Pasture determinants of sheep grazing location in the Central Tablelands

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Abstract

The ability to obtain and analyse the spatio-temporal characteristics of both animals and pasture has been critical to our comprehension of the variability and drivers of pasture utilisation (Trotter *et al.*, 2010). The initiation, development and success of Global Navigation Satellite Systems (GNSS) has been universal across almost every aspects of agriculture including grazing systems. This study seeks to assess the drivers of sheep location by analysing the spatio-temporal characteristics of sheep behaviour in partnership with pasture species and biomass location and stocking rate, while quantifying these relationships using a model. Grazing trials were conducted between March and June of 2017 at the Orange Agricultural Institute (OAI). Pasture quality assessments as well as the technology and tools for evaluating spatial data were utilised. It was predicted that sheep location will not be predictable by species composition but by pasture biomass above all. The most significant driver of sheep location in this study was found to be that of sown perennial herbage mass. Native perennial pasture was also a reliable indicator for sheep locality. Analysis suggests no significant effect of stocking rate on animal location. The results of this study affect our understanding of paddock utilization. Analysis and interpretation proposes management strategies to combat poor pasture utilisation should be centered on pasture composition and not stocking rate.