Scottish Government

Animal Health & Welfare Act (Scotland) 2006

Animal & Plant Health Agency

Report on Fish Welfare for Scottish Government

Part 1: General details

1. Reference number	Corlarach FS1287
2. Name and address	Grieg Seafood Shetland Ltd (FB0440) Dunvegan Pier Dunvegan Skye IV55 8WF Postcode
3. Location of Fish (if different from above)	As above Postcode
4. Date of Visit	25/08/2020
5. Time of visit	09:00 to 13:40

Part 2: Detail

6. Present at visit:

(List the names and roles of attendees at the visit)

[redacted], Marine Scotland; [redacted] (Animal and Plant Health Agency), [redacted] (Grieg Seafood, [redacted]) and partly [redacted] (Grieg Seafood, [redacted]).

7. Reason for Visit:

(state specific reason for visit i.e. routine visit, complaint etc. If a complaint include by whom)

[redacted] emailed SEPA alleging that salmon morts would be unsafely stored at [redacted]. APHA were copied into these allegations. Liaising with Marine Scotland it emerged that this site had experienced higher than normal mortality and a joint inspection was scheduled between APHA and Marine Scotland. I accompanied the colleague of Marine Scotland who led the inspection.

8. Background

(include nature of site (sea/freshwater), species, number, production aim, production cycle, source, history of unit, any recent changes, transport used, veterinary and other advisers).

This is a seawater site stocked with Salmon. At the time of this inspection 6/10 cages were stocked with 160,800 Atlantic salmon with an average weight of 1.7kg . The site employs [redacted] for routine inspections and to help with health management. The company vet were not available to attend on the date of inspection.

9. Findings

(include disease situation and duration, mortalities and other significant records, feeding patterns, advice sought, diagnosis, treatment, vaccinations, culling, expectations etc).

FINDINGS

Corlarach FS1287 –

6/10 cages stocked with 160,800 Atlantic salmon; the average weight was: 1.7kg at the time of inspection.

Recent mortality: of a multifactorial nature and attributed to complex gill issues and damage to the fish caused by blooms of jellyfish

Week 30 – 1.19% - 3,311

Week 31 – 4.34% - 11,975

Week 32 – 13% - 34,300

Week 33 – 6.64% - 15,520

Week 34 – 1.02% - 2,172

The company's staff at the site and the Private Veterinary Surgeon employed (hereafter PVS) have carried out tests of the water and of the fish to understand the possible root cause of this mortality. The PVS attended on multiple occasions between July and August (24th July, 19th and 21st of August) to inspect the records, the fish and to carry out samples to make diagnosis. It is noteworthy that this company regularly employ the services of [redacted] (hereafter [redacted]). A fish specialist vet of FVG attends this site almost every month because they are also the medicine prescribing vets. [redacted] carry out routinely random sampling to screen a representative group of the fish population and also targeted sampling of fish appearing sick. The PVS also analyzes the cycle records to observe trends and advise accordingly. On top of this regular input and due to the large mortality recorded [redacted] attended this site in July and in August (24th July, 19th and 21st of August). The case PVS was also remotely following progress when not physically on site.

Despite lab testing the primary root cause of mortality was difficult to establish with absolute certainty. However, on the grounds of ancillary diagnostics and inspection findings, the PVS considered it very likely that zooplankton blooms -which have been documented by water monitoring-, have damaged the gills of the fish causing mortality and also predisposing them to harmful microorganisms affecting the gills including the amoeba Neoparamoeba perurans.

Pancreatic disease (SAV) did not appear to have been the cause of deaths to the PVS, moreover the fish were vaccinated against it; laboratory findings seem to have excluded with a good degree of certainty SAV as the primary causative agent of this large mortality. The PVS also reported seeing some fish damaged by the tentacles of macro-jellyfish.

No specific treatment exist for gill damage due to zooplankton, but hygiene of the cages, nets and removal of morts were the only aspecif options to manage some of the effects of zooplankton damage. On the day of official inspection company operatives were seen actively removing morts from cages and dealing with moribunds.

The amoeba Neoparamoeba perurans was treated with low dose peroxide and freshwater. However, the scale of the issue made it necessary for the company to instigate emergency harvesting because of safety concerns created by the need for simultaneous removal of a large quantity of morts as well as treating fish.

SEA LICE COUNTS (average adult female) (L salmonis)

Week 34 - 8.31

Week 33 - No count - bad weather

Week 32 - 5.39

Week 31 - 3.79

week 30 - 2.98

week 29 - No count

week 28 - 0.77

Week 27 - 0.53

Sea lice compounded the already complex picture. AMX (Deltamethrin) was prescribed to deal with the lice issue but treatment could not be carried out simultaneously on all cages. It also proved a safety issue to deal simultaneosuly with treatments and the removal of mortalities so emergency harvesting was instigated with a view to fallow the site earlier than anticipated.

The site was depopulated on September the 15th which was earlier than planned. This was done to prevent further health and welfare issues.

10. Action

(outline any necessary actions)

No action beyond inspection for APHA because the company dealt satisfactorily with this incident.

11. Conclusions and recommendations

The site has experienced high levels of mortality of a multifactorial nature. Initial damage of the gills of the salmons by blooms of hydrozoan jellyfish was compounded by secondary factors. The company recruited a fish vet specialist to carry out physical inspections, take diagnostic samples and to treat accordingly. Hygiene of cages and removal of deaths were carried out to manage this incident along with treatments. Despite this, emergency harvesting was carried out and the site fallowed before the expected time to prevent further health and welfare issues; this was due to the complexity of the issue. Grieg Seafood took satisfactory actions in this set of circumstances including: employment of veterinary specialist advice and treatment, emergency harvesting of salmons and finally depopulation.

12. Overall Assessment: Compliant *

** delete as appropriate*

Signature	
Name in BLOCK LETTERS	[redacted]
Date	08/11/2020
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DATA PROTECTION

For information on how we handle personal data please go to www.gov.uk and search Animal and Plant Health Agency Personal Information Charter.

APHA is an Executive Agency of the Department for Environment, Food and Rural Affairs and also works on behalf of the Scottish Government, Welsh Government and Food Standards Agency to safeguard animal and plant health for the benefit of people, the environment and the economy.