

## **RURAL ECONOMY AND CONNECTIVITY COMMITTEE**

### **SALMON FARMING IN SCOTLAND**

#### **SUBMISSION FROM BIOMAR LTD**

BioMar Ltd, based in Grangemouth, produces feeds primarily for the Scottish Aquaculture industry, and is one of many businesses in the supply chain that rely heavily on the fish farming sector in Scotland. Since 1995, when the Grangemouth factory was constructed, the company has grown with the industry, and we now produce over 110,000 tonnes of feed annually, of which more than 25% is exported to Ireland, other EU countries, and Australia, which contributes positively to Scottish balance of payments.

BioMar employs over 80 full time Scottish based staff, with a wage bill of £2.2 million. Annual turnover has now reached £130 million, and £1.5 million capital investment is made each year. A significant proportion of the raw material budget is spent on fish meal and fish oil produced in Scotland as well as Scottish origin crops such as wheat and beans. There are also many activities that provide full and part time jobs around feed logistics and services associated with the factory operations such as engineering and servicing work.

BioMar produces principally salmon feeds, which are produced from non-GM raw materials. As a result of market demand no land animal derived products are used, and all the fish meal and fish oil comes from sustainable certified sources, with an increasing proportion of the fisheries being MSC certified. As with the whole Scottish industry no growth promoters or hormones are used. For 2017, over 20% of our fish meal was produced from trimmings from the processing industry and over 29% of fish oil, again with a significant proportion from Scotland supply.

An important part of our product range, are the feeds that are supplied for the production of organic salmon, this now accounts to over 9% of our total production. As well as producing fish feeds, BioMar provides the service of medicating feeds where required by veterinary prescription. For a number of years now this service has declined in importance, for 2017, only 2.2% of our feeds were medicated, 2% with lice treatments, and only 0.2% with anti-microbial medicines. The previous year, 2016, only 2.9% of feeds were medicated with lice treatments, a decrease of 31%. This reduction is very positive and shows that the huge investment in cleaner fish and alternative non-chemical treatments for sea lice is paying off.

Feeds for salmon originally recreated a fish, and relied heavily on fish meal and fish oil and only a small amount of wheat to produce a pellet, these feeds gave a food conversion ratio well over 1.8 to 1 (1.8kgs of feed to produce 1kg salmon), and because of the reliance on fish oil and fish meal were very inefficient as regards the kg of wild fish to produce a kg of farmed salmon (Fish In Fish Out ratio, FIFO). The feed industry has invested heavily in R&D, with the BioMar Group of companies

spending over £7 million annually. This has now resulted in feeds which are capable of producing an FCR of 1.0, with much of the marine content being replaced by plant derived raw materials, and resulting in a FIFO close to 1.0. An improving FCR is not only good for the fish farmer; as it means more efficient use of nutrients, less are wasted and lost to the environment. The harvested salmon that are produced with these feeds are still a healthy source of proteins, vitamins and the long chain omega-3 fatty acids that are so important for human health and development.

BioMar believes that the Scottish Aquaculture industry is extremely well regulated and transparent in its operation, and compares favourably with other food producing industries as regards welfare and other environmental indicators such as carbon footprint. Of course the industry has its challenges, it is a new industry, as is farming in the open sea. The big challenge at the moment is sea lice, but we believe the industry is acting appropriately and making the necessary significant investments in cleaner fish and physical lice removal systems.

It is suggested by many, that the future of the Scottish Aquaculture Industry is on shore in automated recirculation systems. Financially this is not realistic; no system to date has economically proven itself producing harvest sized fish, where the whole life cycle has been in a recirculation system. However, recirculation systems can be part of the solution; they can be used in the early part of the salmon's life cycle, allowing for the production of bigger and more robust smolts. This should be combined with the use of larger cages sites, sited further off shore in more oceanic waters, where latest DEPOMOD modelling demonstrates minimal environmental impact.

Scottish Aquaculture is hugely important to the Scottish economy, particularly the rural communities of the West Coast and Islands, bringing employment and business opportunities, and allowing communities to flourish again. It is also vital for urban / industrial communities like Grangemouth where our operation is located. Like all human activities, fish farming does have an impact on the environment, but if properly monitored and managed, which we believe it to be; there is no reason why it cannot continue to exist and grow and produce the fantastic product that is Scottish Salmon, which BioMar is very much proud to be part of it.

BioMar Ltd  
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