

The world's most efficient and sustainable value chain

Lerøy's fully integrated value chain for seafood is an efficient value chain, with improved resource utilisation. The world's most efficient value chain is also one of the world's most sustainable value chains for food production.

From roe to table, from fjord to table. From our parent fish facilities for salmon and trout and our own trawlers or the coastal fleet to prepacked fresh ready meals in the shops.

"Long-term investments in innovation and technological developments have secured increased efficiency for Lerøy's value chain, optimal quality and food safety throughout the chain. An efficient value chain is also a sustainable value chain from several perspectives: the climate, social sustainability and, of course, financial sustainability," explains Henning Beltestad, CEO of Lerøy Seafood Group.

QR code tracking

Ever since 2003, Lerøy has been able to provide customers with extended traceability from roe to finished and packaged product. For many years now, Norwegian consumers who have purchased Lerøy salmon in shops have also had access to full traceability of the fish.

We have now taken this one step further and can offer our customers extended traceability with a QR code on the packaging in the shops. This has been developed together with the French Carrefour Group, but we can offer the same solution for all customers who request it.

Our goal is to provide the same traceability for whitefish in 2020.

Reusing almost all water

Over time, Lerøy has invested several billion Norwegian kroner in every part of the value chain for both red fish and whitefish. Recycling plants for smolt production provide substantial reductions in both fresh water and energy consumption. Mud generated in the RAS plants is transformed into fertilizer for agricultural purposes.

The investments in RAS technology not only allow better utilisation of fresh water and energy, they also provide significant, positive contributions to the next part of the value chain. Stronger and more robust fish mean less treatments in the cages. Moreover, the fish spend less time in the

sea, with reductions in the discharge of nutrient salts and feed waste.

Remote monitored feeding

At our farming localities, feeding is controlled by growth centres that ensure optimal feeding, less feed loss and a reduction in resource wastage. Lerøy's feed specialists monitor feeding with live transmission of high-resolution images. Sensors also provide measurements of salt and oxygen content, temperature, feed intake etc. This helps ensure optimal conditions for the fish and collection of data, which is analysed to enable continuous improvements to the value chain.

Once the fish has reached the correct weight and is ready for slaughter, this process takes place in high-tech facilities, helping ensure improved quality and high food safety. At Lerøy's new facility on Jøsnøya island in Hitra, the fish swim directly from the well boat into the facility, where they are anaesthetised. They are then transported through what is probably the world's most modern facility of its kind.

Increased processing in Norway

From the moment the fish enter the facility until they shortly after leave as packaged fillets, they have been through a process including slaughter, sorting, gutting, 3D scanning, filleting and removing bones etc. The fish is then sent directly to transport, ready for customers worldwide.

"Our vision is for the fish to have their full life cycle, from roe to packaged fillet, without being touched by human hands. We are now very close to achieving this vision," confirms Henning Beltestad.

Lerøy's investments in innovation and technology have also resulted in more processing activities in Norway. The goal is to further increase the level of processing. This will in turn generate more and safer jobs throughout the country, and will result in a substantial reduction in transport volume, as the vehicles used for transport will be fully loaded with fillets instead of whole fish. All residual raw materials are utilised, so that the facility makes use of 100% of every fish. The raw materials may

be used to produce salmon oil, animal feed or biofuel. Trondheim's buses, for example, are powered by residual raw materials from Lerøy's salmon.

3D-scan and water jet

Lerøy also has control of the entire value chain for whitefish – from the moment the net full of fish is hauled onboard the trawler until the fish is on a plate on the consumer's dining table. Lerøy has renewed its trawler fleet and now has some of the world's most modern trawlers, with increasing energy efficiency. Residual raw materials are utilised, some for direct sale and others converted into fishmeal, fish oil or animal feed on board the trawlers.

When the fish are landed, they are processed in modernised facilities, either in Melbu, Berlevåg, Kjøllefjord, Stamsund or Bulandet, to mention a few. All these facilities have been significantly upgraded, requiring major investments. The fish can, for example, be scanned in 3D now to establish quality and to show the best way to fillet the fish. A powerful jet of water cuts like a laser through the fish, ensuring improved quality and optimal raw material utilisation for the end product. The facility in Stamsund produces fish cakes and other fish products from trimmings

from fillet production, so that the focus at all times in production is to create the best consumer products using the highest percentage possible of residual raw materials. Fish heads, tongues, cheeks, liver, roe, stomachs, milt, backbones with swim bladder – everything is sorted and packaged, making use of the entire fish.

Sustainable growth

"This journey, from the juvenile fish plant, via the RAS plant, to the fish farm and then the factory is designed to safeguard fish health, the environment and climate. Our modernisation of the trawler fleet and whitefish factories is also an important factor in our efficient, fully integrated value chain. This also provides sustainable growth," explains Henning Beltestad.

"We are doing our utmost to process as much of the fish as possible along the Norwegian coast, or in other words, as close to its origins as possible, in order to minimise our climate footprint and global transport of raw materials. It is perhaps this, more than anything else, that is the most recognisable feature of Lerøy's value chain and makes us one of the world's most efficient and sustainable seafood suppliers."

