

# The effects of light-emitting diode on poultry welfare and economic traits: a review <sup>(1)</sup>

Chin-Hui Su <sup>(2)(4)</sup> Chih-Hsiang Cheng <sup>(2)</sup> Pei-Hsuan Chen <sup>(3)</sup> Jung-Hsin Lin <sup>(2)</sup> and Hsiu-Chou Liu <sup>(2)</sup>

Received: Nov. 23, 2016; Accepted: Mar. 14, 2017

## Abstract

Light presents a main environmental factor in poultry production. The light regime could be divided into four parts: light intensity, duration, color (wavelength) and pattern. It was proved the changes in the light regime have a profound effect on the behavior, physiology, production and reproduction performances of poultry. In tradition, poultry was bred outdoor with simple semi-opened house, the natural sun light was the main source of light, no artificial light need to supply to the poultry. However, the proportion of indoor poultry production become higher because the increased demand of poultry meat and the improvement of feeding technology. In the modern poultry industry, producers are continuously looking for a new light source that could increase their profit to apply in indoor poultry production. Light-emitting diode (LED), due to their various beneficial characteristics of high energy efficiency, long life time, small size and suitable for monochromatic applications, is gaining popularity and attention of poultry producers. In addition to reduce the production costs by high energy efficiency, the character of suitable for monochromatic applications may be applied to improve poultry production performance. Therefore, this review will focus on the research results of LED light applied in the poultry industry, trying to give a light using suggestion for poultry industry in the future.

Key words: Light-emitting diode, Poultry, Review.

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(1) Contribution No. 2553 from Livestock Research Institute, Council of Agriculture, Executive Yuan.

(2) Ilan Branch, COA-LRI, Ilan 26846, Taiwan, R.O.C.

(3) Department of Animal Science and Technology, National Taiwan University, Taipei 10672, Taiwan, R.O.C.

(4) Corresponding author, E-mail: chsu@mail.tlri.gov.tw.