

Environment, Climate Change and Land Reform Committee

Environmental impacts of salmon farming

Written submission from Shetland Vets

Section 2 – Sea Lice

One difficulty I would like to emphasize in the battle against disease is the lack of products licensed for fish. For example, I counted 21 products licensed as anthelmintics in cattle in UK, but there are only four licensed against sea lice in fish (NOAH, 2017). Also, the farmers cannot use any new products until they get a Discharge Consent from SEPA, which they must apply for on a site by site basis. I would like to see this process streamlined, so that any new product is available as quickly as possible to the farmers. Widening the range of products available to farmers would delay the possibility of resistance developing, thereby actually reducing the treatments necessary, and meaning less active ingredients into the environment. This would improve fish health by reducing lice numbers as well as the number of lice treatments (which are stressful to fish). I feel that the number of licensed medicines and treatments available for aquaculture must be maintained for the health and welfare of farmed fish.

The industry is investing in alternatives to therapeutic treatments, such as cleaner fish (Biomar), fresh water treatments and even lasers (Dormehl 2017). Development of these methods takes a lot of work and money, but the industry has devoted a lot of effort to this task, for which it deserves full credit. However, the environmental movement does not seem to support such moves, and even throws cold water on the use of cleaner fish! (Thomas 2018). Other measures include synchronised fallowing, which some companies have embraced, even if it means reduced production. This should reduce the risk of resistance to therapeutants developing, or at least its prevalence, and any risk of wild fish being infested with lice (although the link between lice on farmed fish and wild salmon is still controversial).

Section 3 – Disease

In the early days of salmon farming, a high incidence of a bacterial disease called furunculosis occurred, but the advent of effective vaccines in the 1990s reduced the incidence of this to low levels, which has been maintained since then.

Vaccines have also reduced the incidence of Pancreas Disease (PD) and Infectious Pancreatic Necrosis (IPN). Whilst many of the viruses which affect farmed salmon have been found in wild fish, there is less evidence of them causing disease in the wild.

Section 6 – Medicines & Chemicals

A number of the medicines listed are no longer licensed, or no longer available.

Trimethoprim/Sulphadiazine

Sarafloxacin hydrochloride

Dichlorvos

Diflubenzuron

Teflubenzuron

Cypermethrin,

Antibiotic usage in Scotland is very low – RUMA (2017) estimates that it is about 5g antibiotic/tonne of salmon produced – a level which it has roughly maintained since effective vaccines came into use in the early 1990s. This is comparable with Norwegian aquaculture, compares favourably with other livestock sectors such as pigs and poultry, and usage in human medicine (WHO 2015). Since the early 1990s, antibiotic treatment of salmon at sea has been an uncommon event in this practice, averaging less than one a year for an area which produces a quarter of Scottish farmed salmon. This means that the vast majority of these fish have not tasted antibiotic while at sea during this period. This shows that salmon farming is certainly not “Addicted to antibiotics” as one campaigner claims!

Only three antibiotics are licensed for fish at present (Oxytetracycline, Amoxycillin and Florfenicol) with another (Oxolinic Acid) available to import under Special Import Certificate (SIC). However, these are enough to cover the treatments required, and I cannot say I have seen any increase in antibiotic resistance over the last 25 years.

Antifoulants – use of net washing has increased a lot in Shetland recently, which means that use of antifoulants has reduced.

Section 6 – feed

One new possible source of feed is insect protein, which is still in its development phase, but should reduce the industry’s dependence on fish meal and fish oil (Fish Farmer 2018).

Section 7 – predators/emerging

Seals/Seal scarers– use of seal scarers (or ADDs) has reduced here, due to the poor results from their use in some cases. At least one company has invested in heavier nets, which has also resulted in fewer seals being shot.

Section 8 – Discussion

I would sum up by saying that I think salmon farming is a young industry which has faced its problems openly and with hard work. Challenges remain, but they remain in land agriculture, where animals have been domesticated for thousands of years rather than the fifty or so that salmon have been. It is tightly regulated (arguably over-regulated) and has to live with restrictions, such as Discharge Consents, that terrestrial agriculture does not have to endure. It has also had to endure often unfair criticism in the press and from environmental groups. Medicines and treatments are used responsibly, and the industry is actively seeking alternatives to improve its sustainability, as I have mentioned above.

One thing that the SAMS report alluded to was the benefits of fish farms to the environment (perhaps this should be SAMS next project?). Large numbers of species such as mussels, seaweed/kelp, sea anemones, wild saithe and mackerel are often present in and around the cages, and even Killer Whales are seen occasionally. Boats fishing for scallops, velvet crabs and lobsters are often seen around fish farming sites. A far cry from “toxic” claims of some environmental web sites!

References

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