Summary

Aims: The aim of this survey was to conduct a science-based comparative assessment of the welfare of laying hens in commercial production systems in New Zealand. The collection and analysis of data were focussed on outcomes in terms of hen welfare.

Methods: The survey was carried out on a selection of 60 layer hen farms in the categories: large cage, small cage, large free range, small free range, organic free range and barn categories. The farms were selected to provide balanced representation of the two major brown layer breeds (Shaver Brown, Hyline Brown) farmed in New Zealand, plus a representation of the locally-bred Ranger bird used at the time the survey was carried out by a small number of organic farms. The farms were also selected to represent the geographical spread of egg production in New Zealand, and care was taken to include representation of all the major suppliers of equipment. Data were collected on farm-level variables and bird-level variables, affecting hen welfare, taking account of both biological function and feelings approaches to animal welfare assessment. In cage systems, thirty birds were assessed on each farm. In free range and barn systems, 30 birds were weighed but the behavioural assessment was carried out on a range of birds within easily assessable distance. The average numbers assessed in the non-cage groups ranged between 61 and 128 birds. Two farm visit assessments were made, the first soon after peak lay (average age at first visit: 32 weeks), and the second examining birds from the same flock towards the end of their laying period (average age at second visit: 62 weeks).

Results: The report presents the findings of the two series of farm visit assessments. The results are presented in 35 tables describing the results of the assessment of overall farm practices (tables 1- 17), individual bird level physical assessment (tables 18-25), flock level performance (tables 26-31), flock behavioural assessment (tables 32, 33) and faecal corticosterone analysis (tables 34, 35). Statistical analysis of these results is provided. The tables are supplemented by a number of figures and graphs.

Discussion: Our findings indicate that cage and free range layer hens are similarly adapted to their environments, and show similar stress levels as measured by faecal corticosterone tests. Significant differences in mortality, feather cover and wound prevalence were found between farm types. A range of management standards was found within each farming system, though large cage farms systems showed least internal variation.

Conclusions: In its 2004 report on the draft Layer Hens Code of Welfare, NAWAC stated that it was "unable to recommend replacement of current cage systems with alternative systems until such time as it can be shown that, in comparison to current cage systems, alternative systems, in the context of supplying New Zealand's ongoing egg consumption needs, would consistently provide better welfare outcomes for birds and be economically viable". This report backs up this conclusion and indicates that little has changed in the interim.

Relevance: The science–based approach of this work will lead to improved layer hen welfare outcomes via the revised codes of welfare.