

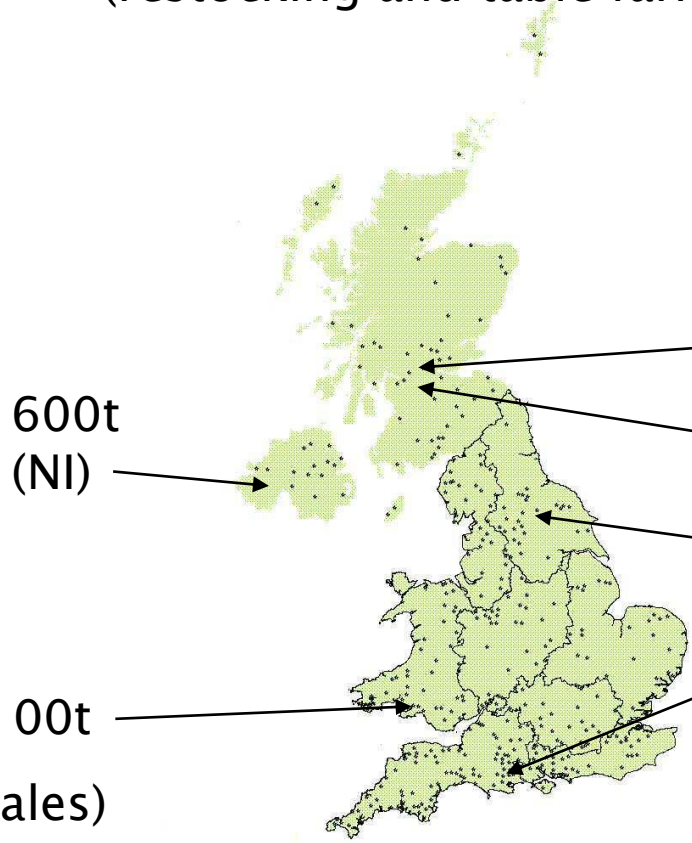
# **Infectious Haematopoietic Necrosis Virus (IHNV)**

## **The impact on live trout Eggs from Denmark**

JULY 2021

# UK Trout - 2019 Industry Overview

**BTA REPRESENTS** c. 90% UK production  
(restocking and table farming)



- c 290 registered (trout) farms across UK
- Mainly SME's, owner/proprietor
- c 1050 jobs)
- C 457t fresh water (portion table)
- C.2366t fresh water (large table )
- c.4083t salt water (large table)
- 3580t fresh water (portion table)  
600t fresh water ( large table )
- c.3,500 t restocking (UK wide)
- c. 250 t Brown Trout (UK)
- Total t: c 15536

## ▶ **What is it?**

- ▶ Infectious haematopoietic necrosis (IHN) is an infectious viral disease of salmon and trout. It was first recognised in the 1950s in sockeye and chinook salmon. The disease has most economic significance for freshwater farms, however Pacific and Atlantic Salmon (*Salmo salar* L.) in both fresh and sea water have been severely affected.

## ▶ **Where and When Might it Occur?**

- ▶ IHN virus spread across North America in the 1970s in rainbow trout (I), apparently originating from fry or egg shipments from a single source. The virus was also introduced to Japan in 1968 by eggs from Alaska and has since spread to continental Europe, although it has never been detected in British waters.
- ▶ Most if not all salmonid species are susceptible to the virus, with fry and small fingerlings becoming infected very readily, and becoming more resistant as they mature. The infection is often lethal and the mortality rate can be 100% in fry. Those fish that survive an outbreak of IHN can become carriers of the virus, providing a reservoir of infection. In addition, infected juveniles will shed IHN virus particles in the faeces, urine and external mucus.

## ▶ **Diagnosis**

- ▶ The visible signs of the disease are lethargic fish showing occasional bouts of abnormally frenzied activity that usually precedes death. The external surface of the fish appears exophthalmic and dark, with pale gills and haemorrhaging at the base of the fins. The abdomen is often swollen, eyes may be protruding and a long opaque pseudocast can be seen trailing from the vent. Internally, the fish will appear generally anaemic, with a mucus-like fluid found instead of food in the digestive tract. Additionally, ascitic fluid can be found in the body cavity.
- ▶ The causative agent of IHN is a rhabdovirus of the genus novirhabdovirus, known as IHN virus (IHNV). IHNV can be isolated from spawning fish, from the pyloric caeca, intestine and ovarian/seminal fluid, and is thought to replicate in the endothelial cells of blood vessels, haematopoietic tissues and nephron cells.
- ▶ Virus is isolated in cell culture from the internal organs of the fish and identification is confirmed by enzyme-linked immunosorbent assay (ELISA), indirect fluorescent antibody tests (IFAT), polymerase chain reaction (PCR) or antibody neutralisation assays.

## Control

IHNV can be transmitted through water, by movement of fish, contact with contaminated untreated waste material and by equipment. In areas where IHN is endemic, the number of cases can be controlled by good hygiene, the use of virus-free water supplies and the disinfection of eggs from farms with IHNV. Testing of brood stock is important in identifying carriers; where known carriers are present, the disinfection of eggs with iodine products is recommended. IHN is a notifiable disease within Great Britain and is listed as a non-exotic disease under Annex IV Part II of [Council Directive 2006/88/EC](#). Great Britain is an approved zone for this disease and to maintain this disease-free status, all farms holding susceptible species of fish are routinely inspected for clinical signs of the disease.

# Ova Imports into the UK

ENGLAND				
	2019	2020		
DENMARK	5,820,000	4,043,000		
USA	2,000,000	1,085,000		
IOM	1,610,000	2,130,000		
NI	750,000	120,000		
SA	1,100,000	140,000		
POL	0	10,000		
	11,280,000	7,528,000		
SCOTLAND				
	2019	2020		
DENMARK	5,567,000	6,000,000		
USA	380,000	380,000		
IOM				
NI	380,000	15,000		
SA				
POL	0			
SP	60,000	60,000		
	6,327,000	6,395,000		
Trout eggs			%	%
TOTAL	2019	2020	2019	2020
DENMARK	11,387,000	10,043,000	52.6	55.8
USA	2,380,000	1,465,000	11.0	8.1
IOM	1,610,000	2,130,000	7.4	11.8
NI	1,130,000	135,000	5.2	0.8
SA	1,100,000	140,000	5.1	0.8
POL	0	10,000	0.0	0.1
SP	60,000	60,000	0.3	0.3
UK Production	4,000,000	4,000,000	18.5	22.2
TOTAL	21,667,000	17,983,000	100	100

# Industry Focus

- ▶ Ensuring policy support from Government :Working with regulators to resume Egg supply from Denmark once the correct procedures and tests have been carried out and that all concerned are satisfied that Denmark has completed and complied to the regulations concerning a notifiable disease ect.
- ▶ Biosecurity: movement of live fish ,ect within the UK review current procedures making sure fit for purpose.
- ▶ UK Brood Stock Development

# Planning for the future

- ▶ Could the UK Trout Industry reduce the risks of importing live eggs by having UK produced eggs?
- ▶ Emerging Technologies: New technology using recirculation, water treatments, fish health and welfare.
- ▶ UK Brood Stock Development :Strain selection for growth, carcass quality ,disease resistance
- ▶ Disease regulation and safe water supply
- ▶ Planning permission a one stop shop for planning

# Quality Trout UK Ltd



QUALITY TROUT UK

[www.qualitytrout.co.uk](http://www.qualitytrout.co.uk)

- ▶ Est. 2000
- ▶ Focus is product quality, food safety and traceability
- ▶ QTUK at the forefront of best practice and welfare
- ▶ BTA is liaising with other schemes to develop joint audits



# Further standards and certification

*Sustainability and sourcing policy are now key issues in supply chain decision making, with increasing emphasis being placed on aquaculture and fishery products:*

- ▶ Freedom Foods
- ▶ BRC
- ▶ Global Gap
- ▶ Retailer in store schemes



**GLOBALG.A.P.**



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