine Hatchery Incubation 3	Scottish Sea Farms Ltd		SAL	OVA	1,125,000	Iceland	Stofniskur Hf.
29/10/2019	Barcaldine Hatchery Incubation 2	Scottish Sea Farms Ltd		SAL	OVA	1,125,000	Iceland	Stofniskur Hf.
30/10/2019	Appleburn Incubation Unit	The Scottish Salmon Company		SAL	OVA	1,030,575	Iceland	Stofniskur Hf.
12/11/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	Loch Duart Ltd	SAL	OVA	450,000	Iceland	Stofniskur Hf.
12/11/2019	Barvas Hatchery	The Scottish Salmon Company		SAL	OVA	443,625	Iceland	Stofniskur Hf.
13/11/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		SAL	OVA	1,900,000	Iceland	Stofniskur Hf.
19/11/2019	Niall Bromage Freshwater Field Station	University of Stirling		SAL	OVA	15,000	Iceland	Stofniskur Hf.
20/11/2019	Cairndow Hatchery	Lakeland (Cairndow) Ltd		SAL	OVA	1,000,000	Iceland	Stofniskur Hf.
19/11/2019	Applecross Hatchery	The Scottish Salmon Company		SAL	OVA	1,800,000	Iceland	Stofniskur Hf.
26/11/2019	Cairndow Hatchery	Lakeland (Cairndow) Ltd		SAL	OVA	1,500,000	Iceland	Stofniskur Hf.
27/11/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	Organic Sea Harvest L	SAL	OVA	675,900	Iceland	Stofniskur Hf.
28/11/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon (	SAL	OVA	2,320,500	Iceland	Stofniskur Hf.
11/12/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	Saumon de France	SAL	OVA	350,000	Iceland	Stofniskur Hf.

"The ban on ova imports from Norway is a slap in the face for Norwegian companies exploiting Scotland's wild image," [stated today's press release from Scottish Salmon Watch](#). "It beggars belief that Norway bans imports of Scottish ova yet the Scottish Government recklessly allows imports of ova from countries with a history of disease problems. Scottish Ministers should stop playing their high risk game of Norwegian, Icelandic and Irish roulette. Is deadly ISA already lurking on Scottish salmon farms?"



In June 2019, Scottish Salmon Watch [revealed that over 50% of farmed salmon sampled by Marine Scotland Science tested positive for Piscine Reovirus.](#)

"The ban on imports from Norway should be extended to other countries to protect the genetic integrity of Scottish salmon," [continued today's press release from Scottish Salmon Watch.](#) "Iceland has now become the #1 importer of eggs for use in Scottish salmon due to disease risks in Norway."



"Switching from disease-ridden Norwegian ova to Icelandic ova is akin to leaping off the Titanic onto the Exxon Valdez. The Icelandic company (Stofnfiskur) now supplying salmon farms in Scotland with imported ova was [named in the spread of virus-laden ova to Cooke Aquaculture in Washington State leading to the mass slaughter of infected farmed salmon due to Piscine Reovirus.](#) And [ISA-ridden AquaGen](#) is producing 'Scottish' salmon through the back door via [potentially infected ova](#) imported from Norway at their [Holywood Salmon Farm in Dumfries.](#)"



The Ferret [reported earlier today](#) (24 February 2020):



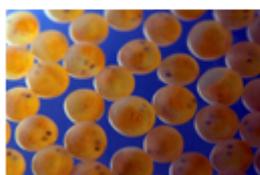
**Imports of salmon eggs from Norway have been banned over fears a deadly viral disease could spread to Scotland, we can reveal.**

[New documents](#) disclose that exports of Norwegian eggs were banned last June following an inspection by the [European Free Trade Association \(EFTA\)](#). The ban remains in place, although the fish farming industry says there is no shortage of eggs.

Millions of salmon eggs, also known as ova, have been imported from Norway to Scottish salmon farms in recent years but there have been concerns over [Infectious Salmon Anaemia \(ISA\)](#), a viral disease affecting Atlantic Salmon.

Last February, [The Ferret reported](#) that Scottish and UK government officials had raised concerns over the import to Scotland of salmon eggs from Norwegian firm, [AquaGen](#), after the outbreak of a deadly virus. AquaGen is one of the world's major suppliers and exported 22.6 million ova to Scotland in 2016 alone.

### Deadly virus outbreak prompted fears over import of fish farm eggs to Scotland



Government officials raised concerns over the import to Scotland of salmon eggs from a Norwegian company called AquaGen after the outbreak of a deadly virus.

Scottish Salmon Watch also [wrote to Scottish Ministers in April 2019](#):



Scottish Ministers  
St. Andrew's House  
Regent Road  
Edinburgh  
EH1 3DG  
[scottish.ministers@gov.scot](mailto:scottish.ministers@gov.scot)

5 April 2019

Dear Scottish Ministers,

#### **Surveillance of Salmon Farms, Hatcheries & Ova to Minimise Disease Risks**

Will Scottish Ministers commit to a program of increased testing and sampling of farmed salmon (including smolts and ova in hatcheries as well as in sea cages and processing plants) for infectious diseases, pathogens, bacteria, parasites and viruses?

In order to safeguard the health of wild fish (as well as farmed salmon), Scottish Salmon Watch challenges the Scottish Government to establish a strict surveillance regime which would test and report publicly on infectious diseases, pathogens, bacteria, parasites and viruses in the following:

- a) Ova imports
- b) Smolts in the hatchery prior to transfer to sea-cages
- c) Harvest-ready farmed salmon immediately prior to slaughter
- d) Market-ready farmed salmon in the processing plant

Scottish Salmon Watch is seriously concerned at the lack of monitoring and sampling of salmon farms, hatcheries and [ova imports](#). The surveillance of [emerging viruses](#) and [emerging diseases](#) such as Piscine Orthoreovirus (Heart & Skeletal Muscle Inflammation), Amoebic Gill Disease and *Pasteurella skyensis* appears woefully inadequate and even the surveillance of [more established 'Notifiable Diseases'](#) is seriously lacking.

In view of the [increasing weight of scientific evidence](#) linking the spread of diseases, pathogens and viruses via vertical transmission, Scottish Salmon Watch views the lack of testing of [salmon ova imported into Scotland](#) as the [antithesis of the precautionary principle](#). Indeed, it is unclear whether imported salmon ova and smolts prior to transfer to sea cages are tested at all leaving the door wide open to disease risks.

Scottish Salmon Watch's [letter to Scottish Ministers dated 5 April 2019](#) included:

Scottish Ministers should be aware of reports of PRV in infected eggs imported from Iceland to the United States. Salmon Business [reported in December 2018](#):

*"What about PRV in eggs?"*

"That's a good question and we have been arguing about true vertical transfer we think when it's inside the egg - not necessarily in the genome but at least inside the egg and more like the contamination problem carrying the virus with a shipment - not necessarily within the fish at all but the materials in the packaging might get contaminated - this is maybe a very prevalent virus. And we need to state that it has been infected before shipping that's also very difficult," Dale says and adds:

"We should be careful - you need a real good sequence data on that whole genome and need to have enough to compare with - and probably they don't have either. To unravel where a virus comes from is a major job to do."

This followed a [news report in The Seattle Times](#):

**The Seattle Times**

**Environment**

## Fish farmer destroys 800,000 juvenile Atlantic salmon due to disease; second purge in past year

Originally published December 18, 2018 at 7:11 pm | Updated December 18, 2018 at 7:38 pm

**The Washington Department of Fish and Wildlife considers the exotic strain of PRV to be an unacceptable risk to native stocks of Pacific salmon. Under the conditions of its permit, Cooke Aquaculture Pacific was required to destroy the fish.**

By [Lynda V. Mapes](#) 

*Seattle Times environment reporter*

For the second time, Cooke Aquaculture Pacific has destroyed 800,000 juvenile Atlantic salmon after testing required by the Washington Department of Fish and Wildlife (WDFW) determined the fish were infected with an exotic strain of Piscine Orthoreovirus (PRV.)

The strain is essentially the same strain of virus found at the Iceland hatchery from which Cooke receives Atlantic salmon eggs.

[Cooke had a similar problem last May.](#) Tests on the most current batch recently came back, said Amy Windrope, Region 4 director for WDFW. Two of Cooke's last three batches of Atlantic salmon in the past year have tested positive for PRV, Windrope said. The third was clean.

The Seattle Times [reported in May 2018](#):

## Washington state finds virus in Cooke Atlantic salmon, plans expanded testing

Originally published May 19, 2018 at 6:00 am | Updated May 19, 2018 at 12:22 pm

**Washington state tested smolt in a Cooke Aquaculture incubator and found the Atlantic salmon had a strain of Icelandic virus. The state denied permission for the company to move the 800,000 fish to an open-water net pen.**

By [Lynda V. Mapes](#) 

*Seattle Times environment reporter*

After identifying an exotic virus in fish raised by Cooke Aquaculture, Washington state is planning to test at other sites where the pathogen from Atlantic salmon may have been spread.

The virus detected in Cooke's fish is a strain of piscine orthoreovirus (PRV) from the northern Atlantic. Cooke hatched the fish from eggs the company imported from its supplier in Iceland. Those eggs are presumed to be the source of the virus, Warheit said.

Salmon Business [reported on 20 December 2018](#):

## Egg supplier responds to Washington PRV salmon cull

News by [Owen Evans](#) - 20 December 2018

**Benchmark Genetics, which supplies eggs to Cooke Aquaculture Pacific, has responded to reports a US salmon cull was due to an 'exotic' strain of Piscine Orthoreovirus (PRV).**

As reported on [SalmonBusiness](#) yesterday, the salmon farmer Cooke Aquaculture Pacific had to cull 800,000 fish.

The Icelandic company StofnFiskur – a subsidiary of Benchmark Genetics – supplied the eggs to Cooke.

Divisional marketing director Birgitte Sørheim wrote in an email to [SalmonBusiness](#) that: "PRV is not a classified disease but a virus commonly found in Atlantic salmon. Fish that carry the virus are not sick but can, under certain circumstances (weak health status/gill status and other factors) develop heart and skeletal muscle inflammation and will then be diagnosed as sick. This was not the case with the juveniles that had to be destroyed in the US. These fish were healthy but were required to be destroyed by the WDFW."

Cooke's hatchery near Rochester tested positive for a form of the fish PRV *piscine orthoreovirus* virus that [the WDFW](#) (The Washington Department of Fish and Wildlife) classifies it as "exotic."

Sørheim added that "the total number of fish destroyed was 800,000. PRV was detected by routine sampling in April, and the entire batch of fish was required to be culled."

"The PRV at Cooke may have originated from the ova delivered from Iceland. We have, however, an optional service of screening against PRV that our customers may choose as an extra risk measure to avoid vertical transmission."

"PRV is found in both farmed and wild salmon and is not described as exotic in Europe. The virus is also not listed by OIE or European authorities," she wrote.

According to [data disclosed via FOI by the Scottish Government](#) in September 2018, Scottish salmon farmers imported at least 16.5 million salmon eggs from Stofnfiskur in Iceland between January 2017 and July 2018 (information relating to Scottish Sea Farms was redacted leading to an appeal to the Scottish Information Commissioner in March 2019).

Date	Site of destination	Operator	Consignee on certificate (if different from operator)	Species	Stage	Number	Source Country	Source Company
11/01/2017	Tulich Hatchery	The Scottish Salmon Company		Salmon	Ova	1,176,000	Iceland	Stofnfiskur
15/02/2017	Geocrab Hatchery	The Scottish Salmon Company		Salmon	Ova	876,000	Iceland	Stofnfiskur
23/02/2017	Geocrab Hatchery	The Scottish Salmon Company		Salmon	Ova	55,000	Iceland	Stofnfiskur
04/04/2017	Furnace Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	1,000,000	Iceland	Stofnfiskur
23/08/2017	Inst of Medical Sciences	University of Aberdeen		Salmon	Ova	3,000	Iceland	Stofnfiskur
04/10/2017	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,500,000	Iceland	Stofnfiskur
08/11/2017	Cairndow Hatchery	Lakeland (Cairndow) Ltd	Cooke Aquaculture Freshwater Ltd	Salmon	Ova	2,500,000	Iceland	Stofnfiskur
09/11/2017	Tulich Hatchery	The Scottish Salmon Company		Salmon	Ova	2,714,250	Iceland	Stofnfiskur
22/11/2017	Kinlochmoidart Hatchery	The Scottish Salmon Company		Salmon	Ova	1,522,500	Iceland	Stofnfiskur
15/11/2017	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	172,000	Iceland	Stofnfiskur
15/11/2017	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	918,750	Iceland	Stofnfiskur
01/02/2018	Tulich Hatchery	The Scottish Salmon Company		Salmon	Ova	1,360,000	Iceland	Stofnfiskur
01/03/2018	Kinlochmoidart Hatchery	The Scottish Salmon Company		Salmon	Ova	615,000	Iceland	Stofnfiskur
01/03/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon Company	Salmon	Ova	575,000	Iceland	Stofnfiskur
12/04/2018	The Roslin Institute	the Roslin Institute		Salmon	Ova	3,200	Iceland	Stofnfiskur
08/06/2018	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,500,000	Iceland	Stofnfiskur

Between January 2017 and March 2018, The Scottish Salmon Company imported 10.3 million ova from Iceland and Norway (including [ISA-infected AquaGen](#) and [PRV-infected Stofnfiskur](#)):

Date	Site of destination	Operator	Consignee on certificate (if different from operator)	Number	Source Country	Source Company
01/03/2017	Geocrab Hatchery	The Scottish Salmon Company		396,000	Norway	AquaGen AS
23/02/2017	Geocrab Hatchery	The Scottish Salmon Company		55,000	Iceland	Stofnfiskur
09/11/2017	Tulich Hatchery	The Scottish Salmon Company		2,714,250	Iceland	Stofnfiskur
22/11/2017	Kinlochmoidart Hatchery	The Scottish Salmon Company		1,522,500	Iceland	Stofnfiskur
15/11/2017	Barvas Hatchery	The Scottish Salmon Company		172,000	Iceland	Stofnfiskur
15/11/2017	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	918,750	Iceland	Stofnfiskur
01/02/2018	Tulich Hatchery	The Scottish Salmon Company		1,360,000	Iceland	Stofnfiskur
30/01/2018	Barvas Hatchery	The Scottish Salmon Company		1,047,500	Norway	Salmobreed
30/01/2018	Amhuinnsuidhe Hatchery	The Scottish Salmon Company		400,000	Norway	Salmobreed
01/03/2018	Kinlochmoidart Hatchery	The Scottish Salmon Company		615,000	Iceland	Stofnfiskur
01/03/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon Company	575,000	Iceland	Stofnfiskur
27/02/2018	Geocrab Hatchery	The Scottish Salmon Company		508,000	Norway	Salmobreed

Between January 2017 and February 2018, Cooke Aquaculture imported 7.6 million ova from Iceland, Ireland and Norway (including [ISA-infected AquaGen](#) and [PRV-infected Stofnfiskur](#)):

Date	Site of destination	Operator	Consignee on certificate (if different from operator)	Number	Source Country	Source Company
16/02/2017	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		400,000	Norway	AquaGen AS
16/02/2017	Cairndow Hatchery	Lakeland (Cairndow) Ltd	Cooke Aquaculture Freshwater	1,400,000	Rep of Ireland	Marine Harvest Ireland
09/03/2017	Rysa Incubation Unit	Rysa Salmon Farm	Cooke Aquaculture Freshwater	170,000	Norway	AquaGen AS
04/04/2017	Furnace Hatchery	Cooke Aquaculture (Freshwater) Ltd		1,000,000	Iceland	Stofnfiskur
08/11/2017	Cairndow Hatchery	Lakeland (Cairndow) Ltd	Cooke Aquaculture Freshwater	2,500,000	Iceland	Stofnfiskur
14/02/2018	Wester Fearn	Highland Salmon Company Ltd	Cooke Aquaculture Freshwater	700,000	Rep of Ireland	Marine Harvest Ireland
21/02/2018	Cairndow Hatchery	Lakeland (Cairndow) Ltd	Cooke Aquaculture Freshwater	1,100,000	Rep of Ireland	Marine Harvest Ireland
27/02/2018	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		350,000	Norway	Marine Harvest Norway

How many salmon eggs imported into Scotland were tested for PRV and other viruses, pathogens and infectious diseases such as ISA?



In conclusion, do Scottish Ministers have any response to the questions raised in Scottish Salmon Watch's [letter dated 31 May 2018](#); [letter dated 5 April 2019](#); or our [press release issued earlier today](#)?

Returning to the [Salmon Business article dated 20 December 2018](#):



Benchmark-owned, Stofffiskur PHOTO: Sharon Olsen

## Egg supplier responds to Washington PRV salmon cull

News by Owen Evans - 20 December 2018

And specifically to [the comment from Birgitte Sørheim of Stofnfiskur/Benchmark](#):

“The PRV at Cooke may have originated from the ova delivered from Iceland. We have, however, an optional service of screening against PRV that our customers may choose as an extra risk measure to avoid vertical transmission.”

[According to Benchmark](#) (controlled by Norwegian investors - including owners of Scottish Sea Farms):



Sørheim has held a number of prominent positions at companies including Lerøy Seafood AS, Marine Harvest, VAP Hydro Seafood AS and Fish Pool ASA and brings to Benchmark a wealth of knowledge and experience spanning strategy development, management, marketing, communication, social media, business development and sales.

Whilst Benchmark may be pouring the Champagne due to increased sale of imported ova to Scotland, what are Scottish Ministers doing to close the net on disease risks?



Has Marine Scotland Science conducted screenings of ova for PRV as an extra risk measure to avoid vertical transmission?

We know via [FOI-19-00882](#) that [screening by Marine Scotland Science in 2018 and 2019 detected PRV in over 50% of farmed salmon tested.](#)

Data disclosed via [FOI/19/00882](#) reveals that during 2018 and 2019 there were 399 positive samples out of 774 samples tested (i.e. 52% of farmed salmon samples tested positive for PRV) [1] - including 63 tests out of 113 with 100% positive results:

Date of Testing	Pathogen	Test	Result (Positive)
27/02/2018	PRV	QPCR	10 of 10
18/09/2018	PRV	QPCR	10 of 10
19/12/2018	PRV	QPCR	10 of 10
29/11/2018	PRV	QPCR	13 of 13
29/11/2018	PRV	QPCR	19 of 19
08/01/2019	PRV	QPCR	6 of 6
22/01/2019	PRV	QPCR	6 of 6
05/02/2019	PRV	QPCR	5 of 5
12/02/2019	PRV	QPCR	5 of 6
12/02/2019	PRV	QPCR	6 of 6
19/02/2019	PRV	QPCR	10 of 10
16/04/2019	PRV	QPCR	5 of 9
25/04/2019	PRV	QPCR	5 of 5
25/04/2019	PRV	QPCR	6 of 7
21/05/2019	PRV	QPCR	6 of 6
21/05/2019	PRV	QPCR	9 of 9

What % of ova used by 'Scottish' salmon farms are infected with PRV, ISA and other diseases, pathogens and viruses?

Data disclosed by the Scottish Government on 14 February 2020 via [FOI-19-02663](#) includes various shipments of ova imported from Norway, Iceland and Ireland:

Date	Site of destination	Operator	Consignee on certificate (if different from operator)	Species	Stage	Number	Source Country	Source Company
04/02/2016	Knock Hatchery	Scottish Sea Farms Ltd		Salmon	Ova	1,100,000	Rep of Ireland	Marine Harvest (Ireland)
04/02/2016	Wester Fearn	Highland Salmon Company Ltd		Salmon	Ova	350,000	Rep of Ireland	Marine Harvest (Ireland)
10/02/2016	Couldoran Incubation Unit	Scottish Sea Farms Ltd		Salmon	Ova	150,000	Rep of Ireland	Marine Harvest (Ireland)
18/02/2016	Ormsary Hatchery	Landcatch Natural Selection Ltd	Scottish Sea Farms Ltd	Salmon	Ova	2,100,000	Rep of Ireland	Marine Harvest (Ireland)
24/02/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	250,000	Rep of Ireland	Marine Harvest (Ireland)
03/03/2016	Ormsary Hatchery	Landcatch Natural Selection Ltd	Scottish Sea Farms Ltd	Salmon	Ova	144,000	Rep of Ireland	Marine Harvest (Ireland)
17/02/2016	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,545,000	Norway	Salmobreed
14/01/2016	Tullich Hatchery	The Scottish Salmon Company		Salmon	Ova	1,200,000	Iceland	Stofnfiskur
09/11/2016	Tullich Hatchery	The Scottish Salmon Company		Salmon	Ova	2,640,000	Iceland	Stofnfiskur
23/11/2016	Geocrab Hatchery	The Scottish Salmon Company		Salmon	Ova	1,008,000	Iceland	Stofnfiskur
23/11/2016	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	441,000	Iceland	Stofnfiskur
01/12/2016	Geocrab Hatchery	The Scottish Salmon Company		Salmon	Ova	35,000	Iceland	Stofnfiskur

Date	Site of destination	Operator	Consignee on certificate (if different from operator)	Species	Stage	Number	Source Country	Source Company
14/01/2016	Mill Burn	Kintail Hatchery	Marine Harvest (Scotland)	Salmon	Ova	2,000,000	Norway	Aquagen AS
05/01/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	550,000	Norway	Aquagen AS
20/01/2016	Howietoun Hatchery	Howietoun Fishery	The Scottish Salmon Company	Salmon	Ova	400,000	Norway	Aquagen AS
20/01/2016	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	1,908,540	Norway	Aquagen AS
10/02/2016	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	400,000	Norway	Aquagen AS
24/02/2016	Geocrab Hatchery	The Scottish Salmon Company		Salmon	Ova	461,160	Norway	Aquagen AS
24/02/2016	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	564,375	Norway	Aquagen AS
24/02/2016	Allt Mor Hatchery	JS Salmon Ltd	Kames Fish Farming Ltd	Salmon	Ova	500,000	Norway	Aquagen AS
02/03/2016	Kinlochmoidart Hatchery	Sunbeam Aquaculture	The Scottish Salmon Company	Salmon	Ova	575,000	Norway	Aquagen AS
02/03/2016	Amhuinnsuidhe Hatchery	The Scottish Salmon Company		Salmon	Ova	275,000	Norway	Aquagen AS
02/03/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	70,000	Norway	Aquagen AS
17/03/2016	Furnace (FW)	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	650,000	Norway	Aquagen AS
02/06/2016	Lochailort Recirculation Unit	Marine Harvest (Scotland)		Salmon	Ova	1,333,333	Norway	Aquagen AS
02/06/2016	Lochailort Recirculation Unit	Marine Harvest (Scotland)		Salmon	Ova	1,333,333	Norway	Aquagen AS
02/06/2016	Lochailort Recirculation Unit	Marine Harvest (Scotland)		Salmon	Ova	1,333,333	Norway	Aquagen AS
23/08/2016	Girista Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,500,000	Norway	Aquagen AS
09/11/2016	Kinlochmoidart Hatchery	Sunbeam Aquaculture	The Scottish Salmon Company	Salmon	Ova	562,500	Norway	Aquagen AS
09/11/2016	Allt Mor Hatchery	JS Salmon Ltd	Kames Fish Farming Ltd	Salmon	Ova	350,000	Norway	Aquagen AS
15/11/2016	Furnace (FW)	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	800,000	Norway	Aquagen AS
15/11/2016	Cairndow Hatchery	Lakeland (Cairndow) Ltd		Salmon	Ova	1,800,000	Norway	Aquagen AS
17/11/2016	Couldoran Incubation Unit	Scottish Sea Farms Ltd		Salmon	Ova	1,000,000	Norway	Aquagen AS
22/11/2016	Girista Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,500,000	Norway	Aquagen AS
22/11/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	400,000	Norway	Aquagen AS
06/12/2016	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	918,750	Norway	Aquagen AS
06/12/2016	Kinlochmoidart Hatchery	Sunbeam Aquaculture	The Scottish Salmon Company	Salmon	Ova	628,500	Norway	Aquagen AS
06/12/2016	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	735,000	Norway	Aquagen AS
08/12/2016	Ormsary Hatchery	Landcatch Natural Selection Ltd	Scottish Sea Farms Ltd	Salmon	Ova	988,000	Norway	Aquagen AS
15/12/2016	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	350,000	Norway	Aquagen AS
21/12/2016	Allt Mor Hatchery	JS Salmon Ltd	Kames Fish Farming Ltd	Salmon	Ova	325,000	Norway	Aquagen AS
21/12/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	400,000	Norway	Aquagen AS
25/05/2016	Girista Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,545,000	Norway	Erfjord Stamfisk

What % of imported ova were screened prior to entry into Scotland for infectious diseases, pathogens and viruses?

The data below includes ova imported to the hatcheries suspected of now sourcing 'Scottish' salmon via domestically produced eggs (e.g. [AquaGen's Hollywood Salmon Farm in Dumfries](#) and [Landcatch's Ormsary Hatchery in Argyll](#)):

Date consignment due	Destination site name	Destination business name	Consignee Business name (if different from destination business)	Species	Stage	Number in consignment	Source Country	Import consignor
27/11/2018	Barcaldine Hatchery Incubation 1	Scottish Sea Farms Ltd		Salmon	Ova	1,250,000	Norway	AquaGen AS
27/11/2018	Barcaldine Hatchery Incubation 3	Scottish Sea Farms Ltd		Salmon	Ova	1,250,000	Norway	AquaGen AS
04/12/2018	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	128,000	Norway	AquaGen AS
17/01/2019	Hollywood Salmon Farm	AquaGen Scotland Ltd		Salmon	Ova	42,000	Norway	AquaGen AS
26/02/2019	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	367,500	Norway	AquaGen AS
14/11/2018	Mingarry Hatchery	Hebridean Smolts Ltd		Salmon	Ova	910,000	Norway	AS Bolaks
27/11/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd		Salmon	Ova	2,197,000	Norway	AS Bolaks
30/11/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd		Salmon	Ova	315,000	Norway	AS Bolaks
16/01/2019	Mill Burn (Old Mill)	Kintail Hatchery	Migdale Smolt Ltd	Salmon	Ova	2,000,000	Norway	Grieg Seafood Rogaland
29/01/2019	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	682,500	Norway	Grieg Seafood Rogaland
30/01/2019	Allt Mhor	JS Salmon Ltd	Kames Fish Farming	Salmon	Ova	500,000	Norway	Grieg Seafood Rogaland
30/01/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon Company	Salmon	Ova	755,300	Norway	Grieg Seafood Rogaland
07/02/2019	Kinlochmoidart Hatchery	The Scottish Salmon Company		Salmon	Ova	576,000	Norway	Grieg Seafood Rogaland
13/02/2019	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	30,000	Norway	Grieg Seafood Rogaland
20/02/2019	Girista Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,800,000	Norway	Grieg Seafood Rogaland
18/01/2018	Knock	Scottish Sea Farms Ltd		Salmon	Ova	1,550,000	Republic of Ireland	Marine Harvest Ireland
07/02/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd	Scottish Sea Farms Ltd	Salmon	Ova	1,500,000	Republic of Ireland	Marine Harvest Ireland
14/02/2018	Wester Fearn	Highland Salmon Company Ltd	Cooke Aquaculture (Freshwater)	Salmon	Ova	700,000	Republic of Ireland	Marine Harvest Ireland
15/02/2018	Couldoran Incubation Unit	Scottish Sea Farms Ltd		Salmon	Ova	1,600,000	Republic of Ireland	Marine Harvest Ireland
21/02/2018	Cairndow Hatchery	Lakeland (Cairndow) Ltd		Salmon	Ova	1,100,000	Republic of Ireland	Marine Harvest Ireland
01/03/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd	Scottish Sea Farms Ltd	Salmon	Ova	800,000	Republic of Ireland	Marine Harvest Ireland

04/01/2018	Inverpolly	Finfish Ltd	Marine Harvest (Scotland) Ltd	Salmon	Ova	2,600,000	Norway	Marine Harvest Norway
11/01/2018	Inverpolly	Finfish Ltd	Marine Harvest (Scotland) Ltd	Salmon	Ova	87,639	Norway	Marine Harvest Norway
31/01/2018	Lochailort Recirculation Hatchery	Marine Harvest (Scotland) Ltd		Salmon	Ova	216,592	Norway	Marine Harvest Norway
07/02/2018	Lochailort Recirculation Hatchery	Marine Harvest (Scotland) Ltd		Salmon	Ova	1,884,000	Norway	Marine Harvest Norway
08/02/2018	Inchmore	Marine Harvest (Scotland) Ltd		Salmon	Ova	2,300,000	Norway	Marine Harvest Norway
27/02/2018	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	350,000	Norway	Marine Harvest Norway
20/03/2018	Cairndow Hatchery	Lakeland (Cairndow) Ltd		Salmon	Ova	1,800,000	Norway	Marine Harvest Norway
04/04/2018	Inverpolly	Finfish Ltd		Salmon	Ova	2,300,000	Norway	Marine Harvest Norway
18/04/2018	Lochailort Recirculation Hatchery	Marine Harvest (Scotland) Ltd		Salmon	Ova	3,500,000	Norway	Marine Harvest Norway
15/05/2018	Inchmore	Marine Harvest (Scotland) Ltd		Salmon	Ova	1,300,000	Norway	Marine Harvest Norway
16/05/2018	Lochailort Recirculation Hatchery	Marine Harvest (Scotland) Ltd		Salmon	Ova	3,800,000	Norway	Marine Harvest Norway
14/06/2018	Inchmore	Marine Harvest (Scotland) Ltd		Salmon	Ova	1,900,000	Norway	Marine Harvest Norway
14/06/2018	Inchmore	Marine Harvest (Scotland) Ltd		Salmon	Ova	1,900,000	Norway	Marine Harvest Norway
28/06/2018	Inchmore	Marine Harvest (Scotland) Ltd		Salmon	Ova	310,000	Norway	Marine Harvest Norway
15/11/2018	Lochailort Recirculation Hatchery	Marine Harvest (Scotland) Ltd		Salmon	Ova	2,500,000	Norway	Marine Harvest Norway
04/12/2018	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	495,000	Norway	Marine Harvest Norway
05/12/2018	Inchmore	Marine Harvest (Scotland) Ltd		Salmon	Ova	1,400,000	Norway	Marine Harvest Norway
06/12/2018	Cairndow Hatchery	Lakeland (Cairndow) Ltd		Salmon	Ova	2,500,000	Norway	Marine Harvest Norway
12/12/2018	Ardtaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	350,000	Norway	Marine Harvest Norway
17/12/2018	Inverpolly	Finfish Ltd		Salmon	Ova	1,300,000	Norway	Marine Harvest Norway
18/12/2018	Inverpolly	Finfish Ltd		Salmon	Ova	500,000	Norway	Marine Harvest Norway
18/12/2018	Inchmore	Marine Harvest (Scotland) Ltd		Salmon	Ova	800,000	Norway	Marine Harvest Norway
18/12/2018	Temperate Facilities	University of Stirling		Salmon	Ova	3,000	Norway	Marine Harvest Norway
20/12/2018	Inverpolly	Finfish Ltd		Salmon	Ova	770,000	Norway	Marine Harvest Norway

10/01/2019	Barcaldine Hatchery Incubation 4	Scottish Sea Farms Ltd		Salmon	Ova	1,500,000	Republic of Ireland	Mowi Ireland
10/01/2019	Barcaldine Hatchery Incubation 2	Scottish Sea Farms Ltd		Salmon	Ova	1,500,000	Republic of Ireland	Mowi Ireland
16/01/2019	Knock	Scottish Sea Farms Ltd		Salmon	Ova	1,500,000	Republic of Ireland	Mowi Ireland
14/02/2019	Wester Fearn	Highland Salmon Company Ltd	Cooke Aquaculture Scotland Ltd	Salmon	Ova	700,000	Republic of Ireland	Mowi Ireland
14/02/2019	Cairndow Hatchery	Lakeland (Cairndow) Ltd	Cooke Aquaculture Scotland Ltd	Salmon	Ova	1,100,000	Republic of Ireland	Mowi Ireland
14/02/2019	Ormsary Hatchery	Landcatch Natural Selection Ltd	Organic Sea Harvest	Salmon	Ova	584,000	Republic of Ireland	Mowi Ireland
21/03/2019	Barcaldine Hatchery Incubation 1	Scottish Sea Farms Ltd		Salmon	Ova	1,500,000	Republic of Ireland	Mowi Ireland
21/03/2019	Barcaldine Hatchery Incubation 3	Scottish Sea Farms Ltd		Salmon	Ova	1,500,000	Republic of Ireland	Mowi Ireland
24/01/2019	Niall Bromage Freshwater Field Station	University of Stirling		Salmon	Ova	30,000	Norway	MOWI Norway
04/02/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,563,000	Norway	MOWI Norway
05/02/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,537,000	Norway	MOWI Norway
05/02/2019	Inchmore	Mowi Scotland Ltd		Salmon	Ova	1,000,000	Norway	MOWI Norway
28/03/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,350,000	Norway	MOWI Norway
02/04/2019	Lochailort Recirculation Hatchery	Mowi Scotland Ltd		Salmon	Ova	1,562,809	Norway	MOWI Norway
09/01/2018	Allt Mhor	JS Salmon Ltd	Kames Fish Farming Ltd	Salmon	Ova	325,000	Norway	Salmobreed
16/01/2018	Mill Burn (Old Mill)	Kintail Hatchery	Migdale Smolts Ltd	Salmon	Ova	2,000,000	Norway	Salmobreed
30/01/2018	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	1,047,500	Norway	Salmobreed
30/01/2018	Amhuinnsuidhe Hatchery	The Scottish Salmon Company		Salmon	Ova	400,000	Norway	Salmobreed
30/01/2018	Mingarry Hatchery	Hebridean Smolts Ltd		Salmon	Ova	656,250	Norway	Salmobreed
07/02/2018	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,545,000	Norway	Salmobreed
20/02/2018	Niall Bromage Freshwater Field Station	University of Stirling		Salmon	Ova	40,000	Norway	Salmobreed
20/02/2018	Allt Mhor	JS Salmon Ltd	Kames Fish Farming Ltd	Salmon	Ova	285,000	Norway	Salmobreed
27/02/2018	Geocrab Hatchery	The Scottish Salmon Company		Salmon	Ova	508,000	Norway	Salmobreed
27/11/2018	Allt Mhor	JS Salmon Ltd		Salmon	Ova	500,000	Norway	Salmobreed
20/12/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd		Salmon	Ova	250,000	Norway	Salmobreed
01/02/2018	Tullich Hatchery	The Scottish Salmon Company		Salmon	Ova	1,360,000	Iceland	Stofniskur H
01/03/2018	Kinlochmoidart Hatchery	The Scottish Salmon Company		Salmon	Ova	615,000	Iceland	Stofniskur H
01/03/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd	The Scottish Salmon Company	Salmon	Ova	575,000	Iceland	Stofniskur H

12/04/2018	The Roslin Institute	The Roslin Institute		Salmon	Ova	3,200	Iceland	Stofniskur Hf.
08/06/2018	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,500,000	Iceland	Stofniskur Hf.
15/06/2018	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	200,000	Iceland	Stofniskur Hf.
03/10/2018	Girlsta Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,890,000	Iceland	Stofniskur Hf.
08/11/2018	Couldoran Incubation Unit	Scottish Sea Farms Ltd		Salmon	Ova	2,150,000	Iceland	Stofniskur Hf.
13/11/2018	Ormsary Hatchery	Landcatch Natural Selection Ltd		Salmon	Ova	750,000	Iceland	Stofniskur Hf.
20/11/2018	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	1,041,000	Iceland	Stofniskur Hf.
04/12/2018	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	35,000	Iceland	Stofniskur Hf.
17/01/2019	Couldoran Incubation Unit	The Scottish Salmon Company		Salmon	Ova	1,500,000	Iceland	Stofniskur Hf.
29/01/2019	Barvas Hatchery	The Scottish Salmon Company		Salmon	Ova	436,800	Iceland	Stofniskur Hf.
28/03/2019	Cairndow Hatchery	Lakeland (Cairndow) Ltd	Cooke Aquaculture Scotland Ltd	Salmon	Ova	1,800,000	Iceland	Stofniskur Hf.

How much of domestically produced ova is sourced from genetic material (ova, broodstock or smolts) sourced from overseas (e.g. Norway, Iceland and Ireland)?

What % of domestically produced ova has been screened for infectious diseases, pathogens and viruses such as PRV and ISA?

It would be much appreciated if Scottish Ministers could shine a light on the murky world of 'Scottish' salmon.



Yours sincerely,

Don Staniford

Director, Scottish Salmon Watch





[Cabinet Secretary for Environment, Climate Change and Land Reform](#)  
[Cabinet Secretary for Rural Economy & Connectivity](#)

The Scottish Government  
St. Andrew's House  
Regent Road  
Edinburgh  
EH1 3DG

31 May 2018

Dear Cabinet Secretaries,

### **Ban Imported Salmon Eggs (Ova) from Norway Due to Disease & Genetic Risks**

Why is the Scottish Government allowing salmon eggs (ova) from Norway (and Iceland) to flood the Scottish salmon farming industry when the Norwegian Ministry of Climate & Environment has banned the import of ova from Scotland citing unacceptable disease and genetic risks under Norway's Nature Diversity Act?

Documents [disclosed via Freedom of Information by the Scottish Government \(24 May 2018\)](#) expose the "complete mockery of the brand 'Scottish Salmon'". In a stinging attack the head of Scotland's largest salmon egg producer (owned by Dutch multinational Hendrix Genetics) accused the Scottish Government of taking a "massive risk" by allowing salmon eggs from Norway and Iceland to flood 'Scottish' salmon farms citing the danger of "transfer of ISA from infected countries such as Norway". Read more via [Press Release: "Complete Mockery of the Brand 'Scottish Salmon'"](#).

In a letter to Fergus Ewing (12 February 2018), [Neil Manchester of Hendrix Genetics](#) wrote:

This means that the Scottish salmon industry is now 100% reliant on imported eggs- both a massive risk in the event of borders closing for disease issues (and also the transfer of ISA from infected countries such as Norway), but also making a complete mockery of the brand 'Scottish Salmon'.

This also means that the extensive R&D projects conducted between Landcatch and the Universities of Glasgow, Stirling, and Edinburgh, once lauded as great examples of Smart Successful Scotland, will now require the involvement of Norwegian breeding companies operating in Norway. Phrases other than smart and successful come to mind.

Scottish Salmon Watch urges the Scottish Government to ban imports of salmon eggs from Norway as a matter of urgency to safeguard [what's left of the genetic integrity of Scottish salmon](#). It speaks volumes that the Norwegian Government is fighting to protect biodiversity and values wild salmon highly whilst the Scottish Government is happy to sell wild salmon down the river.

In February 2018, [Norway's Ministry of Climate & Environment](#) banned the import of Scottish salmon eggs citing risks of disease and genetic impacts of escapes under the Norwegian [Nature Diversity Act](#).

"Farmed salmon with partial Scottish origin increases the likelihood of a negative impact on Norwegian wild populations above negative effects with Norwegian farmed strains," [stated the 22-page letter of refusal](#). "There is a high probability that genetic mixing between Norwegian wild salmon and farmed salmon of partly Scottish origin will increase the loss of genetic diversity."

"This speaks for the Ministry's view that concern for biodiversity and wild salmon should be given significant weight in the case," [continued Norway's Ministry of Climate & Environment](#). "The Ministry also refers to the value of Norwegian wild salmon as an ecosystem service, or a natural good."

Norway's Deputy Director General at the Ministry of Climate & Environment ([Torbjørn Lange](#)) cited a 2017 report by the Norwegian Institute of Nature Research (NINA). "[Risk assessment of imports of partly Scottish salmon from Scotland to aquaculture in Norway](#)" - authored by NINA scientists [Sten Karlsson](#) and [Kjetil Hindar](#) - concluded: "Based on proven genetic distances and that Scottish wild salmon is a separate genetic group different from that found in Norway, fished salmon with partly Scottish origin is considered to have an increased negative effect on wild salmon stocks in Norway."

Scientific research in Scotland has already shown that Norwegian genetic material is threatening the integrity of wild Scottish salmon. The Salmon & Trout Association [reported in 2017](#):

A study by Scotland's Fisheries Trusts, funded by the Scottish Government, looked for Norwegian genes in wild salmonid populations in the "aquaculture zone" of the west coast of Scotland. Across all sites, 369 out of 1472 (25.1%) individuals were identified as hybrids; this is significantly higher than that seen for the east coast "wild" baseline, where there is no marine aquaculture. The data – which was reviewed by Marine Scotland Science, the Scottish Government's fisheries scientists – showed that over one quarter of west coast wild salmon are in fact Norwegian hybrids. (*See RAFTS (2013) Report on Genetic Tool Development for Distinguishing Farmed vs. Wild Fish in Scotland, February 2013*)

The University of the Highlands & Islands is continuing this work via the research project - "[Domestication Genes in Atlantic Salmon: Identification of Markers](#)":

## Projects



### Domestication Genes in Atlantic Salmon: Identification of Markers

Identification of genetic and epigenetic genomic markers of domestication in Atlantic salmon for use in assessing introgression of farm genes into wild populations. Led by the Rivers and Lochs Institute in collaboration with partners in UK, Norway, Ireland, and Canada, jointly funded by the BBSRC and NERC.

In May 2018, a PhD studentship was [advertised by the University of Highlands & Islands](#) to study "[Salmon farming in Scotland: quantifying the actual levels of interbreeding and gene introgression of farm escapes with wild populations](#)".

Scientific research published in 2017 reported that introgression of farmed salmon in wild populations in Norway could be as high as 47% (read more via "[Half a century of genetic interaction between farmed and wild Atlantic salmon: Status of knowledge and unanswered questions](#)").

In 2013, [The Sunday Times reported](#) that one in four wild Atlantic salmon from Scotland was genetically "tainted" by Norwegian fish [following scientific research by Rivers & Fisheries Trusts Scotland](#). In 2013, [The Sunday Times reported](#) that "Scots fish are 'Vikings with kilts on'". Read more via "[Scottish Salmon's Great Escape](#)".

Wester Ross Fisheries Trust [reported](#) in 2013:

## 'Norwegian' genes found in wild salmon populations in Wester Ross

Posted: Monday 4 March, 2013 @ 16:03:52

[Please also see link to quiz at end of this news item . . . ]

The results of a study to learn more about the occurrence of genes with a Norwegian signature in wild salmon populations in the West of Scotland have just been published.



The study, 'Genetic Tool Development for Distinguishing Farmed vs. Wild fish in Scotland' was led by Mark Coulson as part of the [RAFTS Managing Interactions with Aquaculture Project \[MIAP\]](#) and supported by WRFT and other fishery trusts. The report can be downloaded by clicking [here](#) or via the link at the end of this item.

The results of this study demonstrate the ability to distinguish between Norwegian and Scottish fish as well as identify individuals of mixed ancestry with high accuracy.

For samples collected in the West of Scotland, the presence of Norwegian genetic signatures was identified from most sites. Several cases of putative direct aquaculture escapees were genetically consistent with field-based identification, including samples from the River Balgy (2006 and 2007) and the Tullich burn near Lochcarron (2011). It was also possible to distinguish individuals of mixed ancestry versus those of either pure Scottish or Norwegian origin. For rivers sampled in Wester Ross, juvenile salmon of mixed ancestry represented the following % of the samples from respective rivers (where n = number of fish in the sample): Gruinard 2005, 15% (n=20); Kerry 2011, 27% (n=33); Torridon 2007, 26% (n=44); Kishorn 2011, 30% (n=27); and Carron [River Lair] 2011, 34% (n=32).

Scottish Salmon Watch filed a Freedom of Information request following a news snippet - "[Norway keeps ban on import of Scottish roe](#)" - published in February by Salmon Business which itself triggered a [Parliamentary Question from Peter Chapman MSP and a Parliamentary Reply from the Cabinet Secretary for Rural Economy & Connectivity in late February 2018](#).

"We understand the Norwegian Government are reviewing the decision to ban the import of salmon eggs from Scotland," stated Fergus Ewing on 27 February 2018. "We are in dialogue with the Norwegian Authorities in order to understand the outcome of this review and I will raise the issue at a scheduled meeting with Per Sandberg, Norwegian Minister of Fisheries." This was in reply to a Parliamentary Question filed by Peter Chapman MSP on 19 February 2018: "To ask the Scottish Government what its response is to the Norwegian Government's reported decision to ban the import of salmon eggs from Scotland."

As background, the [FOI disclosure by the Scottish Government on 24 May 2018](#) includes the following timeline:

**March 2016:** The Scottish Government (Alastair Mitchell) wrote to the Norwegian Government (Yngve Torgersen):

"I've been advised that a recent planned export of Landcatch eggs from Scotland to Norway was stopped by Norway's Environment Directorate on grounds that those eggs are non-Norwegian and are, therefore, an alien species under your regulations (they further allege other imports since June 2015 may have been illegal)."

**May 2016:** Neil Manchester, Managing Director of Hendrix Genetics (owners of Landcatch) wrote to the Scottish Government (Willie Cowan) asking that the Scottish Government "act in a reciprocal fashion regarding all imports of live salmon eggs and smolts from Norway". In other words, ban imports of salmon eggs and smolts from Norway.

**June 2016:** Neil Manchester, Managing Director of Hendrix Genetics (owners of Landcatch) wrote to the Scottish Government (Willie Cowan): "We have just received confirmation from the Fisheries Department in the Norwegian Government that they have rejected our appeal, and are upholding their decision to prevent the movement of salmon eggs from Scotland into Norway as they believe that mixing phylogeographic strains of salmon will have a serious impact on wild fish stocks."

Hendrix Genetics requested an assurance from the Scottish Government "that exactly the same challenges will be put to any application for the movement of live salmon eggs or smolts from Norway into Scotland, and that movements should only be permitted if it can be proven that the strain matches native Scottish strains of salmon."

**June 2016:** Michael Russell (now the Scottish Government's Minister for UK Negotiations on Scotland's Place in Europe) wrote to Neil Manchester of Hendrix Genetics and Fergus Ewing (Cabinet Secretary for Rural Economy & Connectivity): "I had been alerted to the potential for this problem to arise and it is certainly now very pressing. I hope Fergus can find a way forward, perhaps by direct contact with the Norwegian Government but I am happy to raise it in the Parliament in the new session (we are now about to go into recess) if a solution has not been found by then."

**July 2016:** The Scottish Government wrote to Hendrix Genetics: "Scottish Government are going to follow this up as a matter of urgency with the Norwegian Government....In relation to the trade of imported Atlantic ova from Norway, Scottish Government do not consider Atlantic salmon ova of Norwegian origin to be an alien or locally absent species according to the definitions provided in the EU Regulation. We would therefore not consider any reciprocal action in this regard."

**February 2018:** Neil Manchester of Hendrix Genetics wrote to Fergus Ewing (email copied to Michael Russell): "In the press today it was reported that the Norwegian Environment Ministry issued a communique saying it will not allow the import of farmed salmon from Scotland for aquaculture in Norway, citing fears that escapees could 'further weaken' the country's wild salmon population. This coincides with Hendrix Genetics being issued with a 22 page letter explaining why Scottish genetics are seen as a threat to the Norwegian wild

stocks and why their decision to ban our import of eggs from Scotland into Norway is final and not open to appeal."

"Thus, thanks in part to a spectacular lack of support from parties who should have shown an interest, our case is lost," continued the Managing Director of Hendrix Genetics. "The Landcatch breeding programme, established in 1980 by Sir William Lithgow, heavily funded during the 1990s through Scottish Enterprise, and the only independent Scottish salmon egg producer in existence, will now be terminated. This means that the Scottish salmon industry is now 100% reliant on imported eggs - both a massive risk in the event of borders closing for disease issues (and also the transfer of ISA from infected countries such as Norway), but also making a complete mockery of the brand 'Scottish Salmon'. This also means that the extensive R&D projects conducted between Landcatch and the Universities of Glasgow, Stirling and Edinburgh, once lauded as great examples of Smart Successful Scotland, will now require the involvement of Norwegian breeding companies operating in Norway. Phrases other than smart and successful come to mind."

**March 2018:** Neil Manchester of Hendrix Genetics emailed the Cabinet Secretary for Rural Economy & Connectivity (Fergus Ewing): "The point here is that if the Minister accepts this decision, and thereby the reasoning behind it, he must answer why he is unwilling to afford the same level of protection to wild salmon. Alternatively, since our independent salmon breeding and egg production business in Argyll has been destroyed by this decision and the time it has taken to reach it, I would hope that Scottish government would recognize this and act/react accordingly."

The Global Alliance Against Industrial Aquaculture (GAAIA) [pointed out in a press release](#) (16 April 2017) that:

- In 2016, 53% (22.6 million) of imported eggs were sourced from Norway via Aquagen (a company [genetically fingered by a peer-reviewed scientific paper as the source of ISA outbreak in Chile](#))
- In 2016, Norwegian-owned Marine Harvest imported 14.5 million eggs - all from Norway - accounting for 34% of all egg imports
- In 2016, the Scottish Salmon Company imported 12.4 million eggs - again all from Norway - accounting for 30% of eggs imports
- No data for Scottish Sea Farms is available because "disclosure of this particular information would, or would be likely to, prejudice substantially the confidentiality of commercial information provided by Scottish Sea Farms and thus cause substantial harm to their commercial interests"

Download the FOI data from the Scottish Government as an Excel spreadsheet [online here](#)

Date	Site of destination	Operator	Consignee on certificate (if different from operator)	Species	Stage	Number	Source Country	Source Company
14/01/2016	Mill Burn	Kintail Hatchery	Marine Harvest (Scotland)	Salmon	Ova	2,000,000	Norway	Aquagen AS
05/01/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	550,000	Norway	Aquagen AS
14/01/2016	Tulich Hatchery	The Scottish Salmon Company		Salmon	Ova	1,200,000	Iceland	Stofniskur
20/01/2016	Howietoun Hatchery	Howietoun Fishery	The Scottish Salmon Company	Salmon	Ova	400,000	Norway	Aquagen AS
20/01/2016	Bavvas Hatchery	The Scottish Salmon Company		Salmon	Ova	1,908,540	Norway	Aquagen AS
21/01/2016	Lochailort Recirculation Unit	Marine Harvest (Scotland)		Salmon	Ova	3,000,000	Norway	Marine Harvest (Norway)
04/02/2016	Knock Hatchery	Scottish Sea Farms Ltd		Salmon	Ova			
04/02/2016	Wester Fearn	Highland Salmon Company Ltd		Salmon	Ova	350,000	Rep of Ireland	Marine Harvest (Ireland)
10/02/2016	Lochailort Recirculation Unit	Marine Harvest (Scotland)		Salmon	Ova	200,000	Norway	Marine Harvest (Norway)
10/02/2016	Couldoran Incubation Unit	Scottish Sea Farms Ltd		Salmon	Ova			
10/02/2016	Ardaraig Hatchery	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	400,000	Norway	Aquagen AS
17/02/2016	Girista Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,545,000	Norway	Salmobreed
18/02/2016			Scottish Sea Farms Ltd	Salmon	Ova			
24/02/2016	Geocrab Hatchery	The Scottish Salmon Company		Salmon	Ova	461,160	Norway	Aquagen AS
24/02/2016	Mingarry Hatchery	Hebridean Smolts Ltd	The Scottish Salmon Company	Salmon	Ova	564,375	Norway	Aquagen AS
24/02/2016	Alt Mor Hatchery	JS Salmon Ltd	Kames Fish Farming Ltd	Salmon	Ova	500,000	Norway	Aquagen AS
24/02/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	250,000	Rep of Ireland	Marine Harvest (Ireland)
02/03/2016	Kinlochmoidart Hatchery	Sunbeam Aquaculture	The Scottish Salmon Company	Salmon	Ova	575,000	Norway	Aquagen AS
02/03/2016	Amhuinnsuidhe Hatchery	The Scottish Salmon Company		Salmon	Ova	275,000	Norway	Aquagen AS
02/03/2016	Quoys Hatchery	Cooke Aquaculture Scotland Ltd		Salmon	Ova	70,000	Norway	Aquagen AS
02/03/2016	Inverpolly	Finfish Ltd		Salmon	Ova	1,300,000	Norway	Marine Harvest (Norway)
03/03/2016			Scottish Sea Farms Ltd	Salmon	Ova			
10/03/2016	Lochailort Recirculation Unit	Marine Harvest (Scotland)		Salmon	Ova	1,300,000	Norway	Marine Harvest (Norway)
17/03/2016	Furnace (FW)	Cooke Aquaculture (Freshwater) Ltd		Salmon	Ova	650,000	Norway	Aquagen AS
25/05/2016	Girista Hatchery	Grieg Seafood Shetland Ltd (Hatchery)		Salmon	Ova	1,545,000	Norway	Erfjord Stamfisk

Read more via: [Press Release: "Viking Invasion Taints 'Scottish' Salmon"](#)

The [latest data published by the Scottish Government in September 2017](#) reveals that 91% of 'Scottish' salmon is sourced via imported eggs from overseas (predominantly from Norway and Iceland).

### Ova Production

**Table 17:** Number (000s) of salmon ova produced during 2009-2016

Year	2009	2010	2011	2012	2013	2014	2015	2016
No. of ova	91,964	91,655	78,208	57,489	56,904	33,450	11,605	13,689

In 2016, 13.7 million ova were stripped, an increase of 18% from the number of ova produced in 2015.

**Table 18:** Source, number (000s) and previous year's estimate of ova laid down to hatch during 2005-2017

Year	In-house broodstock	Out-sourced GB broodstock	GB wild broodstock	Foreign ova	Total	Previous year's estimate
2005	43,261	22,465	71	9,896	75,693	65,741
2006	19,063	17,768	63	27,157	64,051	58,385
2007	18,837	14,366	78	42,022	75,303	68,032
2008	19,831	14,261	171	26,409	60,672	75,302
2009	17,148	20,158	65	30,200	67,571	64,693
2010	13,744	26,220	0	29,657	69,621	61,011
2011	15,664	14,630	0	34,322	64,616	54,526
2012	18,556	9,981	0	34,700	63,237	55,723
2013	16,996	8,263	0	41,315	66,573	49,249
2014	14,418	2,725	10	53,684	70,837	48,149
2015	6,479	223	10	61,463	68,175	65,284
2016	5,884	4	0	58,458	64,346	59,604
2017						60,673

**Table 22b:** Destination and number (000s) of salmon ova, parr and smolts exported during 2005-2016 derived from health certificates

Export year	Farmed origin ova				Total	Parr and Smolts
	Chile	EU	Norway	Others		
2005	8,560	3,130	0	1,566	13,256	1,362
2006	26,930	4,312	0	0	31,242	998
2007	32,150	164	0	0	32,314	2,169
2008	62,185	130	0	15	62,330	551
2009	7,181	317	0	0	7,498	89
2010	0	189	600	0	789	130
2011	0	0	0	820	820	183
2012	0	0	0	0	0	55
2013	0	650	0	0	650	404
2014	0	0	0	0	0	259
2015	0	93	0	2	95	8
2016	0	335	0	23	361	173

In 2016, 361,000 ova were exported. Parr and smolt exports increased by 165,000 fish on the 2015 figure.

The number of ova laid down to hatch was 64.3 million, a decrease of 3.9 million (5.6%) on the 2015 figure. The majority of the ova (90.8%) were derived from foreign sources, this being a decrease of 3.0 million (4.9%) on the 2015 figure. Supplies derived from GB broodstock decreased by 0.8 million, a 12.1% decrease on the 2015 figure. No ova from GB wild broodstock were laid down in 2016, however, in previous years the ova derived from wild stocks were generally held and hatched for wild stock enhancement by the aquaculture industry in cooperation with wild fisheries managers.

### International Trade in Ova

Since the introduction of the EU single market on 1st January 1993 and the associated Fish Health Regulations common to all EU member states, a trade in live salmon and ova has been established. In addition, the European Economic Area (EEA) agreement allows trade between the EU and the member states of the European Free Trade Association (EFTA). Trade is based on the same rules as are established within the EU regarding compartments and zones declared free from listed diseases.

Trade with Third Countries has also been established, but only from sites that have met the same health standards as are established within the EU regarding the approval of farms and zones for listed diseases. Exports to countries outside the EU are subject to the health conditions placed by the importing country. Marine Scotland Science advises potential exporters to ascertain with the importing country any specific health testing requirements that may be a condition of import.

## Imports and Exports

Table 22a: Source and number (000s) of ova, parr and smolts imported during 2004-2016 derived from health certificates

Import Year	Ova					Total	Parr and Smolts	
	EU Member States	EFTA		Thirld Countries			EU Member States	EFTA-Norway
		Iceland	Norway	Australla	USA			
2004	4,450	3,475	6,750	1,860	450	16,985	824	0
2005	2,610	570	13,210	0	450	16,840	150	0
2006	11,575	300	15,940	2,400	0	30,215	375	0
2007	10,511	0	33,555	0	0	44,066	420	0
2008	5,600	0	22,703	0	0	28,303	519	0
2009	5,460	0	29,938	0	0	35,398	328	0
2010	2,150	0	26,533	0	0	28,683	452	0
2011	3,400	0	35,851	0	0	39,251	800	0
2012	10,134	0	23,849	0	0	33,983	0	0
2013	10,700	2,719	35,044	0	0	48,463	55	0
2014	5,218	3,813	49,831	0	0	58,862	1,602	1,748
2015	4,815	8,978	45,926	0	0	59,719	2,118	365
2016	5,444	5,324	38,602	0	0	49,370	1,956	0

The numbers of ova imported decreased by 17.3%. The number of parr and smolts imported decreased from that observed in 2015, with only 1.9 million parr and smolts imported from EU member states.

A [paper published in the journal Aquaculture in 2016](#) revealed how Scottish salmon farming has been flooded by imports of foreign salmon eggs (ova) over the last few decades.

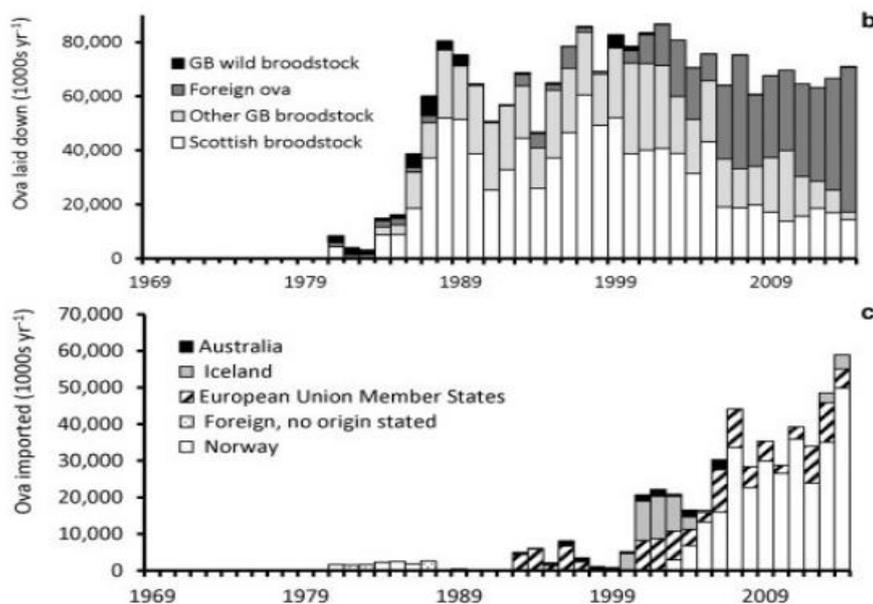


Fig. 2.

Data on salmon ova in Scotland. a: Numbers of ova produced in Scotland, subdivided into laid down in Scotland, exported and not laid or exported. Data available 1984/1994/1995–2014. b: Origins of ova laid down to hatch within Scottish salmon industry. Data available 1981–2014. c: Origins of foreign (imported) ova. Data available 1981–2014.

The Scottish Parliament's [salmon farming inquiry](#) briefly touched upon the issue in [oral evidence from the predominantly Norwegian-owned salmon farming companies on 2 May](#):

**Stewart Stevenson:** I just have a wee point, which is probably for Grant Cummings, based on what he said. I can be corrected on this, but is there not an international trade in smolts, which I believe is two-way? If there is, how does that affect the provenance that we rely on to sell products?

**Grant Cumming:** It is possible to import and export smolts from areas of equivalent disease status. The majority of those smolts are Scottish, if not all of them. It is possibly more common for eggs to come from abroad, but they can still make a quality Scottish salmon.

**Jamie Greene:** This might be a question for Marine Harvest. I was surprised to learn that all the eggs come from Norway. How does that add to Scottish provenance?

**Ben Hadfield:** In farming generally, it is quite typical to move stock types around the world. It is the case in chicken farming, beef farming and pig farming. In salmon production, there is a requirement to take eggs from multisea winter fish brood stock from big rivers. The majority of the worldwide salmon industry uses Norwegian stocks. They have been bred over time and there are some elements of our Scottish stocks within those. They are used in Canada, Norway and Scotland.

**Jamie Greene:** I am happy to leave that there.

**The Convener:** I will bring in Craig Anderson, who might have a different story to tell.

**Craig Anderson:** The Scottish Salmon Company also imports Norwegian eggs. However, we have invested £3 million in a native Hebridean brood stock programme based in Langass on wild stock from the River Uist. It is Scottish eggs and Scottish fish. By 2020, our aim is for 15 per cent of our production to be native Hebridean, and we aim to grow that.

In conclusion, [the reputation of the 'Scottish Salmon' brand is cracked beyond repair and is an international joke](#). When is the Scottish Government going to start protecting native wild salmon rather than protecting predominantly Norwegian companies importing Norwegian salmon eggs into Scotland to pass off to unsuspecting consumers as 'Scottish' salmon?

Do you still concur with the following statement in July by the Scottish Government?

"In relation to the trade of imported Atlantic ova from Norway, Scottish Government do not consider Atlantic salmon ova of Norwegian origin to be an alien or locally absent species according to the definitions provided in the EU Regulation. We would therefore not consider any reciprocal action in this regard"

'[Scotland's 10 Year Farmed Fish Health Framework](#)' published earlier this month (23 May 2018) cites ova yet fails to tackle the issue of imports from Norway and Iceland (where infectious diseases carry, to steal the words of Neil Manchester of Hendrix Genetics, a massive risk):

- **Identify where support to fish farming companies is necessary and assist industry to prioritise robust ova selected for disease resistance to maintain and enhance Scotland's good health status.**
- **Revise the recommendations of the Code of Good Practice with regards to ova selection.**

Why does the Scottish Government not immediately ban the import of ova from Norway?

Yours sincerely,

Don Staniford

Director, Scottish Salmon Watch



Cc:

Michael Russell MSP and Minister for UK Negotiations on Scotland's Place in Europe

Peter Chapman MSP

Mark Ruskell MSP