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Light source preferences in laying hens

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Most severe behavioural problems (feather pecking and cannibalism) in loose housing systems for laying hens originate from the rearing period. In organic egg production, natural light is compulsory during the laying period, but not during the rearing. There is little knowledge about the effect of different light sources on behavioural development. The effect of early exposure to natural light may have an effect on the preference of light type later in life. The aim of this experiment was to study the light source preference in laying hens reared in either artificial or natural light.

126 LSL-chicks were divided into 3 light treatments (in total 18 pens): ¹⁾ A8: 8 hours artificial light + 16 hours dark, ²⁾ A16: 16 hours artificial light + 8 hours dark and ³⁾ N8: 8 hours natural light + 16 hours dark. Birds were reared in these light treatments for the first 14 weeks of their life. At that age, the birds' light type preference on a group level was tested by connecting two adjacent pens with a tunnel, which gave birds access to both natural and artificial light. Birds were video recorded for 4 hours before changing the side of light sources and doing another 4-hour recording. Data was scored using scan sampling (5-min interval) and it was analysed using ANOVA.

There was no difference in body weight of the chicks in different treatments at the age of 14 weeks. Chicks reared in artificial light spent significantly more time in artificial light than chicks reared in natural light [$p = 0.02$ (A8 vs. N8), $p = 0.01$ (A16 vs. N8)]. N8-chicks spent equal amount of time in natural and artificial light.

These results showed that chicks reared in artificial light preferred artificial light at the age of 14 weeks. This supports the idea that chicks for organic egg production (with access to natural light) should also be reared with access to natural light, but there is still a need for long-term studies on this. The results may also imply that birds reared with access to natural light are more adaptable to a changing light environment.