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Canopy cover is correlated with reduced injurious feather pecking in commercial flocks of free-range laying hens

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Abstract

*Injurious feather pecking in non-cage systems is a serious economic and welfare concern for the egg-producing industry. Here, we describe the first results from an ongoing collaborative project to improve range environment and welfare of laying hens (*Gallus gallus domesticus*) within the McDonald's Restaurants Ltd, UK supply base. The objective of this study was to investigate, in a commercial situation, the correlation between: i) proportion of range cover and ii) proportion of canopy cover, with plumage damage of end-of-lay hens. The assessment of plumage damage due to injurious feather pecking is a key animal-based welfare indicator for laying hens in non-cage systems. In 2007 and 2008, all laying-hen producers within the McDonald's Restaurants Ltd egg-supply base, were required to plant (if not present already), 5% of the total range area with blocks of trees either side, and between 20–25 m from the laying hen house. Plumage damage at end of lay was positively correlated with mortality and flocks depleted in summer had less plumage damage at end of lay than flocks depleted in autumn or winter, possibly because of weather conditions at the time of placement. There was no correlation between the proportion (5–90%) of range cover and plumage damage at the end of lay, however, plumage damage was negatively correlated with percent of canopy cover within tree-planted areas. Providing a minimum of 5% tree cover, planted close to the house but with good canopy coverage, may be a feasible and practical method enabling producers to reduce plumage damage due to injurious feather pecking in their laying-hen flocks. Tree cover provision may also provide environmental benefits, such as soil stabilisation, reduced nutrient leaching and carbon sequestration.*

Keywords: *animal welfare, canopy cover, free range, injurious feather pecking, laying hens, range cover*