

Feeding insects for organic layers

Problem

A key challenge remains to achieve organic and sustainable monogastric feeding strategies: meeting their protein and essential amino acid needs with locally sourced feedstuffs.

Solution

Feeding of insects offers new possibilities to overcome the protein gap in organic farming. Insect feeds offer a sustainable and local alternative to commonly used protein feed sources.

Benefits

Live insects and larval meal can replace soy in feed rations. The amino acid profile of insects corresponds to the dietary needs of fish, poultry or swine animals, especially relating to amino acids like lysine, threonine, methionine, and tryptophan.

Practical recommendations

- Processed insect protein legally belongs to the group of ‘animal proteins’ and is currently not permitted in livestock feed; however, this legislation does not apply to the feeding of live insects, as this is not a processed feed.
- Due the high fat content of the live larvae or worms there is an upper limit, which cannot be determined at present with the available results from the feeding trial.
- Feeding live mealworms (*Tenebrio*) (Fig. 2) to laying hens does not reduce aggressive behaviour (based on results of a FiBL trial, where hens received 10 g of live mealworms per day).

Applicability box

Theme

Layers, Feeding and ration planning

Context

Organic laying hen operations

Application time

All-year-round in animal feeding

Period of impact

Permanent

Equipment

No special equipment required for feeding purchased insects or larval meal. Specialised equipment required for on-farm insect production

Best in

Monogastric animals, trial application done with laying hens

Restrictions

Larval meal (Fig. 1) is not permitted – only live insects (Fig. 2)



Figure 1. Insect larval meal mixed with concentrate feed. Photo: OK-Net Ecofeed video ‘Feeding insect for organic layers’ videoproduced by FiBLFilm, image by Kaja Früh.



Figure 2. Mealworms. Photo: OK-Net Ecofeed video ‘Feeding insect for organic layers (OK-Net EcoFeed)’ produced by FiBLFilm.

Further information**Video**

- Check the following video, [Feeding insects for organic layers \(OK-Net EcoFeed\)](#) for further instructions (Video in English with German and French subtitles). It served as a basis for this practice abstract.

Weblinks

- Check the [Organic Farm Knowledge](#) platform for more practical recommendations.

About this practice abstract and OK-Net EcoFeed**Publishers:**

Research Institute of Organic Agriculture (FiBL)
Ackerstrasse 113, Postfach 219, CH-5070 Frick
Phone +41 62 865 72 72, info.suisse@fibl.org, www.fibl.org
IFOAM EU, Rue du Commerce 124, BE-1000 Brussels
Phone +32 2 280 12 23, info@ifoam-eu.org, www.ifoam-eu.org

Authors: Barbara Früh, Thomas Alföldi, Jessica Gearing, all FiBL
This practice abstract is based on the OK-Net Ecofeed video
'Feeding insect for organic layers (OK-Net EcoFeed)'
produced by FiBLFilm.

Contact: barbara.frueh@fibl.org

Review: Lauren Dietemann, FiBL, CH, and Lindsay Whistance,
Organic Reesearch Centre Elm Farm, UK

Permalink: [Organic-farmknowledge.org/tool/38429](https://organic-farmknowledge.org/tool/38429)



OK-Net EcoFeed: This practice abstract was elaborated in the Organic Knowledge Network on Monogastric Animal Feed project. The project is running from January 2018 to December 2020. The overall aim of OK-Net EcoFeed is to help farmers, breeders and the organic feed processing industry in achieving the goal of 100% use of organic and regional feed for monogastrics.

Project website: ok-net-ecofeed.eu

Project partners: IFOAM EU Group (project coordinator), BE; Aarhus University (ICROFS), DK; Organic Research Centre (ORC), UK; Institut Technique de l'Agriculture Biologique (ITAB), FR; Research Institute of Organic Agriculture (FiBL), CH; Bioland, DE; Associazione Italiana per l'Agricoltura Biologica (AIAB), IT; Donau Soja DS, AT; Swedish University of Agricultural Sciences, SE; ECOVALIA, ES; Soil Association, UK.

© 2020

