Technology Brief

PRIME Reference Number: PRIME2021/TB6

Production of protein rich animal feed from food waste

Domain: Others / Waste Management

Indoor farming technology for breeding, rearing & processing of Black Soldier Fly Larvae on food industry waste to produce insect protein & fat as ingredients in pet, poultry & aquaculture feeds. The protein is abundant in essential amino acids, anti-microbial peptides and digestible calcium. The fats are rich in Omega 3, 6, and 9 fatty acids and has anti-bacterial properties. Require 200x lesser land and water to produce the same amount of protein in comparison to a soybean farm.

Value Proposition:

- Fat is extracted without any chemicals or solvents
- Insect proteins are not denatured during the process
- Insect protein for shrimps & trout increases productivity by up to 30% and reduce mortality rates by up to 50%

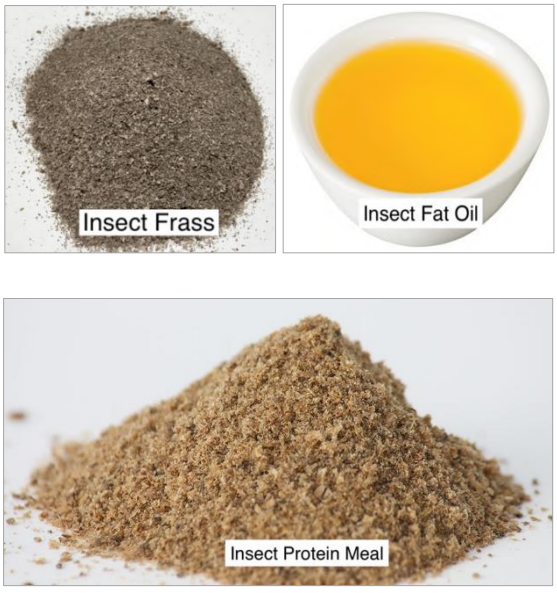
Applications:

- Animal feeds, fish feeds, pet foods as ingredients
- Fat oil can be used in cosmetics & surfactants
- Sports nutrition- protein bars and shakes
- Anti-microbial peptides to replace anti-biotics in livestock
- Chitosan production

Technology Status: Pilot scale established.

IP Status: Patent filing under process.

Market Potential: Edible insects market is expected to grow at a CAGR of 26.5% from 2020 to 2027 to reach $4.63 billion by 2027. In terms of volume, the edible insects market is expected to grow at a CAGR of 28.5% from 2020 to 2027 to reach 1.4 million tonnes by 2027. Global, Asian and Indian Poultry, Aquaculture and Pets Protein & fats markets are 200 Billion, 100 Billion and 15 Billion USD



Edible insect products.

Requirements: Technology is up for market connect

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