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Czech Journal of Animal Science

The effect of dietary Jerusalem artichoke (*Helianthus tuberosus* L.) on performance, egg quality characteristics and egg cholesterol content in laying hens

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Czech J. Anim. Sci., 51 (2006): 349-354

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This research was carried out to determine the effect of Jerusalem artichoke (JA) with or without 5, 10% vetch (V) supplementation on performance, egg quality characteristics

and egg cholesterol content. In the study, seventy-five 25 weeks-old commercial white laying hens were randomly divided into one control and 4 treatment groups each containing 15 hens. Control group was fed basal diet without JA or V. Treatment group 1, 2, 3 and 4 were fed diets containing 5% V, 5% JA, 5% JA + 5% V and 10% JA + 10% V, respectively. The feeding period lasted 16 weeks. In the study, it was determined that dried-ground JA contained dry matter, crude protein, ether extract, crude fibre, crude ash, inulin and metabolizable energy (ME) at the level of 93.30, 10.02, 0.36, 5.64, 9.05, 15.80% and 3 060 kcal/kg, respectively. At the end of the study, live weight was lower by 4.36–10.09% in the treatment group 10% JA + 10% V compared with the other groups, but feed efficiency was improved in this group. There were statistically significant differences between the groups in egg quality characteristics ($P < 0.05$, $P < 0.001$). Egg production was not affected by supplementation of 5, 10% JA with or without 5, 10% V supplementation. Egg yolk cholesterol and total cholesterol content were not different in the groups (P

As a result, the addition of V with or without V has no adverse effect on performance and egg quality in hens.

Keywords:

Jerusalem artichoke; laying hen; egg production; egg quality characteristics

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