Title: Effects of rearing on inappropriate conflict behaviours that predispose feather pecking and subsequent plumage damage, and cannibalism

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Summary

More than 30% of Australia's eggs are now produced in free range housing systems, and this proportion is increasing annually to accommodate customer demands. However, a hidden problem for free range egg production is higher than desired hen mortality, particularly due to cannibalism.

Severe feather pecking and injurious pecking are problem behaviours, which often occur in flocks of free range laying hens. The behaviours result in significant welfare problems for hens and economic losses for egg producers. This project investigated the role of different factors that can be applied during rearing of the chick and young pullet, to determine their impact on the occurrence of severe feather pecking, which leads to plumage damage, and may also result in cannibalism.

Three experiments were conducted using ISA Brown laying hens. The chicks were reared from day-old then allowed onto outdoor ranges past 20+ weeks of age. The first experiment investigated the effects of beak trimming and environmental enrichment. The second experiment compared rearing under low light intensity between 1 and 7 weeks of age, and transport, relocation and mixing (TRM) of the pullets at 16 weeks to simulate the industry practice of transferring point-of-lay pullets from the rearing farm to the laying farm. The third experiment investigated the effects of stimulating foraging behaviour from 6 weeks onwards, and TRM at 16 weeks. Each experiment was conducted using 16 groups of 50 hens, with factorial experimental design and replication.

Apart from beak-trimming, which resulted in birds with no plumage damage and no occurrence of death from cannibalism, the other experimental treatments only had minor effects on the occurrence of severe feather pecking, plumage damage and cannibalism. In two of the three experiments, high rainfall events occurred that seemed to trigger outbreaks of these problem behaviours. The results provide a better understanding of the underlying causes of severe feather pecking, plumage damage and cannibalism, in free range hens under Australian conditions.