Influence of front curtain design on nest choice of laying hens

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Group nests in alternative housing systems for laying hens fulfill mostly a hen's need for seclusion and protection. Although nests are built according to welfare guidelines, there are differences between nest types such as design of front curtains, which could have an impact on laying behaviour. Usually, front curtains are in one piece and have an opening in the middle, which fits approximately the width of one hen. This may lead to an unsettled laying behaviour and conflicts between hens as they need to cross each other for nest access. The aim of this study was to investigate the effect of front curtains, in one piece (OP) or sliced in stripes (ST), on the hens' nest preference and laying behaviour. We predicted that hens prefer nests with sliced curtains as they could do nest inspections and enter/leave the nest on its whole width. Thus, conflicts should be reduced and more settled laying behaviour is expected. Eight pens each with 20 white laying hens (LSL) were equipped with two roll-away nests (0.54m²), one with OP and one with ST curtains. The laying behaviour was recorded for two days. Data were analysed with repeated measures ANOVA. More nest visits were counted in ST-nests (OP 57.81±3.06; ST 68.75±3.06; p=0.039), more nest entries/exits were done on the whole width of the nest. In ST-nests (OP 3.88±0.97; ST 14.50±3.49; p=0.002). We did not find a difference in number of hens, egg number, aggressive behaviour and number and duration of sitting bouts between both nests. Hens seem to value seclusion and protection provided by front curtains more than its design. However, the higher number of nest visits and nest entries in the ST-nest through the curtains indicate that hens enter/leave the nest on its overall width when given the possibility to do so. Thus, sliced curtains provide more opportunities to do nest inspections.