

Multi Media Task 6. South Australia's pine tree experts

Student Outcomes • Understand that tree plantations were established to overcome a lack of supply of native timber

- Know that selective breeding programs produce faster growing trees with higher wood yields

Internet task: Using the internet, listen and watch the Forest Learning video 'Going Bush – South Australia's pine tree experts' at <http://www.forestlearning.edu.au/Resources/Going-Bush-SA-Plantations> (5.35 minutes duration). Answer the following questions

(a) Why were plantations established in the late 1800's in South Australia?

(b) Which softwood plantation species was selected for the Mediterranean climate of SA (common and scientific name)? _____

(c) List the traits of superior trees used in 'selective breeding' programs in nurseries

(d) Why are these traits important?

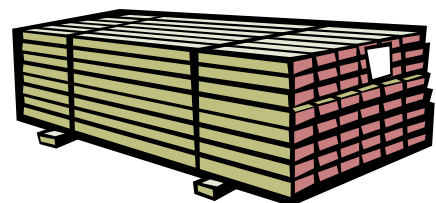
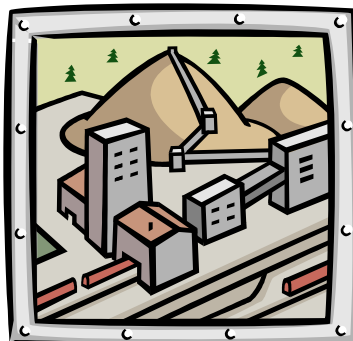
(e) Many high technology techniques and equipment are used to manage plantations. Define and investigate (using the internet) the use of GPS (Global Positioning Systems) and LiDAR in developing an individual stem profile for a tree

(f) What is the main renewable product to come from the certified SA plantations?

(g) What are some of the ancillary (other) products that come from the SA plantation forests?

ANSWERS – South Australia’s pine tree experts

- (a) To address the lack of native timber and suitability of available species for milling wood into useable timber products
- (b) The Californian Pine (*Pinus radiata*) was pioneered from around the world as a suitable species that would grow and produce well
- (c) Selective breeding is a program where superior trees are identified in the field for traits such as straighter and stronger stems, fewer limbs and defect wood, faster growth and higher yielding; and then reproduced in nurseries for planting out in plantation stands
- (d) Once planted out, these trees produce better quality wood faster to meet consumer demand
- (e) GPS (Global Positioning System) identifies the individual location and time of an object on earth, in this case a tree, taken from a space based satellite navigation system. LiDAR (Light detection and ranging) is an optical remote sensing technology used to take measurements of trees, such as stem diameter at 10 cm intervals. By using these technologies, managers can record specific data on individual trees that assists with harvesting and marketing
- (f) Sawlogs for structural timber
- (g) Veneer and pulp wood for the domestic and export markets



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