DIPTERA LTD

- Turning Waste into Affordable Protein for Farmers -

EXECUTIVE SUMMARY

Headline

Ghana is drowning in organic waste while its farmers are being priced out of existence. Diptera solves both problems simultaneously.

What we are: Diptera Limited is a pre-seed Black Soldier Fly bioconversion company converting urban organic waste into affordable, locally produced protein for Ghana's poultry and aquaculture farmers.

What we have built:

- Facility under active construction at Asuboe Processing Node, Eastern Region
- $88,000+ in founder capital already deployed
- Co-founder with 4+ years BSF operational experience and an existing verified customer network

The raise:

- Seeking: **$50,000**
- Stage: **Pre-seed**
- Offering: **10% equity**
- One lead investor

The return opportunity:

- Year 1 projected revenue: **$187,822**
- Year 5 projected revenue: **$2,253,859**
- Break-even at just 17.86% capacity utilization
- 2 - 3 months from capital release to first revenue

THE PROBLEM

Ghana's waste and food systems are failing simultaneously.

The Methane Time Bomb

- Ghana generates 6.57 million metric tonnes of municipal solid waste annually.
- 70% is organic matter — 80% dumped unsegregated into open landfills.
- Ghana's CH_4 emissions rose ~260% between 1990 and 2022.

The Feed Cost Trap

- Feed = 60-70% of total production costs for poultry & aquaculture farmers.
- Driven by imported yellow corn, soybean meal & fishmeal.
- Currency depreciation amplifies cost volatility - a direct consequence of near-total reliance on imported feed inputs.

The Smallholder Collapse

- Locally raised poultry costs 30-40% more than frozen imports.
- Domestic chicken market share collapsed from ~60% (2000) to under 25% today.
- $254M+ lost annually to foreign frozen imports.

THE SOLUTION

We intercept organic waste before it becomes a climate liability and convert it into affordable protein for Ghanaian farmers.

The Bioconversion Model

• Black Soldier Fly larvae consume urban organic waste at 2x the speed of conventional processing.

• Requires 80% less water and 60% less feed input than traditional protein production.

• Fully circular: zero-waste conversion from organic feedstock to sellable outputs.

The Impact

• Diverts organic waste before it enters anaerobic landfill environments → direct methane abatement

• Delivers locally produced protein at $1.54/kg → targets ~30% net reduction in farmer feed costs

• Ultimately lowering smallholder production costs and restoring their competitiveness against cheap frozen imports

Three Sellable Outputs

• **BSF Protein Meal** - high-performance alternative to imported fishmeal & soybean.

• **Bio-Refined Fat Fractions** - energy-dense feed supplement for poultry & aquaculture.

• **Organic Frass fertilizer** - soil regenerative by-product for smallholder crop farmers

• Long-term target: 15,000+ tonnes/year across West Africa.
Year 5 market capture: $2,253,859 in revenue

MARKET OPPORTUNITY

A $100M+ import substitution market — structurally hungry for a local solution.

Total Serviceable Addressable Market (SAM)

- BSF protein can realistically substitute **30–40%** of Ghana's imported fishmeal and soybean meal
- Target segments: commercial poultry farms, aquaculture operators, and feed millers
- SAM estimated at **$40M–$50M** within Ghana's feed ingredient import market

Total Addressable Market (TAM)

- Global insect protein market projected to reach **$2.57 billion** by 2030, growing at 33.3% CAGR.
- West Africa’s animal feed market estimated at **$1.2 billion annually**.
- Local feed mills import **150,000+ metric tonnes** of soybean meal and fishmeal annually.

Total Serviceable Obtained Market (SOM)

- Scaling roadmap: 10 MT → 100 MT/month over 60 months
- Year 1 market capture: **$187,822** in revenue
- Year 5 market capture: **$2,253,859** in revenue
- Long-term target: **15,000+ tonnes/year** across West Africa - representing less than 1% of the continental TAM

BUSINESS MODEL & UNIT ECONOMICS

Two revenue streams. One circular process. Industry-leading margins.

Fixed Peg Exchange Rate: $1 USD = GHS 11.66

Stream 1 — BSF Protein Meal

- Price: $1.54/kg (GHS 18/kg) — fixed domestic price, immune to forex volatility.
- Pilot yield: 10 MT/month dried larvae.
- Monthly revenue at pilot: **$15,437/month**.

Stream 2 — Organic Frass Fertilizer

- Every 10 MT of larvae yields 13 MT of frass fertilizer.
- Price: $0.26/kg (GHS 3/kg).
- Monthly revenue at pilot: **$3,345/month**.

- Combined pilot Revenue: $18,782/month

Unit Economics

- Customer Acquisition Cost (CAC): GHS 500-1,000 per B2B customer ($43-$86)
- Average monthly contract value: GHS 18,000/month ($1,544) per 1 MT customer
- Customer lifetime: 3–5 years
- Customer Lifetime Value (LTV): GHS 648,000–1,080,000 ($55,584–$92,624) per customer

LTV:CAC Ratio

~648:1

Exceptionally strong unit economics driving high scalability.

TRACTION & CUSTOMER PIPELINE

The customers existed before the pitch deck did.

Our Customers

- **Commercial poultry farms** - actively seeking stable-priced local alternatives to volatile imported fishmeal.
- **Aquaculture operators** - facing acute protein supply constraints.
- **Feed millers** - seeking local substitutes for imported ingredients.
- **Smallholder crop farmers** - primary buyers of Organic Frass Fertilizer.

Customer Discovery

• Samuel Boadu's 4+ years of active field operations at Wiggling Gold.

• Brings an established network of verified BSF operations and offtake relationships - **no cold market entry at launch.**

• Organic waste collector partnerships established — feedstock supply pipeline confirmed.

•2 Letters of Intent (LOIs) secured

FINANCIALS & PROFITABILITY

Capital deployed. Ground broken. Clock running.

Financial De-Risking

- $88,000+ personal founder capital fully deployed.
- Covers land, construction, equipment, vehicles & materials.
- Zero external debt - founder has full skin in the game.
- Fixed assets verified at $23,000+ on audited balance sheet (April 2026).

Break-Even Performance

- Monthly OPEX: GHS 33,250 ($2,852/month)
- Break-even production threshold: **1.786 MT/month**
- Break-even capacity utilization: 17.86% of pilot capacity
- Time to first revenue: **2 - 3 months post-commissioning**

5-Year Revenue & Profitability Roadmap

Year	Production	Revenue (USD)	Net EBITDA (USD)	Margin
Year 1	10 MT/month	$187,822	$125,429	66.8%
Year 2	20 MT/month	$450,772	$332,997	73.9%
Year 3	45 MT/month	$1,014,237	$774,536	76.4%
Year 4	65 MT/month	$1,464,966	$1,125,710	76.8%
Year 5	100 MT/month	$2,253,859	$1,748,420	77.6%

Note: Year 1 revenue projections assume full pilot capacity from Month 3 post-commissioning

Path to Self-Sufficiency

- No further capital injection expected beyond this $50,000 round
- Future scaling CAPEX funded entirely from reinvested profit
- Full operational self-sufficiency projected by **Month 7**

COMPETITIVE LANDSCAPE

Diptera wins on price stability, resource efficiency, and local execution.

Feature	Diptera	Imported Fishmeal/Soy	JSO/Insectum	ITTA/BBEST
Locally produced protein	✓	✗	✓	✓
Fixed domestic price — no forex	✓	✗	✗	✗
80% less water / 60% less feed	✓	✗	✗	✗
Low-CAPEX modular model	✓	✗	✗	✗
Direct B2B supply contracts	✓	✓	✓	✗

Diptera is the only player combining local production, fixed price stability, resource efficiency, and proven founder commitment at industrial scale.

PILOT PHASE IMPACT METRICS

01 - Waste Diverted

- 400-500 MT of urban organic waste intercepted monthly.
- Estimated ~27-32 tonnes of CH_4 abated per month.

02 - Feed Cost Impact

- B SF protein delivered at $1.54/kg vs. imported fishmeal at $2.50-$3.50/kg.
- Targets ~30% net reduction in smallholder feed costs.

03 - Jobs Created

- 5 direct local jobs at pilot phase.
- 26 jobs by Year 5.
- 50+ jobs projected at full West Africa scale-up.

04 - Local Production

- 10 MT/month BSF Protein Meal + 13MT/month Frass Fertilizer
- 100% locally produced - zero forex exposure for buyers.

Key Risks & Mitigation

- Feedstock: Waste collector partnerships secured.
- Adoption: Pre-established B2B via Samuel's network.
- Regulatory Barriers: africa Circular partnership provides policy navigation
- Technical: 4+ years proven BSF engineering.
- Forex: 100% locally priced — zero exposure.

THE TEAM

Benjamin Boateng — Founder & CEO

- Belgian-Ghanaian entrepreneur, 4+ years operating in Ghana's business environment.
- Previously founded and successfully exited a service business in Ghana (2021-2025).
- Personally deployed $88,000+ into land acquisition, construction & infrastructure.

Samuel Boadu — Co-Founder & BSF Operations

- 4+ years BSF engineering experience in Ghana.
- Specialist in BSF breeding, genetics, insect nutrition, and feed formulation.
- Designed and scaled BSF production systems at Wiggling Gold.

Technical Adviser - Africa Circular (MLC member - Piotr Barczak

- Pan-African circular economy network
- Provides policy expertise, market readiness & BSF ecosystem support across Africa

Equity Structure (Pre-Investment)

Benjamin Boateng: **70%**

Samuel Boadu: **30%**

Equity Structure (Post-Investment)

Benjamin Boateng: **65%**

Samuel Boadu: **25%**

Lead Investor: **10%**

USE OF FUNDS

Headline: $50,000 precisely deployed across five operational pillars.

Pillar	USD	GHS	%	Purpose
Industrial Processing	$20,000	233,200	40%	Core machinery: rearing equipment, sorting systems, drying lines.
Waste Logistics	$10,000	116,600	20%	Waste collection routes & truck transit from Accra nodes.
Core Staff Payroll	$12,000	140,000	24%	7-month runway (fully covering Month 1-2 pre-revenue burn)
Operational Contingency	$6,500	75,790	13%	Buffer for spare parts, shipping shifts, raw material variations.
Industrial Utility	$1,500	17,490	3%	Factory grid power, backup fuel, processing energy demands.

This $50,000 stacks directly on top of:

- *$88,000+ founder capital already deployed*
- *Founder capital and $23,000+ in audited assets.*
- *8 documented construction stages in active construction*

EXIT STRATEGY

Near-Term (Year 1-3)

Achieve pilot capacity, validate economics, and establish Diptera as one of Ghana's leading BSF supplier.

Mid-Term (Year 3-5)

Scale to 100 MT/month modular expansion, enter West African market, and reach $2.2M/year base revenue.

Long-Term (Year 7-10)

Position Diptera for strategic acquisition by a global agri-food, feed ingredient, or circular economy company seeking an established West African BSF operation with proven unit economics and a verified B2B customer base.

THE OFFER & MILESTONES

The Offer

- Raise: **$50,000 USD**
- Equity offered: **10% to one lead investor**
- Investment type: **Direct Equity; pre-seed round**
- Minimum ticket: **$50,000**

Why now?

- Facility mid-construction — this investment completes the knot.
- Samuel's network means revenue begins immediately post-commissioning.
- Break-even requires only 17.86% capacity — downside is protected.

What happens after investment?

Month 1 - 2: Commission production equipment and breeding set up.

Month 2-3: First 10 MT run & first commercial B2B sales revenue.

Month 4-6: Workflow stabilization and off-take contract finalization.

Month 7: Lock in full operational self-sufficiency, at steady 10MT/month baseline.

Month 10-12: Scaled infrastructure expansion to **20 MT/month**.

Contact: Benjamin Boateng - Founder & CEO

contact@diptera.com.gh

www.diptera.com.gh