



RURAL INDUSTRIES RESEARCH  
& DEVELOPMENT CORPORATION

**Second International  
Symposium on  
Biotechnology of Tropical  
and Subtropical Species,  
Taiwan, November 2001**

**A travel report for the Rural Industries  
Research and Development Corporation**

by Ms Lillian Sando

February 2002

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*Travel report – Second International Symposium on Biotechnology of Tropical and Subtropical  
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# A Travel Report presented to the RIRDC

## Person travelling:

Ms Lillian Sando, School of Biomolecular and Biomedical Science, Griffith University, Nathan, QLD 4111

## Reasons for travel:

Oral presentation of a paper entitled “Assessment of genetic diversity in Australian-grown mangosteen (*G. mangostana* L.) and its wild relatives” at The Second International Symposium on Biotechnology of Tropical and Subtropical Species, Academia Sinica, Taipei, Taiwan, 5-8 November 2001.

Presentation of seminar and results of research to the Queensland mangosteen industry and the Queensland Department of Primary Industries at South Johnstone research station on 1 November 2001.

### Summary:

The travel started on November 1<sup>st</sup>, as I travelled from Brisbane to Cairns. A meeting with the mangosteen industry was held at the Department of Primary Industries, South Johnstone, from 19.30 to 21.00 the same evening. During this meeting I gave a 1 hour presentation on the research that I have done on genetic diversity in mangosteen in north Queensland. Sixteen persons were attending the meeting, including Yan Diczbalis (DPI South Johnstone). The travel continued on November 3<sup>rd</sup>, as I travelled from Cairns to Taipei via Hong Kong. The Second International Symposium on Biotechnology of Tropical and Subtropical Species was held at Academia Sinica in Taipei, Taiwan, from November 5<sup>th</sup> to November 8<sup>th</sup>. My oral presentation “Assessment of genetic diversity in Australian-grown mangosteen (*G. mangostana* L.) and its wild relatives” was given on November 8<sup>th</sup>. I returned to Brisbane on November 10<sup>th</sup>.

### Itinerary outline:

<u>Date</u>	<u>Time</u>	<u>Destination</u>	<u>Flight</u>
1 <sup>st</sup> November 2001:	14.15	Brisbane – Cairns	QF 784
3 <sup>rd</sup> November 2001:	15.20	Cairns – Hong Kong	CX 102
3 <sup>rd</sup> November 2001:	23.55	Hong Kong – Taipei	CX 462
9 <sup>th</sup> November 2001:	19.10	Taipei – Hong Kong	CX 506
9 <sup>th</sup> November 2001:	23.35	Hong Kong – Brisbane	CX 103

### Travel report:

The primary purpose of the travel was to present my research paper “Assessment of genetic diversity Australian-grown in mangosteen (*G. mangostana* L.) and its wild relatives” at The Second International Symposium on Biotechnology of Tropical and Subtropical Species, Academia Sinica, Taipei, Taiwan. The symposium is an important forum to exchange and discuss scientific achievements, experiences and opportunities relating to the symposium topic, and conference papers

accepted for oral presentations will be published in *Acta Horticulturae*. This year the symposium hosted nearly 400 registrants. In total 50 papers were presented; 24 by speakers from Taiwan and 26 by speakers from Australia, Belgium, India, Indonesia, Japan, Malaysia, Mexico, USA and Vietnam. Approximately 50 posters were also displayed.

The major achievement of the travel was the presentation of our unique genetic study of an Australian mangosteen population to an international forum. The study caught the interest of several scientists present at the symposium. Hopefully it also inspired scientists in other countries to undertake similar studies, so that a broader understanding and mapping of the genetic diversity in mangosteen worldwide may be achieved, thus aiding mangosteen germplasm conservation and initiation of mangosteen breeding programs.

The travel/conference was of great significance to me as I was able to present a paper at a conference for the first time in my career, this even being an international conference. During the travel I also made some useful contacts and obtained information that will benefit my further research on mangosteen. Moreover, from a Vietnamese scientist presenting a paper at the conference I obtained knowledge about recent advances in tissue culture of mangosteen, which might prove useful in the case of further research to assist genetic improvement of the species, e.g. by embryo rescue from interspecific hybridisations or genetic manipulations.

The mangosteen industry in north Queensland benefited from my travel in that I was able to stop in Cairns on the way to Taiwan and attend a meeting with the industry at the DPI, South Johnstone, where I gave a presentation of the results from my study. I also handed out a brochure containing a summary of my research and left 100 copies of the brochure at the DPI, South Johnstone to be sent out to the rest of the mangosteen growers in north Queensland who did not attend the meeting. The presentation of my research at the conference may have created interest among overseas scientists for collaboration or exchange of knowledge and/or plant material with the Australian mangosteen industry in the future.

From my meeting with the mangosteen industry in north Queensland I learned that the industry is struggling with lack of resources to promote distribution of mangosteen both within Australia and overseas. It was also obvious that the industry suffers from being a new and small industry, compared to large industries with long traditions such as e.g. the banana or citrus industry, in that funding towards research

on breeding or other improvements of mangosteen cultivation is difficult to obtain. It seems that in order to further develop this industry and for initiation of a potential crop improvement program, the industry must receive appropriate funding. My recommendations to RIRDC are therefore to increase support to the mangosteen industry so that they can achieve the above mentioned aims. As to recommendations to the mangosteen industry, I suggest making a discussion on their attitude to further genetic research on mangosteen and the directions of further genetic research. Our research group at Griffith University, in collaboration with University of Queensland, intends to initiate a study aiming to determine the environmental effects on gene expression in mangosteen during the coming year, which will hopefully yield some practical information for the growers. Research to aid genetic improvement of the species, e.g. by embryo rescue from interspecific hybridisations or genetic manipulations could possibly be facilitated in our laboratories or others, however such research would have to be carried out in agreement and collaboration with the industry.

RIRDC was acknowledged for the support of my travel in the conference paper as well as in the oral presentations both at the DPI South Johnstone and at Academia Sinica, Taipei, Taiwan.

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Lillian Sando

Brisbane 5<sup>th</sup> Dec 2001

(Note: A copy of the conference paper was enclosed with the hard copy of the report sent to RIRDC, as well as a copy of the brochure printed for members of the mangosteen industry. If you would like to obtain copies please contact Ms Sando)