

Title: Free range hen welfare: Characterisation of 'outdoor' and 'indoor' hens and physical features in the range

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Author: Jean-Loup Rault

Summary

Free range production systems are increasing in Australia, partly driven by consumer perception of free range systems as animal welfare friendly, because outdoor access is considered conducive to the expression of natural behaviours. Free range egg production currently contributes about 39% in terms of the volume and 49% in terms of the value of egg grocery sales in Australia. Nevertheless, the use of the outdoor range in free range commercial flocks, which is the main feature of the system in comparison to other non-cage systems (barns, aviaries), remains poorly understood.

This project involved a series of six experiments, conducted over a three-year period on commercial farms of various sizes (with flocks of 120 to 18,000 hens), involving a diversity of outdoor range features considered representative of the overall Australian free range egg industry. The experiments included the tracking of individual hens using radio-frequency identification, behavioural studies of ranging in varying locations and conditions, and animal welfare assessment using behavioural and physiological measures.

A large majority of the hens studied accessed the range on a regular basis and for extended periods of time, yet there was no evidence that either the frequency or the amount of ranging were related to differences in hen welfare.

The various behavioural studies conducted within this project showed that hens performed different behaviours outdoors as compared to indoors. However, these differences related to the frequency rather than the type of behaviours displayed. Hens performed more exploratory behaviours in the range, and more comfort and resting behaviours inside the shed.

Environmental features offered in the areas within the outdoor range were found to have a great influence on the number of hens and the behaviour that they displayed in these areas. Artificial structures could be designed that were attractive to the hens, with the most successful offering overhead cover and dense cover blocking UV light. There are novel avenues for the design of outdoor range features that attract the hens into the range.