

Increasing grazing intensity reduces the re-growth of *Lebeckia ambigua* during summer and autumn.

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Abstract

Lebeckia ambigua, is a deep rooted, perennial legume from South Africa and is adapted to dry, infertile and acidic soils. Little is known about the production, nutritive value and optimum management of *Lebeckia* and hence its potential value to sheep production systems in areas of Western Australia. A field experiment was conducted to test the hypotheses that more intensive autumn grazing of spring sown *Lebeckia* (seven months old) will reduce its rate of re-growth but would increase the digestibility and protein content of the re-growth. One hectare (ha) of *Lebeckia* was established in September 2013 on a commercial farm, near Beverley in Western Australia. The un-grazed, moderate grazed and severe grazed treatments were characterised by different residual pasture heights. Replicate plots, (n=8) for each grazing treatment, were selected for uniformity and treatments were allocated randomly. The pasture measurements included; density, individual plant weight and height, survival, and nutritional value. Grazing intensity had a significant effect on the re-growth of *Lebeckia*. Severe and moderate grazing significantly reduced total pasture production compared to un-grazed plants (0.7 vs 0.8 vs 1.7 tonne of dry matter (DM) /ha; P<0.001). Initially the negative impacts of grazing were due to reduced residual leaf area and the grazing treatment itself, whereas after six weeks the treatment effect on weekly pasture growth rate disappeared. Grazing did however increase the protein content of *Lebeckia* and the metabolisable energy and crude protein were in excess of 11.4 MJ /Kg DM and 21 % DM for all treatments. The results indicate that grazing to a residual height below 9 cm is not recommended for newly established *Lebeckia* and additional research is required to determine the optimum management. However, a high nutritional value of *Lebeckia* suggests it could become a valuable plant for increasing livestock production during the summer autumn period.