AquaVitae

Case study 13 –Low-trophic aquafeeds

KEYWORDS

Sustainable aquaculture, feed ingredients, growth, new diets, aquafeeds

SPECIES

- *Arapaima gigas* (Pirarucu)
- *Colossoma macropomum* (Tambaqui)
- *Haliotis midae* (South African abalone)
- *Haliotis tuberculata coccinea* (European abalone)
- *Litopenaeus vannamei* (Whiteleg shrimp)
- *Pagonias corbina* (Black drum)
- *Sparus aurata* (Gilthead seabream)








GEOGRAPHICAL BOUNDARIES

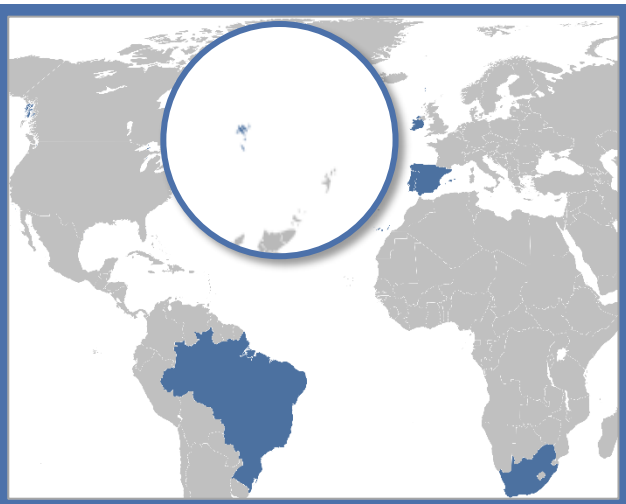
Case study of low trophic *aquafeeds* will take place in the Eastern and Western Atlantic with a focus on activities in Portugal, Spain, Ireland, Faroe Islands, South Africa, and Brazil, trough linkages to CS1, CS2, CS3, CS4 and CS12.

GOALS

- Include low-trophic species in *aquafeeds* and increase the added value of underutilized ingredients.
- Increase the aquaculture resilience through a self-sustaining food chain.
- Standardize feeding strategies protocols to obtain robust animals.
- Provide new skills and knowledge to all partners involved.

AT A GLANCE

- **Project period: 2019-2023**
- **Increase the added-value of underutilized ingredients.**
- **Diets with inclusion of microalgae for Whiteleg shrimp.**
- **Diets with macroalgae inclusion for black drum, tambaqui and European and South African abalone.**
- **Improved broodstock diet with macroalgae inclusion for pirarucu.**
- **Diet with mussel meal for Gilthead seabream.**
- **Increase the aquaculture resilience through a self-sustaining food chain.**



Main activities take place in Portugal, Spain, Ireland, Faroe Islands, South Africa and Brazil.

This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 818173. This publication reflects the views only of the AquaVitae consortium, and the European Union cannot be held responsible for any use which may be made of the information it contains.

CHALLENGES

- A compromised aquaculture value chain due to feed dependence on external ingredients.
- Lack of knowledge on the performance of low-trophic levels ingredients in diets to feed abalone, shrimp, freshwater, and marine fish.

EXPECTED RESULTS

- Increased added- value of underutilized ingredients.
- Diets with microalgae inclusion for whiteleg shrimp.
- Diets with macroalgae inclusion for black drum, tambaqui and European and South African abalone.
- Improved broodstock diet with macroalgae inclusion for pirarucu.
- Diet with mussel meal for gilthead seabream.

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EXPECTED USERS

- Low-trophic species producers, e.g., micro-and macroalgae, and mussels' companies
- Feed manufacturers
- Animal production facilities
- Researchers on animal nutrition

WORKPLAN

A series of trials will be run through the lifetime of AquaVitae. In Portugal (CCMAR), Brazil (EmBraPa, FURG, and UFSC), Spain (ULPGC), and South Africa (RhU, MFeed). These trials will focus on the diet formulation with the new ingredients, animals feeding trials, key performance assessment and data analysis.

At IMM-CSIC (Spain), the focus will be to repurpose mussel meal from specimens that were not selected for human consumption after harvest.

TEAM

1. CCMAR (Portugal)
2. EmBraPa (Brazil)
3. FURG (Brazil)
4. UFSC (Brazil)
5. Rhodes University (South Africa)
6. CSIC (Spain)
7. ULPGC (Spain)
8. Marifeed (South Africa)
9. Ocean Rainforest (Faroe Islands)
10. GMIT (Ireland)

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