**Effect of different light sources on performance and egg quality traits in laying hens**

**Summary**

This study was carried out to determine the influence of yellow incandescent bulb, white mini fluorescent lamp and white LEDs on some performance and egg quality traits in laying hens. A total of 360 animals were randomly allocated to the three light source treatments and housed in individual cages in a three tier battery in three environmentally controlled poultry houses.

Each house was equipped with one of the following light sources: incandescent bulb; mini fluorescent lamps and light-emitting diodes (LED) lamps. All light sources were fixed to a light density of 20 lx and applied for 16 h per day. In the study, a total of 360 (120 birds for each house) ATAK-S egg layer hybrids were used. Body weight at sexual maturation, final body weight, liveability, feed consumption, feed conversion ratio, yield, weight, quality, Haugh unit and shape index of eggs, eggshell thickness and eggshell strength were recorded until 52 weeks of age.

Light sources had no effect on, final body weight, albumen index and shape index but had no influence on other traits. The results of the present study demonstrated that though the cost of LED lamps was higher than that of other light sources, their energy consumption was lower. LED lamps did not have any negative impact on the production and egg quality of the laying hens.