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Award recognises forester's work in eucalypt development in China

Clonal plantations now total 3.7 million ha

THE Chinese government has awarded an Outstanding Contribution Award to Queensland forester Dick Pegg for his work on the successful Dongmen eucalypt forest project. The award was presented at the National Eucalyptus Forum at Guangxi in southern China last month, hosted by the Chinese Society of Forestry and Guangxi Forestry Department. The award recognised outstanding achievements in the field of eucalypt research, contributions to the China-Australia Technical Cooperation Eucalypt Afforestation Project at Dongmen forest farm and the assistance given in the eucalypt development of Guangxi province. The event was attended by eight former Queensland government foresters, including six who worked on the Dongmen project from 1982 to 1989. Wei Ju, Chinese project manager (1982-89) and Dongmen forest farm manager (1979-87) was also presented with an Outstanding Contribution Award.

The Dongmen forest farm in the Guangxi province has been operating for more than 40 years and has been a centre of eucalypt tree improvement in China for more than 25 years. A large percentage of the eucalypt clones currently being used operationally in China were developed at Dongmen. Much of the eucalypt genetic material established at the farm since the 1980s has been retained so Dongmen now has the most comprehensive eucalypt genetic material in China. The production of first generation hybrids continues and plans are in hand for the creation of advanced generation breeding populations of pure species and hybrids.

The farm was founded in 1965 and was the site of the Australia-China technical cooperation project from 1981 to 1989. In the 1970s and early 1980s, the main eucalypt species planted were *Eucalyptus citriodora* (now classified as *Corymbia citriodora* subsp. *citriodora*), *E. exserta* and some *E. rudis*. Today, the eucalypt plantation program is based entirely on hybrid clones.

The Dongmen project developed following an approach from the Chinese government to the Australian International Assistance Bureau (AIDAB now known as AusAID) in April 1981 which organised a feasibility study of a proposal on eucalypt afforestation. The project was funded on the Australian side by AIDAB with the Queensland Department of Forestry as the managing agency.

There have been massive change in eucalypt plantation forestry and associated utilisation in China since the start of the Dongmen project



Pictured among Gympie messmate (*E. cloeziana*) from the first project trial at Dongmen planted in 1983 are, from left, Mo Qiping, chief Chinese technician on the project 1982-89; Zhang Shoude, Chinese forester on project 1982-89 and Dongmen forest farm manager 1987-90; Wei Ju, Chinese project manager 1982-89 and Dongmen forest farm manager 1979-87; Bai Jiayu, ex director of Research Institute of Tropical Forestry, Guangzhou; Dick Pegg; Rod Stevens, forester on project 1982-84 and 1986-87; He Sanzhong, Chinese forester on project 1982-89 (M Sc from University of Melbourne during project); Keith Gould, Australian team leader, 1985-88; and Zhang Yuanhua, currently deputy manager of Dongmen forest farm.

Dick Pegg said there had been massive change in eucalypt plantation forestry and associated utilisation in China since the start of the Dongmen project. In 1981, the area of eucalypt plantations in China was about 400,000 ha. The most common species were *Eucalyptus exserta*, *E. citriodora* and *E. globulus*, established as seedlings. Today, the area of eucalypt plantations is about 3.7 million ha, most of which is clonal. Most clones are selections from hybrids between *E. urophylla* and *E. grandis*. Mr Pegg estimates that more than 2.6 million ha has been established from clones developed at Dongmen.

“Over the past 30 years, plantation yields per hectare have more than doubled,” Mr Pegg said. “Many new industries are using products from these plantations and a recent estimate has valued the industry at more than \$A30 billion a year – indeed a massive achievement.”

At this stage, there are no plans to advance the breeding populations of other species in family trials at Dongmen. “The reasons for this are, firstly, that the most productive hybrids for the Dongmen area are between *E. urophylla* and *E. grandis* and, secondly, there is limited staff for the large amount of higher priority work needed in the tree improvement program,” Mr Pegg said.

“Between now and the availability of second generation selections, there is an opportunity for making hybrid families using the selections currently available and introducing some material from second generation family trials as it becomes available. “Maximising of the number of hybrids between *E. urophylla* and *E. grandis* should increase the probability of finding combinations more productive than hybrids currently used. “But there is a degree of uncertainty in predicting the performance of hybrids as large numbers of hybrid families under test are required to get optimum results.”

Mr Pegg said with the large range of clonal material available at Dongmen, there was a great opportunity for studies of wood properties (including pulping yield and quality) among clones. With the importance placed on attracting the pulp and paper industry to Guangxi by the provincial government, this type of study had great importance. “Some studies into these properties have been conducted, but there is potential for the further selection of operational planting material and to guide the direction of further hybrid production,” Mr Pegg said.



Dick Pegg presents Huang Guangyin, the current manager of Dongmen forest farm, with a carving made from rosewood (*Dysoxylon fraseranum*) after the National Eucalyptus Forum at Guangxi in southern China.