

~~NOTE.~~

RESEARCH - UTILISATION.

1. MOISTURE CONTENTS (D.U. 1.1.4.)

Samples taken from three different trees at Grimwade - one recently dead, one healthy nearby and one normal tree on a hillside, were forwarded for moisture analysis by Mr. Stewart. Mean figures from two samples were 37.3%, 37.9% and 132.6% respectively.

There is some significance between the two living trees and an inspection of a tree similar to the middle sample would be of interest. 37.9% appears extremely low for a living tree.

2. REHABILITATING STUDY. (D.U. 1.2.1.)

To obtain some information about the behaviour of seasoned timber after reconditioning, a project was devised using 4" x 1" x 1" samples from back and quarter sawn boards.

A steam box was provided by Banning Bros and established at Wilyonze. 220 samples were obtained from Banning Bros. and State Sawmills. Half of the samples have been steamed for periods of $\frac{1}{2}$, 1, 1 $\frac{1}{2}$ and 2 hours and dried back to their original moisture contents. With these samples the increase in size was negligible. The remaining samples have been steamed and are now being dried before re-measurement.

Mr. Beags will prepare a report on completion of the second series and I will discuss with you any further work which may be required.

3. CR-14-14 IV. RESEARCH. 1952 D.U. 1.3.2.

No action has been taken to continue this project but following your recent letter to Mr. Wright of Forest Projects, further samples, as requested, will be supplied by Mr. Beags.

2.

4. BOARD SHRINKAGE TEST. (D.U. 1.3.3).

Tuart boards only, have been cut, but this project will now proceed with the preparation of specimens for the Forest Products Shrinkage Tests.

Wandoo will be obtained from either Dryandra or Boddington Mills, Karri will be obtained from Pemberton measured straight from the saw and brought to Dwellingup by utility. Jarrah, Blackbutt and Marri will come from Dwellingup.

5. WANDOO SLEEPERS - LONGITUDINAL SHRINKAGE (D.U.1.3.4.)

Periodic measurements are being taken and shrinkage to date have been of the order $1/20\text{th}^{\circ}$ - $1/40\text{th}^{\circ}$ after 18 months, although one shows a figure of $1/5\text{th}^{\circ}$. Measurements will continue.

6. FENCE POST PRESERVATION. (D.U. 2.2.1.)

The Working Plan submitted to you has been amended slightly due to an accidental fire towards the end of the hot-cold dip. The crude method used is apparently dangerous and it was decided not to persevere with this method and to make the posts already treated satisfy the requirements. Also, it was found that the amount of creosote absorbed by cold soaking made it unnecessary for any hot-cold treatment especially in regard to the pine posts. Twelve month seasoned posts take up 12-15 lbs per c. ft. in cold soak compared with $2\frac{1}{2}$ - 5 lbs. for 2 months seasoned. Hot-cold soak gives an absorption of 14 - 19 lbs. in pine in 1 hour compared with 1.7 lbs. in sapling Jarrah. A report is being typed and will be forwarded within a few days.

A cold soak experiment investigating uptakes for various period of soak, with and without bark, was carried out on *P. radiata* posts (ex Mandaring) at Dryandra. These posts will be incorporated in a fence line at Dryandra following a layout set down by Mr. Beggs. Details will be forwarded to you with the report above.

7. COPPER SULPHATE IMPLANTATION.

Following Dr. Goor, an attempt was made to implant a round green pine and jarrah fence post and a short jarrah pole. (Boucherie Process circa. 1836).

Success was achieved with approximately 10-12 lbs pressure and some interesting observations made, viz:-

1. Copper Sulphate penetrated the length of the jarrah post in the sap within 8 minutes.
2. About 200 mls. of sap were displaced before any coloration could be detected.
3. After 15 minutes the concentration of the filtrate was 25% of the original Copper Sulphate solution.
4. Copper was detected after 45 minutes with a 10 ft. Jarrah pole.
5. With Jarrah an immediate flow of sap resulted on the application of pressure.
6. With the pine post it took 40 minutes before there was any sapflow from the open end and 520 minutes before any copper could be detected.
7. After about 11 hours the concentration of copper Sulphate in the filtrate was only 25% of the original solution. (Jarrah 15 minutes).
8. It is interesting that we obtained 8 litres of sap before the copper showed (Jarrah 0.2 litres).

This seems to be a reasonable method for sap extraction for purposes of analysis.

800 mls. of Jarrah sap from the pole have been retained for analysis, and an endeavour is being made to extract the resin from the pine sap for a similar determination.

A detailed report is being typed and will be forwarded to you within a few days.

MR. STEWART. MANJIMUP.

MR. MILES. COLLIE.

MR. WESTON. BUSSELTON.

MR. RYAN. BUSSELTON.

For your information.

R.F.O.

W. C. Allan
R.F.O.