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Determination of animal unit equivalent (AUE) and daily requirement energy for Sanjabi sheep breed

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Abstract

Knowledge on animal requirement, available forage and its quality is fundamental for successful livestock and range management. Since sheep is dominant grazing animal of rangelands in Iran and there are over 27 sheep breeds and each breed has special body size, physiological condition and consequently different daily nutrition requirement, animal unit should be determined for dominant breed of sheep in every region to be calculated the forage requirement based on body weight, daily energy requirement and quality of available forage. In this study, two herds of Kermanshah's Sanjabi breed have been weighted including 50 animals in each herd (15 heads three years old ewe, 15 heads four years old ewe, 5 heads three years old ram, 5 heads four years old ram, 5 heads three months old lamb and 5 heads six months old lamb) in three stages. The body weight of Sanjabi breed (based on average body weight of three and four years old ewe) was 60.68 ± 0.56 kg. Animal unit equivalent (AUE) for ewe, ram and lamb were 1.29, 1.88 and 0.63 kg, respectively. The results of analysis of variance indicated that there are significant differences between weight of ewes and rams ($P < 0.01$). The metabolizable energy requirement determined based on maintenance condition (with 40% extra energy because of regions, topographic condition and watering point distances) using two method of MAFF (1984) formula and NRC (1985) tables. In the first method, the daily energy requirement of animal unit was obtained 10.97 MJ while second method it was 12.28 MJ. Generally, information about daily requirement is essential for animal nutrition management in rangeland and it should be considered in range management designs.

Keywords: Animal unit, Sanjabi breed, Daily requirement, Forage quality