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Comparison of grazing behaviour between goat and sheep in a steppe rangeland of Iran

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Key words : goat grazing behaviour ,sheep ,steppe rangelands ,utilization of range species

Introduction Nougi (1992) presented that the palatability of some plant species varies during stages of growth as a result of the presence of some chemical compounds .Valentin (1984) categorized goats as browsers ,and pointed out that browsers often harvest forbs and shrubs with a great amount of herbs .Although browse constitutes up to 90% of browser's diet in winter and fall ,forbs and other palatable plants make a great contribution to their diet in summer and spring .

Materials and methods The area selected for study was located 55 km southwest of Ghom .The elevation was 1540 m above sea level .Mean annual precipitation for the study rangelands was 200 mm .*Artemisia sieberi* ,*Buffunia macrocarpa* ,and *Stipa arabica* were the most extensive in the region .Four three-year-old sheep and four three-year-old goats were selected and their foraging behaviour was recorded by camera for one hour ,between 8 and 9 in the mornings every month .Then ,we measured the amount of time that sheep and goats ,separately ,spent harvesting each range species .

Results During the fall months ,annual plants in particular annual grass and forbs ,also *Artemisia sieberi* and *Stipa arabica* were mostly used by both sheep and goat .In winter ,annual grasses ,forbs and *Stipa arabica* were mostly grazed by the herbivores .Comparing goat preference for range plant species with sheep preferences addressed that some species such as *Pteropyron oliveri* ,*Ajuga chamesistus* , and *Astragalus gossipinus* were not used by sheep in any season ,while goats more or less used all existing species .Harvesting times in all seasons did not differ between goats and sheep .The highest amount of annual forbs grazed by goats and sheep was observed in spring and summer ,while the lowest amount was in winter and fall .Most amount of *Stipa arabica* species eaten by both herbivores was in winter and fall .The amount of *Artemisia sieberi* utilized within different seasons was significant only for goats .The *Noaea mucronata* species was mostly grazed by goats in spring and summer .The amount of *Euphorbia major* eaten by goat differed significantly within months ,while no difference was observed for sheep .There were no differences in the amount of *Echinops cephalote* grazed by both sheep and goat during the different months .There were significant differences in the amounts of *Astragalus gossipinus* consumed by goats during the different months .In contrast ,sheep did not eat it in any season .Amounts of *Convolvulus* species grazed by the herbivores did not differ significantly within the study months .Amounts of *Launea acanthodes* consumed by goats during the study months were significantly different ,while amount of this species were similar for sheep .There were significant differences among amounts of *Scariola orientalis* species consumed by goats in different months ,while the figures were similar for sheep .For some species such as *Stachys inflata* and *Cleom coliteoides* , the amount of plants which were consumed by goats and sheep differed significantly during the months .Amounts of *Ajuga chamesistus* eaten by goat during the study months also differed significantly .In contrast ,this species was not eaten by sheep in any month .There were no significant differences among amounts of *Pteropyron oliveri* species consumed by goat during the different months .In contrast ,sheep did not eat this plant during summer months .

Conclusions According to results ,sheep are relatively similar to goat with respect to foraging times as well as forage preferences .Obviously for hot seasons goats are more effective than sheep .It is concluded that a composition of goat and sheep make an appropriate herd for the rangelands grazed in the whole year .

References

- Nougi ,K .R . ,J .Powell ,F .C .Hinds ,and R .A .Olson .1992 .Range animal diet composition in south central Wyoming . *J . Range Manage* . 45 (6) : 542-545 .
Valentine J .F . ,R .P .Shumway ,and S .C .James .1984 .Cattle ranch planning manual Brigham young univ .Pub . ,Utah . 315 .P .