

Crunch time: creating room to grow

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World production of fishmeal last year stood at just over five million tonnes – at the lower end of the last 30 years' production range, which has generally ranged from 5 to 7 million tonnes (see figure 1).

Occasional dips occurred after El Niños, but the recent reduction is caused by a number of other factors including the setting of precautionary fishing quotas in Europe and South America.

Another factor is the undeniable truth that more of the fish traditionally used for meal is now going for human consumption, with over 50% of Chilean jack mackerel canned or frozen last year.

In fact, the common public perception that the production of fishmeal is at the cost of human food is described as a myth by IFFO's Andrew Jackson, who points out that wherever possible, fish will be sold for human consumption as it pays more money.

The increase in health awareness and the properties of long chain fatty acids has also pushed more fish – its oil in particular particularly for direct human consumption.

In fact, of the one million tonnes of annual fish oil production, about 80,000 tonnes currently ends up as human food, and this is growing 10% year on year.

While this should help silence the NGOs, it does not help the aquaculture industry, whose massive growth has up until this point relied heavily on being able to source enough meal and oil to feed its product.

But it is not just availability the aquaculture industry needs to concern itself with, but price.

The growth in human consumption has in turn, brought price to almost the same level as soya and rapeseed oil, making the use of fishmeal and oil less appealing to the industry.

Of course, many species, such as carp (the world's most farmed species) don't need fishmeal or oil in their diets, but salmon and shrimp rely heavily on the two sources (see figure 2).

However, the R&D departments of both aquaculture and feed companies have been ploughing money into investigating alternatives and since late 2004, the use of meal and oil in farmed fish diets has in fact been decreasing, at apparently no cost to the growth of the industry (see figure 3).

But with aquaculture only set to accelerate its growth in the coming years, has there yet been enough research to sustain the industry long term and are there enough volume alternatives to feed the industry in the coming years, while sustaining quality of product?

While a certain amount of meal and oil can still be gained from a decline in fishmeal and oil use in the poultry and pork farming industries, which are less reliant on it and are increasingly using it as a 'strategic ingredient' – the aquaculture industry has been benefitting from the diminishing use in these industries for some years now (see figure 4) and soon stopping point will be reached.

So while there is no imminent risk to the industry, there is a definite need for aquaculture to follow the lead of its counterparts and investigate the points in the life cycle at which oil or meal is essential to product quality.

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