

Appendix E

Is the variability of seasonal pasture growth patterns changing?

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Introduction

In southern Australia, the timing of the autumn break and the length of the spring growing season are considered as the two times of year when pasture growth is most variable. The timing of the autumn break is most strongly influenced by precipitation and can commence early (March) or late (May/June), while the spring may be short or long, depending on soil moisture availability and the onset of high temperatures. Declining autumn, and more recently spring, rainfall (Gallant et al. 2007) and rising temperatures (CSIRO and BoM, 2007) have been documented over the last 60 years. This change in climatic conditions may have impacted on seasonal patterns of pasture growth. This paper investigated the historical frequency and trends in early/late autumn breaks and short/long spring growing seasons in five pastoral regions of south east Australia.

Discussion and conclusions

This analysis has showed that within and between the sites examined there is considerable variation in the decadal frequency of early and late autumn breaks and short and long springs. There also appears to be a trend towards an increasing frequency of shorter springs at all sites and increasing frequency of late autumn breaks at Hamilton. These trends can be linked to declining autumn and spring rainfall (Gallant et al. 2007). Although no clear trends have been observed in annual pasture growth over time (Cullen et al. 2011), these changes in seasonal distribution of growth will require changes to grazing management strategies to maintain efficient utilisation of annual pasture growth.

See Bell MJ, Cullen BR, Christie KM, Rawnsley RP, Eckard RJ (2011) Is the variability of seasonal pasture growth patterns changing? Proceedings of the 2011 Annual Grassland Society of Southern Australia Inc conference, Hamilton, Victoria, 2-3 June 2011.