

An Evaluation of Furnished Cages as an Alternative Egg Production System under New Zealand conditions: Project Summary

Background

Around 75 million dozen eggs with a retail value in excess of NZ \$ 200 million are produced annually in New Zealand. The majority of these eggs (88 %) are produced by hens housed in cage systems, with the remainder produced by hens housed in non cage systems (either barn or free range).

Although enriched (or furnished) colony cages, which provide nesting, perching, scratching opportunities and more space per hen are increasingly being used in egg production systems in the European Union there are currently no such housing systems in New Zealand.

The welfare of laying hens in New Zealand is governed by the Layer Hen Welfare Code (2005), one of a number of welfare codes which have been developed and reviewed by the independent National Animal Welfare Advisory Committee (NAWAC) and adopted by the Minister of Agriculture based on the recommendations of the Committee. The current Layer Hen Welfare Code will be reviewed by NAWAC in 2009 and it is essential that any policy change on cage systems be based on independently validated research carried out under NZ commercial conditions.

This project therefore aims to evaluate furnished colony cage systems for laying hens under New Zealand conditions. The study will evaluate the systems in the context of

- Animal health & welfare
- Genetic strains of hens
- Economics
- Practicalities of management
- Product quality

The Issue / Opportunity

In developing the Layer Hen Welfare Code (2005), NAWAC noted that ideally they would like current cages to be phased out. However, they further noted that they could not recommend replacement of current cage systems with alternative systems including furnished cages until such time as it could be shown that in the context of supplying New Zealand's ongoing egg consumption needs, alternative systems would consistently provide better welfare outcomes for the birds and be economically viable.

The current code will be reviewed in 2009 at which point NAWAC will consider current New Zealand and international research on alternative systems, amongst other factors, prior to determining whether or not to amend the minimum requirements for cage systems.

The range of production systems for eggs currently in place in New Zealand means that eggs fulfill a unique niche, providing high quality protein for very low cost (around \$4.00 per kg). At the same time a significant proportion of heavy egg users include those households with children, Maori and Pacific households, and households located in the Northern parts of New Zealand. It is essential therefore that any regulatory change to production systems does not result in the loss of this cost effective food source for, in particular, low income households.

Successful implementation and completion of research into the welfare, economic and management aspects of enriched cages under New Zealand commercial conditions is essential if NAWAC are to meet stakeholder expectations and/or needs and adequately evaluate the applicability of furnished cage systems in the New Zealand context.

Similarly, evaluation of an alternative mechanism for the production of a high quality, least cost product, in a system that enhances bird welfare over current cage systems will benefit both those consumers on low incomes, and the price dependent growing egg ingredient market.

Methods

The Egg Producers Federation (www.eggfarmers.org.nz) which represents all egg producers in New Zealand will deliver this project by leveraging off capital investment by Mainland Poultry Ltd, an EPF member company. Scientific assessment will be carried out Dr. Lindsay Matthews, a leading New Zealand researcher based at AgResearch. The project team also includes Professor Christine Nicol of Bristol University and who is currently involved in a number of EU funded projects assessing hen welfare in various housing systems, in a consultative role.

A key driving factor in the trial design has been ensuring that it can link into other national and international studies. The project design therefore matches that of a MAF Operational research project which will comparatively assess layer hen welfare across all systems of housing in New Zealand. Similarly, Professor Nicols' input into the project will ensure that it can be linked into other international studies on furnished cages.

The project will be carried out in a new laying house facility located on a site with an excellent bird health status. A large colony type (60 bird colony) furnished cage system will be installed and evaluated. Genetic influences will be assessed comparing the two strains of commercial brown egg laying breeds available in this country. This is a key element in the study as compared to other countries using furnished cages; New Zealand producers are limited in choice of breed due to the small size of the industry, and strict quarantine rules. All aspects of management from rearing the birds through to laying will be identical for the two strains.

The first study will focus on how the furnished cage design is suited to New Zealand farming conditions to ensure optimum benefits for hen welfare, egg quality and economic return. Production assessments for each flock will be based on weekly data covering egg production, feed intake, feed conversion to eggs, mortality & bodyweight and will be compared to the breed target for each strain of bird.

Researchers will use the on farm welfare audit assessment designed by Bristol University for the EU Laywel project (deliverable 7.2 www.laywel.eu). Welfare assessments will be carried out on the birds at peak lay (35wk) and again towards the end of lay (60wk). To ensure comparability with other published studies the physical scoring will be based on published visual scoring systems published by Tauson *et al.* (www.livsmedelssverige.org/hona/scoringsystem).

Year 1 results will be available to NAWAC (National Animal Welfare Advisory Committee) when it reviews the Laying Hen Welfare Code (2005) in 2009.