

## What to consider when feeding pullets in cage-free systems

### Problem

Pullets must be provided with sufficient amount of nutritious feed to grow and develop properly. In cage-free housing systems, it may be difficult for some birds to access the feeder and feed without competition. Underweight pullets are at a higher risk to develop feather pecking during the laying period.

### Solution

In cage-free housing systems, the feed has to be provided in such a way that it is easily accessible for all pullets of the flock. In addition to a sufficient amount of feed, it is important to pay attention to a balanced nutrient composition.

### Benefits

An adequate and well-balanced diet supports the growth and development of the pullets. This improves pullet health. There are also long-term benefits, as pullets with an adequate body weight will perform better and will have a lower risk of developing feather pecking during the laying phase.

### Practical recommendations

Insufficient feeder space and feeding frequency may result in frustration, aggression, and uneven flock growth. Ensure that feeding equipment allows all pullets to eat with minimal competition. Depending on the size of the house, 6-7 (sometimes up to 10) feeding times are recommended. In addition, block feeding is advised, where two feeding times follow shortly after each other. Birds that have not been able to eat the first time will get access the second time, as the birds that fed during the first time are less eager. The feeding equipment for pullets should be similar to the equipment for laying hens to help reduce stress after transfer to the layer house. Feeding equipment should match the feeding equipment that the birds will have access to when they are later kept as laying hens to help reduce stress after transfer. Mashed feed (Figure 1) instead of pellets should be fed to lower the risk of feather pecking. Dietary dilution (about 15%) during rearing may be a further approach to reduce the risk of feather pecking by increasing feeding time and other feeding-related behaviours. Avoid sudden diet changes during rearing as these may be associated with an increased incidence of feather pecking during laying. Masking the changes between diets by mixing diets may help to prevent disruption to the birds arising from diet change. Insoluble grit of an appropriate size and quantity should be provided from 3 weeks of age to aid digestion.

#### APPLICABILITY BOX

##### Theme

Animal husbandry

##### Keywords

Pullet, housing, feeding equipment and feeding

##### Context

Transition to and operating cage-free housing systems for laying hens

##### Best in

All cage-free housing systems for laying hens: barn, free range, and organic production

##### Target audience

Farmers, farm advisors



Figure 1: Mashed feed for pullets (Source: Mona Giersberg, Utrecht University)

## On-farm application

### System approach

- Apply 6-7 (or up to 10) feeding times per day depending on the size of the house and pullet behaviour (all birds should eat with minimum competition); apply block feeding.
- Provide mashed feed instead of pelleted feed to decrease the risk of feather pecking.
- Mask diet changes by mixing diets.
- For specific advice on diet formulation, contact your feed supplier.

### Evaluation

- Assess the behaviour of the pullets at feeding: if the birds stand in line to reach the feeder after it has been filled, then it is filled too rarely.
- Monitor the body weight of the pullets and compare the results with the breeding company's standards. Calculate the uniformity of the flock (proportion of pullets that weigh within  $\pm 10\%$  of the average flock weight). A uniformity of  $>80\%$  is considered good, and the highest uniformity can be observed at 15-16 weeks of age.

## Further information

### Weblinks

Guide on best management practices for the welfare of pullets [https://ec.europa.eu/food/system/files/2021-06/aw\\_platform\\_plat-conc\\_guide-welfare-pullets\\_0.pdf](https://ec.europa.eu/food/system/files/2021-06/aw_platform_plat-conc_guide-welfare-pullets_0.pdf)

## About this practice abstract and Best Practice Hens

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**Best Practice Hens:** To support egg production in non-cage systems and improve animal welfare, a consortium consisting of 7 partners will develop Best Practices for Non-cage Egg Production Systems as a European Commission, DG SANTE pilot project. These Best Practices will provide practical support to egg producers to encourage them to convert from cage to non-cage systems, including organic production.

**Project website:** [www.bestpracticehens.eu/](http://www.bestpracticehens.eu/)

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