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Improving data management and decision support systems in agriculture

Edited by Dr Leisa Armstrong, Edith Cowan University, Australia



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Part 1 reviews general issues underpinning effective decision support systems (DSS) such as data access, standards, tagging and security. Part 2 contains case studies of the practical application of DSS in areas such as crop planting and nutrition, livestock feed and pasture management as well as supply chains.

About the editor

Dr Leisa Armstrong is Senior Lecturer in Computer Science and leader of the eAgriculture Research Group at Edith Cowan University, Australia. Dr Armstrong is President of the Australian Society of ICT in Agriculture as well as past President of the Asian Federation of Information Technologies in Agriculture (AFITA).

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2. Improving data standards and integration for more effective decision-making in agriculture: *Sjaak Wolfert, Wageningen University and Research, The Netherlands*
3. Improving data identification and tagging for more effective decision making in agriculture: *Pascal Neveu and Romain David, MISTEA, INRAE, Montpellier SupAgro, University of Montpellier, France; and Clement Jonquet, LIRMM, CNRS and University of Montpellier, France*
4. Advances in data security for more effective decision-making in agriculture: *Jason West, University of New England, Australia*
5. Advances in artificial intelligence (AI) for more effective decision making in agriculture: *L. J. Armstrong, Edith Cowan University, Australia; N. Gandhi, University of Mumbai, India; P. Taechatanasat, Edith Cowan University, Australia; and D. A. Diepeveen, Department of Primary Industries and Regional Development, Australia*
6. Improving data management and decision-making in precision agriculture: *Soumyashree Kar, Rohit Nandan, Rahul Raj, Saurabh Suradhaniwar and J. Adinarayana, Indian Institute of Technology Bombay (IIT Bombay), India*

Part 2 Case studies

7. Decision support systems (DSS) for better fertiliser management: *Dhahi Al-Shammari, Patrick Filippi, James P. Moloney, Niranjan S. Wimalathunge, Brett M. Whelan and Thomas F. A. Bishop, The University of Sydney, Australia*
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10. Developing decision support systems for improving data management in agricultural supply chains: *Gerhard Schiefer, University of Bonn, Germany*
11. Developing decision support systems for optimizing livestock diets in farms: *Marina Segura, Concepción Maroto, Baldomero Segura and Concepción Ginestar, Universitat Politècnica de València, Spain*
12. Developing decision-support systems for pasture and rangeland management: *Callum Eastwood and Brian Dela Rue, DairyNZ, New Zealand*