Chemical composition and *in vitro* gas production of three local Poaceaes in El djelfa's region, North-central Algeria.

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The Algerian steppe covers more than 30 million ha of land and constitutes a transition area between the green belt in the North and the Sahara desert. The diversity and relative abundance of fodder plants has allowed the steppe to provide animal food for 15% of the Algerian population, and constitutes the main source of red meat for the population as a whole. However, the major constraint on the performance of grazing ruminants in these regions is the scarcity of high quality pastures. The situation is even worse during the dry season when the quality and quantity of the natural pasture declines, resulting in lower intakes and reduced ruminant productivity. In this study the nutritive value of some Algerian browse species was studied on the basis of their chemical composition, *in vitro* gas production and fermentation kinetics (gas production technique). The browse species were *Stipagrostis pungens*, *Lygeum spartum* L. and *Stipa tenacissima* L. Generally, there were significant variations ($p < 0.05$) between chemical components of all browse species studied herein except in CT content. The CP content value of the edible components ranged between 47.06-75.20 g/kg DM, the highest CP value was recorded for *Lygeum spartum* L. The NDF and ADF contents were relatively high ($p < 0.05$) in *Stipa tenacissima* L. and low in *Lygeum spartum* L. with value ranging from 696.96 to 775.20 g/kg DM and 500.16 to 562.06 g/kg DM respectively. The total gas production and OMD ranged from 56.49 to 91.15 (ml/g DM) and 38.15 to 59.03 % respectively. Generally, high values ($p < 0.05$) of gas production and OMD were recorded by *Lygeum spartum* L. followed by *Stipagrostis pungens*. As conclusion, browse species evaluated in the present study show high content of fiber and low crude protein concentration. Nitrogen supplementation and effects of alkaline treatments are then expected to be highly beneficial for *in vitro* organic matter digestibility, as observed in more conventional low quality forages when dealing with sustainability of low-input livestock farming systems.

Key-words: browse species, gas production, *in vitro* digestibility, nutritive value.

Evaluation of genetic variability in Algerian clover (*Trifolium* L.) based on morphological and isozyme markers.

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As part of evaluation and enhancement of genetic resources, genetic variation within and among fifteen *Trifolium* species represented by 157 accessions collected in northern Algeria was assessed using morphological and isozyme markers. Most of morphometric characters contributed to the discrimination of the species. No significant relationship between environment of the site of collection and morphological features were appreciated. The two enzymatic systems analyzed; Esterase (EST) and Glutamate oxaloacetate transaminase (GOT) were considered to be polymorphic. Phenotype diversity of isozyme markers ranged from 0.07 to 0.61 with an average of 0.31 based on polymorphic information content. The pair-wise Jaccard similarity coefficient ranged between 0.10 and 0.60 indicating that the collection represent genetically diverse species. A considerable number of species-specific zymograms were detected since can used for species identification. The clustering pattern of enzymatic markers was not in consonance with the groupings based on quantitative traits. This rich variability present among Algerian clover species can provide good gene resources for breeding program.

Key-words: clover, isozymes, morphology, PAGE, polymorphism.