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PHYSICAL QUALITY OF EGGS FROM HENS RAISED ON ORGANIC AND CONVENTIONAL SYSTEM WITH 46 WEEKS

QUALIDADE FÍSICA DE OVOS DE GALINHAS CRIADAS EM SISTEMA ORGÂNICO E CONVENCIONAL COM 46 SEMANAS

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Eggs are considered one of the most complete foods, by providing essential health, such as protein, vitamins and mineral elements. Reduction of internal egg quality during storage that is related to the loss of water and carbon dioxide, is proportional to the elevation of temperature. The experiment was conducted to evaluate the effect of storage time on physical quality of organic and conventional eggs from hens Isa Brown, collected at 46 weeks of age. One hundred fifty eggs were used for the analysis of the percentage of weight loss, Haugh unit, percentage of yolk and albumen, with 15 repetitions for different storage periods, corresponding to 0, 7, 14, 21 and 28 days (Table 1). The results obtained were subjected to analysis of variance using the Statistical Package SISVAR and means were compared by Tukey test at 5% significance.

Table 1. Values of percent of weight loss, Haugh unit, percentage of yolk and albumen obtained for the effect of time storage

Systems	Storage time (days)				
	0	7	14	21	28
	Percentage of weight loss (%)				
Organic	0,00 a	2,08 a	3,76 a	5,14 a	5,76 a
Conventional	0,00 a	2,91 a	4,16 a	5,32 a	6,39 a
	Haugh unit				
Organic	125,17 a	112,03 a	86,20 b	87,26 a	73,18 b
Conventional	126,24 a	112,57 a	130,51 a	88,53 a	127,48 a
	Percentage of yolk (%)				
Organic	23,08 a	26,78 a	25,16 a	26,98 a	27,81 a
Conventional	25,76 a	27,12 a	28,73 b	30,12 b	30,13 b
	Albumen percentage (%)				
Organic	69,79 b	64,09 b	65,58 a	64,53 b	63,76 a
Conventional	64,33 a	63,93 a	62,24 a	61,41 a	61,72 a

Means followed by different letters in the column differ each other (P>0.05) by Tukey test.

No significant statistical differences about the percentage of weight loss of eggs (P>0.05) between the two systems were observed, unlike Haugh units, percent of yolk and albumen showed difference b (P<0.05) between treatments. It was observed that in both systems, there was a reduction in the percentage of albumen, while increased yolk percentage, with best results observed in the eggs from organic system. It can be concluded that the physical quality of eggs from the organic system were higher than those obtained in conventional system eggs.

Keywords: Haugh unit, internal quality, storage time.

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