

## **THE EFFECT OF LIGHT COLOR AND INTENSITY AND FEED FORM ON WELFARE INDICES IN BROILER CHICKS**

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### **Introduction**

In modern poultry husbandry, artificial illumination has been widely used to promote avian productive performance. Wavelength, intensity, photoperiod, type and placement of lighting all play an important part in bird development, growth and welfare of broilers (Olanrewaju et al., 2006). Many studies indicate that broilers raised under blue or green light were heavier than those raised under red or white light (Cao et al. 2008). The objective of this experiment was to investigate the effect of light color and intensity and feed form on welfare indices in broiler chicks.

### **Materials and methods**

In this study, 384 day-old broilers Ross (308) in factorial arrangement ( $2 \times 2 \times 2$ ) in a completely randomized design with eight treatments and four replicates were used. The treatments consisted of two feed forms (mash and pellet), two colors (white and green) and two light intensities (10 and 20 lux). The light intensity for all chickens at the first week was 30 lux. Welfare indices such as the walking ability (gait score), hock burn, breast blister, foot pad dermatitis were determined and scores at days 35 and 42d.

### **Results and discussion**

As results showed, hock burn and foot pad dermatitis were significantly lower ( $P < .0001$ ) in treatment of feed form pellet to white light colors of 10 lux. walking ability in group of feed form mash to white light colors of 20 lux, also breast blister in group of form mash to white light colors of 10 lux was significantly lower ( $P < .0001$ ) than other groups.

**Keywords:** Light color, light intensity, feed form, welfare indices, broiler

### **References**

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