Blue mussels as feedstuff

Problem
Organic production should use 100 % organic protein in 2025, but the availability of organic protein is limited.

Solution
Mussel meal can replace other less sustainable protein-rich ingredients, in particular fishmeal, in the diets of organic pigs and layers. Furthermore, mussels can lessen water eutrophication by uptake of nitrogen and phosphorus.

Benefits
Feed intake, weight gain and egg-laying are sustained at normal levels when feeding mussel meal to grower-finisher pigs or layers. Egg quality remains good with a more orange yolk colour compared to feeding fishmeal (Figure 1).

Practical recommendation
- Mussels are harvested from nutrient-rich water before maturation.
- Mussels are deshelled by boiling, dried and processed into meal with approximately 60 % crude protein.
- Mussel meal is included in the diet at a maximum 8% in layer hen diets to avoid off flavour in eggs (Figure 2).
- No maximum inclusion rate has been established in piglets.
- Diets can be optimised for essential amino acid requirements and will often include less crude protein.

Figure 1: Differences in egg yolk colour. Photo: Marleen van der Heide

Figure 2: Feeding diets with mussel meal to layer hens. Photo: Marianne Hammershøj

Applicability box
Theme
Pigs, layers
Context
Coastal regions
Application time
All year after harvest of blue mussel
Required time
Time of feeding
Period of impact
Immediate impact
Equipment
No special machinery needed for feeding
Best in
Piglets, layers
PRACTICE ABSTRACT

Further information

Further reading

Weblinks
- Check the Organic Farm Knowledge platform for more practical recommendations.

About this practice abstract and OK-Net EcoFeed

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.
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