

World Forestry Congress

Plantation forestry - Argentina

Paul Bradbury, Director of SPS Biosecurity

In October, 2009, I took the opportunity to visit a number of commercial plantations and nurseries in the Corrientes and Misiones regions of Argentina. With around 400,000 hectares of trees, these areas contain the bulk of Argentina's plantation forest estate.

The main pine species are *Pinus taeda*, *P. elliottii*, *P. caribaea* and *P. caribaea* x *P. elliottii*. Growth rates are phenomenal with mean diameters of over 31cm at age 13 and 18-22 year rotations being the norm. High pruned *Eucalyptus grandis* and *E. dunnii* also account for a significant area, these too have eye-watering growth rates allowing for 18-year rotations, supplying local ply-wood factories or shipped further afield as poles.



Ten year old *P. radiata* under agro forestry - La Pera Company

All of the main commercial species are undergoing intensive genetic improvement programmes, and breeding work is also beginning on secondary species including *Araucaria* spp and *Grevillia* spp. Much of the tree improvement programme is still focused on tree growth, form and establishment techniques, (about where New Zealand was with *P. radiata* 20 years ago). There are also significant incentives for forestry around taxation, establishment and research, not to mention inexpensive labour.

Multiple land use is widely practiced in Argentinean forestry, particularly where indigenous people live within and around the plantations. Agroforestry using cattle is a common sight and a less familiar sight (to New Zealanders) is the inter-planting of maize with 1-2 year old trees and the growing of yerba mate, a tree that is used in making a popular green tea sipped through a metal straw.

But like New Zealand grown *P. radiata*, the industry does have some challenges around wood density. Carlos Baumgart, General Manager of Lipsa, one of Argentina's largest forest and forest products companies, made the



Impressive ten year old *E. grandis* - Las Marias Company
(Inset) Tree affected by stem cankers

interesting comment that Lipsa has to look for products that suit the lower wood density of fast growing pine.

However, I was there to look at forest health issues, of which there were few. The locations of the plantation forests visited were generally remote which is a definite 'plus' when it comes to managing forest health.

In pine forests the wood wasp *Sirex noctilio* has become a concern in some areas, however, and it would appear the insect's main bio-control agent, a sterilising nematode, has not been as effective as here in New Zealand. For a number of years SPS Biosecurity has assisted both Chile and Argentina with their forest biological control programmes. We have supplied the larvae of several species of *Sirex* insect parasites to Chilean scientists.

Some other forest health issues noted included nutrient deficiencies on second rotation sites. We were able to assist with the identification of phosphorous deficiency in *P. caribaea* and *P. taeda*, which exhibit similar symptoms to phosphorous deficient *radiata* here.

The eucalypts plantations were not only notable for their growth rates but also the near absence of forest health issues. Growing some 11,000 kilometres away from Australia and the natural 'phytophagic load' (disease and bugs) that feed on them, certainly has advantages! A few eucalyptus health issues are however starting to emerge in Argentina and other South American countries. Stem cankers caused by a *Coniothyrium* sp. are a concern as is the bud damaging psyllid *Ctenarytaina* sp. just to name two.