



Dr Brian Lowry with a siris tree full of seed pods. Siris trees also produce valuable timber.

Sustainability

Could it grow on trees?

A NATIVE, leguminous tree with nutritious leaves, pods and flowers, high-quality timber and lush pasture growth beneath its canopy is emerging as a potential ally for north-east Australia's pastoral industry.

According to CSIRO scientist Dr Brian Lowry, the siris tree (*Albizia lebbekii*) could provide the basis of a dual-purpose agroforestry system in semi-arid regions. 'At the moment the two options are seen as quite different,' he says. 'Some shrubby plants are grown for browsing by cattle and other trees are planted for timber.'

A survey of more than 400 landholders in northern Australia last year revealed that many were interested in establishing trees for fodder and environmental restoration, but rarely considered timber an option. Lowry, who is based at CSIRO Tropical Agriculture at Brisbane, is evaluating a range of trees suited to these uses. His work is supported by The Rural Industries Research and Development Corporation in the Joint Venture Agroforestry Program.

During the northern Australian dry season, cattle lose condition because the mature grass is so low in protein that rumen microbes cannot digest the fibre. Plants known as 'browse shrubs' can help bridge this nutritional gap by providing green leaf that keeps the microbes active, making the dry-season grasses more digestible. Lowry believes that fallen leaves, flowers and pods from trees such as siris may act in the same way. The trees also promote pasture growth by fixing nitrogen via their roots, and enhancing the soil's water-holding capacity.

Lowry's research will focus on the feed value of siris trees, tree growth rates, establishment, pruning and harvesting techniques and the ability of the trees to modify pasture growth. Other trees with similar potential will also be studied, including forest siris (*Albizia procera*), a Queensland rainforest species that grows well in drier areas and has high fodder and timber value. Its leaves are said to be used as a vegetable. Another potential tree legume is red siris, or Mackay cedar, also a rainforest timber tree capable of growing in drier areas.

Lowry sees dual-purpose trees as a way to boost pastoral production, buffering the feed supply against drought, and providing a future harvest of quality timber. 'They would also enhance wildlife values,' he says. 'Wallabies seek out the higher quality grass below the siris canopy, while cockatoos and other birds utilise the pods.'

The native range of siris is restricted in Northern Australia, but Lowry believes the tree's ease of establishment suggests it was probably once widespread. 'Perhaps it retreated with the increased fire frequency that followed early human settlement,' he says. 'It may well have been part of the vegetation that supported the diprotodons and giant kangaroos.'

'My vision is to see the siris tree return to prominence in the landscape as the basis of a more sustainable pastoral system.'

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Our boomerangs did come back!

THANK YOU to all the *Ecos* readers who completed and returned the 'boomerang' cards enclosed in the winter issue. The cards sought your reasons for subscribing to *Ecos*, an assessment of its value, and ideas for improving its style and content.

The boomerangs came back from readers in a wide range of professions: academics, teachers, engineers, scientists, librarians, conservationists, town planners and farmers, from secondary and tertiary students, from families, and from people with a personal interest in environmental research. Most relayed a positive message, with readers finding the magazine relevant, diverse, interesting, informative, and, above all, a reliable reference.

Opinion was divided about the magazine's layout and level of 'technicality'. Some readers felt articles at times were too long and technical; others asked for more 'well-explained' science and mathematics. And while many readers enjoyed the presentation style, photographs and diagrams, others felt there were too many photographs, and too much colour.

Other suggestions included the need to promote *Ecos* more widely, and to produce a simplified version for politicians! A question-and-answer segment, more short news items, more articles on topics relevant to tertiary-entry studies, and more issues per year, were also recommended.

As you will see in this issue, we have introduced a brief summary box, including keywords, at the end of longer articles. Several readers suggested this would enhance the magazine. All other constructive comments have been noted, as has an extensive list of subject ideas for future articles. These range from sustainable energy and astronomy to pest species management, global warming and rural innovations. We will attempt to respond to these ideas in future *Ecos* editions.