

Nutritional Value and Forage Quality Indicators in Some Rangeland's Species at Different Vegetation Forms

Authors : Reza Dehghani Bidgoli

Abstract : Information on different rangeland plants' nutritive values at various phonological stages is important in rangelands management. This information helps rangeland managers to choose proper grazing times to achieve higher animal performance without detrimental effects on the rangeland vegetations. Effects of various plant parts' phonological stages and vegetation types on reserve carbohydrates and forage quality indicators were investigated during the 2009 and 2010. Plant samples were collected in a completely randomized block (CRB) design. The species included, grasses (*Secale montanum* and *Festuco ovina*), forbs (*Lotus corniculatus* and *Sanguisorba minor*), and shrubs (*Kochia prosterata* and *Salsola rigida*). Aerial plant parts' samples were oven-dried at 80oC for 24 hours, then analyzed for soluble carbohydrates, crude protein (CP), acid detergent fiber (ADF), dry matter digestible (DMD), and metabolizable energy (ME). Results showed that plants at the seedling stage had more reserve carbohydrates and from the three vegetation types (grass, forbs, and shrub), forbs contained more soluble carbohydrates compared to the other two (grasses and shrubs). Differences in soluble carbohydrate contents of different species at various phonological stages in 2 years were statistically significant. The forage quality indicators (CP, ADF, DMD, and ME) in different species, in different vegetation types, in the 2 years were statistically significant, except for the CP.

Keywords : grazing, soluble carbohydrate, protein, fiber, metabolizeable energy

Conference Title : ICAFAS 2015 : International Conference on Agricultural, Food and Animal Sciences

Conference Location : Zurich, Switzerland

Conference Dates : July 29-30, 2015