

Sandalwood—a lucrative solution to salinity problem

TRIAL plantings of sandalwood (*Santalum spicatum*) to promote revegetation in the Wheatbelt, have reached their first harvest, yielding 130 trees.

CALM established the trial plantation in 1987 to demonstrate to local farmers that it is possible to plant sandalwood and see a financial return in one's lifetime.

The trial harvest took place at Northampton, on a property owned by Roy Routledge who, together with CALM's then sandalwood business unit manager Peter Jones and forester Ben Sawyer, carried out the task.

One of the biggest barriers in persuading farmers to plant sandalwood on a large scale as a crop is the misconception that it takes a long time to grow.

In the semi-arid pastoral regions, sandalwood requires 50 to 100 years to reach commercial size, but given the right conditions in the medium rainfall areas of the Wheatbelt, sandalwood can reach the same size within 20 years.

Sandalwood is a root hemiparasite, meaning it can produce its own photosynthetic products but is dependent on host trees for some of its nutrients and water.

It needs to grow next to suitable host trees. Fine feeder roots attach to host roots through a cup-shaped organ called a haustorium. The haus-

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torium can be up to two centimetres in length, and a single tree can produce hundreds of haustoria.

At the Northampton site, CALM planted jam (*Acacia acuminata*) seedlings in 1987, then seeded sandalwood next to each jam sapling in 1988 and 1989.

The sandalwood seed germinated quite readily and most germinants survived and prospered. However, the sandalwood to host ratio (1:1) was too high, which caused most of the jams to die between age five and 10 years. An individual sandalwood tree requires at least two to three host trees to ensure good host survival.

Due to the low number of remaining host trees, it was decided that most of the sandalwood trees should be harvested to determine the amount of commercial wood at age 12 years.

The exciting aspect of the Northampton trial was that the sandalwood had produced heartwood and oil at an early age and was already a marketable product.

The 0.8-hectare plot produced 520 kg of commercial timber, worth approximately \$1200. Given the correct host ratio, the returns from future sandalwood plantations are expected to be far greater.



Peter Jones (near ute) and Ben Sawyer survey one of their loads of sandalwood. Photo by Jon Brand