

Seed Money Project

Insects as high-quality animal feed ingredient in Uganda.

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SMP Insects as high-quality animal feed ingredient in Uganda.

Objectives SMP:

- 1) develop insight in demand for high-quality feed ingredients (demand for insect products?)
- 2) develop and test insect oil production options
- 3) test suitability of oil in piglet and fish feed.



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Consortium consists of:

- De Heus
- Insect Engineers
- Larive International
- Marula Agribusiness
- Nakifuma Pig Farming Company
- Makerere University
- New Generation Nutrition
- HAS University of Applied Sciences
- Devenish Nutrition.

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Three activities:

- market study feed industry*
- insect oil production, at the Marula insect plant, Kampala*
- feed trials to test the insect oil in Uganda replaced by LCA (Life Cycle Analysis).*

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Animal feed sector Uganda: not enough specialisation

Pig sector:

-450.000 sows

-3.5 M weaners, fatteners

Specialised feed needed in specialized production systems: 1.5 M tons.

Currently produced: 20.000 tons.

Rest is from leftovers, byproducts, waste products etc.

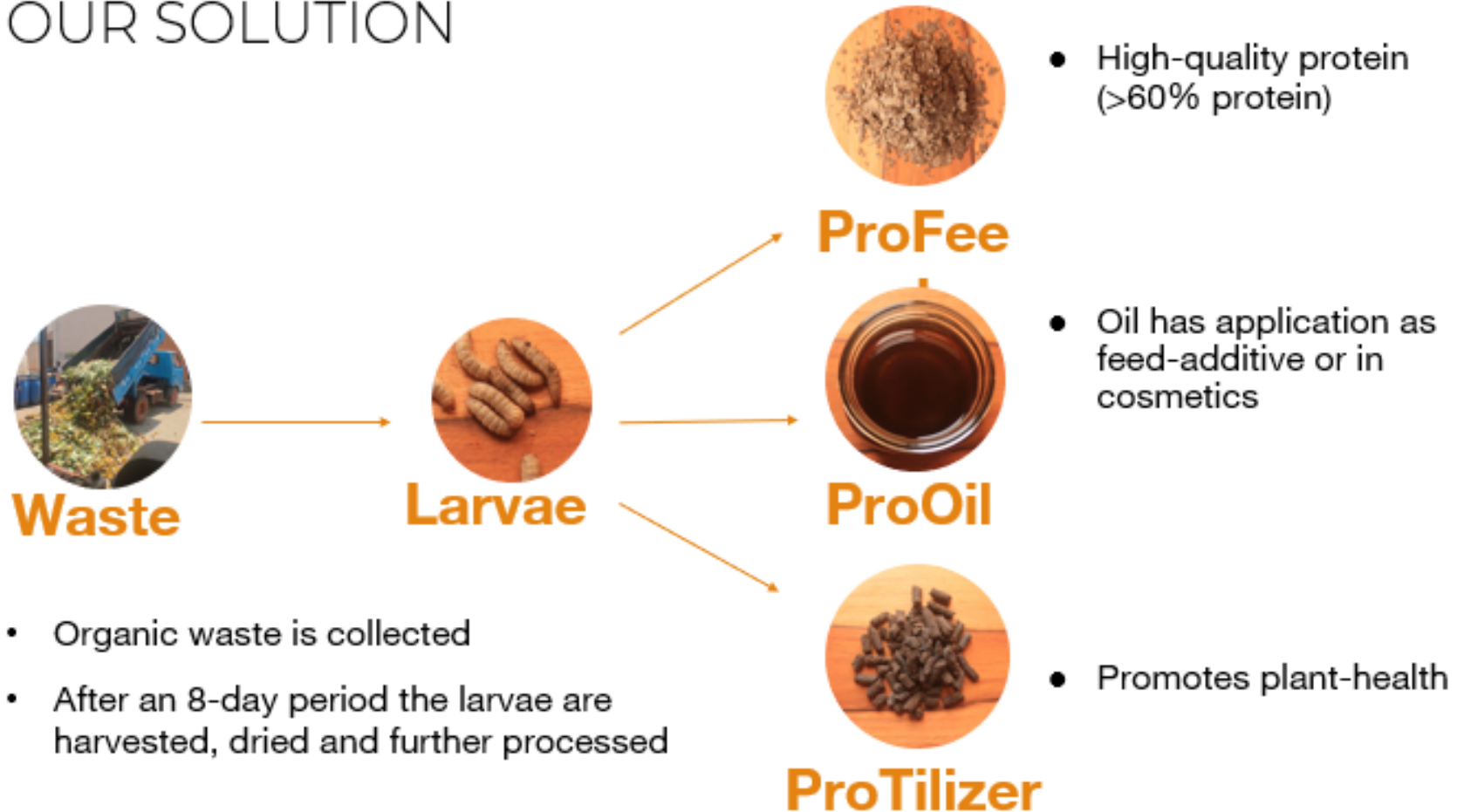
Fish feed demand



- 102,000t of fish produced*1.3=132,600t of feed needed
- 9,300 compound feed produced only covers 7% of need
- Most high quality feed is imported
- Farmers also feed their fish with kitchen waste and crop residues.
- **Conclusion: big shortage of quality ingredients.**
- **Report:** *Potential of black soldier fly oil as a feed component.*

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OUR SOLUTION



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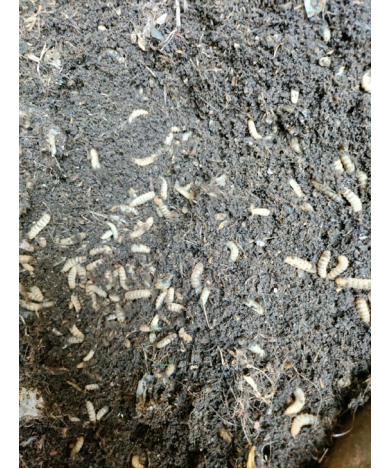
A NOVEL AND SUSTAINABLE LIVESTOCK



1. Eggs
2. Neonates (Baby larvae)
3. Larvae (ready to harvest)
4. Pupae
5. Adult Flies

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The Process



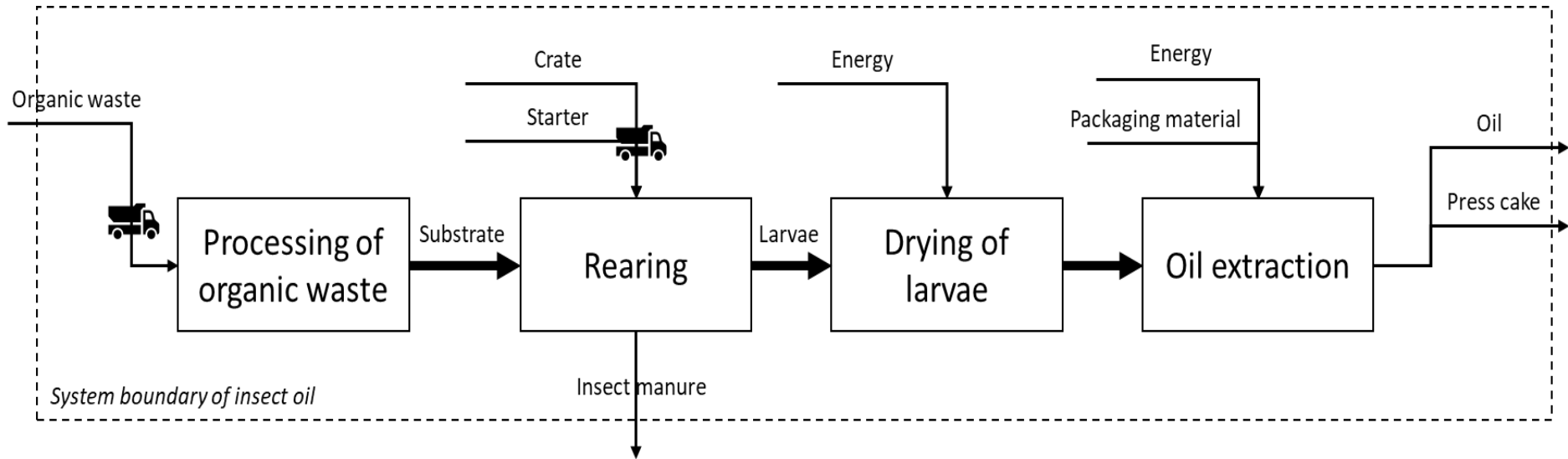
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Goals Life Cycle Analysis

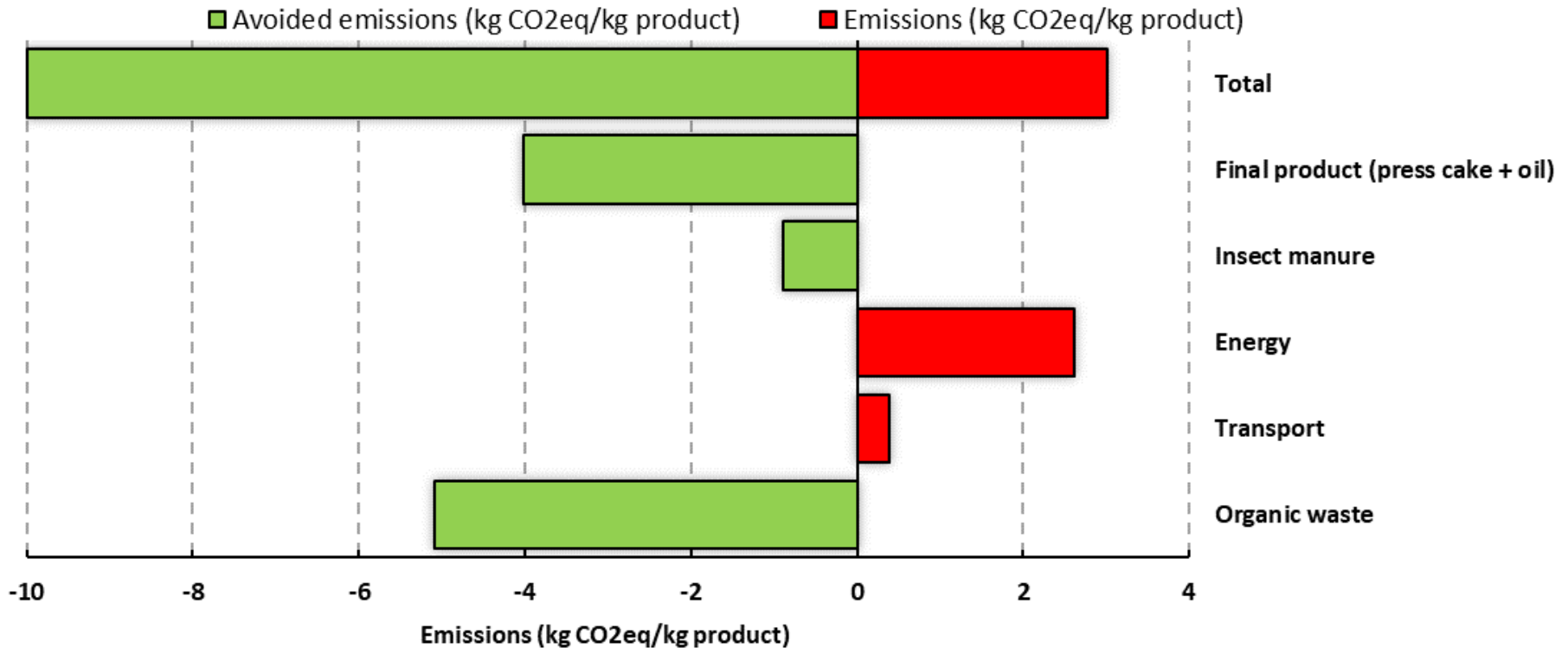
- Assessing environmental impact of whole insect production process including:
 - collection of organic wastes
 - processing of organic waste to be used as substrate
 - rearing insect
 - final process (drying and oil extraction)
- Identifying environmental hotspots of insect oil production process
- Determining environmental credits (avoided emissions) due to:
 - Replacing typical feed components by insect products
 - Replacing synthetic fertilizers by insect manure
 - Reducing the landfill emissions of organic wastes

System boundary



Preliminary results LCA.

Environmental impacts of insect production



Thanks for your
attention!



Any questions?