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## Comparison of chemical composition and nutritive value of rangeland plants in northern Iran

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**Introduction** One of the main objectives of range management is livestock production , which depends on the nutritive value of available forage (Stoddart et al . , 1975) . Ganskopp and Bohnert (2003) proposed that livestock and wildlife managers must be aware of the nutritional dynamics of forages to sustain satisfactory growth and reproduction of their animals , and assure fair value of the pasture . Feed quality has been defined as the amount of nutrient material that an animal can obtain from a feed in the shortest possible time (Walton , 1983) .

**Materials and methods** Range species from rangeland in northern Iran were evaluated in this experiment including : *Carex pendulus* , *Cyperus rotundus* , *Lathyrus pratensis* , *Lathyrus aphaca* , *Brachypodium sylvaticum* and *Alopecurus myosuroides* . Samples were collected randomly from rangeland from northern Iran (between the cities of Sari and Amol) . Plants were harvested in mid-May at the early growth stage , transported to the lab , dried , and prepared for chemical analysis . Samples were analyzed for forage quality , CP (crude protein) , CF (crude fiber) , ME (metabolism energy) , DDM (dry digestible matter) , ADF (acid detergent fiber) , DE (digestible energy) , and TDN (total digestible nutrients) .

### Results

**Table 1** Mean crude protein (CP) , acid detergent fiber (ADF) , metabolizable energy (ME) contents and dry matter digestibility (DMD) of forage species in rangeland of northern of Iran .

	<i>Cyperus rotundus</i>	<i>Carex pendula</i>	<i>Lathyrus pratensis</i>	<i>Lathyrus aphaca</i>	<i>Brachypodium sylvaticum</i>	<i>Alopecurus myosuroides</i>
CP ,%	10/36±0/14a	5.94±0/1b	18/21±1/16c	16/05±0/14d	7/80±0/05e	11/63±0/07f
CF ,%	21/85±0/3a	40/42±0/42d	32/42±0/32c	33/83±0/9c	24/15±0/3b	21/27±0/47a
ADF ,%	36/67±0/42c	40/55±0/35d	36/41±1/24c	34/93±0/77c	24/43±0/93a	27/93±0/57b
TDN ,%	54/17±1/49b	49/71±0/4a	54/47±1/4b	56/7±0/88b	68/25±1/07c	64/22±0/65d
DDM ,%	60.32±0/3b	57/30±0/27a	60/53±0/96c	61/67±0/60c	68/25±1/08d	67/13±0/44d
ME ,Mcal/Kg	1.66±0/01ab	1/46±0/01a	1/88±0/03ab	1/85±0/02ab	2/00±0/04a	1/93±0/05ab
DE ,Mcal/Kg	2/03±0/01b	1/79±0/01a	2/3±0/04b	2/27±0/03b	2/45±0/05d	2/36±0/06c

**Conclusions** *Carex pendulus* had the highest ADF , CF and lowest CP , DMD , ME , DE and TDN and , therefore , the lowest forage quality . *Lathyrus pratensis* had the highest CP and high DMD , ME , DE , TDN and low ADF , CF and , therefore , the highest forage quality .

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