

How to enrich housing for pullets?

Problem

Structurally complex housing, including outdoor setting is not suitably designed for modern hen's locomotor and flying skills. Optimizing rearing environment, particularly for pullets going into alternative housing systems, is crucial for later behavior, health, and welfare when layers. It is best to match the rearing housing system with the layer housing system to best prepare birds for an optimal laying cycle.

Solution

Adding environmental enrichments is a method for improving bird development. Pecking enrichments, perches and litter, or accessible ground area during rearing enhance bird development to suit alternative systems. The aim of different enrichment materials is to: increase the amount of time the birds spend actively standing, walking, running, jumping, and dustbathing; increase foraging behaviours, provide the opportunity to seek and peck at other materials in their environment and reduce the number of aggressive interactions between birds and create environment in which birds can find safe refuges.

Benefits

Enrichments may increase the performance of natural behavior, reduce the incidences of abnormal and damaging behavior, reduce negative emotional states, improve physical health, and improve the use of the provided environmental resources. Benefits (i.ex. musculoskeletal strength, immunity) are greater when environmental modifications are applied during growth and physical development.

Practical recommendations

If possible, similar enrichment items should be provided during the laying period. The type of enrichment material is important: pet toys, for instance, do not lead to the benefits mentioned above, while the materials listed below do. Effective enrichment can include: a) straw and shaving bales to jump on, to create low barriers and partitions within larger spaces, and provide a substrate to peck at (i. ex., alfalfa hay in bales); b) perches and platforms at different levels to support different behavioural uses during the day and night, including refuge from other birds (i. ex. perches with grip/wood as perch material); c) novel food for pecking; d) pecking blocks – some may incorporate nutritive value or beak blunting effects (i. ex. pumice stone); e) a range of pecking objects; f) dustbathing boxes; and g) “verandas” or “winter gardens” to provide additional space, litter, and access to natural daylight in housing systems where range access is not available or may be restricted for periods of time; h) in free range systems use of the range encouraged by a high percentage of sheltered areas. The enrichment types should target the birds' behavioral needs, i.e., be biologically relevant. Replace enrichment variants that are not used well by the birds with alternatives!

APPLICABILITY BOX

Theme

Environmental enrichment

Keywords

Enrichment material, welfare, free range, roughage, perch, pecking block, feather pecking, development

Context

Rearing pullets for cage-free housing systems for laying hens.

Period of impact

Pullets

Equipment

Environmental enrichments

Best in

All cage-free housing systems

Target audience

Producers, Farm Advisors



Figure 1: Pullets provided with the bale of straw as an environmental enrichment (Source: ©Tina Bøje Clausen, ØkologiRådgivning Danmark)

On-farm application

System approach

- Structural enrichments suited to pullets locomotor skills (perches, different high levels of the housing constructions) to optimize skeletal development. Ramps can improve the use of the elevated areas for hens housed in aviaries and decrease keel bone damage.
- Access to litter in the first four weeks of life can have long-term impacts on the development of feather pecking behaviors, which may be related to litter stimulating natural foraging behavior.
- Sufficient light intensity and spectrum can improve visual traits necessary for optimal navigation within commercial housing systems and may prepare birds for specific types of adult non-cage housing environments.

Evaluation

- Enrichments improve pullets welfare by directly improving the affective state and indirectly promoting more positive interpretations of stressful situations and improving stress recovery, helping the physical and behavioral development, improve later health and productivity.

Further information

Videos

Enriched environment buffers against stress in chickens – Linköping University:

<https://www.youtube.com/watch?v=TWdupVu98w8> ()

Further readings

https://food.ec.europa.eu/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/

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