

Fall grazing of annual forages with fall born lambs may improve animal growth and total protein concentrations when compared to stockpiled pastures

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Introduction

- Grass-fed lamb continues to demand a premium in the retail market (1,2).
- Grass-fed lambs require a greater degree of management because of the economic, health, and production losses associated with parasitic infection (3,4).
- An alternative management strategy for producers is the grazing of lambs on annual forages during the fall and winter months as parasitic infection may be less prevalent under lower ambient temperatures (5).



Image 1. Fall born lambs grazing Oats

Objective / Hypothesis

- Our objective was to evaluate the effect of annual forages on the growth and parasite resilience of growing lambs.
- We hypothesized that lambs grazing annual forages would increase their body weight at a greater rate when compared with lambs grazing stockpiled pasture.

Methods

- Fifty-four, 60-day-old fall born lambs, were randomly assigned to one of three forage treatments:
 - Turnips (T)
 - Oats (O)
 - Stockpiled Tall Fescue (F)
- Lambs were grazed for 56 days, during the months of November and December, with body weight (BW) and total plasma protein sampled every 14 days.
- PROC MIXED in SAS was used to determine differences between treatments ($P \leq 0.05$).

Results (Table 1)

- On days 42 and 56, T lambs had greater BW than O and F lambs ($P < 0.003$).
- On days 28 and 42, T lambs had a greater ADG than O and F lambs ($P < 0.0001$).
- On day 42, F lambs had a greater ADG than O lambs ($P < 0.003$).
- No differences were found in total plasma protein concentration.

Table 1. Effects of fall grazing on fall lamb growth

Day	Body Weight (kg)			Average Daily Gain (g/d)		
	T	O	F	T	O	F
0	24.0	24.3	24.0	-	-	-
14	24.3	24.6	23.6	20	20	-25
28	27.3	25.8	25.3	218 ^a	85 ^b	121 ^b
42	29.1 ^a	24.7 ^b	25.5 ^b	125 ^a	-79 ^b	13 ^c
56	30.0 ^a	25.0 ^b	25.9 ^b	67	22	27

a, b, c means within a row with different superscripts differ ($P < 0.05$)



Image 2. Forage stands of oats and turnips

Conclusions

- Lambs grazing turnips demonstrated the greatest body weight gain when compared with lambs grazing oats or stockpiled fescue.
- There was no overall difference in body weight between lambs grazing oats or stockpiled fescue
- Parasite resilience, as measured by plasma protein concentration, was similar between grazing treatments.

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