Delivery of decision-support tools over the Internet to increase the wealth of grazing enterprises

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We are conducting an exciting project based on our capacity to deliver decision-support tools (DSTs) as teaching applications over the Internet to a variety of client groups around the country. This project has been supported by Australian Wool Innovation because of its potential to increase the profitability of wool producers. In addition, most extensive ruminant grazing enterprises stand to benefit from the technology and the project.

Currently, we are delivering the CSIRO Plant Industry's DSTs GrassGro™ and GrazFeed™ via dedicated, load-balanced servers at UNE called 'eDSServe', our 'e-Decision-support Server'. We are negotiating for further CSIRO products such as MaNageWheat™ and MaNageRice™ (and APSIM™) to be made available for teaching purposes via our delivery system.

The DSTs are accessed by undergraduate students both on- and off-campus via an Internet address (http://edsserve.une.edu.au). From this entry point, registered students can select units in which they are enrolled and make use of the DST appropriate for the teaching exercise in that unit. Additionally, we are able to 'constrain' the student experience to focus on specific areas of interest in a given unit. A printed teaching portfolio is provided to support skill development. These facilities enable students to build knowledge and skill of complex DSTs in a stepwise, user-friendly manner.

Following training of 10 academics from seven tertiary institutions around Australia in the use of GrassGro and the eDSServe delivery system, we are providing this service to students and staff from those institutions who request it. Several have begun to make use of the system, as it reduces the need for individual installations on campus computers and allows students to access software after hours from personal computers. UNE is providing significant additional support to other universities through a decision-support specialist who assists other academics in developing teaching materials and provides information-technology support dedicated to the smooth delivery of the software.

Use of DSTs in teaching exposes students to cutting-edge technology derived from years of scientific endeavour, allows exploration of inter-relationships between systems and identification of profit drivers in grazing enterprises, and gives students practice at managing the various risks involved in those enterprises. Undergraduates are enjoying quality teaching outcomes and developing job-relevant skills. This will position them to better advise grazing managers on ways to improve profitability in their future careers, regardless of the field they find themselves in.

The delivery system also lends itself to benefiting the wool industry in other ways. We are engaged in a pilot program with the Cicerone Project at Armidale, New South Wales, to find more effective ways of presenting outputs from DSTs that can be readily integrated into woolgrowers' personal decision-making processes. It is envisaged that, within 2 years, graziers will be able to register on this web site to gain insights into how critical factors, such as plant available moisture, pasture growth rates, and supplementary feeding, influence profitable and sustainable grazing systems.

We will also work with secondary schools to engage students in the exciting science and possibilities available in the grazing industries through demonstration of the inter-relationships in complex ecosystems. This is particularly important, given that many secondary students do not proceed to university and therefore need some exposure to the potential of DSTs before they leave school.

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