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Czech Journal of Animal Science

The effect of feeding untreated rapeseed and iodine supplement on egg quality

Lichovníková M., Zeman L., Jandásek J.:

Czech J. Anim. Sci., 53 (2008): 77-82

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The objective of the experiment was to evaluate the effect of the feeding of 80 g/kg (R8) and 100 g/kg (R10) of untreated rapeseed (RS) on egg quality including sensory quality in comparison

The addition of iodine (I) was also evaluated (1 mg/kg (R10) vs. 3 mg/kg (R10+I)). “Double zero” RS was used. The contents of energy and crude protein were almost the same in the diets. Laying hybrid ISABROWN was used in the experiment. The quality of eggs was analyzed 11 times every 28 days, from 19 to 64 weeks of age. 30 eggs per each group were always analyzed. Boiled eggs were assessed twice around the peak of egg production. Egg weight decreased ($P < 0.001$) with the increased level of RS (62.9 g, 61.8 g and 60.7 g, respectively). A reduction in egg weight in R8 and R10 diets resulted in the lower weight of albumen and eggshells. The addition of I to R10 diet increased ($P < 0.001$) egg weight (62.1 g vs. 60.7 g). The yolk proportion in egg weight was the highest (26.0%, $P < 0.001$) and the albumen weight ratio was the lowest (64.2%, $P < 0.001$) in group R8. Iodine supplementation improved ($P < 0.001$) yolk weight (15.7 g vs. 15.3 g). The proportion of RS in the diet did not affect the eggshell strength. An increase in the level of I improved ($P < 0.001$) eggshell quality (strength 36.1 N vs. 34.0 N and

thickness 0.386 mm vs. 0.363 mm). Taste and overall acceptability were lower ($P < 0.05$) in eggs of hens fed RS. The addition of I did not affect flavour, odour, taste or overall acceptability.

Keywords:

laying hens; sinapine; eggshell; taste

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