





Company Overview

Raygonal is an agri-tech start-up developing sustainable aquaculture systems to monitor and optimise tropical seafood production. The company is building fully automated, land-based farming systems that combine artificial intelligence, renewable energy and advanced water management to create controlled growing environments.

This innovative approach enables local, year-round cultivation of high-quality tropical species such as tilapia, catfish and shrimp, while reducing reliance on long-distance imports. In doing so, Raygonal positions itself as a provider of reliable, low-impact seafood production infrastructure for the UK market.



Key Challenges Addressed

Global seafood supply chains are inefficient and fragile, leaving the UK heavily reliant on around £3.5 billion of seafood import each year and contributing to overfishing and environmentally damaging production practises. Much of this seafood arrives frozen from distant producers, with limited transparent and few truly sustainable, antibiotic-free options.

Raygonal's, land-based aquaculture systems enable domestic cultivation of tropical species at scale, giving producers a way to shorten supply chains, reduce environmental footprints and move away from conventional, wild-caught and intensive farmed models. The company's core innovation is the integration of AI-driven monitoring with closed-loop water and energy systems to create highly controlled aquaculture environments. Sensors and predictive algorithms continuously track water quality, fish health and system performance, enabling precise interventions that improve growth rates and feed efficiency while cutting waste. Coupled with renewable energy and advanced recirculating aquaculture technologies, Raygonal's platform is designed to lower operating costs and environmental impact, creating a scalable model for resilient, regionally distributed tropical seafood production in the UK.



Role of Roslin Innovation Centre

Raygonal's move to the Roslin Innovation Centre Agri Field Station in June 2025 proved to be a catalyst for accelerating the company's technology development. As a tenant, the company has been able to prototype and scale its land-based aquaculture system using a 20-foot shipping container on site, allowing it to transition from early concept work to real-world system demonstration.

Beyond physical facilities at the Agri Field Station, Roslin Innovation Centre has supported Raygonal's growth through concept validation,, business incubation support, guidance on grant applications and access to shared research infrastructure. Through this ecosystem, Raygonal has built strategic partnerships with organisations such as Scottish Enterprise, which has backed its aquaculture technologies through a SMART Grant and has benefited from participation in Converge, one of Scotland's leading entrepreneurship programmes, securing the Blue Economy Award and additional financial backing. Together, these partnerships and the Roslin Innovation Centre's wider network have delivered essential funding, market access and strategic advice, helping to drive Raygonal's aquaculture system towards market-ready status and positions the company for significant impact within Scotland's innovation ecosystem and the wider blue economy.

