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An investigation on diet selection by sheep and goats in steppe regions of Yazd province ,Iran

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Key words diet selection ,intake ,bite count ,direct observation ,palatability ,chemical compositions

Introduction A basic knowledge of palatable plant selection by observing grazing animals is essential to formulate a diet programme for sheep and goats . The objectives of this research are :1) to determine diet composition of sheep and goat in three different grazing periods . 2) to find the best stage of forage quality by comparing the qualitative composition of important range species during three grazing periods . 3) to determine forage intake by comparing the two methods of bite count (Holechek *et al* . ,1982) . and direct time observation .

Material and methods The study area is located in the Nodoushan summer rangelands in Yazd province Iran . The area is a dry steppe ,elevation 1600 m ,average annual rainfall 170 mm . . The vegetation types are shrublands with *Artemisia aucheri* dominant at high elevations ,and *Artemisia herba alba* dominant at low elevations . One m² plots were used to determine the range species composition based on production and canopy cover . The chemical composition of the forage plants were determined by using "Ao Ac" (1990) method in 3 periods of grazing season . Intakes by sheep and goats were measured by time and bite count methods in 3 periods to determine relative palatability . The relationships among these factors were studied using regression models .

Results There were significant differences between sheep and goat and among the seven species of the main diets during the initiation of grazing , . However ,during the second and third periods of grazing there were no significant differences between two classes of livestock in diet selection . Also ,there were shifts in selection of diets . For example ,the species of *Trigonella elliptica* . and *Poa bulbosa* ,were selected during the early season of grazing , ,but this shifted to *Artemisia herba alba* . ,and *Eurotia ceratoides* at the end of grazing season (Figure 1) .

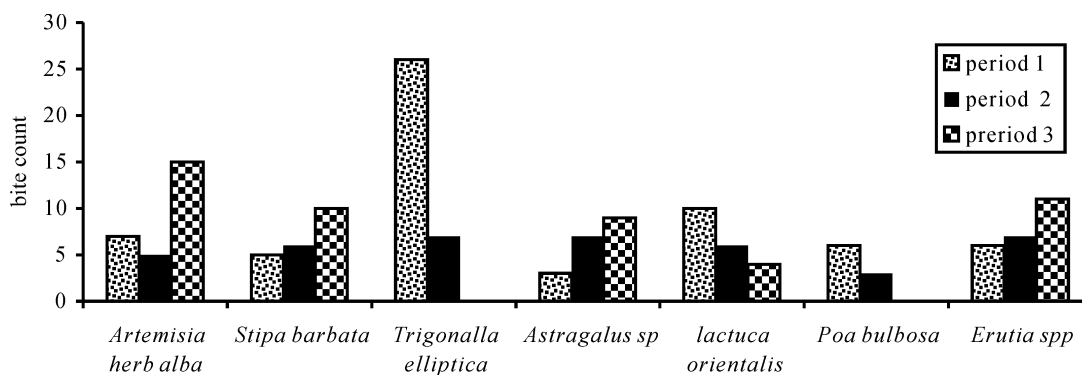


Figure 1 Version of diet selection for 3 periods of grazing season .

Conclusions The study conclude that although goats are often blamed for overgrazing of rangelands ,the common grazing of goat and sheep is acceptable for the arid shrublands of Yazd province ,Iran and possibly for other similar regions .

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