Abstract:

This study was conducted to determine the chemical composition and nutritional value of four promising dual-purpose grain-forage sorghum lines at different harvest stages called KGFGS10, KDFGS16, MDFGS2 and MDFGS and four harvest times (including 1-grain milk stage A, 2-soft paste stage B, 3- Hard paste C and physiological ripening (D) were performed. After collecting plant samples and grinding them according to standard methods, their chemical compositions including dry matter (DM), organic matter (OM), protein (CP), fat (Carbohydrate (WSC), ash (ASH), cell wall (NDF) and hemicellulose-free cell wall (ADF) were determined using standard methods.In the gas production test KGFGS10> KDFGS16> MDFGS> MDFGS2 and harvest time A > B> D> C showed the highest to the lowest volume of cumulative gas.The results related to the amount of protein produced per hectare showed that the highest amount of protein related to MDFGS variety with 2.9373753 kg per hectare and also, harvest time D the highest amount It has a protein content of 2.656532 kg / ha.According to the results related to metabolizable energy in dry matter, the highest amount of energy Bell had MDFGS metabolism with 287641.6 megajoules per hectare and harvest time D with 325257.4 megajoules per hectare. Due to the fact that the grain is accompanied by the plant in the physiological stage of ripening, but the grain is practically separated in the conditions of farmers, so this stage can not be a suitable stage and it is better to harvest the cultivar in the second stage, soft paste (B).

Keywords: gas production, sorghum, line, nutritional value, minerals, digestibility.

University of Zabol
Graduate school
Faculty of Agriculture
Department of Animal Science

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Supervisors:
Dr. M. Yosef Elahi
Dr.A.R.Aghashahi

Advisors:
Dr. M. Dehghani
Dr. M. Soflaei

By:
Omolbanin Dahmardeh GHaemabad

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