

The Facts About Aquafeed



EFPPRA

DRIVING FOOD CHAIN SECURITY AND SUSTAINABILITY IN EUROPE



What is aquaculture?

Aquaculture is an increasingly important means of food production that encompasses the farming of fish, molluscs and crustaceans. Nearly 2.5 million tonnes of farmed fish were produced in Europe in 2014 out of a global total of 101 million tonnes. (FEAP)

Within Europe, two thirds of the fish farmed is salmon, more than 80% of which is produced in Norway. Besides salmon, the main species produced in Europe are trout, sea bass, sea bream and carp. Most of the species are carnivorous and omnivorous with varying requirements for protein and oil.

In aquaculture, fish consume feed pellets rather than wild sources of food such as insects, plankton or other fish. In Europe, the typical feed ration consists of a combination of fish oil, fishmeal, vegetable oil and high protein plant material – typically soy and corn.

Animal by-products in aquafeed:

In Europe, Processed Animal Protein (PAP) in aquaculture was restricted until 2013. Since then, non-ruminant PAP has been permitted reflecting scientific consensus on the safety of feeding land animal proteins to fish. Rendered animal fat and oil have been available to use in aquafeed for many years without any restrictions.

PAP and animal fat and oil are by-products of the meat processing industry. They are produced from material that is fit for human consumption at the point of slaughter but doesn't enter the human food chain for cultural or economic reasons.

In other parts of the world, aquaculture routinely uses material from land animals for aquafeed. Products from non-European aquaculture are regularly imported, sold and consumed in Europe.

Aquafeed production:

Producing aquafeed requires high-level technical and scientific skills. The aim is to provide feed which meets the fish's nutritional requirements, although not exactly replicate the sources of food in a fish's natural diet. Ingredients from land and marine animals as well as plants are used in aquafeed. Ingredients and finished products are rigorously tested to guarantee the necessary nutrients are present and in a form that is digestible by the fish.



The components of aquafeed:



Fishmeal and oil

Is produced from captured wild fish and the by-products of the fish processing industry. It is relatively expensive and there are concerns that it is not a sustainable source of food for a growing aquaculture industry. Fishmeal and oil have to be carefully monitored for accumulated contaminants like heavy metals and dioxins. Material from the fish by-product industry also requires careful monitoring to prevent intra-species consumption.



Vegetable oil and protein

These ingredients are generally cheaper than fish products but there are some nutritional issues. Digestibility of fibre and phosphorous are issues which affect animal performance. Also, plant material may contain anti-nutritional factors that are part of a plant's defences against predation from land animals. These factors can have a marked effect on health, welfare and performance of fish.



PAP & animal fat and oil

PAP contains essential amino acids – including lysine and methionine – as well as fats, minerals such as calcium and phosphorous and vitamins including vitamin B12. Non-ruminant PAP has good digestibility and palatability – this is especially important when feed is produced with smaller quantities of fishmeal and higher levels of vegetable proteins. Worldwide, poultry oil is mostly used in fish diets but recent studies show that tough fats like beef tallow perform very well in all kinds of fish: fresh or marine, warm or cold water.

There is a range of benefits to including animal by-products in the aquafeed ration:

Marine resources:

- Animal products are an affordable way to improve the overall quality of aquafeed
- Using PAP and animal fat and oil reduces pressure on wild fisheries to provide aquafeed
- Aquaculture is a fast growing industry so it will not be possible to meet all nutritional demands from wild fisheries



Environment

- PAP and animal fat and oil are considered to have a much lower carbon footprint than vegetable products that are grown specifically for animal feed
- There are fewer concerns about indirect land use change when using animal by-products unlike some imported vegetable feedstuffs, particularly the effect of soy production on tropical rainforests

Animal health

- Animal by-products are safe with a well regulated supply chain
- Substitution of vegetable with animal material in aquafeed reduces the levels of anti-nutritional factors which improves fish health and welfare

EFPRA represents the animal by-products processing sector in Europe and is a leading authority on the regulation, manufacture, bio-security and nutrient value of processed animal protein and animal fat. EFPRA members employ over 15,000 employees and process raw material on approximately 400 lines across the entire membership.

EFPRA has a single primary objective; to continually improve the safety, security and sustainability of European food production by efficiently processing animal fats and animal by-products.

It brings together European by-product processing organisations that produce high-quality products, edible animal fats and processed animal protein. It also works closely with partners worldwide for the technical advancement of the industry.

For more information about processed animal protein, animal fats and the European by-product processing industry visit www.efpra.eu or call +32 (0) 2 203 51 41.

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