



ANIMAL WELFARE COMMITMENTS

Innovafeed is committed to animal welfare, and we create optimal conditions for our insects to ensure their wellbeing

There is growing scientific evidence that insects may experience some negative mental states (pain, fear, etc...), therefore Innovafeed applies the **precautionary principle**.

This means we look after our insects with a certain level of care and ensure we respect animal welfare standards ... just in case they do.

We use the framework of Brambell's Five Freedoms for animals formulated by the Farm Animal Welfare Council (FAWC,2009) to assess our husbandry and continuously improve towards achieving:

- (1) **freedom from hunger and thirst;**
- (2) **freedom from discomfort;**
- (3) **freedom from injuries, pain and diseases;**
- (4) **freedom from fear and distress;** and
- (5) **freedom to express their natural behavior.**

For centuries people have cared for insects, like for instance looking after bees.

At Innovafeed our efforts are geared towards having **environmental conditions mirroring and respecting the species needs** to safeguard welfare standards. We are investing in on-going research to better understand and scientifically quantify these needs under domesticated conditions.



1. Ensuring our insects feel at home

For our insects to be comfortable throughout their lifecycle we create **optimal environmental conditions** which address their species-specific needs. Our insect is the Black Soldier Fly (*Hermetia illucens*), which starts as an egg, grows into a larva and transforms into a fly. **We recreate the right level of temperature and humidity for each of these life stages.** Larvae naturally aggregate in high density. In order to let them express their natural behavior we therefore let them grow in large colonies while ensuring they have adequate space and feed. As adult flies, they live in large cages which are optimized to promote mating and oviposition behavior while minimizing factors that could disturb them.

2. Looking after our larval nutrition and health

For our larvae to be healthy and strong we feed them with a nutritionally balanced diet which we monitor to ensure its wholesomeness. **Our larvae are fed with feed-grade plant-based agricultural by-products naturally containing all the essential components to address their needs.** To avoid diseases, we minimize our insects' exposure to potential sources of contamination and closely monitor all raw material entering their diet.



3. Providing a stress-free life-cycle

By reducing the level of human interactions, we minimize the risk of inducing potential stress or harm. We leave our larvae to feed and grow with the least human handling but closely monitor conditions and their development through sensors so that we can quickly respond if anything is amiss. Our handling equipment and processes are designed to limit harm or pain. We continue to investigate best practices for end-of-life for both larvae and adult flies to maximize their welfare.