

## **AN EVALUATION OF PERCEPTIONS OF PARTICIPANTS IN A PILOT STUDY OF REMOTELY SENSED PASTURE GROWTH RATE TECHNOLOGIES**

*J.N. SNEDDON<sup>A</sup> and S. GHERARDI<sup>B</sup>*

<sup>A</sup> Graduate School of Management, University of Western Australia, Perth, WA 6006

<sup>B</sup> Dept Agriculture, Western Australia, Bentley, WA 6983

A research consortium of the Department of Agriculture Western Australia, the Commonwealth Scientific and Research Organisation, and Department of Land Information, Western Australia (WA) has developed Pasture Growth Rate (PGR) remotely sensed pasture management technologies. The PGR technologies were piloted with about 50 wool producers from WA in 2003. The aim of the PGR pilot study was to assess the potential value of these technologies to the Australian wool growing communities.

The PGR pilot study was evaluated in 2 stages. Firstly, a pre-pilot survey was conducted in March 2003 to assess participants' perceptions and expectations of the PGR technologies prior to use. Secondly, a post-pilot survey was conducted in November 2003 to assess post adoption perceptions of the PGR technologies. Participants' perceptions of the ease of use, compatibility, usefulness and benefits of the PGR technologies were measured using 5-item scales developed by Davis (1986) and Moore and Benbasat (1991). Individual items were scored on a 5-point Likert scale, from (1) strongly agree to (5) strongly disagree.

Of the 43 PGR pilot study participants who completed both surveys, 77% adopted the PGR technologies during the pilot study. Independent-Samples t tests were employed to compare the means of individual perception item scores between PGR adopter and non-adopter groups across ease of use, compatibility and usefulness constructs. No significant differences ( $P > 0.05$ ) in the mean scores of PGR adopters and non-adopters were found for any of the individual ease of use and compatibility items. Both groups of participants shared agreement with statements about the ease of using the PGR website and email systems (adopter means  $< 2.62$ , non-adopter means  $< 3.00$ ), and the compatibility of these technologies with their farming systems (adopter means  $< 2.07$ , non-adopter means  $< 2.70$ ). The relatively high levels of agreement with individual ease of use and compatibility items suggest that perceptions of ease of use and compatibility of the PGR technologies did not constrain the adoption of PGR during the 2003 pilot study.

The PGR adopter and non-adopter groups shared agreement on individual perceived usefulness statements relating to the use of PGR to improve management performance, accomplish management tasks, manage productivity, manage the wool and meat enterprise, enhance management effectiveness and provide a clear advantage over existing pasture management information. A significant difference ( $P < 0.05$ ) in the mean scores of adopter and non-adopter groups was found for 1 individual usefulness item. The PGR adopters agreed more strongly with the statement 'using PGR information will give me greater control over my wool enterprise', than non-adopters (adopter mean = 2.13, non-adopter mean = 2.80). The difference in the mean scores of this item between the 2 groups may be attributed to the potential difficulties that participants faced in quantifying 'greater control'.

In conclusion, the high levels of shared agreement between adopter and non-adopter groups across perceptions of ease of use, compatibility and usefulness of the PGR technologies imply that these factors did not constrain adoption behaviour during the PGR pilot study in 2003.

DAVIS, F.D. (1986). 'A technology acceptance model for empirically testing new end user information systems: theory and results.' (Sloan School of Management: Boston, MIT.)

MOORE, G.C. and BENBASAT, I. (1991). *Inf. Sys. Res.* 2, 192-222.

Email: [jsneddon@student.ecel.uwa.edu.au](mailto:jsneddon@student.ecel.uwa.edu.au)