



Oral presentation

Evaluation of nutrient composition and *in vitro* true dry matter digestibility in aktaş and güneş variety of buckwheat grains

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Abstract

Buckwheat is a plant species in the *Fagopyrum* genus belonging to *Polygonaceae* family. *Fagopyrum esculentum* Moench and *Fagopyrum tataricum* are the most widely grown two buckwheat species in the world. Buckwheat is a new plant for Turkey, and there are two registered varieties known as Aktaş and Güneş. This study was carried out to evaluate Aktaş and Güneş buckwheat grain varieties in terms of nutrient composition and *in vitro* true dry matter digestibility. In this study, Aktaş and Güneş varieties of Buckwheat (*Fagopyrum esculentum* Moench) were used as plant material. Seeds were sown in the experimental area in a randomized block design with 3 replications, in 2.4×4 m (9.6 m²) plots at a depth of 4-5 cm. Each parcel was reaped separately 13 weeks after sprouting and the plants were harvested as grains. The samples were ground in a mill with a sieve diameter of 1 mm (without dehulling process) and used in the analysis. There were no statistically significant difference ($P>0.05$) between varieties in terms of the basic chemical compositions (dry matter [DM], Ash, organic matter [OM], crude protein [CP], ether extract [EE], crude fiber [CF], nitrogen-free extract [NFE], non-fiber carbohydrate [NFC]), fiber fractions (neutral detergent fiber [NDF], acid detergent fiber [ADF], acid detergent lignin [ADL], hemicellulose [HC], cellulose [C]), predicted total digestible nutrients (TDN%) and energy (Mcal/kg DM) contents (digestible energy [DE], metabolizable energy [ME], net energy lactation [NEL]), and the percentage of *in vitro* true dry matter digestibility (IVTDMD). When compared to other studies in terms of both basic nutritional composition and digestibility, the similarities and slight differences show that buckwheat grains have an important potential in animal nutrition as well as human nutrition. Comprehensive studies on this subject will be very useful for taking place of buckwheat in the livestock industry as an alternative feed material.

Keywords: Buckwheat grains, Aktaş buckwheat variety

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