



## **Aquaculture will be sustainable or it will not be**

*The role of fish-species-farming in supporting population growth and living standards should result in increasing the sustainability of aquaculture. AquaFarm, in Pordenone Fiere on 26th and 27th January, examines the best practices and current research to minimize the impact on the environment and resources.*

*Milano / Pordenone January 11, 2017 (following CS 07 of January 4<sup>th</sup>). Eating fish is good for you, and you have to eat more of it; the population increases, and with it, all its needs increase: all premises that lead to the need to increase fish production. Thus is how we left with the last press release ([link](#)) and it is from here that we start again. Increasing the produced quantity is just one of the objectives set by the industry. So as not to undermine the economic and social role of the aquaculture, the fish multiplication must be done in respect of the environment.*

Sustainability in aquaculture is divided into different areas of intervention. A breeding facility has a number of potential local impacts that depend on the way in which the implant is made, on the operating practices and, as with everything, on the experience. Today in fact environmental effects - such as the transfer of disease and pests from the specimens that have been bred to the wild ones, the discharges of polluted water, the introduction of harmful exotic species and the presence of chemical and drug residues in fish and shellfish - are much more limited than a decade ago, thanks to the introduction of new technologies and security protocols.

Aquaculture also has a global impact resulting from the use of fish flour and fish oil as animal feed. Most farmed species, both marine and freshwater ones, are in fact carnivorous and need ingredients found in fish flesh to grow in harmony and give a nutritious and palatable product. Staying in Europe, the increase expected and hoped for the fish production from aquaculture in 2030 will result in a 46% increase in the required animal feed.

Over the years, technological improvements and disease-control for fish has allowed the improvement of the relationship between the amount of ocean



resources used and the amount of fish that is obtained with that amount, technically FIFO (Fish-in Fish-out). In aquaculture, in 2000, the value was 2.6 for salmonids such as trout and 1.5 for marine species. Already in 2010 it had dropped to 1.4 and 0.9 respectively, and the number is still declining. For comparison, in natural environment, the FIFO for a carnivorous fish is about 10.

However, even today 15% of the fish caught is destined to non-food uses and more than 70% of that amount is used for aquaculture. The medium and long-term goal is to replace fish flours with other flour-types (plant, insect, bird), and the oil with one not coming from fish (mainly from microalgae). In general terms, it is "educating" carnivorous fish to become at least omnivores, without losing quality in the product.

Academic and feeding-stuff-company research worldwides is committed to discovering the best "educational" methods and to trying to reduce the cost of fish oil not scoming from fish. AquaFarm will be a showcase for both areas. The feeding-stuff companies such as Skretting, Naturalleva and Aller Aqua will present their new formulations with low impact on ocean resources. Several Italian universities will present the first results of their research projects - funded also by private entities - on the methodologies to produce feed with a low environmental impact, be they nutrient or palatable. An example is the project 4F (Fine Feed For Fish), entrusted to an academic-industrial consortium led by the University of Insubria, which aims to study the microbiota of carnivorous fish to understand, on the one hand, how it reacts to the new feed and, on the other hand, how to "program" the microbiota itself to allow the fish to take full advantage of the feed.

The success of this, and other initiatives, will reduce the impact of aquaculture not only on ocean resources, but also on land ones, for example on the use of fresh water and agricultural products, allowing the use of vegetable waste and animals without taking place away from food production. If we want the sustainable multiplication of fish to be successful, even the loaves should be multiplied.

The AquaFarm 2017 conference program is available and constantly updated on the website [www.aquafarm.show](http://www.aquafarm.show), in the Program section.



Participation is free. This is the link to the online pre-accreditation. In any case, registration will be possible during the event, too.

For more information

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