

Free-choice feeding – an alternative feeding method for laying hens

Problem

Formulated, complete diets for laying hens do not reflect their nutrient requirements since their needs change according to the weather and their age. As a consequence, nutrients are often under- or oversupplied.

Solution

With free choice feeding, the rations are not fed to the chickens as a complete feed but instead offered as three separate component feeds supplying energy, protein and calcium.

Benefits

By using feed produced on-farm, feed costs can be reduced. At the same time, the hens can use their so-called "nutritional wisdom" to better create their own rations with the free-choice feeding. The system is interesting, especially for mobile housing systems as they offer high amounts of young grass and can thus reduce the amount of protein sources used.

Applicability box

Theme

Layers, Feeding and ration planning

Context

Feed cost savings, feed efficiency

Application time

At any time, best one month prior to onset of laying

Required time

One-month changeover time for hens

Period of impact

During the entire production period

Equipment

Feed troughs with inserted partitions

Best in

Small groups in permanent and mobile stables

Practical recommendation

- The feed choices can be grouped into three major feedstuffs (not including grit): an energy source, a protein source mixed with mineral and vitamin supplements and a calcium source.
- To promote learning in the hens, the energy component must contain a lot of starch and energy, the protein component a lot of protein, minerals and vitamins, and the third component a lot of calcium. With only moderate differences, learning may not occur.
- If different types of grain are used in the energy component, they should be fed mixed in the same trough.
- The transition of feed to whole grains should be done slowly over two to three weeks so that the gizzard can build up the muscles necessary to crush the grains.
- Habituation to the free choice system with whole grains should take place one month before the start of laying, i.e. from about the 15th week of life. This allows the hen to get used to the choice feed before the nutrient requirements increase with egg production. Calcium reserves can also be built up if necessary.
- Vitamins and trace elements should not be offered as a separate component since a hen's ability to control intake is not well understood. There is a risk that some animals may avoid them or eat too much, resulting in toxicity.
- To obtain a complete ration, the supplement feed must be suitable for mixing with cereals or cereals and limestone. Following the rearing supplement, the ration should be switched to the laying supplement, as usual, when egg production starts.
- A sufficient animal/feeding area ratio must be maintained, and there must be enough distance between the troughs. For example, for every 100 hens, two hanging troughs per feed component.

There is further need for research on behaviour, potential savings and practical application.

Further information

Further Reading

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Weblinks

- Roth, F.X. 2005. Fütterungsstrategien für Legehennen in Haltungssystemen mit Grünbewuchs im Auslauf (Nach EU VO 2092/91). Final report research project No.: 02OE505/F. <https://orgprints.org/8908/>
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