

Abstract

The purpose of this study, the impact of physical processing (Milling) and thermal processing on *in vitro* ruminal fermentation characteristics. In this experiment, the effects treatment heating including soybean powder, roasted in the time period (2, 4, 8 and 10 minutes), toasted and heated in an oven (65, 95 and 125 ° C. for 4, 8 hours) on fermentation parameters, test gas production and the disappearance of dry matter were evaluated under laboratory conditions. In this study, all treatments were prepared by grinding Foss 2 mm in size. In this study the temperature and processing time, the Protein crude, crude lipids, increase the amount of ash fell. Meal roast for 2 minutes the gas production potential of soybean meal roasted for 10 minutes to 4/ 95 to 4/ 46% decrease. Thermal processing roasting gas production was reduced (P <0/01). The use of treatment Milling with treatment Oven drying ground soybean meal showed higher gas production. Percent soybean meal disappearance of dry matter in different treatments toasted, roasted and Oven drying been a significant decline compared to the control group (P <0/01). The amount of ammonia nitrogen control was compared with all treatments (P <0/01).

The results showed that all soybean processing methods such as roasting, roasting and Oven drying Thermal Parameters particles at different temperatures can cause changes to be fermented.

Keywords: soybean meal, *In vitro*, Milling, toasting, roasting, heating



University of Zabol
Graduate School
School of Agriculture
Department of Animal Science
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**Effect of physical processing of soybean meal on *in vitro* ruminal
fermentation characteristics**

Supervisor

Dr .M. R. Dehghani

Advisor

Dr. M. Yousef Elahi

BY

S .Arabnezhad

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