Assessing the efficacy of different organic substrates for Black Soldier Fly Larvae Production.

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INTRODUCTION
Given the scarcity of a protein source in most commercial livestock feeds such as poultry and fish, larvae of the Black Soldier fly insect reared on organic wastes and agricultural by-products have potential to serve as an alternative protein source. Sustainability of larvae production is favored by the fact 70% of our economy is agriculture based, and 30% of the agricultural produce ends up as organic waste, which pose problems to the environment and its inhabitants. BSF larvae can convert the nutrients into useful biomass, which can be turned into a source of protein for domesticated animals. However, to ensure sustainable production of the larvae is dependent on identification of ideal substrates, substrate combinations and feeding rates.

OBJECTIVE
To compare the growth of the Black soldier fly larvae (Hermetia illucens) reared on different organic substrates

PRELIMINARY RESULTS

Among homogeneous substrates, food remains did well at all stages of development, while banana peelings performed the poorest.

Though did poorly as pure feedstocks, the do well when used as co feedstock rather as the primary feedstock.

The 40:60 FS and Co feedstock ratio seems to produce consistently increasing biomass for all substrates

The higher the FS amount in the combined feedstock though, the lower the weight gain of the larvae.

DISCUSSION:
• FR superior performance can be attributed to its heterogeneous nature while the poor performance of the BP is due to the high moisture content in it, which causes larvae migration.
• When mixed with faecal sludge, BP perform as a co feedstock, because its moisture content is moderated.
• When FS is mixed with a co feedstock above 40:60 ratio, larvae growth reduces perhaps due to the high ammonia content produced.

CONCLUSION:
• FR, BW and FS are all suitable for BSF production.
• BP is suitable as a co-feedstock of FS.
• The 40:60 ratio of combination ratio does well.

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