



Fish Food or Fish Feed

A fresh ethical perspective on the use of fishery resources in animal feeds

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Fish is a biological resource, indispensable for the equilibrium of the entire food chain in many ecosystems, but also indispensable as a source of nourishing food and raw material for feed preparation. Unfortunately, this resource is limited and its over-exploitation will ultimately lead to a global collapse. Hence, there is a pressing need for initiating a global debate on the ethical nature of current practices on the use of this precious natural resource.

Edible fish shortage

In consideration that conservation and fisheries scientists unanimously agree on the depleted status of the majority of marine wild fish populations, due mainly to over-fishing and unsustainable pressures of human activities on aquatic environments, there is consensus that the harvestable oceanic fish stocks have reached a plateau, and cannot expand further.

However, the demand for edible fish is on the rise. The favourable nutritional qualities of fish make it a somewhat unique animal food source for providing a high quality, cheap source of protein for a starving world and, at the same time, beneficial omega-3 fatty acids, which are essential for combating several diseases typical of western societies. In this scenario, it is quite paradoxical that not all of the currently harvested 90 to 100 million tonnes of fish and aquatic organisms are used for human food production - a significant amount is used for other purposes, and mainly for animal feed production.

Ethical stances

Aquaculture is often condemned by many lobby groups because it uses about 45 and 85 percent of the global production of fish meal and fish oil, respectively. Industrial production of fish meal and fish oil are based on what is termed as a reduction process using smaller sized fish species variously termed low valued fish/trash fish/forage fish. In essence, nearly 25 percent of the global marine fish catch is used for these purposes, predominantly consisting of species such as the Peruvian anchovy, capelin, menhaden, and sand eel amongst others.

There is a growing view that the fish resources used in the reduction industry should be channelled for feeding humans directly, particularly in developing countries; an ethical stance that is gaining increasing momentum. Alternately interpreted that valuable protein sources should not be used to convert to higher quality animal proteins that are accessible only to a selected sector of the population.

In aquaculture, fish meal usage is mostly for the culture of high valued species. In fact, it has been estimated that 71 percent of total fish meal used by the aquaculture sector is consumed by the salmonid and shrimp industries, which together account only for about 13 percent of the global aquaculture production. Furthermore, a large quantity of fish meal (40 percent of global production) is used in feeds for other farmed animals, mainly poultry and pigs.

The use of fish meal

What seems to have gone unnoticed by all proponents condemning the aquaculture sector, despite the fact that it provides millions of livelihood opportunities to

poor sectors of the community particularly in Asia, contributes to food security and poverty alleviation, and currently provides approximately 50 percent to global food fish consumption, is that a very substantial quantity of fish is used for non-human



food production purposes. These non-human food purposes are principally for pet food production, and an unknown but a significant quantity for feeding animals farmed for the fur trade. In particular, while there are some data available on the extent of fish meal consumption by the pet food industry for the production of dry feeds (estimated to



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be 2.9 million tonnes of raw fish equivalent), a knowledge gap exists on the use of fresh or frozen raw fish for the production of canned or other wet feed.

Figures

It is in the above context that we set about to estimate the quantities of fish used in the above sectors. We made a rather conservative estimate of the use of raw fish in the pet food industry, in particular cat feeds, and that too for only certain parts of the globe (for example China was excluded). The results were staggering if not revealing: very conservatively estimated at 2.48 million tonnes of raw fish, a gross underestimation (Journal of Agriculture and Environmental Ethics, 2008; Volume, 21, pp. 459–467). The publication of the above article received overwhelming, widespread, global media coverage.

This is a clear reflection of what is normally felt by an increasing proportion of society and already documented in the scientific communities: consumers are becoming more interested in environmental and ethical issues and their social and purchasing behaviours reflect their perception of the intrinsic environmental, social and sustainable qualities of products or industrial processes. Unfortunately, not all industries are ready to accept this view, seriously jeopardising their own future economic sustainability, and even potential consumer apprehension.

Global discussion

The main point of our study was that it is not a question of pets versus aquaculture – human food – but the fact that a common biological resource that could be channelled (at least a good proportion of

it) for direct food consumption is being used for non-human food production and that there needs to be a global dialogue and a consensus with regard to the sharing and channelling of this resource for various purposes.

It is in all of the above contexts that we call for a global discussion on the use of fish resources by all users of fish, for purposes other than direct human consumption, as an increasingly precious and a limiting biological resource. We would like to see all major industry stakeholders and legislators sitting at a round table discussing proper management and utilisation of this currently over-exploited resource. Within this context, the first preliminary and highly desirable step would be for all wild caught fish and

derived product users, from fish meal reduction industries to aquaculture feed companies, pet feed companies and all other users, to release explicit and accessible data of current usage of the primary resource. This will likely permit a judicious dialogue, avoiding counterproductive sensationalism, misleading information and mass over-reactions, and hopefully contribute to a better future to our pelagic fish stocks, to our coronary, heart, brain and overall health, and to our malnourished neighbours, as well. ■

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