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Composition, digestibility and nutritive value of cereals for dogs

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Abstract

Most dry dog foods are based on cereals, but very little published information and few comparative studies are available on the nutritive value of various cereals in dogs. To determine the apparent nutrient digestibilities and feed values of five different autoclave-processed and ground cereals: oat groats, barley, wheat, corn and rice, a digestibility trial was carried out on twelve adult huskies according to a 6 x 4 cyclic changeover design. Total tract organic matter (OM), crude carbohydrate and gross energy (GE) digestibilities were higher in rice than in all the other cereals. Apparent crude protein (CP) and acid hydrolyzed fat digestibilities of rice (80% and 94%, respectively) were as good as for oat groats (81% and 93%). However, oat groats had higher OM, CP and GE digestibilities than barley, wheat and corn. The amount of digestible crude protein (118 g kg⁻¹ DM) was higher in oat groats than in the other cereals. Digestible energy contents (MJ kg⁻¹ DM) of oat groats, rice, corn, wheat and barley were 17.1, 16.0, 15.7, 15.6 and 15.5, respectively. The quantity of excreted wet faeces increased and the percentage of dry matter (DM) in faeces decreased when oat groats, barley, wheat or corn were supplemented to the basal diet, in contrast to rice, which had the opposite effect on wet faeces excretion. Oat groats are good substitutes for rice or other cereals in dry dog foods.

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