Şimşek E, Kilic I (2006) Building environment and ınteraction of population density and position and their relationship to layer performance. International Journal of Poultry Science 5 (9): 856-862.

Abstract

In this study, it was aimed to determine the effects of hen age, cage position and cage density on egg production and quality characteristics in laying hens. Ome thousand and thirty six 25 wks-old Isa Brown layers, at the beginning of laying period, were used in experiment. Two cage batteries which were paralle to long axis were selected as the study material. Cage densities were four, five birds per cage, respectively. Different egg production and egg quality parameters were measured for different hen age, cage position and densities for 11 weeks. Egg samples were collected from the cages to define the egg quality characteristics once a week. Indoor environmental condtrions such as temperature and humidity were fairly affected by cage density ($P<0.01$). however, they did not differ among cage positions. Hen age had a significant effect on hen-day egg production (HDEP), feed consumption (FCS), feed conversion (FCV), and egg quality characteristics ($P<0.01$). the weekly observations showed that cage position and cage density didn not have major influence on HDEP, FCS and FCV. On the other hand, HDEP and FCS were higher for four birds per cage on the windoe side. No egg quality characteristics were impacted by cage position and cage density. Differences between hen age for mortality were significant ($P<0.01$). even though the cage position effect on mortality was not significant, highest mortality was observed on corridor side. The mortalities were differed ($P<0.05$) among cage densities. Mortality in lower cage density was less than higher cage density. The study concluded that the interactions among hen age, cage position and cage density were significant for some variables.