

FINDING THE MIDDLE GROUND

Cages Versus Cage-Free Systems for Laying Hens

The move away from battery cages toward cage-free egg systems has been building momentum in North America with several corporations (e.g., Burger King, Wolfgang Puck) and universities (Harvard, University of Guelph) announcing animal welfare policy shifts to support cage-free egg production. Has the middle ground been ignored?

Within the European Union, *Council Directive 1999/74/EC*, adopted in 1999, identifies three types of rearing systems for laying hens:

- **Conventional** (non-enriched) cage systems (hens must have at least 550 cm² of cage area per bird. As of Jan 1, 2003 such cages may not be built or used for the first time. Conventional cages will be prohibited by Jan 2012;
- **Enriched**¹ cages where laying hens have at least 750 cm² of cage area per bird;
- **Non-cage** systems with nests (at least one for seven hens), adequate perches and where the stocking density does not exceed nine laying hens per m² usable area.²

In a recent interview, Michael Appleby, who developed one of the original furnished cages (the Edinburgh Modified Cage) said, “Furnished cages have been introduced widely in Sweden, and to some extent in the UK. Other countries in Europe are largely holding their breath to see whether



Commercially available furnished cage

the Directive mandating phase-out of conventional cages by 2012 will be upheld.”

Meanwhile, research on hen housing systems has been ongoing. In Europe a research project (LayWel) studied the welfare implications of changes to laying hen production systems. Two outcomes from the project were:

- A report assessing the welfare impact of three housing systems (conventional battery, furnished and non-cage);
- An on-farm animal welfare audit manual for producers.

The report concluded that, “with the exception of conventional cages, all systems have the potential to provide satisfactory welfare for laying hens. However this potential is not always realized in practice.” Table 1 illustrates the project’s ‘traffic light’ approach to compare welfare outcomes and risks associated with several production systems. >

TABLE 1: LAYWEL PROJECT: RISK TO WELFARE FOR KEY INDICATORS IN DIFFERENT CATEGORIES OF HOUSING SYSTEM

INDICATOR	CONVENTIONAL	FURNISHED CAGE			NON-CAGE		OUTDOORS
		Small	Medium	Large	Single level	Multi-level	
Mortality (%)	Orange	Orange	Red	Red	Red	Red	Orange
Mortality due to feather pecking and / or cannibalism	Green	Orange	Orange	Orange	Orange	Orange	Orange
Red mite	Orange	Orange	Orange	Orange	Orange	Orange	Orange
Bumble foot	Green	Orange	Orange	Orange	Red	Red	Red
Feather loss	Orange	Orange	Orange	Orange	Orange	Orange	Orange
Use of nest boxes	Red	Green	Green	Green	Green	Green	White
Use of perches	Red	Orange	Orange	Orange	Orange	Orange	Orange
Foraging behaviour	Red	Orange	Orange	Orange	Green	Green	Green
Dustbathing behaviour	Red	Orange	Orange	Orange	Orange	Orange	Orange
Air quality	Green	Orange	Orange	Orange	Red	Red	Green
Water intake	Green	Green	Green	Green	Green	Green	Orange

Red = high risk of poor welfare
Orange = variable between flocks & farms or moderate welfare risk
Green = low risk of poor welfare

CAGES VERSUS CAGE-FREE SYSTEMS ...

Michelle Jendral, PhD candidate at the University of Alberta, is in the latter stages of an industry supported project, that involved developing a modified cage (with nest box and perch) from a conventional cage. She is comparing the welfare and productivity of hens in the modified system to hens in conventional cages and some commercially available furnished cage units.

Results include:

- 95% of eggs were laid in the nest box for modified and furnished cages.
- Hens in modified or furnished cages exhibited less stereotypic behaviour and feather pecking, with more time spent resting, preening, and wing or leg stretching than hens in battery cages.

- Number of eggs did not differ between systems, but egg quality was improved in modified / furnished cages.
- Foot condition & bone quality was improved in the modified / furnished cages.
- Feather cover was improved in modified cages and in furnished cages with dust baths.
- Feed consumption and aggression was lowest in the modified cages.

Appleby notes, “It remains true that many people concerned for hen welfare think that all cages are wrong, and that going cage free is the only reasonable action. That message does have some clarity to it. But I also have reservations ... For me, one of the most important points is that welfare in furnished cages is better than in conventional battery cages.” ■

LayWel: www.laywel.eu

M. Jendral's project summary: www.prc.afns.ualberta.ca/Content/Docs/Project-Jendral02.pdf

1. Enriched cages (also referred to as 'furnished cages') include a nest box, perch and litter for pecking / scratching. Some enriched systems also include a dust bath.
2. ec.europa.eu/food/animal/welfare/farm/laying_hens_en.htm