

INSECT PROTEINS FOR FEED APPLICATIONS



80%

of soy production is only used to feed animals, while substantially contributing to deforestation.



The global meat consumption is expected to double by

2050



“Current feed protein sources won’t be sustainable with the expected meat consumption growth”

Geert Bruggeman, Innovation Manager at Nutrition Sciences

WHAT SUBSTITUTE TO TRADITIONAL PROTEIN SOURCES CAN BE USED, TO ENSURE FARM ANIMALS’ FEEDS ARE MORE SUSTAINABLE?

➤ WHAT?

Nutrition Sciences proposes to use insects as a sustainable source of proteins as it presents 3 significant advantages:

- Insects can be reared on a wide range of substrates, such as biowaste, and therefore address waste management issues while increasing circularity.
- Insect being cold-blooded, they don’t waste energy on regulating body temperature and therefore convert biomass very efficiently.
- Carbon footprint of insect-based proteins is low, because land use is optimal and resources don’t have to travel.

➤ HOW?

Nutrition Sciences works with UNIMORE and ZETADEC to optimize the quantity and the quality of the proteins extracted from insects.

Responsible for providing the insects, UNIMORE works on improving the rearing process of black soldier fly larvae on organic substrate. By optimizing the biomass conversion process, they try to enhance the insect’s proteins concentration. More about the insect rearing plant [here](#).

Insects being composed of various valuable substances, the proteins need to be separated. ZETADEC experiments different protocols to optimize the protein extraction process and retrieve a protein substance as pure as possible. More about insect fractionation [here](#).

Finally, Nutrition Sciences analyses the quality of the extracted protein. The molecule is compared to the current best feed protein sources, soy, or fishmeal, to ensure that resulting feeds’ nutritional values will be optimal. The focus is on protein content.

➤ WHEN?

If the European legislation on processed agricultural products (PAPs) allows, the resulting feed should be tested in farm animals in early 2022. Indeed, the current ban on using insects as feed supplies is expected to be lifted.

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Want to learn more about insect proteins ?

- Read the publication [Exploring the chemical safety of fly larvae as a source for animal feed](#).
- Discover our [SCALIBUR project](#)

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