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Research activity

Aquaculture and sustainability: Global population growth drives the growth of aquaculture production (protein and high biological value fatty acids). Finding sustainable, marine-derived feed ingredients to replace impactful fishmeal and fish oil, is a strategic line of research for achieving sustainable and high-quality livestock productions.

Welfare and health of fish species: aquaculture, a relatively young sector, needs production and treatment protocols that can ensure farmed fish welfare and health. Marine environment can provide nutraceutical ingredients that can reduce fish rearing stress, support their immune system, and reduce the use of drugs.

Funded Projects

2024 – Effect of the use of controlled-release minerals on growth parameters in zebrafish. Contractor: not disclosed.

2023 – Validating dietary micro-ingredients effects for improving fish growth performance, health, and welfare, using zebrafish as a model species. Contractor: not disclosed.

2022 – Study of the environmental sustainability of dairy sheep farming in the Tuscany Region. Project code PRA_2022_56, University of Pisa.

PROJECT: FeedInsect – The insect *Hermetia illucens* reared on agri-food waste for the production of feed for meat-producing animals intended for human consumption. Lead partner: University of Basilicata, PSR BASILICATA REGION 2014–2020.

2019 – SIMTAP EU-PRIMA project: toward a Self-sufficient IMTA for improving aquaponic sustainability (Project budget: University of Pisa internal budget: €250,000.00). PRIMA Programme (Art. 185), Horizon 2020 <http://prima-med.org/>.

Skills

At the Zebrafish facility of the Department of Veterinary Sciences are conducted studies of interest to aquaculture, by employing fish species in livestock production such as Gilthead sea bream (*Sparus aurata*) and European sea bass (*Dicentrarchus labrax*), but also wild type, mutant and transgenic fish models such as Zebrafish (*Danio rerio*) and Killifish (*Notobranchius furzeri*).