

Traceability in Aquaculture



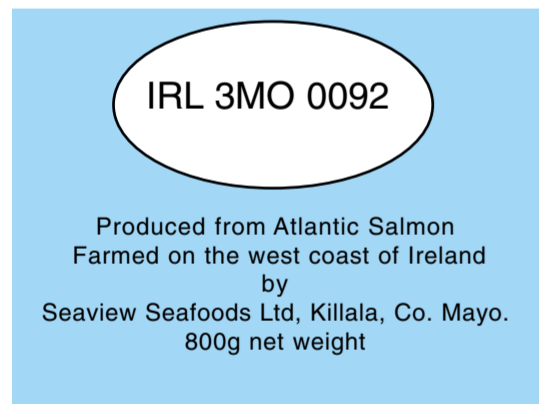
Shellfish - Hatcheries/Spat Collection
Due to a massive increase of spat extraction by dredging, some EU countries now require that wild mussel spat collectors maintain logbooks detailing amounts and locations of wild spat collection and where they go to. Shellfish hatcheries maintain breeding records for all stock and are able to provide a history for all seed supplied onto shellfish farmers.



Shellfish Growers
Shellfish growers are registered "Gatherers". All shellfish dispatched by a registered "Gatherer" are accompanied by a "Gatherer's Certificate" which gives information on the consignments origin, grower details and where the consignment is going to. Copies of all Gatherers' certificates are sent to the competent authority and entered in the national database. Shellfish can only be produced in waters classified under the EU 91/492 directive.



Shellfish Depuration/Dispatch Centres
Depuration consists of placing shellfish in suitable conditions of clean seawater for a period of time sufficient for pathogens to be purged by the normal activity of the animal. All depuration and dispatch centres have to be approved under the EU Directive 91/492 and issued with an approval number. All outgoing product from a dispatch centre is accompanied by a certificate giving details of the consignment including those of the dispatch centre and origin of the shellfish. Lists of approved depuration centres are maintained by the competent authorities.



Labelling and Traceability
The labelling and packaging requirements for fishery and aquaculture products and the traceability of such products are dealt with in EU legislation under Council Regulation (EC) No. 104/2000 and Commission Regulation (EC) No. 2065/2001 in detail. Labelling must include:
The member state or third country in which the product undergoes the final development stage of the rearing process. Under the EU91/492 and 91/493 directives the label is supposed to include the processors or depurators EU approval number which is traceable.



Traceability for the Consumer
Tracking and tracing systems can be developed further to allow consumer tracing. Currently the consumer can theoretically track back processed product from the point of sale to the processor via the packaging. If the labelling does not include contact details the product can be tracked via its EU approval number, eg: IRL3KK091. The competent authority in each country is obliged to maintain a list of approved premises which is available to the public.

Traceability systems have been present in Aquaculture for a long time. Many companies are part of quality shellfish, finfish and seafood schemes which require a tracing system. Additionally most of the health and hygiene regulations (EU directives 91/492 and 91/493) which apply to fish, shellfish and seafood products have measures in them to track and trace seafood product along various parts of the supply chain. It is only in recent years that traceability in its own right has become important. The first piece of EU traceability legislation (Regulation 178/2002) will come into force in January 2005. It is expected that further EU legislation will come into force which will replace a lot of the existing health and hygiene rules. The new legislation requires companies working in the food sector to have a minimum traceability capacity of "one step forward and one step backwards". Complete traceability along the supply chain is theoretically possible.

Food safety is an intrinsic part of food quality as are tracking and tracing systems. A reliable traceability system is the means by which a food company can track and trace any foodstuff which does not meet consumer expectations or the regulations in the country of production or consumption. The main objective of a traceability system is to tell the story of a product i.e. identify a unique batch of product and the raw materials used in its production and follow that batch through the production and distribution process, to the retailer. Today tracking and traceability software tools are of major interest to the retail business (as a business to business communication tool). Tracking and traceability systems can be incorporated into information systems where consumers can get information on any product.

Traceability systems enable efficient product recall and allow fewer products to be recalled. This brings important cost savings where the aim is to provide consumers with nutritious and healthy products which are produced in a cost efficient way. Additional benefits of an efficient traceability system provides feedback on product quality to the supply chain and improves consumer confidence.



Traceability on Finfish Farms
All finfish farms maintain production records in either paper or electronic format. Upon handover to the next link in the supply chain, in most cases, a positive release statement is signed confirming that the product conforms to the EN45011 guidelines. For finfish farms traceability systems should have a detailed, coherent data base from which to extract data. Various software products are available which can be customised to suit a particular farmer's needs.



Traceability of Feed and Ingredients
Food and animal feed (includes food producing animals and animal feed ingredients) must be traceable at all stages of production, processing and distribution from January 1st 2005. Feed and food producers have to be able to demonstrate traceability (Art.18 EU Regulation 178/2002). The feed manufacturer has to have a system in place to keep track not only of batches produced but the raw materials that went into the feed.



Packing Plants/ Processing Plants
Most vertically integrated fish farms have their own packing or processing plants which are also "Approved Premises" under the 91/493 Directive. Smaller fish farms use local EU approved processors as their packing plants. The placing of processed fish product for sale to the public is only allowed from EU Approved Premises. Each approved premises has a unique approval number which normally appears on all packaging and is traceable. The competent authority in each country maintains a list of EU Approved (Fish Processing) Premises which are available to the public.

IMPROVED QUALITY CONTROL

Traceability systems increase the standard of product management and quality control work by a system of records that can be accessed on demand. Having access to this information means that a product can be easily checked to confirm that it adheres to various quality scheme criteria.

IMPROVED FOOD QUALITY

If an accident related to food safety occurs, traceability systems help trace the cause quickly and easily. The systems help collect and remove a problem food product correctly and promptly.

BUSINESS EFFICIENCY

Traceability systems help increase the efficiency of product management and quality control work by managing products by ID numbers and by storing and offering information about the origins and characters of products. Ultimately it strives to achieve the harmonisation of all operators in the system.

MINIMISE PRODUCT LOSS

Being able to reduce the possibility of mass product recalls in the event of products not reaching their specifications could save a producer from being forced to withdraw perhaps a whole year's stock. Effective traceability systems enable the zeroing in of the product batch and tracing it along both directions of the food chain.



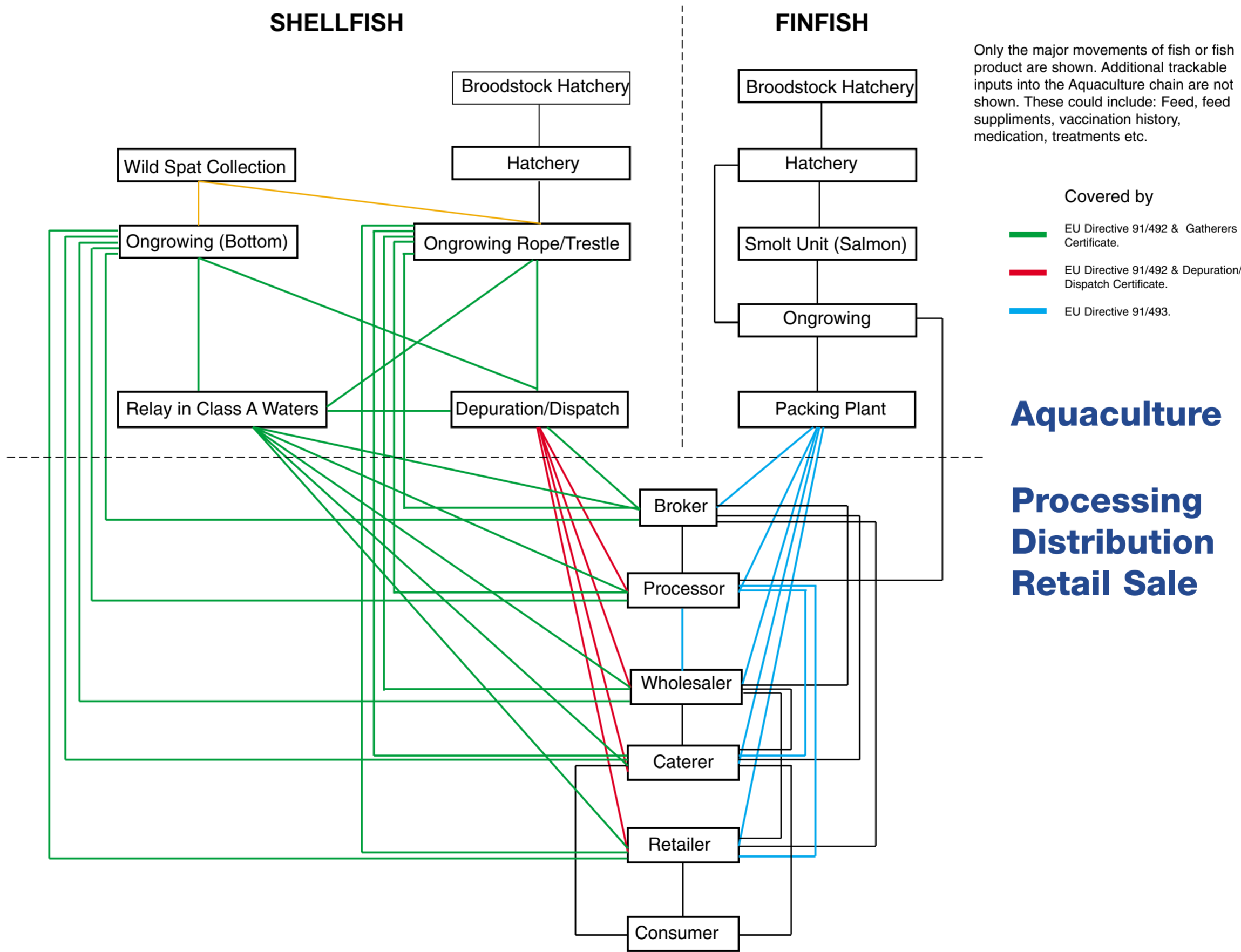
INFORMATION STORE

New legislation stresses that all traceability systems must give easy access to vital points of recorded data. The primary function of a traceability system is to have the ability to locate products not reaching their specifications.

TRANSPARENCY

Traceability systems have to work across the full supply chain and be easy to use by companies operating the system and those requiring access to the data.

Major Pathways for Aquaculture Product along Supply Chain to Consumer



Only the major movements of fish or fish product are shown. Additional trackable inputs into the Aquaculture chain are not shown. These could include: Feed, feed supplements, vaccination history, medication, treatments etc.

- Covered by
- EU Directive 91/492 & Gatherers Certificate.
 - EU Directive 91/492 & Depuration/Dispatch Certificate.
 - EU Directive 91/493.



Quality Marks and Traceability
Quality schemes allow a consumer to have confidence that the product they are purchasing has arrived at the shelf using practices that adhere to standards set by the scheme in place. Quality assurance schemes are given approval by outside audits, and upon certification, are accredited by EN45011 bodies.

Aquaculture

Processing Distribution Retail Sale

Generally quality schemes seek to certify/approve seafood products to internationally recognised standards of product excellence in terms of processing, quality, hygiene and traceability. Examples include: Quality Seafood Programme, BIM, Ireland; Label Rouge, France.



Traceability in Transport
All transport companies will maintain records of what is on a particular lorry at a particular time. Some have electronic track and trace web based systems to allow customers know where the consignment is in real time. The EU Tracofish project (www.tracofish.org), has developed a system to allow the transparency of goods being transported. Each package is marked with a unique identifier, and then all relevant information can be transmitted/extracted electronically.

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