

## PRODUCTION RESPONSES IN SOMATOSTATIN-IMMUNE CROSSBRED LAMBS

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Responses of lambs to somatostatin (SRIF) immunity have been contradictory. Thus in somatostatin-immune lambs Spencer et al. (1983) found production responses and no change in growth hormone (GH) whereas Galbraith et al. (1985) found GH increased but obtained no production responses. This study was undertaken with lambs, the progeny of Dorset Horn rams and Border Leicester x Merino ewes, fed a pelleted diet consisting of rolled barley (55%), lucerne hay (30%) and fish meal (15%). Lambs were actively immunised against SRIF using an immunogenic fusion protein (Genentech, Inc.) and Freund's complete adjuvant. Control lambs were similarly immunised with Freund's adjuvant but without the SRIF immunogen. Animals were immunised at 2, 7, 12 and 24 weeks of age. Two thirds of the SRIF immunised lambs had achieved high SRIF antibody blood titre by 7 weeks and all by the start of the study and averaged 1:9630 during weeks 8, 13 and 25 (range 1:50 to 1:50,000). The various measurements (as tabulated) were made during weeks 12-27 or at termination.

Liveweight, feed intake, hormonal and production responses in immune and control lambs (8 lambs each group)

Responses	Immune	Control	SEM
Weight gain (g/d)	192	191	11.5
Dry matter intake (g/kg BW <sup>0.75</sup> )	98	97	2.05
Feed conversion (g feed/g gain)	7.2	7.0	0.30
Feed dry matter digestibility (%)	72.7	73.0	0.43
Meal size (g/kg BW)	2.8	2.2	0.53
Clean fleece growth (g/d)	9.9	10.9	0.59
†Plasma GH (ng/ml)	1.04	0.83	0.21
Cold carcase weights (kg)	25.5	25.0	0.84
Non carcase weights (kg)	16.6	16.9	0.45
Carcase dry matter (%)	53.2	54.3	0.92
Carcase fat (%)	35.7	37.5	1.26
Carcase crude protein (%)	24.7	23.9	1.16
Non carcase dry matter (%)	45.5	45.6	0.92
Non carcase fat (%)	26.1	27.7	1.19

†Geometric mean of 25 serial blood samples taken on two occasions at 15 minute intervals during weeks 15 and 23.

Somatostatin immunity had no effect on the variables measured which is largely consistent with work of Galbraith et al. (1985).

GALBRAITH, H., WIGZELL, S., SCAIFE, J.R. and HENDERSON, G.D. (1985). Anim. Prod. 40(3): 523.

SPENCER, G.S.G., GARSEN, G.J. and BERGSTROM, P.L. (1983). Livestock Prod. Sci. 10: 469.

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