

單色窄波長人工光照對無特定病原蛋種雞生產效能之影響

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摘要

光照是雞隻產蛋主要的環境因子，因家禽感知波長的能力較人類強，許多研究觀察不同光照顏色對家禽行為表現的影響。研究顯示相較於綠色光，產蛋雞在白色光與紅色光的照射下會有較長的採食時間及較高的產蛋率。無特定病原雞胚蛋為維持多種特定病原清淨，蛋種雞需飼養於正壓密閉環境，同時落實嚴謹飼養管理及防疫作為，生產成本高昂，因無特定病原蛋種雞之飼料營養組成不易依據胚蛋品質進行即時調整及生產，故本研究藉由調整橘紅色窄波長光照以提升無特定病原蛋種雞之生產效能，同時監測群飼之種雞群啄肛及健康情形，以降低無特定病原胚蛋之生產成本。

The influence of monochromatic artificial light on egg production in SPF hens

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Abstract

Illumination conditions play the most crucial role in management of egg-laying poultry as they are more sensitive to environmental luminosity than humans. Many studies have demonstrated that white and red light wavelengths facilitate longer feeding time and result in increased egg production when compared to egg-laying hens subjected to green light. Specific-pathogen-free (SPF) embryonated eggs are produced at high cost due to the use of a positive pressure, airtight poultry housing and the implementation of other critical biosecurity management measures. An additional challenge is to always make prompt, real-time adjustments to dietary ingredients so as to maintain or improve the performance of egg-laying SPF hens. Alternatively, a technically feasible measure to enhance egg production of egg-laying SPF hens in this study was tested through the use of monochromatic artificial light in egg-laying henhouses while cannibalism and the overall health of flocks were monitored.