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S. A. Hosseini

*Golestan Agricultural and Natural Resources Research Center, Iran*

M. Mesdaghi

*Golestan University, Iran*

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## Forage quality of five important grasses at Sar-Aliabad summer rangelands in Golestan province , Iran

S . A . Hosseini<sup>1</sup> and M .Mesdaghi<sup>2</sup>

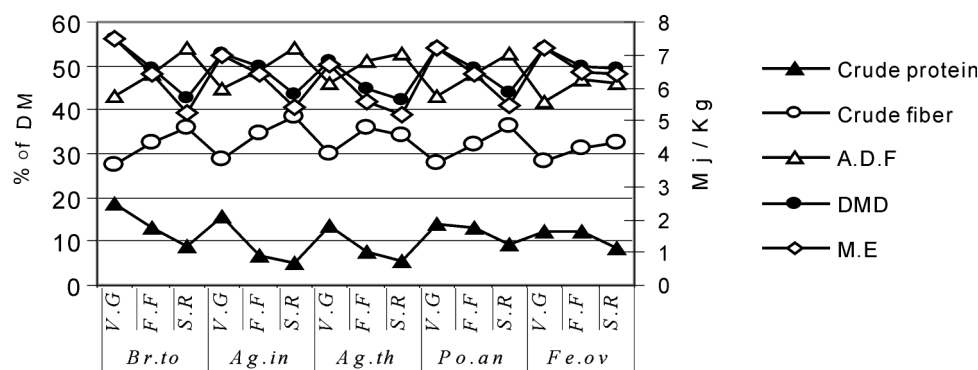
<sup>1</sup> Researcher , Golestan agricultural and natural resources research center , P .O .Box 49157-93354 , Gorgan , Iran , E-mail : seidalihosseini@yahoo .com <sup>2</sup> Professor of Rangeland department of Golestan University , Gorgan , Iran

**Key words :** forage quality , crude protein , acid detergent fiber , dry matter digestibility , metabolizable energy

**Introduction** An initial knowledge of forage quality is essential for determining rangeland grazing capacity , and for sustainable range management . For an investigation of variation in nutritive quality of forage in different phenological stages , five species were chosen for the study .

**Materials and Methods** The study area is located in Saraliabad-e-Gorgan summer rangelands , Golestan .Iran . The elevation is 2300 m . The texture of soil was salty loam to little salty clay loam ; the average annual rainfall was 348 .5 mm . In this study five native species included : *Agropyron trichophorum* (Link) Richter , *Agropyron intermedium* (Host) P . Beauv . , *Bromus tomentellus* Boiss , *Festuca ovina* Hack and *Poa angustifolia* L . were chosen , then Samples of each species were cut at three stages of growth : vegetative growth (VG) ; full flower (FF) and seed ripening (SR) . The samples were analyzed at the Animal Husbandry Research center of Golestan .CP , CF (AoAc , 2002) ADF (Van Soest et al . , 1991) were measured . DMD (Oddy et al , 1983) and ME (SCA , 1990) was calculated by formula as follows :  $DMD\% = 83.56 - 0.824 ADF\% + 2.626 N\%$  ,  $ME (Mj/Kg) = 0.17 DMD\%$  .

**Results** Results showed that forage quality was higher at vegetative stage , while lower at maturity . Among species the highest forage quality was related to *Br . tomentellus* while the lowest related to *Ag . trichophorum* (Figure1) .



**Figure 1** Diagram of changes CP , CF , ADF , DMD and ME five grasses at three phenological stages .

**Conclusions** The results of this study were showed that the amounts of CP , DMD and ME were decreased with increasing growing season but CF and ADF were increased . These results were similar to Arzani et al .2005 . Amirkhani . et al .1997 , Baghestani et al 2004 and Shirmardi et al 2003 .

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