EcoCycle Larvae System: Black Soldier Fly Larvae (BSFL) proteins for low cost animal feeds

BSFL proteins for sustainable local fish and chicken feed production

BSFL composting is a biological method that uses Black Soldier Fly larvae to break down organic waste like food scraps and manure. The process produces nutrient-rich larvae for animal feed and a compost by-product called frass.

This technology is **pre-validated**.

Scaling readiness: idea maturity: 8/9; level of use: 9/9

1,000—2,400 USD
Small BSFL composting system

375—1,040 %
Return on investment

IP
Unknown

Problem

- Fish and poultry farming in sub-Saharan Africa face inconsistent and unreliable year-round feed supplies.
- The feed prices significantly increase production costs, making it difficult for fish farmers to sustain operations.
- 30-40% of food and organic is wasted, resulting in to negative environmental impacts, such as pollution and resource depletion.

Solution

- Using BSFL to decompose organic waste provides a sustainable way to waste and reduce environmental harm.
- BSFL technology produces nutrient-rich larvae that can be used as a low-cost feed for fish and poultry.
- Encouraging the adoption of BSFL technology supports a circular economy model that fosters long-term economic stability and environmental protection.

Key points to design your business plan

- Manufacturers can utilize BSFL Composting Technology to create low-cost, high-protein feed from organic waste, with initial setup costs ranging between 1,000 and 2,400 USD for composting bins, larvae sourcing, and essential equipment.
- Resellers play a crucial role in distributing the feed to livestock farmers, with key costs including purchasing, transportation, storage, and marketing.
- For users, the technology offers affordable feed, reduced environmental impact, and improved farm productivity, with the main expenses being the purchase of feed and farm operational costs.

Gender assessment 4

Climate impact 7

IITA
Rousseau Djouaka

Commodities

Fish

Sustainable Development Goals

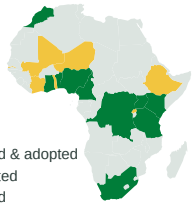
Categories

Pre-production, Practices,
Input processing,
Animal feed management

Best used with

- Fast Growing and Hybrid African Catfish ›
- Cage Systems for Fish Culturing ›
- Tank Systems for Fish Culturing ›
- Flow-Through and Recirculatory Water Systems for Fish Tanks ›

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.