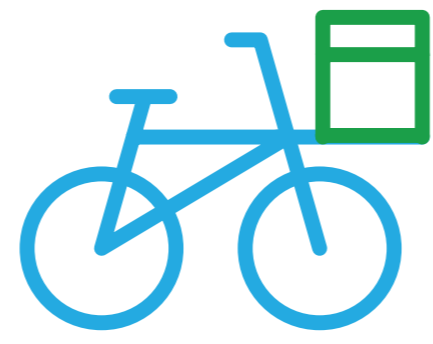


# Seven reasons why insects provide a sustainable alternative

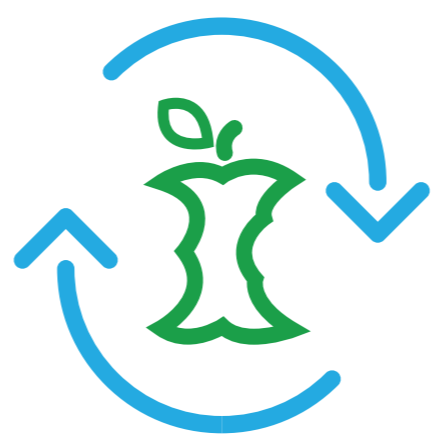


Insects play a pivotal role in nature in the nutrient cycles. They are one of the largest living biomasses and thrive on the overproduction of other systems. Yet we rarely utilize this biomass. We believe insect derived nutrients can provide the new sustainable source of feed for the aquaculture and livestock industry and can create a food-secure future for generations to come. These are the reasons why we do so.



## 1 Locally produced

We produce our insect lipids and proteins locally, and use only locally available plant-based organic by-products to feed our insects. In this way, we have reduced our CO<sub>2</sub>-emissions for transport to a minimum and we can stimulate local economies.



## 2 Efficient nutrient recovery from organic waste streams

Insects can efficiently recover nutrients from low grade organic waste streams. In our production facilities 1 ton of insects is capable of transforming 4.5 tons of low quality, plant-based organic waste into high quality nutrients, which otherwise would end up in a landfill.



## 3 Efficient land-use

Insects can be grown quickly and do not need much space to do so. One ton of insects can be grown in 6 days using a land area of 20 square meters.



## 4 No methane emissions

Breeding and processing of insects as a source of protein and lipids, do not cause any methane emissions. Methane is a potent contributor to global warming, trapping up to 100 times more heat in the atmosphere than carbon dioxide within a 5 year period.



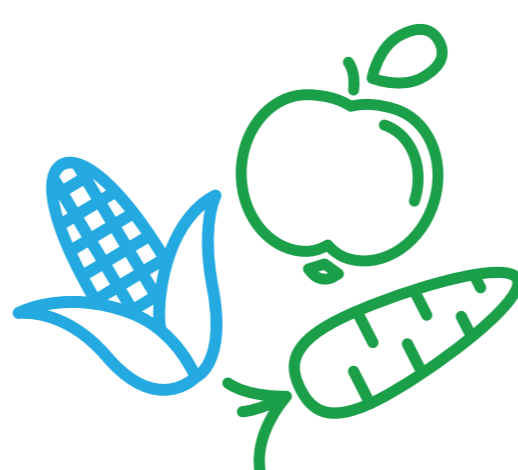
## 5 Low water usage

Insects breeding requires very little water. To produce 1 ton of our insects, less than 30 litres of water is needed. This means that insect-breeding is possible almost everywhere on the planet.



## 6 Zero waste

In the breeding and processing of insects as a source of protein and lipids, there's no waste. Besides the nutrients retrieved from our insects, by-products such as compost and skins can all be used as raw materials for other industries or fertilizer.



## 7 Agricultural diversity

At Protix we work with the black soldier fly, which can eat virtually anything. This creates flexibility to vary the croplands to produce more diverse diets for people. This means that regardless of what we enjoyed for our last meal, it can be sustainably reused by the insects that clean up our scraps.