

Management of pasture quality for sheep on New Zealand hill country

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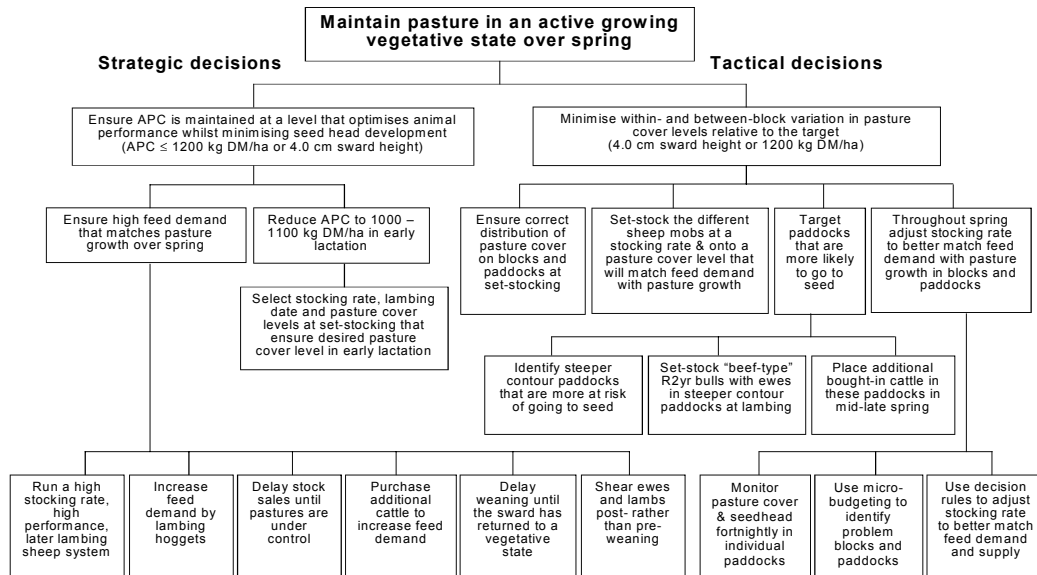
Keywords: decision-making, farmer knowledge, feed budgeting, planning, tactical management

Introduction The control of pasture quality over spring is central to the achievement of high levels of sheep performance on hill country. Despite this, with the exception of the work of Lambert *et al.* (2000), little is known about how farmers actually manage pasture quality. The purpose of this research was to describe how a high performing hill country farmer manages pasture quality on their sheep area over spring and from this develop a framework that will assist other farmers improve their pasture management.

Materials and methods The case study farmer (647 ha, 7,770 s.u.) was selected because of his high levels of performance for the district and expertise in tactical feed management. Data collection was primarily through monthly semi-structured interviews supported by field observations. Interview data were transcribed verbatim and analysed using qualitative techniques to develop a model of the farmer's decision-making processes.

Results and discussion The control of sheep pasture quality requires farmers to make important strategic and tactical decisions (Figure 1). Strategic decisions aim to match feed supply with pasture growth over the spring and maintains grazing pressure so that average pasture cover (APC) levels do not exceed 1200 kg DM/ha. Key decisions in this area include lambing date, stocking rate, sheep performance levels, pasture cover at set-stocking, stock purchase and sale dates, shearing policy and weaning date. Equally important are the tactical decisions to minimise within- and between-block variation in pasture cover levels (\approx 1200 kg DM/ha) during mid- to late-spring. Key tactical decision areas include: (1) ensuring the correct distribution of pasture cover at set-stocking, (2) setting stocking rate and pasture cover levels at set-stocking for the different sheep mobs that best match feed demand to pasture growth, (3) integrating cattle to help control the steeper contour sheep paddocks and (4) using fortnightly monitoring and micro-budgeting to match feed demand with feed supply.

Figure 1 Methods used by the case farmer to manage pasture quality on his sheep area



Conclusions This study highlights that the control of pasture quality on hill country is complex, requiring farmers to make a range of important strategic and tactical decisions. The model presented in this paper provides a framework that other farmers can use to improve their management of pasture quality on hill country.

References

Lambert, M.G., M.S. Paine, G.W. Sheath, R.W. Webby, A.J. Litherland T.J. Fraser, & D.R. Stevens (2000). How do sheep and beef farmers manage pasture quality. In: *Proceedings of the New Zealand Grassland Association*, 62, 117 - 121.