

THE ADAPTIVE DESIGN OF BREEDING OBJECTIVES OF BLACK SOLDIER FLIES (HERMETIA ILLUCENS):

An example from one of the earliest BSF Farms and Processors

Knoll, Susanne PhD – Head of Business Development

GRINSECT 



What could be the breeding objective of a company?

- To make as much money as possible. (If possible.....in a sustainable way)
- In our case: building a plane while trying to fly it.
(If possible.....in a sustainable way)



Indeed, we are building something.

- (BSF) breeding, rearing, and processing based on assumptions.
- The market is still developing.



Value & upcycling chains are volatile and subject to frequent changes.



Breeding objectives



What is Grinsect?

- Start in 2018
- First licensed insect protein manufacturer in Hungary – 2020
- Scaling ever since



1. Breeding objectives

- Breeding needs to be efficient
- Processing needs to be developed to maximise the value of the raw material as much as possible
- Costs need to be kept low



**Upgrade
breeding
objectives**



Upgrade 1.1 in Breeding Objectives



What does the market need?

Who are our clients?

What are their challenges?



Quick adaptation was crucial.



Survival strategies



Offering the whole package



Breeding



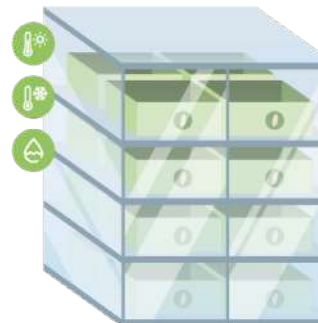
Rearing



Processing



Market stimulation



Competence center for research?

Stay with me.



Let's specify breeding objectives again!

Top-to-down supply chain approach:

1. Ready for harvest on the 15th day, with the most valuable nutritional content possible. (Semi-defatted BSF insect meal needed to have a minimum of 55% crude protein and a maximum of 15% fat.)
2. Have a healthy stable flock, which is robust and easy to handle.
3. Should perform under the local and given circumstances.



**Time to start to ramp-up
the production.**



Additional challenges

Slower scale-up process
than anticipated.



More time on high-margin
product development.

Located in Hungary - EU,
strict legislation, politics.



Strong agriculture means
lots of local input material,
EU Quality Assurance.

Non-homogeneous by-
product streams,
„Continental diet”.



Technological R&D and
preparation for processing
all types of by-products.





**Do you want to
test your ideas
on scale?** 🦋



Σας ευχαριστώ

GRINSECT



Susanne Knoll, Ph.D.

Head of Business Development

+36 20 269 4151 | susanne.knoll@grinsect.com

<https://www.grinsect.com/>

