

Organic Knowledge Network on Monogastric Animal Feed

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Strategies:

By-products and
new protein
sources

Slow-growing
breeds + feed the
animals less
intensively

Recommendations:

1. Lower the amount of SID (standardised ileal digestible) lysine/MJ with 10% based on the recommended level for conventional pigs of modern breeds. To be used as a starting point.
2. Consider seasonal needs when formulating feed for organic: Climatic conditions (temperature, wind and humidity), availability and digestibility of grass (summer) or roughage (winter), physical (locomotory) activity

Fresh grass is more rich in protein and lysine than in net energy. If this is not taken into account, sows may be exposed to great oversupplies of protein during the summer!





Strategies:

Lower energy content feed could increase consumption and intake of amino acid

Organic breeds and dual breeds

Recommendations:

1. If farmers accept a higher age at slaughter, it is possible to decrease the nutritional value (lysine and methionine content) of the feed during the growing or finishing phase. Important is to provide high nutrient content in the starter phase to ensure proper growth.
2. Consider seasonal needs, difference in feed intake between summer and winter.

Limiting protein intake for organic broilers can be an acceptable feeding strategy if the broilers have access to a vegetation with a high nutritious content.

The nutritional requirements for conventional broilers for energy, protein, amino acids, minerals and vitamins are well documented, which is not the case for the different slow growing broilers that have been introduced in recent years



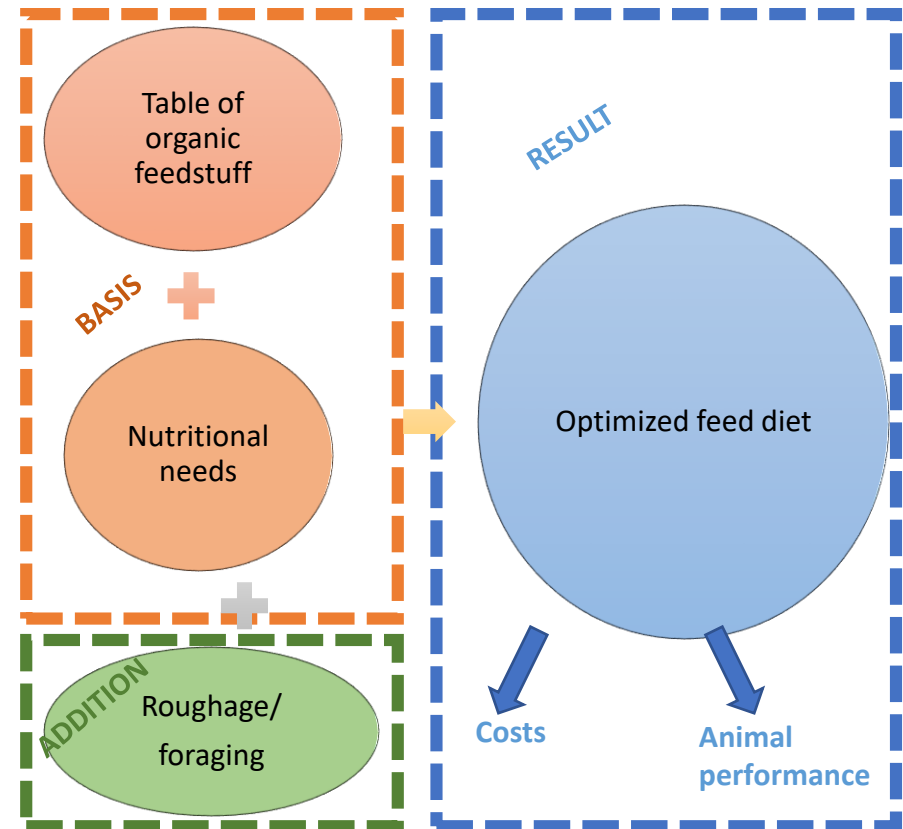
Ration planning tool: feed database meeting needs of organic farmers



OK-Net EcoFeed ration planning tool performs calculations of rations for pig and poultry farming based on two entries:

1. Production objectives (Types of animals, age, slaughter weight, laying potential...)
2. Usable organic feedstuffs

[Ration planning tools, manual and training recording available on Organic Farm Knowledge platform](#)



Novel ingredients in feeds



- **Aquatic:** Blue mussel, Starfish, Seaweed
- **Green protein** extracted from forage crops (ryegrass, lucerne and red clover)
- **Insects:** black soldier fly, the yellow mealworm, and mealworm



Review
The Potential of Locally-Sourced European Protein Sources for Organic Monogastric Production: A Review of Forage Crop Extracts, Seaweed, Starfish, Mussel, and Insects

Marleen Elise van der Heide ^{1,2,*}, Lene Stødtkilde ^{1,2}, Jan Værum Nørgaard ¹ and Merete Studnitz ³

Conclusions:

1. Aquatic, green protein and insects are suitable for alternative feed production in Northern Europe
2. They play a role in circular and sustainable feed production
3. Seaweed seems to have less potential than others
4. Single feed ingredients provide only part of the required nutrients of a complete diet. It is necessary to have a large array of different feed ingredients to compose optimal diets for monogastric animals!



Organic Farm Knowledge

- Online platform
- Provides access to a wide range of tools and resources about organic farming for **farmers** and **farm advisors** at the European level
- A virtual meeting place for cross-border learning.



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Feed and nutrition



European organic regulations call for 100% organic feed with 20% produced on-farm for monogastric animals. Feeding directly impacts productivity and therefore, profitability, the health of the animals and product quality.

Producing or purchasing feed usually accounts for more than 50 % of costs in organic monogastric production. Growing and manufacturing on-farm feedstuffs can therefore be an important way to reduce costs for farmers. The ration design of organic feed not only takes economic criteria into account, but also ecological and ethical criteria. It therefore differs from the conventional approach and must be specially designed for organic conditions.

To produce an appropriate feed, farmers need to:

- Know the nutritional value of organic feedstuffs
- Know the animals' requirements
- Calculate the nutritional balance between feedstuffs to provide a diet that meets the needs of the animals

Database and calculation tools can provide very important information and services to help the farmers achieve this.

On this page, you find such tools to help determine species-appropriate feeding strategies.

Sub-themes

