

New Organic Salmon Farm for Shot Head

JANUARY 2012



marineharvest

Ireland's Leading Organic Salmon Farm Business to Invest €3.5 million in Bantry Development

Ireland's leading organic salmon farm company, Marine Harvest Ireland (MHI), plans a capital investment of €3.5 million to develop a new salmon farm site at Shot Head, Bantry Bay, Co. Cork. The development is one element of a planned €14 million investment programme by the company over the next five years in the upgrade of its 16 aquaculture sites around the coast.

The overall investment will ensure that the company's Irish operations benefit from the most up-to-date technological advances. It will comprise the upgrade of equipment and operational practices and the continuing development of a nationwide stocking, harvesting, fallowing and rotation programme in compliance with international best practice.

In the case of Shot Head, the investment will vastly improve the company's existing Bantry Bay facilities, enabling improved rotation of the fish crop and creating a world-class operation in the Beara Peninsula which will secure the long-term future of the aquaculture industry in the area.

There has been salmon farming in Bantry Bay since the 1970s, when local fishery interests first established the Roancarrig Salmon Farm. Over the last 40 years salmon farming has become a successfully integrated part of the local community in the region.

MHI is a subsidiary of the Marine Harvest Group headquartered in Norway, it is a global force in aquaculture with 4,800 employees operating across 21 countries worldwide and servicing 50 markets across the globe. The company has 30 years successful operation in Ireland, employing over 260 people between its salmon farms and hatcheries in Donegal, Mayo and Bantry. Its Irish produce is exported throughout the EU and to the US.



According to Catherine McManus of MHI;

"While our operations in Ireland are small relative to our other facilities worldwide, Ireland is a strategically important location for MHI. The high environmental standards of our Irish operations have established them as the ideal location for the company's high value organic salmon business."

"The guarantee of 'Produced in Ireland' is also a significant contributor to the success of our sales in the more sophisticated European markets of France, Germany and Switzerland. For those reasons the company is committed to maintaining its presence here and is investing to ensure that our Irish operations can continue to operate to best international standards," she added.

Following an analysis of a number of site options in Bantry Bay a suitable site has been identified near Shot Head, 8km east of the company's existing Roancarrig site. The development will initially create six full-time jobs during the farm set-up and a further two additional jobs when fully operational. The company will also commission a marine vessel with a local ship builder to service the Shot Head site.

The site development will take 14 weeks to complete and will begin as soon as the company receives an Aquaculture Licence and a Foreshore Licence from the Department of Agriculture, Food and the Marine.



This newsletter has been produced to inform the local community and interested stakeholders of our proposed investment programme and provide you with an insight into the company and the high standards of operation. Should you have further queries on MHI or its Shot Head development, please refer to the contact details on the back page.

The Development

The licence application for Shot Head will be for an operation very similar to the Roancarrig site. The visible sea surface area of the site will be 15,650m² or just over 1.5 hectares. However, the application will be for an overall seabed area of 42,000m² or 42.5 hectares.

The larger overall seabed area is required to accommodate the lengths of moorings for anchoring the pens and a feed barge. It must also allow sufficient space for the movement of the pens over new ground within the overall site area. This will enable improved fallowing should the need arise. The extra seabed area required will not represent a physical boundary, nor will it prevent continued use of the area by other water users. It would be normal, for example, for inshore fishermen to pot around the moorings of fish farms.

The proposed new salmon farm will hold a maximum stock of 2,800 tonnes of salmon at a peak stocking density of 10kg/m³. Peak stock will occur in February to March of year two in each production cycle. Smolt will be transferred to the site in October to November every two years, and reach harvest weight at the site within 22 months. Average harvest weight will be 4.5 to 5.6kg. The site will be fallowed after harvest for no less than two months and will then be restocked for the next cycle.

The intended maximum stocking density of two full grown fish per cubic metre of water is low by international salmon farming standards. This is in line with the high animal welfare principles and organic salmon farming standards to which MHI operates. This leads to the production of fitter, more evenly sized fish.



Marine Harvest Ireland – A World Leading Company

Marine Harvest Ireland (MHI) is the largest aquaculture company in Ireland, producing premium salmon under the brand name of Donegal Silver, and organic salmon under the brand names of Clare Island Organic and the Organic Salmon Company.

In Ireland, the company started in 1979 as Fanad Fisheries which was founded by a group of Irish shareholders led by Anthony Fox, who had up to then been a biology teacher in Dublin. The farm started as a sea trout farm, but soon changed to salmon farming.

In 1981, a joint venture was established with A/S MOWI of Bergen, Norway, and this greatly strengthened the Irish operation as it provided access to stock, technology and financial resources. This initial agreement was key to the company's early successes in the Irish salmon farming industry.

The first harvest of Atlantic salmon took place in 1984. In 2004 the Company purchased Clare Island Seafarms in Co. Mayo and in 2008, acquired Silver King Seafoods in Co. Cork.

Today, MHI produces four main products for three markets. The company sells fertilised ova to other farms around the world; it sells fry and smolts to other farmers in Ireland and Scotland; and it produces premium salmon under the brand name of Donegal Silver, which it sells throughout the EU and the USA's East coast. The company also produces Organic Atlantic salmon at Clare Island in Clew Bay, Co. Mayo, in Donegal Bay, Co. Donegal and in Bantry and Kenmare Bays, in counties Cork and Kerry.

The majority of the company's fresh salmon customers are salmon smokers who require a continuous and reliable supply of high quality fish. MHI sells its fresh salmon products from its own sales office based at the Rinmore processing plant in Co. Donegal.

High Standards

MHI has achieved many awards and standards since its establishment over 30 years ago. These have included the Irish Quality Association (IQA) Q-Mark, the Fish Processing Category of the IQA National Hygiene Awards, the Excellence Ireland Hygiene Certificate and the Excellence Ireland Triple Hygiene Award.

MHI has achieved the Irish Quality Salmon Standard for all company operations since 2000. The company operates under the ISO 9001 International Quality Management Standard and was the first salmon farming company in the world to achieve the ISO 9002 International Quality Systems Quality Assurance Standard. MHI was the first Irish primary food producer to be certified under the ISO 14001: 1996, the International Environmental Standard.

MHI is certified under three separate internationally recognised Organic Standards; Naturland, Bio Suisse and Irish Quality Salmon Organic Standard in full compliance with EU Directive EC/710/2009. If licensed, the proposed Shot Head site will be operated and managed with the benefit of these standards as a fully organic unit, using low stocking density, organic salmon smolt and organic feed.

The Salmon Farming Cycle

The salmon farming cycle starts in freshwater hatcheries in early winter. Ova are removed from the female fish and fertilised. These are then incubated very carefully until they can be handled and shipped to other farms and hatcheries.

The ova are laid down in hatchery troughs where further incubation leads to hatching, at which stage the "alevin" emerges from the sea. This alevin is not unlike a frog's tadpole. After a further four to six weeks the alevin reaches the stage when it can start feeding itself; this typically coincides with the rising temperatures in springtime. This so called "first feeding" stage still remains one of the most critical and delicate stages in the production cycle.

Once feeding, the fish are referred to as "fry", and these grow rapidly in the circular tanks of the hatcheries. MHI hatcheries draw water from nearby lakes, which were chosen not only for their pure waters, but also for their low incidence of wild migratory fish which represent a potential source of disease.

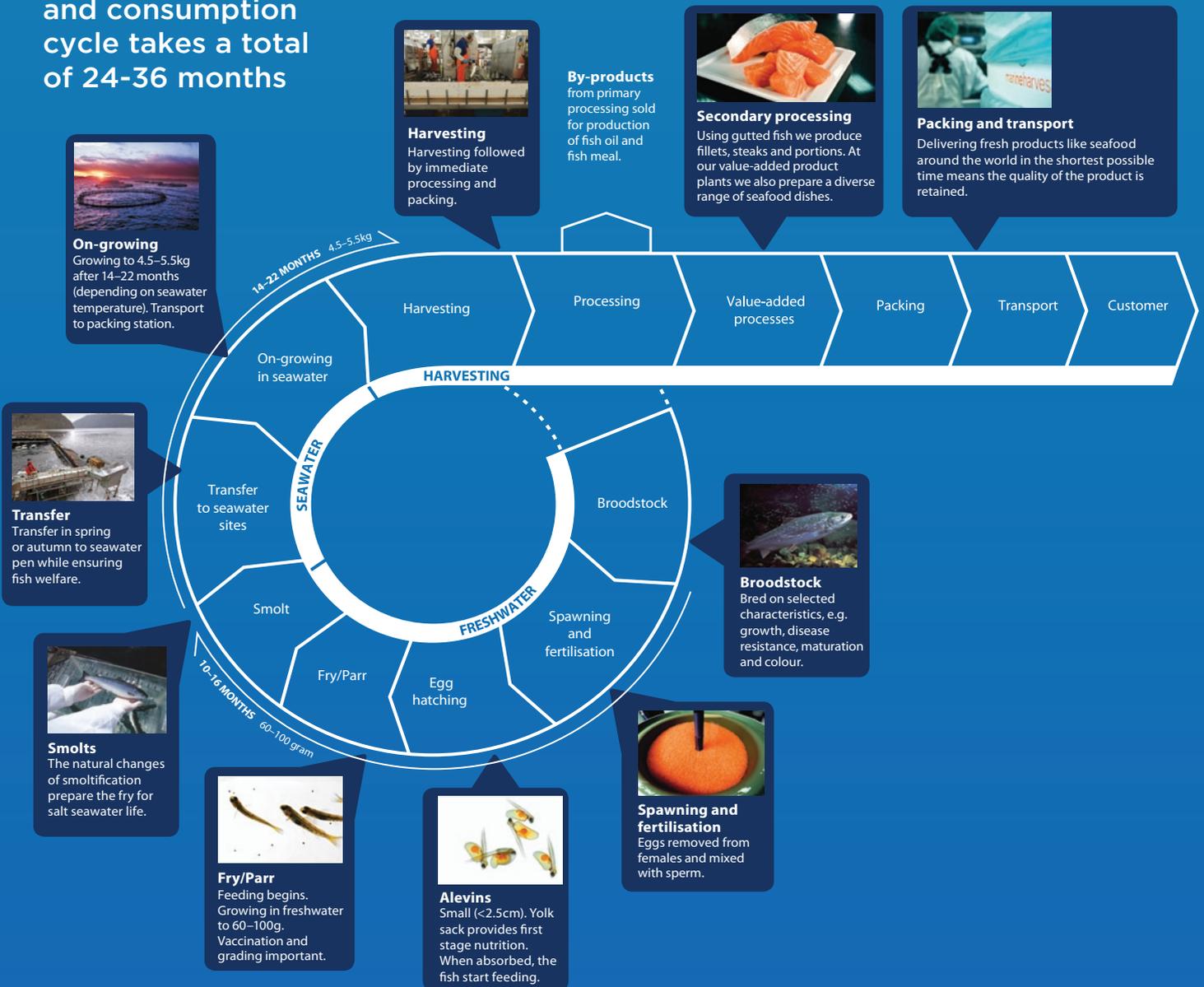
These hatcheries grow the fry on to smolts at which stage the young salmon are ready to go to sea. As the fish smoltifies it turns silver, and once complete, this physiological change enables the fish to cope with the high level of salt in sea water. Smoltification takes place in springtime, some 14 months after the ova first hatched.

MHI produces both spring and autumn smolts and these are used for its own salmon production and that of other salmon farmers in Ireland and Scotland.

The production cycle at sea from a smolt of circa 60g to a 4.5kg salmon takes between 16 to 22 months. Once at sea, the smolts are reared in nets suspended from either square or circular floating structures referred to as pens. These are moored in groups at locations where there are strong water flows in order to provide the stock with optimum environmental conditions.

Once the fish reach the desired weight of between 3kg and 5kg they are harvested as rapidly and with as little stress as possible. This is important for the animal's welfare as well as its quality. Immediate chilling followed by rapid processing and logistics are all important to present a fresh product.

The production and consumption cycle takes a total of 24-36 months



Caring for the Environment

Salmon are extremely sensitive to pollution and only grow if the waters in which they live are clean and well oxygenated. Consequently, the monitoring of both fish and environment represent a very important aspect of MHI's operations.

This also means that the salmon farmer has the greatest interest and concern for the environment in which they exist. By its nature, aquaculture is set to grow in areas where there is very little other development. The wild Atlantic salmon feeds in the crystal clear waters of the ocean. Equally, the farmed salmon demands the same such pristine conditions which are commonly found only in the most remote and beautiful parts of this island. We as farmers must satisfy the salmon's requirements, yet do so sensitively in respect of other interests and the general public's concerns.

Marine Harvest Ireland operates a comprehensive Environmental Management System which is certified to the international environmental standard, ISO 14001. Within this system we examine and measure all of our impacts on the environment from energy usage, visual impact and use of natural resources to waste management. We establish environmental objectives and targets each year with a view to minimising our environmental impact and continuous improvement.

Organic Salmon

MHI's commitment to providing great organic salmon products to its customers has led to the company becoming the world's leading supplier of organic salmon. Marine Harvest farms Irish organic salmon in locations around Ireland including Clare Island Sea Farm, one of the world's most remote salmon farms.

Organic salmon are provided with special diets that contain only organic, natural ingredients and are free of genetically modified products.

Stocking densities are low, in line with organic welfare concepts. This works out at just 0.5% to 1% of fish by volume in the water, less than half that of conventional farms. The organic production sites are continuously flushed with clean water, preventing any build-up of parasites or pollutants. This natural, healthy environment and low population density allows the fish to develop good muscle tone and body shape.

Underlining their outstanding merit, our organic salmon are certified by EU Organic Aquaculture Standards, in addition to private label standards in Germany and Switzerland. The four organic certification bodies that certify Clare Island Organic Salmon and organic salmon from Roancurrig, Inishfarnard and Deenish sites in Cork are Naturland Verband (Germany), Bio Suisse (Switzerland) and Global Trust Certification. Each authority conducts an annual audit to ensure the highest organic standards are maintained. The new salmon farm at Shot Head will also conform to these high standards.

The Licensing Process

Ireland has a very stringent and strictly enforced regulatory regime for aquaculture. Under Section 6 of the Fisheries (Amendment) Act, 1997 (as amended), it is illegal to engage in aquaculture without an appropriate Aquaculture Licence. Aquaculture includes the culture or farming of fish, aquatic invertebrates, aquatic plants or any aquatic form of food suitable for the nutrition of fish. Land-based aquaculture may also require planning permission and a discharge permit from the local authority.

Aquaculture licensing is administered through the Aquaculture and Foreshore Management Division of the Department of Agriculture, Food and the Marine. The division also processes companion foreshore licences required for coastal aquaculture operations. The Minister for Agriculture, Food and the Marine decides on applications made to the division. Any person who engages in aquaculture without a licence, or who breaches the terms of a licence, may be prosecuted through the courts. Penalties can be severe and, in addition to any fine imposed by the courts, the Minister may also require the person convicted to remove any structures and/or equipment.

There is an appeals procedure which members of the public can use to challenge the issue of a licence or the terms of that licence. The appeals procedure for aquaculture licensing is handled by the independent Aquaculture Licences Appeals Board. Applicants, the public or environmental organisations aggrieved by a decision of the Minister for Agriculture, Food and the Marine on an aquaculture licence application, or by the revocation or amendment of an aquaculture licence, may make an appeal.

The Aquaculture Licensing Section of the Aquaculture & Foreshore Management Division co-ordinates processing and monitoring of licences for marine finfish including salmon, rainbow trout and cod; land-based finfish such as turbot, perch and salmon hatcheries; shellfish such as oysters, mussels, scallops, clams, abalone and sea urchins; the cultivation of aquatic plants including seaweed.

A visual impression of the proposed development looking south west over the cliff above Mehil Head.



For further information on the Shot Head application please contact

Catherine McManus

Email: Catherine.McManus@marineharvest.com

Mobile: 087 982 9205

Tel: 074 919 2105