

Use of biomass

Cluster 5 of Food Pro-tec-ts pursues the goal of developing concepts and technologies for the conversion of previously poorly used or unused biomass material flows into high-quality products.

The activities are based on the bio-economic strategy, which is oriented towards natural material cycles and aims to contribute to a structural change from an economy based on finite fossil sources to an economy based more strongly on renewable resources.

Food production technologies for trans-boundary systems

Food Pro-tec-ts is designed to bring top class technology innovation right into the heart of both the Dutch and German corporate landscape.

In the project, entrepreneurs from both countries cooperate with innovation experts in different clusters with the aim of jointly developing new technologies and learning how to use them.

www.foodprotects.eu



TERRABITES

Development of practical and technological applications for mealworm breeding and processing



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Project partners Cluster 5



Co-financiers



www.deutschland-nederland.eu



Project objective

In this subproject, mealworm farmers are supported in their rearing operations by exploring options for sustainable feed sources and applications for rearing by-products.

By monitoring and analysing the rearing process, opportunities for more sustainable resource use can be identified and put into practice among mealworm farmers.

In addition, new products based on mealworms for application in the pet feed industry as a sustainable protein source for animals should be developed.



Cluster 5
Material and energetic
use of biomass

Processinnovation

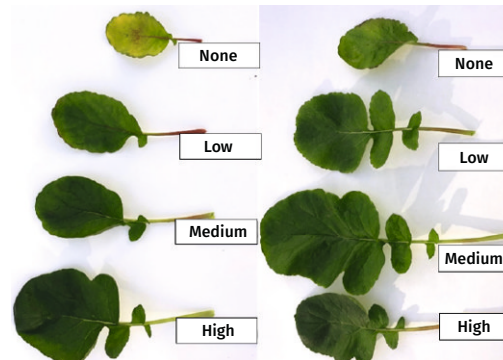
By using process innovation, we can re-search and identify waste streams and by-products that have potential for new applications that provide economic value to rearing. Based on this, new sustainable resources are made available in the agri-food system.

Motivation

- › Address waste in the mealworm value chain by developing new applications and uses of waste streams and by-products through integrating a circular economy approach
- › Promote mealworm rearing as an economically sustainable business model by developing opportunities for added value based on rearing waste streams and by-products
- › Develop high value end-product applications for mealworms to support value chain development

Waste and recycling

We research the possibilities for mealworm-frass usage in crop growth (labels indicate level of mealworm manure included in potting mediums of clay and soil)



Project tasks

- › Identification of agricultural waste and byproducts that can be recycled into feed for mealworm rearing
- › Research into application of mealworm manure for greenhouse crop production, for example radish. (See figure of leaves on the left)
- › Development of high value animal feed products based on mealworms, e.g. for monkeys



Raw material

We test and provide farm by products as food for insects

Production and processing

We enable insect farmers to rear sustainable mealworms for food, feed and pet food



Consumer and market

We produce specialised semi-moist feed for exotic species (e.g. reptiles)

Benefits for consumer

- › Access to a sustainable protein source for use in food and feed products
- › Efficient resource use in the value chain, resulting in sustainable end-products reaching the end consumer at a fair price

Benefits for economy & society

- › Improved resource efficiency resulting in lower costs and opportunities for diverse income streams through valorisation of waste streams and by-products

