

Project	BSFL for feed
Project name	
Year of record	2023
Q 1	The progress of the project has been challenged particularly for output 2 milestones for mass production of BSFL. The work has managed to maintain breeding fly populations but to achieve mass requires more input and resources. According to the poultry village trial protocol, we would need a more than 387 kg of dried BSFL to which we have not achieved in the last 3 quarters.
Q 2	In the 1 & 2 quarter of 2023, we have prioritized to setup a BSFL rearing facility in the old aquaculture shed to which much of the work focused; 1. Clearing, cleaning and total wash-down of the old-aquaculture shed (Picture table 1) 2. Building feeding, harvesting and BSFL collection boxes 3. Boxing shelving to house feeding BSFL 4. Sieving table for collecting BSFL The facility and the arrangement of work with waste collection, waste processing, egg collection, cleaning requires daily routine work. There are a few improvements that the system needs to do to make the process more coherent. 1. Waste collected needs to be processed into fine particulates so that bulk waste material can be easily digested by the feeding larvae. What is recommended now moving forward is to breakdown the bulk material, de-water the breakdown organic material, sundry and feed the larvae. Right now, the efficiency of the feeding larvae is producing at a rate of 1kg of BSFL to 10kg of consumed waste wet weight. We plan to make these improvements to encourage efficiency within the system. 2. Artificial BSF egg production is low since bring in the breeding nets. It is recommended that we improve lighting within the shed and make a 10 – 20% harvest weight collection of larvae at their 6th star stage to increase BSF populations within the breeding nets.
Q 3	Work is continuing to improve the ratio of feed to BSFL production: The ratio of larvae to waste according to the sampled data from May to September of 2023 for naturally seeded BSFL collected from households is about 1: 10 (1 kg of BSFL harvested is to 10 kg of waste fed on). This ratio is rather large for an efficient system to utilize a period of 35 days of growing time to reach the 5th to 6th instar stage at 35-day periods. The current BSFL system is not efficient enough. A desirable target is to reduce this ratio to 1: 5 with the current capacity being established. This will require more efforts into artificially producing more egg clutches to add into existing pre-seeded wastes being harvested from the food boxes each week. The anticipated results are: 1.) increase the larvae output from 1 to 3 kg per week; 2.) improve waste reduction to larvae from 2.9% to 7% that was achieved in August (Graph 2); 3.) Improve bioconversion of wastes from 33% to 40% 4.) Reduce the harvested BSFL to waste ratio from 1: 10 to 1: 5 5.) Reduce feeding time rearing periods from 35 to 20 days (\pm 5 days)
Q 4	