MAGGOT PRODUCTION

Maggots are produced from wastes and this calls for integration so as to boost sustainable Agriculture. In other words, without wastes, there are no maggots. The objective of every farmer is to maximize profit and you will agree with me that feeding alone accounts for about 70% of the total cost of animal production and if you can be able to reduce this feeding cost, then, you can make more profit...and one of the ways you can do this is via maggot production.

Maggot is the larvae gotten from domestic flies and a farmer needs the facilities to engage in the mass production of maggots. Though, the construction of a maggotery can be cost effective.

SOME OF THE ROLES OF MAGGOTS
1. It provides a source of protein for all avian species and fishes too.
2. Also given to mammals as grass cutters and man in form of maggot meal.
3. The waste from it can be used to fertilize the soil.
4. They protect the environment by reducing the amount of waste produced humanly.
5. The technology for maggot production is simple and cost effective.

THINGS TO CONSIDER IN BUILDING A MAGGOTERY

Site selection: because of the smell and bad odour associated with the maggotery, it can not be done anywhere/everywhere. It should be located, preferably, away from human residence. It should be erected in places where there are trees or surrounding vegetations as thee helps to absorb the offensive odour from the maggotery and reduces the ambient temperature.

Housing: the building should be oriented in the east-west direction to reduce the effects of the sunlight on the substrates.
So, specification of the housing is: a building with opening at the top and sides for proper ventilation. The roof can be made from corrugated iron sheets or thatched; and the following dimensions can be used (can be altered to suit you):
* 3m from the top to the feet of the building.
* 3.2m from the floor to the ridge of the building.
* the walls of the building are short (maximum of 3 block coaches) and are open sided to enable aeration.

NOTE: as the building are open, predators can come in to steal your maggots such as birds, rats, lizards, etc and as such, you have to protect it with nets so that when birds or other predators get in, they get trapped and are then used as fly attractants.
MAGGOT CULTURE (HOW TO PRODUCE/CULTURE MAGGOTS)

To produce maggots, we need the following:
1. Housefly.
2. Substrates.
3. Fly attractants.

**NOTE** that all the substrates do not give you the same results as some substrates are better than others. The best substrate for the maggot production is the QUAIL DROPPINGS. Any quail farmer can attest to the fact that within 24 hours of getting quail droppings, you get maggots naturally without any process or intervention.

Now, to produce maggots, you get the wastes from the quails or any other animal, and then you add the wastes from the grasscutters (the remnants of the elephant grasses consumed by the grasscutters are not disposed off but are used in maggot production...this is integration); then you mix the two (the quail droppings and the grasscutter waste). After mixing them, you wet your mixture and then introduce your fly attractant (which can be dead animals as rats, lizards, birds, etc; animal offal, or any substance that can attract housefly such as mango fruits, etc.) which you should drop on top of it and then, go your way. About 2-3 days later, you come back and you will notice that you have maggots already which are ready for harvest.

**HARVESTING MAGGOTS**
You will see your maggots clustered as ant hill, so, you use a ‘parker’ or a tray, sweep the clustered maggots into a bowl containing water and a sieve. Place your maggots into the bowl and then sieve out the little substrate which will be floating. Decant the water and then you have your maggots left in the bowl.
Now, after harvesting your maggots, you must feed them immediately to your fish or birds except you are preserving or processing. If you leave them fresh, they will turn to pupa which will later turn to housefly. Remember that the maggot is gotten in the life cycle of a housefly and if there is delay in feeding your animals with it, the lifecycle continues and then you end up having much housefly or you end up multiplying the houseflies in your maggotery.

**NOTE** that as the maggots are produces, some of them may stray away. To prevent this, you need have some surrounding cannals around your maggotery and these cannals should have water and should house some some fishes (tilapia, catfish or carp fish). As the maggots stray away, they fall into the channals and are then consumed by the security guards...the fishes. By doing this, no maggot is lost.
The above concept is called the ZERI (Zeri Emission Research Initiative) Concept where nothing is lost to protect the environment.

**FACTORS AFFECTING THE YIELD OF MAGGOTS**

**Season:** the production of maggots during the dry or harmattan season is usually low.  
**Temperature:** the lower the temperature, the less maggots produced. The production of maggots is best in the temperature of 30oC and above. If the temperature falls below this, yield is affected negatively.  
**Humidity:** production is better in humid conditions.  
Quantity of fly attractants: the more attractants, the more maggots produced.  
Quality of fly attractants: some attractants attracts more flies than others. 
**Predators:** the more they are, the lesser your yield.  
The operators’ skill: if the operator is not skillful enough, he/she may miss the target as at the right time to harvest.
USE OF MAGGOTS
Maggots can be used in feeding fishes, poultry and also in feeding other animals via maggot meal or even feeding them fresh. Grasscutters which have difficulty in digesting/utilizing animal protein digest maggots especially in the form of maggot meal (mixed with concentrates).

CHEMICAL COMPOSITION OF MAGGOTS
Dry matter-24.7%
Crude protein-47.5-60%
Minerals-9%
Lipids-93.2%
Ash-23.2%
Ca-1.5%
P-1.2%
Mg-0.3%

PRESERVATION OF MAGGOTS
The best method of preservation is sun-drying. When, they dry, you can incorporate it into any feed and feed your animals. Alternatively, you can oven dry or you steam them and sundry (so they will not escape). These ones have effects as the protein content of the maggot is slightly reduced. However, when you just sundry, most will stray. So, you can oven dry or steam and sundry so that they do not stray away. You can also crush into meal.

MAGGOT MEAL
After harvesting the maggots, you can steam them and dry or them and steam and then oven dry. After, you can mill your maggot into meal (powder). This is even consumed by man because of the high nutrient content via tea, coffee, pap, etc.

CONSTRAINTS OF MAGGOT PRODUCTION
The constraints to the production of maggots include but not limited to the following:
Water logging of substrates during production: this affects yield hence the use of dwarf wall is vital. You can also use wind breaks in places where rainfall is accompanied by wind.
Harmattan or dry air: they dry the substrates faster, hence the reason for low yield during dry season. To avoid this, you water the substrate frequently.
Direct sunlight on substrate: cover the open sided walls with bamboo sticks or palm fronds or dark colored plastic sheets.
Soldier ants: the solution to this is to maintain water regularly in the channel. They cannot cross the cannal as they will only serve as feed to the fishes if they try.
Birds: use of traps or nets is vital to catch these birds or rats or lizards.
Human vigilance: this is vital to ensure you harvest when you’re supposed to harvest. This is also vital as people may enter your maggotery to steal your maggots.