

## Evaluation of Egg Quality Parameters in the Isa Brown Line in Intensive Production Systems in the Ocaña Region, Norte de Santander

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**Abstract :** The objective of the study was to evaluate the internal and external quality of the egg in the three production housing systems: floor, cage, and grazing of laying birds of the Isa Brown line, in the laying period between weeks 35 to 41; 135 hens distributed in 3 treatments of 45 birds per repetition were used (the replicas were the seven weeks of the trial). The feeding treatment supplied in the floor and cage systems contained 114 g/bird/day; for the grazing system, 14 grams less concentrate was provided. Nine eggs were collected to be studied and analyzed in the animal nutrition laboratory (3 eggs per housing system). The random statistical model was implemented: for the statistical analysis of the data, the statistical software of IBM® Statistical Products and Services Solution (SPSS) version 2.3 was used. The evaluation and follow-up instruments were the vernier caliper for the measurement in millimeters, a YolkFan™ 16 from Roche DSM for the evaluation of the egg yolk pigmentation, a digital scale for the measurement in grams, a micrometer for the measurement in millimeters and evaluation in the laboratory using dry matter, ashes, and ethereal extract. The results suggested that equivalent to the size of the egg ( $0.04 \pm 3.55$ ) and the thickness of the shell ( $0.46 \pm 3.55$ ), where  $P\text{-Value} > 0.05$  was obtained, weight albumen ( $0.18 \pm 3.55$ ), albumen height ( $0.38 \pm 3.55$ ), yolk weight ( $0.64 \pm 3.55$ ), yolk height ( $0.54 \pm 3.55$ ) and for yolk pigmentation ( $1.23 \pm 3.55$ ). It was concluded that the hens in the three production systems, floor, cage, and grazing, did not show significant statistical differences in the internal and external quality of the chicken in the parameters studied egg for the production system.

**Keywords :** biological, territories, genetic resource, egg

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