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## Response of Dominant Species Population Importance Value to Different Grazing Systems in *Stipa Breviflora* Steppe

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## Response of dominant species population importance value to different grazing systems in *Stipa breviflora* steppe

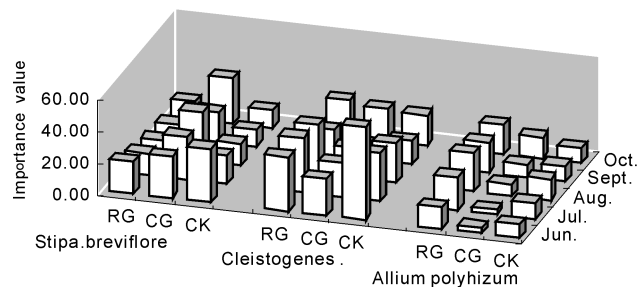
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**Key words:** desert steppe, population, importance value, rotational grazing, continuous grazing

**Introduction** The impact of grazing on the vegetation is an important field of grazing ecology. Most of that rational grazings can improve forage growth and livestock production. It can also improve grassland and prevent grassland degradation (Martin SC, 1988; Wei Zhijun et al, 2003). Studied on dominant population importance value of desert grassland communities under different grazing system may explore reasonable grazing system and provide a theoretical basis for the sustainable use of grassland resources.

**Materials and methods** The study site is located in *Stipa breviflora* desert steppe in Sunit Right Banner of Inner Mongolian (42° 16' 26" N, 112° 47' 17" E). Annual-mean temperature is 6.2°C and average precipitation is 209.12mm. Dominant vegetation is the community of *Stipa breviflora* and *Cleistogenes songorica* and *Allium polyrhizum*. The experimental treatments were composed of a continuous grazing plot of 340hm<sup>2</sup>, a rotational grazing plot of 320hm<sup>2</sup> divided into 8 smaller, equally sized plots and a grazing exclusion plot of 1hm<sup>2</sup>, which has not been grazed since 1999. Stocking rate on grazing plots was 1.25sheep/hm<sup>2</sup>. The height, density, coverage of plant community were measured.

**Results and discussion** Throughout the grazing season, the importance value of *Stipa breviflora* in continuous grazing was higher than that in rotational grazing (Figure 1). With continuation of grazing, the importance values of *Stipa breviflora* in rotational grazing plot and the banning grazing plot showed downward trends, in contrast to the upward trend in continuous grazing plot. The importance values of *Cleistogenes songorica* and *Allium polyrhizum* in rotational grazing plot were higher than those in continuous grazing plot.



**Figure 1** Importance value of dominant population under different grazing systems.

**Conclusions** *Stipa breviflora* of grazing tolerance poor palatability forage was enhanced in continuous grazing. Rotational grazing increase the role and status of *Cleistogenes songorica* and *Allium polyrhizum* of better palatability forage.

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