

THE BLACK SOLDIER FLY (BSF) UNIT:

A sustainable protein meal production source and quality organic fertilizer for farmers in Africa

The BSF unit

The black soldier fly (BSF) unit is a fully equipped structure on a 20 square meter land size made up of a block work from footing to the window level and wire mesh including fibre net from the window to roofing level with galvanised and PVC clear sheets as its roofing. With an estimated cost of \$8,000 (cost may vary depending on the energy source and materials used), the unit can be fully completed and operationalized. This can easily be constructed by local artisans. The BSF technology is an innovative way of transforming organic waste into rich protein meal and organic fertilizer.



A Black Soldier Fly (BSF) unit at AF Aaro Limited, Adeiso.

Why a BSF unit and BSF Products (Larvae and Frass)?

The high cost of protein meal coupled with the unreliability of accessing it in the market in recent times has made smallholder chicken, pig and fish producers gradually close their business or shift to other businesses. Also, there has been inadequate agricultural inputs especially fertilizer in the markets in Sub-Saharan Africa thereby making it inaccessible for farmers to obtain adequate fertilizer for their produce.



A pile of BSF larvae and frass in a bowl



Packaged dried BSF larvae



Chicken feeding on larvae



Packaged BSF Frass



Application of frass on lettuce



Results of applying frass to lettuce

Benefits of the Unit

- Reliable and affordable protein source production for chicken, fish, and pigs.
- Production of frass as organic fertiliser for vegetable production
- Easy to expand the decentralized units to scale up larvae production.
- Efficient management of farm waste.



Preparation of the pupae in the dark cage.



Preparing eggs laid by the fly for hatching.

Sustainability of the Unit

- Sustainable and independent – no over-reliance on feed importers/producers.
- Waste generated at the farms used to feed the larvae.
- Locally produced and easy to maintain equipment.
- A very good source of business revenue as an alternative Income Generating source.
- Learning center for interested farmers in the catchment area.



BSF eggs laying and collection

The BSF equipment and tools



Equipment in a BSF unit

For any enquiries on BSF production and construction of the BSF unit, kindly contact:

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