**Innovation in aquaculture, from feedstuff to robots, to vaccines. At AquaFarm the most interesting news for a crucial sector.**

*13 May 2022*. Fish and shellfish farming has been defined for years as strategic by international organizations, starting with FAO, to ensure the quantitative and qualitative food security for a growing world population. To enable this expansion, the innovation pedal is being pressed hard all over the world to significantly improve the efficiency and productivity of livestock farming activities by increasing their sustainability.

At AquaFarm we will showcase the most significant innovations for Mediterranean aquaculture, both saltwater and freshwater. The appointment is for the next 25, 26 and 27 May at Pordenone Fiere.

Representing more than 50% of the costs of a farm and a major component on the quality of the product and on the local and global environment, feed is the production factor where investments in innovation are most relevant. In Pordenone it will be discussed on May 25th in the late afternoon into the *Fish feed* session. As part of the search for sustainability, as Anders E. Østergaard, of BioMar explains, the main thrust comes from the desire to replace in the preparations, proteins of fish origin (from non-edible species) with others of animal origin (for example from insects) and vegetable (cultivated microalgae and yeasts). Emilio Tibaldi, Professor of the University of Udine, Robert Tillner, of Aller Aqua, who has developed a microalgae-based trout feed, and Federico Moroni, Researcher at the University of Insubria, are going to speak about it. Based on the principles of the circular economy, a second line of innovation aims to obtain feed ingredients from the by-products of fish processing and from vegetables and microorganisms grown on fish farm waste. Alessio Bonaldo of the University of Bologna and Luciano Foglio, Researcher, Italian Experimental Institute Lazzaro Spallanzani will talk about it.

As in any other sector, digitalization and automation find ever wider fields of application also in fish and shellfish farming, Aquaculture 4.0 is emerging; we will talk about it in Pordenone on May 26 in the late morning. The sector that is attracting many investments in the field of R&D is precision aquaculture which aims to collect data from the farming environment and, after having processed, analyzed and combined them with other information, allows for targeted interventions to respond to the actual needs of aquatic animals. and to the biochemical and physical characteristics of the aquatic environment. The goal is to improve the efficiency in the use of resources, productivity, quality, animal welfare, profitability and sustainability. It starts with the collection and organization of data, even at sea with satellites (Alessandra Bleve di Planetek), with robotic systems (Manuel Greco, Se.Te.L), with networks of underwater IoT sensors and wearable by operators (Chiara Petrioli , W-Sense), up to the monitoring of the oxygen level of internal water (Edouard Royer, Ca 'Foscari University of Venice). Modern sensors produce huge amounts of data in real and deferred time, the famous Big Data, which must be organized and managed (Roberto Pastres, Ca 'Foscari University of Venice) to be analyzed (Guglielmo Giannini, g-nous). The most ambitious goal pursued today is the creation of a digital twin of breeding, even off-shore, (Ahmed Abid, EGM), to synthetically monitor the conditions, growth and health of fish. and shellfish, carry out simulations and guide management interventions (Alessio Canalini, The Sea Opportunities). In land livestock farming, a crucial element is the maintenance of optimal water conditions, with increasingly efficient purification systems, from ozone ones (Federico Ponti, O3MET) to the latest photocatalytic ones (Daniela Bertotto, University of Padua)

There is a lot of innovation in aquaculture even at the basic level, both in the improvement of reared species through genetic selection systems (Federico Calboli, of the Finnish LUKE University) and in the health of fish. The risk deriving from parasites in Europe is low but must be monitored (Maria Letizia Fioravanti, Alma Mater Studiorum), while vaccines are increasingly effective (Amedeo Manfrin, Zooprophylactic Institute of the Venezie). This is discussed in the session on May 26 *Markets and product quality*.

With this wealth of content and the authority of the speakers, targeted and sensitive to the needs for updating of operators in the sector, AquaFarm is confirmed as the reference event for the sector throughout the Mediterranean, unique in Europe for the balance between scientific , corporate and market interventions.

***AquaFarm*** *is the international exhibition and conference event dedicated to* ***aquaculture and sustainable fishing industry****.* ***NovelFarm*** *is the most important Italian event entirely dedicated to* ***new cultivation techniques****, soilless and vertical farming.* *This year accompanied by* ***AlgaeFarm****, an event dedicated to technologies and applications in* ***algae cultivation.***

For more information:
AquaFarm [**www.aquafarmexpo.it**](http://www.aquafarmexpo.it/)
NovelFarm [**www.novelfarmexpo.it**](http://www.novelfarmexpo.it/)
AlgaeFarm: **www.aquafarm.show/algaefarm-convegno-algocoltura/**

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