

## The performance of weaned lambs grazing a high dry matter and nonstructural carbohydrate selection of *Lolium multiflorum*

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### Introduction

*Lolium multiflorum* cultivars are widely utilised in South Africa as autumn and late-winter/spring pastures, and their seasonal growth pattern during the year is well suited to the traditional lambing period (De Villiers, 1991). However, since there is increasing evidence of poor performance of weaned lambs on *L. multiflorum* (Rutter, 1970; De Villiers, 1991; Meissner, 1996), the actual herbage intake, liveweight gain, wool growth and carcass quality of weaned lambs on selection 121-A ryegrass was determined and compared with these indices on Midmar ryegrass.

### Materials and Methods

Lambs were weaned at the 12<sup>th</sup> week of lactation and remained on the two ryegrass pastures at a stocking rate of 20 weaned lambs/ha. The lambs on Midmar and 121-A had average weaning weights of 26.19 and 26.20 ± 1.45 kg, respectively. An eight-paddock rotational grazing system, with 3.5 days spent in each paddock, was used. This allowed a 24.5 day re-growth period. The lambs were weighed weekly in order to determine the liveweight gain of each animal. Dry matter (DM) intake and digestibility of the weaned lambs were measured using *n*-alkanes as indigestible markers. The lambs remained on the two pastures until a marketable mass was obtained and were individually classified and slaughtered at Cato Ridge abattoir at the end of the trial.

### Results and Discussion

The DM intake of weaned lambs was significantly higher (29 %;  $P < 0.01$  and 21 %;  $P < 0.05$ ) on Midmar than 121-A using the C<sub>31</sub>/C<sub>32</sub> and C<sub>32</sub>/C<sub>33</sub> alkane pairs respectively. No significant differences in digestibility were found between Midmar and 121-A ryegrass. In the first week after weaning, lambs grazing 121-A had a higher (73 %;  $P < 0.05$ ) ADG (g/day) than lambs grazing Midmar. The post-weaning ADG of lambs grazing Midmar and 121-A was 164 and 185 g/day respectively. The lambs on 121-A ryegrass were significantly ( $P < 0.05$ ) higher in mass than lambs on Midmar. After 77 days on the pasture, the lambs stocked at a rate of 20 lambs/ha on Midmar and 121-A and weaned at an average mass of 26.19 and 26.20 ± 1.45 kg, respectively reached a final mass of 38.8 ± 1.78 and 40.45 ± 1.79 kg, respectively. The lambs on 121-A gained 14.25 kg post-weaning while lambs on Midmar gained 12.61 kg, despite the fact that the lambs had similar weaning weights. No significant differences were found for wool growth and warm or cold carcass mass. The lambs on 121-A had a significantly higher ( $P < 0.01$  and  $P < 0.05$ ) hindfat and forefat than the lambs on Midmar. The Rand/carcass value for Midmar and 121-A was R259.00 and R296.00, respectively but there was no statistically significant difference.

### Conclusion

Despite the lower DM intake on 121-A, the lambs outperformed those grazing Midmar, in terms of liveweight gains and carcass mass (although not statistically different). Although selection 121-A had a much higher (20%) DM content than Midmar, the DM content of Midmar in this experiment was probably high enough (180.6 g/kg) not to have resulted in lowered intake by the weaned lambs. Observed differences in animal performance between the two ryegrasses were therefore possibly largely due to the 98% higher TNC content of selection 121-A.

### References

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Rutter, W., 1970. Anim. Prod. 12, 543.