

## **Precision pastures: opportunities and challenges for spatial information to improve productivity and animal welfare in extensive livestock systems.**

**David W. Lamb<sup>1,2</sup>, Donalee Taylor<sup>1</sup>, Mark Trotter<sup>1,2</sup>, Graham Donald<sup>1</sup> and Derek Schneider<sup>1,2</sup>**

<sup>1</sup>Precision Agriculture Research Group, University of New England, Armidale.

<sup>2</sup>CRC Spatial Information Carlton, Victoria.

*contact: dlamb@une.edu.au*

### **Abstract**

The use of spatial information in extensive livestock systems is not new. However the use of GPS tracking technology on livestock, coupled with existing or new remote and proximal plant/soil sensing technologies is redefining opportunities and challenges for using spatial information to improve productivity and animal welfare in livestock systems. Interest amongst researchers, technology developers and end-users is growing, as evidenced by recent forums given over to spatially-enabled livestock management (SELM), including the 1<sup>st</sup> ANZ SELM Symposium (Australia) and the SELM Session at the 10<sup>th</sup> International Conference on PA (USA), both held in July this year.

Based on the outcomes of both of these forums, this presentation will canvas some of these opportunities and challenges as they relate to understanding the complex interactions between animals and their grazing environment, including pastures or crops, and discuss avenues for using such data as part of livestock management.