

MULTI-FUNCTIONAL BENEFITS OF SILVOPASTORAL AGROFORESTRY IN CENTRAL QUEENSLAND, AUSTRALIA

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The natural forests and open woodlands of Australia have historically represented a significant land base for the agricultural development of the nation, reflecting global market drivers for food and fibre commodities. However, extensive tree clearing and land use practices over time have led to land degradation including dryland salinity, biodiversity loss, invasive weeds, soil erosion and water quality reduction. These issues have resulted in a greater interest in the role of revegetation practices such as agroforestry for improving productivity and environmental outcomes in agricultural landscapes. Furthermore, reductions in public wood availability brought about by increases in the forest conservation reserve system, together with emerging markets for ecosystem services such as carbon sequestration, have provided additional incentives for timber and carbon farming (Stephens and Stunzner, 2008).

In the open woodland savannahs of subtropical Australia such as in Central Queensland, silvopastoralism may provide a range of benefits well suited to existing agricultural land use which is dominated by beef cattle grazing. While early research focused on the competitive effects of scattered trees on pasture production (Walker, 1986), more recent work has focused on alley belts and tree design aspects influencing the multi-functionality of these systems to enhance livestock productivity, and soil and water functions. Partnerships have emerged between community forestry and natural resource management organisations, research bodies, companies and farmers involved in a range of networking, training, research and demonstration projects.

Stephens, M.L. & Stunzner, A. (2008). Small scale forestry management in Central Queensland, Australia: an emerging model of public-private partnerships. *In*: Buttoud, G. (Ed.) *Small-scale Rural Forest Use and Management: Global Policies versus Local Knowledge*, IUFRO International Symposium, Gerardmer, France, 23-27 June 2008, Pre-Conference Proceedings, AgroParisTech-ENGREF, pp. 215-222.

Walker J., Robertson J.A., Penridge L.K. and Sharpe, P.J.H. (1986). Herbage response to tree thinning in a eucalyptus-creba woodland. *Australian Journal of Ecology*, 11: 135-140.

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