



How to Solve Food Security with Good ESG... and Insects - Part 2.

In [Part 1](#) we discussed the many uses for Black Soldier Fly Larvae (BSFL), and touched on their scientific and nutritional makeup along with what they contribute to cleaning food waste and supporting food security. We delved into how the production of the insects supports ESG, specifically the Environmental benefits, which are numerous and applicable to varying production sizes from smallholder farms to industrial scale.

In Part 2, we'll look at the remaining aspects of ESG, which are Social and Governance, and how these incredible grubs can function as a core component of each.

Social

The social component of insects and in particular BSFL holds great potential but is often overlooked, as the bulk of investment money has gone towards temperature-controlled facilities managed by robotics in colder climates such as Europe.

These industrial insect farms can and do make an ecological impact in terms of the waste upcycled into feed - typically slated for use in aquaculture - but they miss out on the great opportunity that insect farming holds for creating employment, particularly in the warmer climates of the developing world.

Black Soldier Fly Larvae can be easily farmed by even unskilled workers with low education levels, making them an ideal candidate for corporate and NGO programs geared toward more rural areas and smallholder farmers in emerging markets.

In fact, this was one of the core tenets of the FAO report in 2013 which kickstarted today's *entomophagy* movement. Sadly the human focus has been mostly lost in the frenzy of fundraising and the pursuit of technological innovation.

However, putting resources into training human capital rather than just investing capex into energy-intensive heating and cooling systems or robotics, ensures that the Social element of ESG is not overlooked, and is in fact maximized for widespread human benefit. We must not detach humanity from the Social component of ESG.

Additionally, from both a CapEx and OpEx standpoint, expenses are lower and production is more sustainable farming insects in the developing world.

Providing jobs to rural workers by farming grubs utilizing ambient temperatures, rather than spending large amounts of cash for robotics and completely enclosed facilities dependent on energy from the grid, has the added benefit of significant cash savings in the short-term and valuable positive community impact in the long-term.

Environmental sustainability cannot be separated from human (Social) impact, and Governance directly guides both. Yet many times these measures are locked within their own silos by those who seek to capitalize on one without transparently contributing to the others.

In reality they all tend to be interconnected and thus either one or two end up neglected, resulting in some level of greenwashing, or they all become true ESG features of a sustainable and resilient agricultural framework.

Within this structure, a legitimately ESG-focused waste-to-value system built around insects can:

- Educate a new breed of youthful enthusiastic farmer with broad knowledge of food production and axiology built around sustainable farming methods, and incorporating the powerful zero-waste central component of BSFL at the heart of the system
- Provide agricultural job training programs which include life skills, supporting the individual's growth within the current job and furthering their outside career options
- Maximize the use of human labor, positively impacting the highest number of people in a geographic area and creating resilient communities
- Heighten eco-awareness via education on the importance of environmental sustainability and the detrimental long-term impacts of plastic waste and poor soil management
- Improve nutrition and food security for:
 - smallholder farmers connected to the core system on the periphery
 - city-dwellers who have increased access to locally produced, sustainable, nutrient-dense foods of all types

Over time, the emphasis on human benefits will encourage trends in food production which contribute to the well-being of the largest number of people, while simultaneously improving the standard of living, the quality of life, and the future employment opportunities of each individual who participates.

Governance

Governing bodies at all levels are tasked with improving the lives of their citizens, which includes policymaking related to sanitation, food security, economic development, and more.

Insect farming is a ready-made solution for governments with either one or both of the major issues related to the agricultural supply chain: food waste and food security.

Those insects which can function as the bridge between the removal and cleaning of organic matter waste, and the production of valuable livestock feed components, have the highest value because they are the most adaptable to various situations.

The Black Soldier Fly is the current champion but other insects can also be used, including Mealworms ([which have been shown to successfully consume styrofoam!](#)), Fruit Flies, and even Cockroaches.

Insect companies can thus provide a single, measurable, turnkey solution to governments from the local to national levels, who are dealing with multiple challenging environmental and social issues simultaneously.

As mentioned, these include food waste, food security, fertilizer shortages, economic development, and of course at the heart of it all, climate change concerns.

Corporations who are producing insects at scale should seek to educate governing bodies in order to influence environmental policy in a productive direction, along with developing regulations which do not unnecessarily restrict R&D or the natural growth of the market.

Companies should also collaborate on consistent industry standards for improved food waste management, bringing the supply of organic material into the insect system more efficiently and cost-effectively.

Many national and regional associations already exist around the world and are working on these issues together with corporate and governmental entities, including [AFFIA](#) (Asia), [IPIFF](#) (Europe), [NACIA](#) (US & Canada), [IPAA](#) (Australia), [APICAL](#) (Latin America), [AAIS](#) (Africa), and others.

Pulling it all together

What's incredible about insects is they're the epitome of a value-add: the entire system is built around upcycling waste material which would otherwise be left to rot, turning it into multiple streams of ESG-positive revenue!

This type of solution can be implemented in a variety of ways through different methods of application corresponding to an individual or business need.

From the rural backyard gardener to the smallholder farmer all the way to large-scale family farms and industrial production, grubs can be plugged into existing systems to make them more ecologically friendly and productive, while raising the standard of living for those involved at the worker and corporate levels.

As the world gets more ideologically divided, forcefully debating the merits of plant-based meat substitutes vs commercial feedlot meat, what is actually needed for the survival - and thriving! - of our species is a return to a reality-based system, one which closely mimics nature's own regenerative formula.

Insects, and in particular BSFL, make the strongest case as that scalable solution. Rotting organic matter goes in and gets cleaned. This upcycling process creates valuable, sustainable outputs which both generate revenue and build a foundation of food security across the entire crop and livestock production network, with zero waste.

In the end, whatever the business or even individual viewpoints on climate change, the evidence is clear that great benefits can be found through implementing soldier grubs as a true Environmental, Social, and Governance solution.

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