European Network for Rural Development

Bioeconomy
Case Study

EntoValor – Insects converting vegetable by-products into animal feed

COUNTRY
Portugal, Mainland

PROJECT PROMOTER
EntoGreen

FUNDING
National funds EUR 500 000
Private 250 000

DURATION
2016 – on-going

CONTRIBUTION TO
- generating environmental benefits
- mitigating climate change
- increasing efficiency of biomass resource use
- creating value through improved production methods or processing technology
- creating value through increased cooperation among value chain actors
- scaling up a pilot project to commercial scale

KEYWORDS
Added value, biomass, innovation, cooperation, sustainability, pilot project, recycling nutrients

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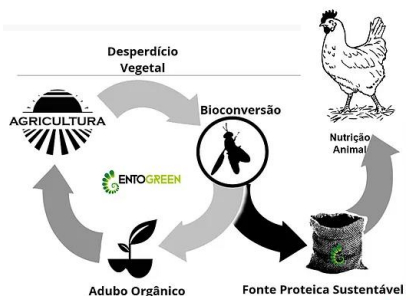

The initiative

The initiative aims to explore the possibility of reintroducing lost, nutrient-rich vegetable by-products into the agri-food value chain through fertilizers and feed. The link to allowing this recovery is the larvae of the Black Soldier Fly (Hermetia illucens): an insect capable of converting low-value organic matter into high-value ingredients that can be used for animal feed. The project builds upon existing technical and scientific knowledge concerning the conversion of vegetable by-products into animal feed using insects on an industrial scale.

The Ingredient Odyssey company is developing the insect production process, and Agromais Plus SA, an agri-food producer in the horticultural sector, provides vegetable samples for testing (off-cuts and scraps of onion, potato, broccoli, etc.). The organic fertilizers produced during bio-digestion by the larvae, in addition to the larvae themselves, are sampled and evaluated by the National Institute for Agrarian and Veterinary Research (INIAV). Finally, the animal feed end-product will be tested by the Rações Zêzere, SA company on laying hens and by the INIAV on broiler chickens.

Ensuring sustainability

This initiative will reduce the dependency on imported feed ingredients and the environmental impact of international transport. It will also reduce demand for traditional feed ingredients such as soy bean.

The impact of the project will be assessed by measuring the quantity of both the converted waste products and the final feed product.

Lessons learnt

Public funding is of major importance in supporting the creation of new strategies and processes during the early stages of their development, when they are not yet economically sustainable.

When creating new approaches, the time between testing and becoming fully operational may be long and full of setbacks. Hence, the investor should be resilient and have alternative sources of income.

A project should address specific market needs and be directed towards specific stakeholders. Additionally, public funding is not a means of subsistence and should only be used to support the recipient's business plans in the short term.

New, experimental initiatives should be embedded in local/regional economic life and aligned with national objectives, making it easier to find appropriate partners and support from the authorities.

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