THE FOODFACTORY PROJECT

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SUMMARY

The FoodFactory is an idea by Dutch inventor Bart Hogebrink to fight world hunger by industrially rearing insects for food. Insects are highly nutritious; they generally contain more protein and less fat than traditional meats. They also have higher food conversion efficiency than traditional meats. Furthermore, they reproduce much faster than cattle, are easy to raise and need far less living space.

In many parts of the world insects are already popular as food. But the current method of harvesting, by hand in the wild, makes them expensive and susceptible to extinction, droughts and natural enemies. Furthermore, they are only available in significant quantities in specific seasons.

The idea of the FoodFactory Project is to design highly scalable factories where insects are grown, harvested and processed in an industrial way, making the process of making insect-based food cheap and controllable. As a result, food can be produced at such a low cost, that even the poorest people can obtain enough food to survive, learn and work.

APPROACH

Despite the advantages, insects currently face too many limitations to be a large and sustainable food source all over the Third World. The goal of the FoodFactory Project is to overcome the factors that have limited the success of entomophagy (the practice of eating insects for food) in alleviating world hunger. The FoodFactory Project follows two approaches to achieve this goal:

1. The development of a high quality FoodFactory. This version of a FoodFactory is aimed at providing a sustainable supply of food to disaster areas and other areas that have a structural food shortage. For these situations, a FoodFactory made from pre-fabricated building blocks will be designed, that should be initially delivered, built and operated by skilled World Food Organization employees to alleviate local hunger. In time, other NGO-employees or local entrepreneurs can be taught to operate, maintain and exploit these factories. This should lead to the development of a local economy around entomophagy.

2. The development of a building diagram for small scale FoodFactories. This diagram explains how to make a very basic FoodFactory out of scrap material like oil drums, waste packaging materials, wooden sticks, etc. By printing this diagram for example underneath oil-drums, this version can be constructed at any workplace without explanation or material from the WFO or any other NGO. Both the material and the diagram can be used immediately to build something that is able to provide a sustainable supply of food. This way, the knowledge about how to rear insects can be spread among developing countries much faster than any NGO could ever accomplish. To reach this goal, the FoodFactory Project will seek cooperation with large companies that produce and distribute suitable building materials, like oil-drum manufacturers.

These two approaches will be initiated and implemented simultaneously.

THE FOODFACTORY PROJECT

PLANNING

PHASE 1A: TECHNICAL FEASIBILITY STUDY

The first phase focuses on data collection and design. The final selection of insects (most likely crickets and grasshoppers) will be made. Then expertise will be gathered about how to rear these insects. This knowledge will be used to design both versions of the FoodFactory. For both designs, a report including a construction drawing will be made.

PHASE 1B: BUSINESSPLAN FOR LOCAL PRODUCTION

In this phase, the social and economical situation in several developing countries will be evaluated to determine the feasibility of the FoodFactory Project. This study will be done in cooperation with MBA-students. Also, NGO's will be contacted to discuss the dissemination of the FoodFactory concept. The results will be incorporated in the report. This report will be offered to several foundations and NGO's in order to generate the funds required to finance the dissemination of the FoodFactory project.

PHASE 2A: PILOT FOODFACTORIES IN THE NETHERLANDS.

In this phase, both versions of the FoodFactory will be built and evaluated with respect to temperature control, inlet of food, harvesting of insects, ruggedness, etc. During this phase, an implementation plan will be made.

PHASE 2B: PILOT FOOD FACTORY IN DEVELOPING COUNTRIES.

During this phase, the FoodFactories will be installed in the selected countries. In close collaboration with local NGO's, the FoodFactories will be set up to operate in the local infrastructure. The operation, insect production, acceptance etc. will be evaluated. Based on these evaluations, the designs and implementation plans of the FoodFactories will be revised.

PHASE 3: IMPLEMENTATION & DISSEMINATION

The final phase consists of the actual implementation and dissemination of FoodFactories around the globe.

TIME AND COST PLANNING

See the table below for a provisional estimate of time and cost planning per phase:

Phase	*Time (months)*	*Costs (k € estimate)*	*Remarks*
1A	0 – 6	50	
1B	0 – 9	60	with MBA students
2A	7 – 15	100	
2B	16 – 30	150	with local NGO's
3	30 – 48	P.M.	with local NGO's