

Abstract

The objective was to evaluate the feeding value of ensiled grape marc (GM) on performance, digestibility, nitrogen balance and wool growth of sheep. Forty-two young merino ewes (36.0 ± 3.18 kg) were used in a 2 x 3 factorial arrangement with 2 basal diets, lucerne (LC) or oaten chaff (OC), combined with one of three levels of GM, 0, 15 and 30% (dry matter basis). Sheep were individually fed *ad libitum* once a day and weighed fortnightly for 60 days. Wool mid-side samples and dye banding were measured monthly. In the last month, sheep were placed in metabolic crates for seven days and urine and faecal output were collected for four days. Sheep fed LC showed a greater dry matter (DM) intake, digestible energy intake, digestible DM intake and digestibility of DM. Sheep fed LC also showed greater nitrogen (N) intake, N absorbed, N retained, faecal N, and urine N. Fibre diameter and clean wool weight also were greater for LC. Absorbed and faecal N were greater for sheep fed 0 and 15% GM compared to 30% GM ($P = 0.04$). Wool growth rate (last 30 days) was greater for sheep fed GM15% in comparison to GM30%, however both did not differ from GM0% ($P < 0.05$). No interactions were found between basal diet and GM % for any variables. In conclusion, the inclusion of GM up to 15% (DM basis) can be used without negative impacts on nitrogen balance and wool growth.