

Leeds University and Entocycle reveal research program for commercialisation of UK insect farming

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University of Leeds and Entocycle unveiled a program dedicated to developing the protocols and codes of practice to unlock the growth of the UK insect farming industry.

The project, named InSAFE, is funded by Innovate UK and BBSRC as part of the Novel Low Emission Food Production Systems competition and will evaluate the use of nonpermissible feedstocks, including pig slurry, chicken manure and sewage sludge, to raise black soldier fly (BSF).

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Insects are still an emerging opportunity for farmers, and developing codes of practice and industry standards, in particular those on Food Safety, will help to align insect farming with other farming systems in the UK. The InSAFE project will help us accelerate our efforts to address some of the barriers facing the industry, in particular those related to food safety.

Current UK and EU legislation prohibits the use of livestock manure and slurry as a feedstock for insects, restricting its potential to reduce the growing problem of agricultural waste and the associated environmental pollution.

Currently, feedstocks allowed to breed and feed insects are primarily of vegetal origin. Examples include vegetables not meeting specific supermarket standards, byproducts from vegetable processing such as potato or carrot peelings, or spent grains from beer or spirits production. Animal products are not permitted, except dairy products and eggs.

Protocols, codes of practice and Food Safety and Quality standards will also be developed for a range of production scales, from small lab-scale units to commercial farms.

A new, state-of-the-art insect-rearing demonstrator facility, developed and installed by the UK's leading insect technology companyÂ Entocycle, will house the research and is situated atÂ The National Pig CentreÂ on the University of Leeds's research farm in Yorkshire.

The 40ft walk-in unit â?? named â??Entoexploreâ??, is the only commercial demonstrator to utilise non-permissive feedstocks in the UK, and it has been specifically designed and built to withstand the industrial requirements of handling these inputs. The unit mirrors commercial rearing environments with an environmental control system and Wi-Fi data monitoring.

Samples will be collected from the unit, in addition to Entocycle's R&D facility in London for permissive feedstocks, including segregated food waste. The research will analyse the bacterial microbiome, pathogen loads, presence of AMR genes, and heavy metal content of permissive and non-permissive feedstocks before and after insect bioconversion (the natural process of insects eating and upcycling waste matter into higher-value products such as protein and fertiliser), alongside analysis of the BSF larvae and by-products such as frass.