

Feeding strategies for broiler chickens

Problem

Organic broilers grow slower than conventional birds and so producers face the challenge of feeding quality feed components at lower concentrations. Feed needs to fulfil the amino acid and energy requirements of broilers for efficient growth and development, but growth is slower.

Solution

Choice feeding, access to range and forages can increase the utilisation of protein and energy, which will increase feed efficiency. The requirements for birds to use the range area is part of the solution.

Benefits

Improved energy and protein utilisation in broilers. Furthermore, as these approaches rely on local feed sources and forage from the range, the feeding strategies add to agricultural sustainability and reduce the need to import foreign feed.

Applicability box

Theme

Animal husbandry - Feed and nutrition - Production systems - Poultry - Ration planning

Geographical coverage

In all countries

Application time

Any time

Required time

No extra time required

Period of impact

Immediate Impact

Equipment

Existing feed equipment

Best in

All conditions

Practical Recommendations

Organic standards require organic broilers to be free range and have access to open-air spaces as soon as possible (figure 1) but at a minimum of one-third of their life. The minimum slaughter age for broilers is 81 days.

- Feed components should contain high-quality proteins, e.g., legumes, aquatic feed sources and by-products from food manufacturing and industrial processes.
- Organic standards prevent the use of synthetic amino acids, so there is a need to ensure amino acid availability (especially methionine and lysine).
- A phase feeding strategy should be used to account for the differences in the dietary needs of broilers during different growth stages.
- Account for feed consumed in outdoor areas (i.e., roughages) when calculating nutritional requirements and formulating feed rations.
- Formulate diets on a digestible amino acid basis rather than on a total amino acid or crude protein level.
- Choose appropriate breeds that are able to perform with the given resources, particularly slower-growing breeds.
- Slower-growing breeds will need less energy-dense rations and are also more inclined to seek food in the range.

Choice feeding, where birds select separate foods, rather than manufactured compound feed, has been found to increase Feed conversion efficiency (FCE) when birds have access to range.

Limiting protein intake for organic broilers in the finishing stages can be an acceptable feeding strategy if the broilers have access to vegetation with a high nutritional value. Reducing protein levels for slow-growing breeds to 15% resulted in a lower FCE but a lower cost of production.

Key to this is range management and alternative forages, such as baled haylages, which will be needed during winter or drought periods. High protein sources such as lucerne and clovers can also supply some of the required protein. Account can also be taken of insects and invertebrates eaten on the range, which can supply some of the protein and amino acids required.



Figure 1. Forage can provide significant food for organic broilers (Photo: Jerry Alford, Soil Association)

Further information

Reading

- Fanatico, A. C. et al. (2016): Choice feeding of protein concentrate and grain to organic meat chickens. Journal of Applied Poultry Research.
- Ramos Elorduy, J. et al. (2002): Use of *Tenebrio molitor* (Coleoptera: Tenebrionidae) to Recycle Organic Wastes and as Feed for Broiler Chickens. Journal of Economic Entomology.
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- Bassler, A. and Ciszuk, P. (2002): Pilot studies in organic broiler production – management and cross-breeds. Ekologiskt lantbruk, no. 34. Centre for Sustainable Agriculture.
- Adedeji, O. et al. (2013): Effect of Different Organic Feed Ingredients on Growth Performance, Haematological Characteristics and Serum Parameters of Broiler Chickens. World Journal of Agricultural Sciences.

Weblinks

- Further information can be found on the Organic Farm Knowledge platform.

About this practice abstract and OK-Net EcoFeed

Publishers:

Soil Association, Spear House, UK BS1 6AD Bristol,
Phone , , www.soilassociation.org

Research Institute of Organic Agriculture (FiBL), CH 5070 Frick,
Phone +41 62 865 72 72, info.suisse@fibl.org, www.fibl.org

IFOAM Organics Europe, BE 1000 Brussels,
Phone +32 2 280 12 23, www.organicseurope.bio,
www.organicseurope.bio

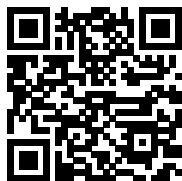
Authors: Jeremy Alford, Soil Association. UK

Review: Lindsay Whistance, ORC, UK

Contact: jalford@soilassociation.org

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Project website: <https://ok-net-ecofeed.eu/>

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