

Closing the loop with sustainable recycling of lignocellulose rich organic (by-) products for insect development and pet food production

Initiative: Zirkularität mit recycelten und biogenen Rohstoffen

Ausschreibung: Kooperationsprojekte

Bewilligung: 12.09.2023

Laufzeit: 4 Jahre

Most former peatlands are in an inadequate or poor condition. However, a potential rewetting of peatlands for the purpose of revitalization and CO₂-storage leads to the accumulation of lignin-rich primary biomass, which cannot be used efficiently for classical animal husbandry. This biomass, like other unused by-products of the same nature, can so far at most serve energetic purposes, but this is no longer expedient in terms of an ambitious energy transition and circular economy. Therefore, the lignocellulose structure is technically broken up by a pre-treatment, made digestible and afterwards used for decentralized insect production (black soldier fly, mealworm, crickets). The aim is to produce scalable, high-quality raw materials for pet food or, in the future, new types of food. The outlined approach represents a new, scalable raw material-product cycle. The technological-biological utilization of primary biomass for the development of a value chain with insect production can help to create a broader social acceptance for biodiversity-promoting measures such as the rewetting of peatlands.

Projektbeteiligte

Dr. Kashif ur Rehman

Deutsches Institut für
Lebensmitteltechnik e.V.
DIL German Institute of Food Technologies e.V.
Quakenbrück

Prof. Dr. Christian Visscher

Stiftung Tierärztliche Hochschule
Hannover
Institut für Tierernährung
Hannover