Influence of nest site and nipple drinkers in front of nests on laying hen behaviour in aviary systems


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In laying hen barns with aviary systems two nest sites can be distinguished: either at the walls of the house or integrated into the aviary blocks. Integrated nests are often equipped with nipple drinkers in front of the nests. The aim of the study was to investigate whether the different nest sites cause behavioural differences and if the presence of nipple drinkers has an effect. 4,500 LSL hens, randomly assigned to 20 pens along a corridor, were housed in groups of 225 birds in a laying hen barn. Each pen was equipped with a BOLEGG Terrace® aviary and four Vencomatic®-Classic-Sidebelt-Nests (two facing the corridor and two facing the outdoor run). Ten pens had integrated nests (five with nipple drinkers and five without) and ten pens had wall-placed nests (five with nipple drinkers and five without). The number of eggs per pen was recorded separately for nest-eggs and mislaid-eggs every day. Nest platforms were filmed and behaviour of 25 week-old hens was analysed. The number of mislaid eggs did not differ between the nest sites from begin of lay until 25 weeks of age. Integrated nests facing the corridor or the outdoor run were equally used but in pens with wall-placed nests hens showed a preference for nests facing the corridor. Due to this imbalance, the number of hens on nest platforms depended on the interaction between nest site, nipple drinker equipment and side of the pen (facing corridor or outdoor). Most hens stood in front of wall-placed nests with nipple drinkers facing the corridor. Thus, number of agonistic interactions was higher at wall-placed nests compared with integrated nests facing the corridor (F1,16=7.28, P<0.05). Wall-placed nests were inspected more often (F1,32=22.83, P<0.0001). In front of integrated nests and nests with nipple drinkers hens were significantly less active. Different nest sites and nipple drinkers in front of nests influence behaviour of laying hens in aviary systems.