

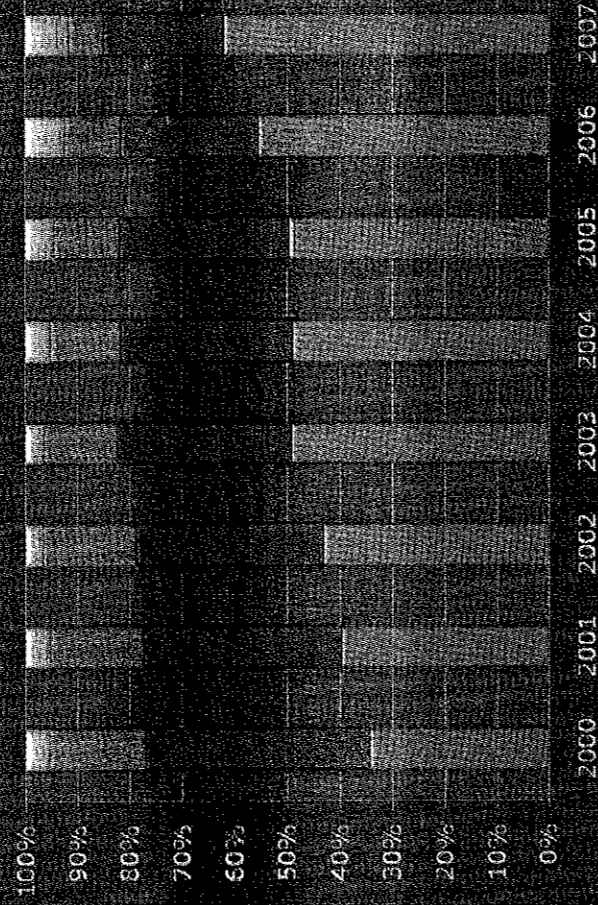
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Fishmeal 'still best'

*FISHMEAL has played an important role in high performance diets during the rapid growth of global aquaculture over the last twenty years, writes **ANDREW JACKSON**, technical director of the International Fishmeal and Oil Organisation (IFFO).*

Percentage Change in Fishmeal Usage



■ Other ■ Chicken ■ Aquaculture

Figure 1: The changing use of Fishmeal by sector
(IFFO data)

IN RECENT years annual fishmeal production has settled at around 5 million tonnes, compared with around 6 million tonnes during most of the 90s (except in El Niño years). This, along with the sharp rise in prices over the last three years, has led many to speculate that either aquaculture must learn to live with less fishmeal or its future growth could be limited.

A number of factors have contributed to the reduced production of fishmeal in recent years. These include a move towards a more precautionary approach when setting fishing quotas and the adoption of the fishing related concepts of Maximum Sustainable Yields (MSY) and Ecosystem Management. This is particularly true in Europe and in South America where lessons

have been learned from previous over-exploitation. Over time this more precautionary approach may even result in increases in production as the standing biomasses increase, allowing a concomitant rise in MSY. Another factor in the reduced production has been the growing use of pelagic fish for direct human consumption. This is most notable in South America where, for example in Chile, an increasing proportion of the jack mackerel catches (more than 50% in 2007) are being canned or frozen for the human consumption (HC) market.

An increasing HC market is also now being found for Peruvian anchovy, both locally and for export, although it still represents less than 1% of the fishery. A third factor in the

decline of fishmeal production has been the overall reduction in catches in some fisheries due to over-exploitation. As aquaculture expanded in China during the 1990s its demand for fishmeal rose and domestic production of fishmeal increased from around 200,000 tonnes to over 700,000 tonnes. However, having peaked in 1999 it has now fallen to less than 200,000 and the Chinese have become more reliant on imports.

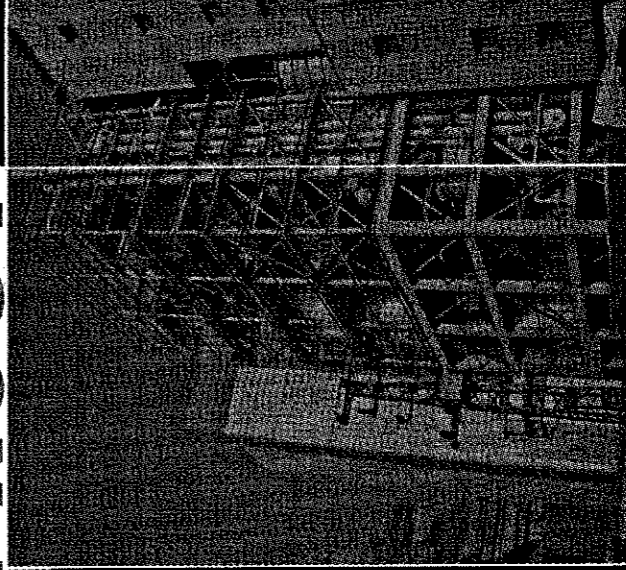
However, off-setting this reduction in some areas is increasing interest, spurred on by rising prices, in producing meat from fishery wastes. This trend is likely to continue.

To sum-up on the supply-side, production of fishmeal is likely to remain tight at around 5 million tonnes of fishmeal.

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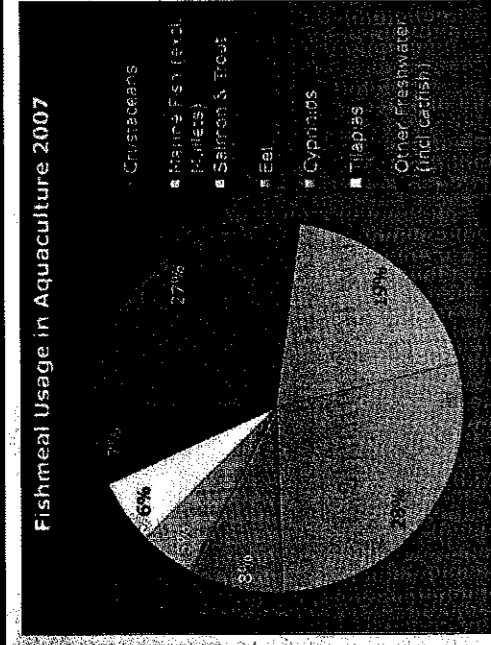


Figure 2 : The use of fishmeal by different aquacultural sectors in 2007
(IFFO data)

Improved fisheries management, for example the adoption in Peru of a new quota system, should ensure a more reliable supply. Any reduction due to increased human consumption should be off-set by an increasing production of fishmeal from fishery by-products.

Turning to consumption, aquaculture has continued to increase its share of total consumption of fishmeal and in 2007 it exceeded 60% for the first time, with use in both pig and poultry diets continuing to decline (see Figure 1). However, this non-aquaculture balance represents around 2 million tonnes of fishmeal, which could still be diverted to aquaculture if market demand dictates.

Within aquaculture crustaceans, salmonids and marine fish are the three largest users with crustacean production (primarily shrimp) having grown from 1.5 million tonnes in 2000 to around 4.5 million tonnes in 2007 (See Figure 2).

However, despite the very rapid increase in production, the price and availability of fishmeal has not been a limiting factor. This is because, as production has grown, so the inclusion level of fishmeal has decreased, with increasing nutritional knowledge and availability of alternative protein sources.

In China for example the production of species making use of dietary fishmeal has doubled over the last ten years to over 16 million tonnes in 2007 (FAO data). However, the use of fishmeal in China was at its lowest level for ten years in 2007 at around 1.2 million tonnes having peaked at around 1.9 million tonnes in 2005.

Although the price of fishmeal has risen sharply over the last four years from around \$500/tonne to over \$1000/tonne on a FOB basis, that of soya meal, for example, has more than doubled from \$160/tonne to \$350/tonne. Compared to other protein sources the price of fishmeal is now as attractive as it has been

for many years.

As aquaculture production continues to increase it seems likely that the trends we have seen over the last few years will continue. Fishmeal inclusion levels will decrease and its use will increasingly be as a strategic ingredient used in starter, broodstock and finisher diets, where its unrivalled nutritional properties are most needed. However, as a result of the overall growth in aquaculture, the total amount of fishmeal used in aquaculture will increase and the amount used in land-based agriculture will continue to decrease.

Following the rapid rise in its price during the last few years the reputation of fishmeal in some countries has suffered from irresponsible mixing with inferior protein sources, such as poultry meal, meat and bone meal and even melamine. This, combined with some poor fisheries management in some countries as already described, has led to a need to help the supply-chain identify responsibly produced fishmeal.

In response IFFO is currently developing a Code of Responsible Practice (CORP) for the production of fishmeal and fish oil. CORP will be a third-party audited scheme covering product safety and purity as well as offering reassurance of responsible raw material sourcing.

This will include screening to eliminate the use of illegal, unreported and uncontrolled (IUU) fish and reassurance that the fisheries are managed by countries committed to implementing the key elements of the UN (FAO) Code of Responsible Fishing.

It is hoped that fishmeal produced under CORP will start to become available in 2009 and that this will enable the value-chain to source their fishmeal with confidence, so contributing to the anticipated growth of sustainable aquaculture over the next decade.

A SCOTTISH Member of Parliament has lashed out at the common practice of dumping unwanted but caught fish at sea after a UK trawler caused an international incident after caught dumping fish on film, reports *Fish/Update*.

The discarded fish are seldom alive after being towed in a trawl net for hours and those that are in such a weakened and stressed state that they fall prey to either other fish or disease.

Struan Stevenson is reported to have said that the incident once again illustrated the "abhorrence of this disastrous practice which is still

legal in EU waters and insisted upon by the European Commission". In response to the action he claimed that fish discards could be sold to the aquaculture industry instead.

"More than 1 million tonnes of healthy fish are dumped dead back into the sea each year in EU waters under current fisheries management rules. Many fishermen in the UK's whitefish fleet...admit that discards can often account for more than of their catch."

"A much better system of management would be to rely solely on a 'days at sea' policy combined

with a system of maximum sustainable yields (MSY), where fishermen could land everything they catch in the 10 or 12 days a month they are allowed to fish," says Stevenson.

"This management system would reverse the current policy on discards. Instead of being compelled to dump fish over the side, fishermen would be compelled to land everything. It would become an offence to discard undersize or out of quota fish. Such a system, similar to that currently in place in Norway, would provide two immediate advantages for the industry."



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