

PROJECT SUMMARY

Ref No.: MRIC/IBG3-BG/P07	Title: Developing Sustainable Aquafeed from Azolla Biomass Cultivated on Agro-Waste and Fishpond Wastewater in Combination with Black Soldier Fly Larvae
Local Institution: AgriCare Consultants Ltd	
Project Leader	
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TECHNICAL ABSTRACT Mauritius remains highly dependent on imported aquafeed ingredients such as fishmeal and soybean meal, exposing the aquaculture sector to increasing production costs and supply chain vulnerabilities. Meanwhile, large volumes of agro-waste and nutrient-rich fishpond wastewater are generated locally and represent an untapped opportunity for the production of sustainable feed resources. This project seeks to address both challenges simultaneously by valorising these waste streams for the cultivation of <i>Azolla pinnata</i> and the production of aquafeed formulations incorporating Black Soldier Fly Larvae (BSFL) meal. The project adopts a circular bioeconomy approach in which organic waste streams are converted into valuable feed resources. Agro-waste will be pre-treated to produce nutrient-rich leachate, while fishpond wastewater will supply additional nutrients for <i>Azolla</i> cultivation. The harvested <i>Azolla</i> biomass will be analyzed and incorporated into aquafeed formulations alongside BSFL meal to assess nutritional quality and suitability for aquaculture applications. By producing feed ingredients locally from waste-derived resources, the project seeks to reduce dependence on imported inputs, lower feed production costs, and improve resource efficiency. The proposed system offers a low-energy, scalable, and environmentally sustainable solution that supports circular economy development, food security, and the growth of sustainable aquaculture in Mauritius.	
Key Words: Circular Bioeconomy, <i>Azolla pinnata</i> , Black Soldier Fly Larvae (BSFL), Sustainable Aquafeed, Waste Valorisation	