organic waste to animal feed

Cleaning Cities, Feeding Millions, Employing the Future

Tommie Hooft, Philipp Straub, Martin Tenywa
Trash-to-Cash in Kampala, Uganda

We feed urban organic waste to insects, which are processed into a high-quality livestock feed. The insects leave behind a valuable fertilizer.
3 Problems

- ORGANIC WASTE
- DEPLETED SOILS
- ANIMAL FEED
CIRCULAR SOLUTION

Sustainable Feed for Uganda’s Aquaculture & Poultry Industry

Waste Market
Organic Waste
Protein
larvae
Circular high-quality feed
ProFeed
ProOil
ProTilizer
Organic fertilizer
Farms
OUR SOLUTION

Waste → Larvae

- Larvae fed for 8 days
  > harvested and further processed

ProFeed
- rich in high-quality protein ($900/MT)

ProOil
- favourable fatty acid structure
- feed-additive or in cosmetics ($1200/MT)

ProTilizer
- larvae poop
- plant-health and growth ($200/MT)
WHAT IS BLACK SOLDIER FLY
BLACK SOLDIER FLY LIFE CYCLE

1. Adult
   2 week life-span
   Females lay 500 eggs

2. Egg (5 days)
   Hatching occurs after 1 day until day 5. baby larvae are then fed organic waste

3. Larvae (8 days)
   The larvae stop eating and turn into pupae.
   Waiting to emerge become flies
   Consume waste with amazing speed, converting it into body mass

4. Pupae (14 days)
   The larvae stop eating and turn into pupae.
   Waiting to emerge become flies

5. Processing
   Final product
   10% 90%
WHAT EATS THE BLACK SOLDIER FLY LARVAE

Piggery

Poultry

Fish
ORGANIC WASTE (STEP-BY-STEP PROCESS)

1. Organizing waste
2. Separating organic waste
3. Collection of waste
4. Storage in barrels
5. Processing for composting
REARING PROCESS

1. Waste mixing
2. Baby larvae for inoculating
3. Crates with waste and 5-DOL
4. Harvesting after 8 days
BREEDING AT THE “LOVE HOTEL” (OBTAINING THE 5-DOL)
ZERO-WASTE PROCESS

ProFeed

ProOil

ProTilizer
VALUE PROPOSITION (2 YEARS)

Citizens
Healthier Communities

- Clean up 38,000 t of waste

Farmers
Productive Farms

- Feed 500,000 birds
- Fertilize 12,000 acres

Youth
Employed Youth

- Employ 2115 youth
TECHNICALLY FEASIBLE

- Municipal Waste Recycling Facility
- \(500m^2\) for pilot
- 20 youth employed
- 180t organic waste processed since Oct 2020
- 3T/day of waste → 10t/day → 25t/day
GROWING MARKET: ANIMAL FEED

**S.O.M**
$1.2B
Ugandan feed deficit in 2020

**S.A.M**
$2B
East-African feed deficit in 2020

32k t/y
Demand BSF in Kenya

-37.5%
Cost reduction with BSF
Our Team of Experts in Social Business, Agriculture and Insect Production

Philipp Straub
CEO
Serial Entrepreneur in Uganda

Martin Tenywa
CPO
Local management on the ground

Tommie Hooft
CTO
6-years of R&D on Insects for Food and Feed

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This business is ready to fly!
Thank you!

- Process organic waste
- Create animal feed & fertilizer
Impressions
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Find us: online

www.weareproteen.com

Visit: our documentary

https://www.youtube.com/watch?v=wEgADbZmyXs&t=14s
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