Abstract

Nowadays assessing egg quality are used various parameters like weight variation, variation in the air cell and albumen, yolk and shell quality; all these with the sole purpose of presenting a highly reliable product for consumers. The objective of study was to determine the quality of the chicken egg in four hybrid lines, grown in two production systems in humid warm climate; for this, were established in 2011, two studies in the relay from the Zootechnical University Papaloapan (17° 47' 00'' north latitude and 95° 56' 00'' west longitude, to a height of 57 masl). In study one, 40 hens of 18 weeks of age, 10 from each strain (Tetra SL, Harco, Plymouth and INPEMA-Plymouth), were housed in individual cages (80 cm^2) the food provided was ad libitum. In study two, a group of 80 hens (50 Tetra SL and 30 Plymouth) of the same age, were raised under pastured poultry. In both studies, the evaluation was carried out in the 14, 18, 22 and 26 laying weeks and measured variables were weight, length and diameter of the egg; yolk, albumin and eggshell weight; yolk and albumin pH; yolk intensity color and Haugh unit. It was used a completely randomized design with a multifactorial array where fixed effects were the genetic line, laying week, time of storage and refrigeration. At lay week 26 were found the highest values (p< 0.05) in egg weight, yolk and diameter in the two systems. The pH of the yolk and albumin was better in eggs evaluated a day after lay and under refrigeration, in both studies. The eggs obtained from hens in cage had egg shell thinner and less intense color in yolk, compared with those produced under pastured poultry system.

Keywords

Gallus gallus, poultry grazings, egg production.