

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

PERFORMANCE AND EGG QUALITY OF LAYING HENS FEEDING WITH CALCAREOUS ALGAE LEVELS OF DIFFERENT PARTICLE SIZES

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Minerals are extremely important for poultry and calcium (Ca) and phosphorus (P) supplementation is essential because they take part in all biochemical processes in the body, with emphasis on the egg shell formation. In the search for alternative sources of Ca, calcareous algae (*Lithothamnium calcareum*) have become an interesting option because it consists basically of Ca and Mg, besides presenting more bioavailability of the minerals, making them easily assimilable by the animals. The aim of this study was to assess the effects of the inclusion of calcareous algae (CA) levels of different particle sizes in the diets on performance and egg quality of laying hens. A total of 210 laying hens with 53 weeks of age were used. The experiment was carried out in a completely randomized design, in a factorial scheme 3x2 (CA levels x particle sizes), with five replicates and six birds per experimental unit. The treatments consisted of a control ration (without addition of FAC) and three CA inclusion levels (1, 2 and 3%) of different particle sizes (0.128 and 1.114 mm). The experimental period was of 112 days, divided into four cycles of 28 days. The data were submitted to the variance analysis for the effects of the factors studied to be verified by using the Tukey test ($P < 0.05$) to compare the means. For the comparison of the treatments with the control group, the Dunnet Test ($P < 0.05$) was used. The layers performance and the external eggs quality were not influenced by the CA levels and by the different particle sizes ($P > 0.05$). A lower albumen percentage ($P < 0.05$) was observed with the inclusion of 2% of fine particles CA in the laying hens diets. The highest yolk percentage ($P < 0.05$) was verified when coarse particles CA was provided in the diets, regardless of their level. It was concluded that the inclusion of up to 3% of fine or coarse particle CA, in white-egg layers diets (53 to 68 weeks) did not influence their performance and egg quality.

Key words: egg production, haugh unit, *Lithothamnium calcareum*, organic sources, yolk index

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