Urea supplementation effects on the utilization of low-quality forage and lamb production in patagonian rangelands

Golluscio, Paruelo, Mercau & Deregibus

Abstract

The effect of feeding a urea-based supplement for the last 8 weeks of pregnancy was examined on ewes grazing the grass-shrub steppes of NW Patagonia, Argentina. The productivity of ewes and lambs and the utilization rate of the major, less preferred, grass species (*Stipa speciosa*, 27% cover) was analyzed. In a paddock-scale experiment, ewes grazed two areas of 450-500 ha from 15 August to 15 February at a stocking rate of 0·5 ewes ha^{-1}. From 15 August to 10 October, one group of ewes was given access to a urea-based supplement containing 300 g kg^{-1} urea, 320 g kg^{-1} salt, 30 g kg^{-1} molasses and 300 g kg^{-1} bone meal. Average supplement consumption was 3·5 g ewe^{-1} d^{-1}. The performance of 100 ewes in each of the two areas was evaluated. Supplemented ewes gained 4·2 kg more live weight than the control ewes between 15 August and 10 October (prepartum) (liveweight gain was 10·3 vs. 6·1 kg ewe^{-1}, $P<0·05$). The number of live lambs at 8 weeks of age, as a proportion of ewes mated, was 15% higher in the supplemented than in the control group (0·634 vs. 0·553, $P<0·05$). A similar increase in the live weight of lambs at 8 weeks of age in the supplemented group compared with the controls was also observed (12·1 vs. 10·6 kg, $P<0·05$). In the paddock with the supplemented ewes, there was a significant increase in the proportion of *Stipa speciosa* plants defoliated (0·62 vs. 0·38, $P<0·05$) and in the intensity of defoliation of these plants. It was concluded that urea-based supplements increased productivity of ewes and that this was likely to be associated with an increase in the intake, and possibly digestibility, of the less preferred species such as *Stipa speciosa*.