



University of Zabol

Management of graduate education

School of Agriculture

Department of Animal Science

Dissertation for obtaining a master's degree in the field of Animal Nutrition

**Comparison of nutritive value and palatability of three varieties of
edible mushroom compost**

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Abstract

Today, the use of organic modifiers such as mushroom compost waste in order to achieve sustainable production and healthy products has received more attention. In the production of edible mushrooms, a large amount of mushroom compost waste is created, which has a significant effect on increasing the nutritional value and palatability of sheep food, and improves the process of food digestion and the elimination of harmful substances. This research was conducted with the aim of evaluating the nutritional value and palatability of three types of oyster, button and ganoderma edible mushroom compost waste in a completely randomized design with 3 treatments and 3 replications. The results showed that the highest amount of chemical compounds including dry matter, organic matter, protein and fat with the values of 99.07, 98.24, 18.06 and 7.44 respectively related to the treatment of oyster mushroom compost waste and the most ash with the value of 0.39/ related to the treatment of button mushroom compost waste and the highest amount of NDF and ADF was related to the treatment of Ganoderma mushroom compost waste. Also, the highest amount of parameters of gas production including insoluble part, gas production rate, metabolizable energy, digestibility of organic matter and digestible organic matter in dry matter with values of 06.94, 0.272, 7.42, 06 respectively. 49/46 and 89/46 were related to the treatment of oyster mushroom compost waste. The chemical composition and suitable nutritional value of oyster mushroom compost waste, as well as its cheap price, showed that this waste can be used in the diet of ruminants as an alternative to a part of the fodder used by livestock.

Keywords: metabolizable energy, gas production, digestibility, mushroom variety