

Table of Contents

In Press

Article Archive

[CJAS \(63\) 2018](#)
[CJAS \(62\) 2017](#)
[CJAS \(61\) 2016](#)
[CJAS \(60\) 2015](#)
[CJAS \(59\) 2014](#)
[CJAS \(58\) 2013](#)
[CJAS \(57\) 2012](#)
[CJAS \(56\) 2011](#)
[Issue No. 1 \(1-45\)](#)
[Issue No. 2 \(47-94\)](#)
[Issue No. 3 \(99-149\)](#)
[Issue No. 4 \(151-203\)](#)
[Issue No. 5 \(205-249\)](#)
[Issue No. 6 \(251-291\)](#)
[Issue No. 7 \(293-335\)](#)
[Issue No. 8 \(337-380\)](#)
[Issue No. 9 \(381-426\)](#)
[Issue No. 10 \(427-474\)](#)
[Issue No. 11 \(475-520\)](#)
[Issue No. 12 \(521-550\)](#)
[CJAS \(55\) 2010](#)
[CJAS \(54\) 2009](#)
[CJAS \(53\) 2008](#)
[CJAS \(52\) 2007](#)
[CJAS \(51\) 2006](#)
[CJAS \(50\) 2005](#)
[CJAS \(49\) 2004](#)

Editorial Board

Ethical Standards

Reviewers 2017

For Authors

Author Declaration

Copyright Statement

Instruction for Authors

Submission Templates

Fees

New Submissions/Login

Subscription

Interaction between housing system and genotype in relation to internal and external egg quality parameters

E. Tůmová, M. Englmaierová, Z. Ledvinka, V. Charvátová

<https://doi.org/10.17221/3838-CJAS>

Citation: Tůmová E., Englmaierová M., Ledvinka Z., Charvátová V. (2011): Interaction between housing system and genotype in relation to internal and external egg quality parameters. Czech J. Anim. Sci., 56: 490-498.

[download PDF](#)

The effect of three housing systems (conventional cages, enriched cages and litter) on egg quality parameters was evaluated in two experiments with four brown laying strains ISA Brown, Hisex Brown, Bovans Brown and Moravia BSL. During 40 weeks of lay the total number of 7200 eggs was produced and analysed for egg weight, egg component weight and eggshell quality indicators. In 60 eggs, pore density in the small-end, large-end and equatorial areas was determined. Significant interactions between genotype and housing were found out in egg weight ($P \leq 0.001$), yolk and albumen weight ($P \leq 0.001$) and yolk colour ($P \leq 0.001$). Haugh units were the highest in eggs laid in cages and the lowest in the ISA Brown strain. Eggshell quality indicators were affected more by genotype than by housing. The interaction between genotype and housing was not significant for eggshell thickness but it was significant for eggshell weight and strength. Although eggshell thickness was lower in eggs produced in cages, eggshell strength was higher. A significant negative correlation was found out between pore density and housing system. Results of the study suggest that the ability of a strain to produce eggs of high quality in a particular housing system should be considered, even within brown strains.

Keywords:

laying hen; conventional cage; enriched cage; litter; genotype; egg physical measurements; pore density

[download PDF](#)

IF (Web of Science)

2017: **0.955**

5-Year Impact Factor: **1.06**
Q3 (33/60) – Agriculture, L
 Animal Science
SJR (SCOPUS)
 2017: **0.443** – **Q2** (Animal Science and Zoology)



Share

New Issue Alert

Join the journal on [Facebook](#)
Abstracted / Indexed in
 Agrindex of AGRIS/FAO
 Animal Breeding Abstracts
 CAB Abstracts
 CNKI
 Current Contents®/Agriculture, Biology and Environmental Sciences
 Czech Agricultural and Food Bibliography
 DOAJ (Directory of Open Access Journals)
 Food Science and Technology Abstracts
 Google Scholar
 ISI Web of Knowledge®
 J-Gate
 Science Citation Index Expanded
 SCOPUS
 TOXLINE PLUS
 Web of Science®

Licence terms

All content is made freely available for non-commercial purposes. Users are allowed to copy, redistribute, transform, and build upon material as long as they credit the source.

Open Access Policy

This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

Contact

Ing. Gabriela Vladyková
 Executive Editor (Editorial Board publication)

e-mail: cjas@gazv.cz

Ing. Kateřina Kheilová
 Executive Editor (submission editorial system)

e-mail: cjas@af.czu.cz

Address

Czech Journal of Animal Science
 Czech Academy of Agricultural Sciences
 Slezská 7
 120 00 Praha 2
 Czech Republic