

# Insects as Alternative Proteins



## Why Insects?



### Food security

Addressing global protein demands sustainably, offering numerous ecological and economic benefits



### Sustainability

Lower resource consumption compared to livestock



### Waste reduction

Turning organic waste into valuable food resources

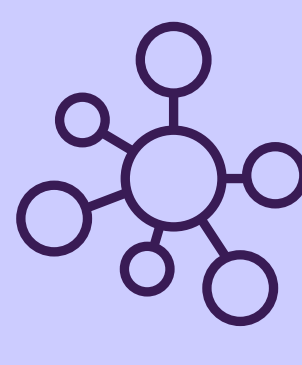


*The consumption of insects can positively improve the environment and the health of the people. They are considered highly nutritious and a great alternative source of protein.*

[Source](#)



## Nutritional and environmental benefits



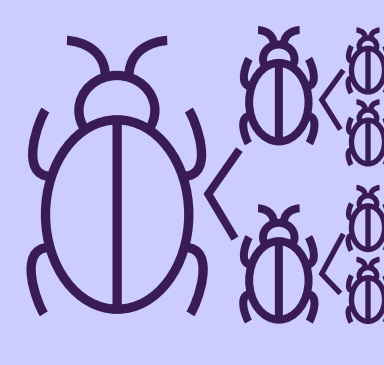
### Rich nutrition

High-quality protein and essential amino acids



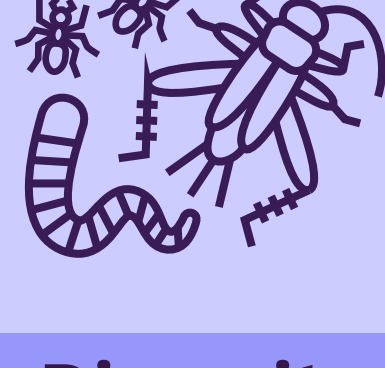
### Eco-friendly

Low land, water, and feed use; minimal greenhouse gas emissions



### Fast reproduction

Short cycles for quick protein supply



### Diversity

Hundreds of edible species provide flavour and nutrient variety



### Economic viability

Profitable for regions unsuitable for traditional livestock



### Cultural fit

Already part of traditional diets in many cultures



### Sustainable waste management

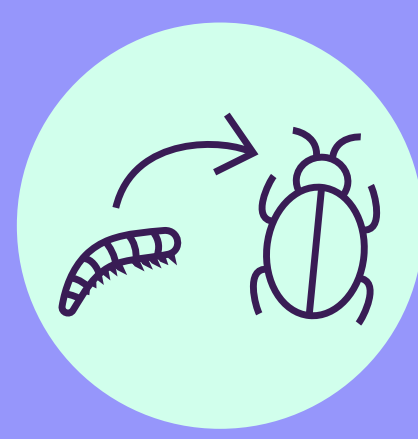
Insects thrive on organic waste, turning it into protein



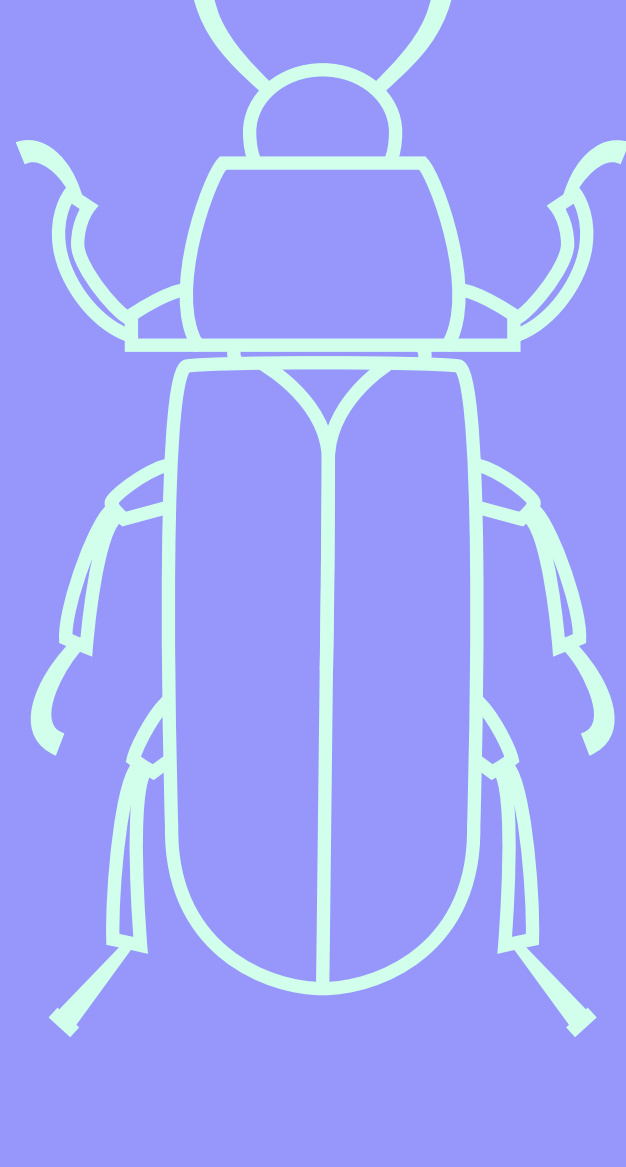
### Are the insects safe to eat?

*As from March 2019, European Commission approved specific insects as suitable for human consumption and authorised in accordance with Regulation (EU) 2015/2283 and listed in Implementing Regulation (EU) 2017/2470.*

[Source](#)

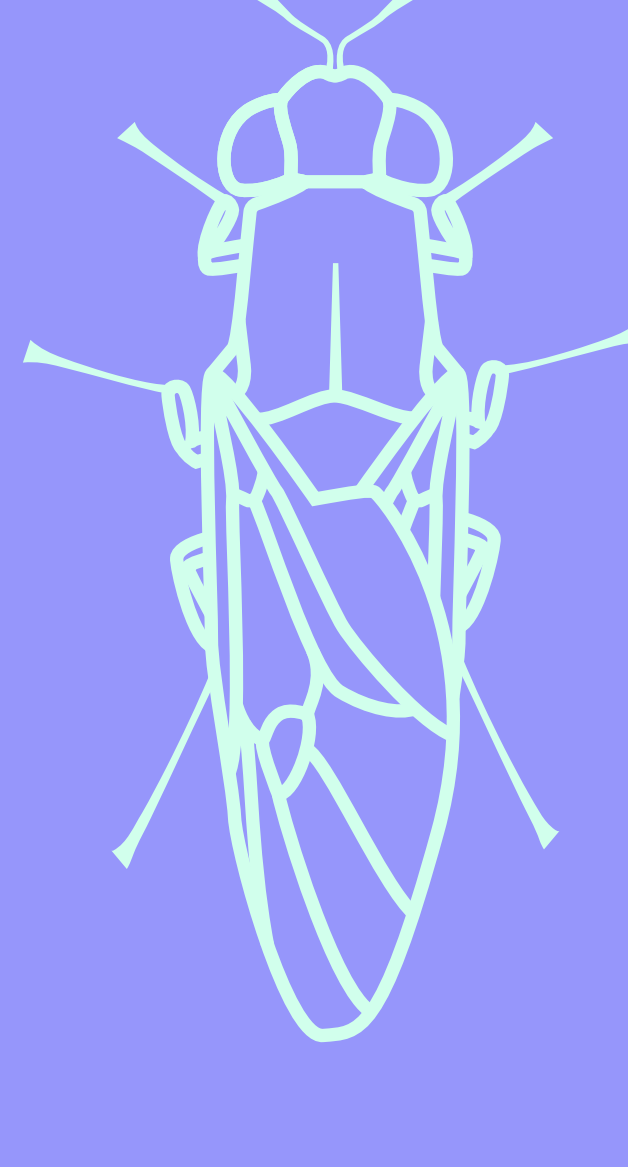


## Types of insects and farming cycles in InnoProtein



### Mealworm

(*Tenebrio molitor*)



### Black Soldier fly

(*Hermetia illucens*)

These insects are commonly farmed for their protein-rich larvae

### Farming cycles

#### Mealworm:

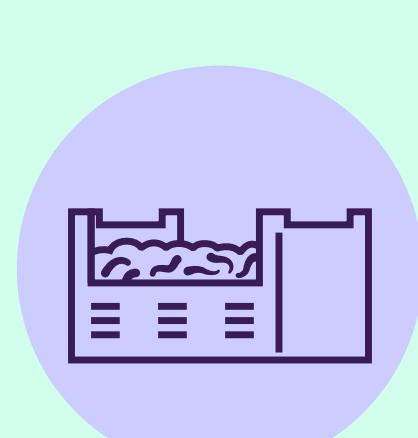


Growth from eggs to harvest **3 months**

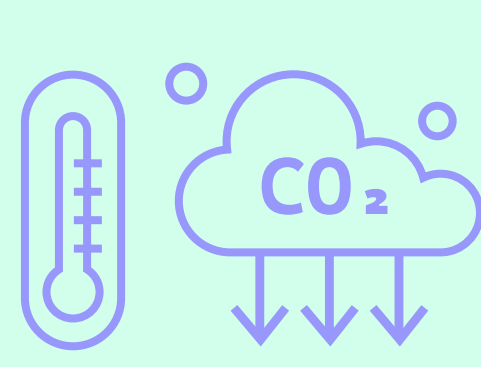
#### Black Soldier Fly:



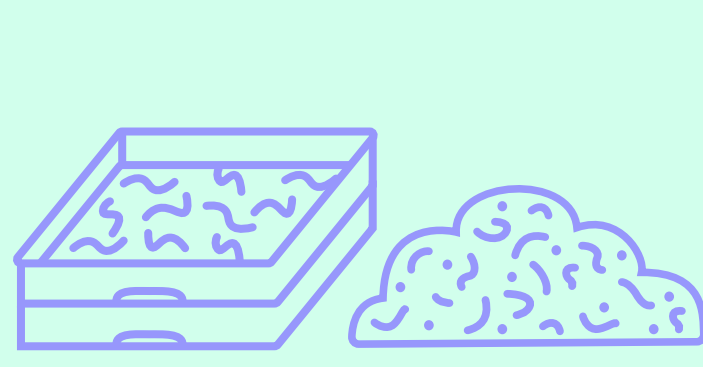
Growth from eggs to harvest **14 to 20 days**



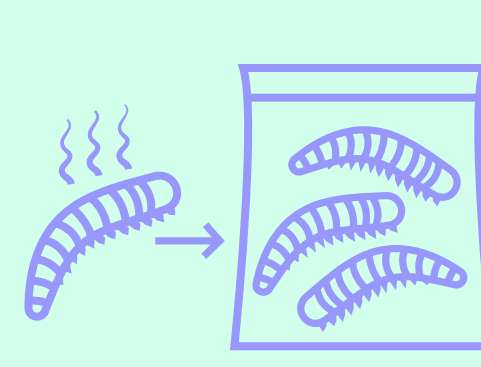
## Farming Practices



Controlled conditions (temperature, humidity, CO<sub>2</sub>) are vital



Mealworms grow in trays with specific densities, while Black Soldier fly larvae grow rapidly in optimised substrates



Larvae undergo pre-treatment: blanching, drying, and vacuum-sealing for further use

[www.innoprotein.eu](http://www.innoprotein.eu)