

Western

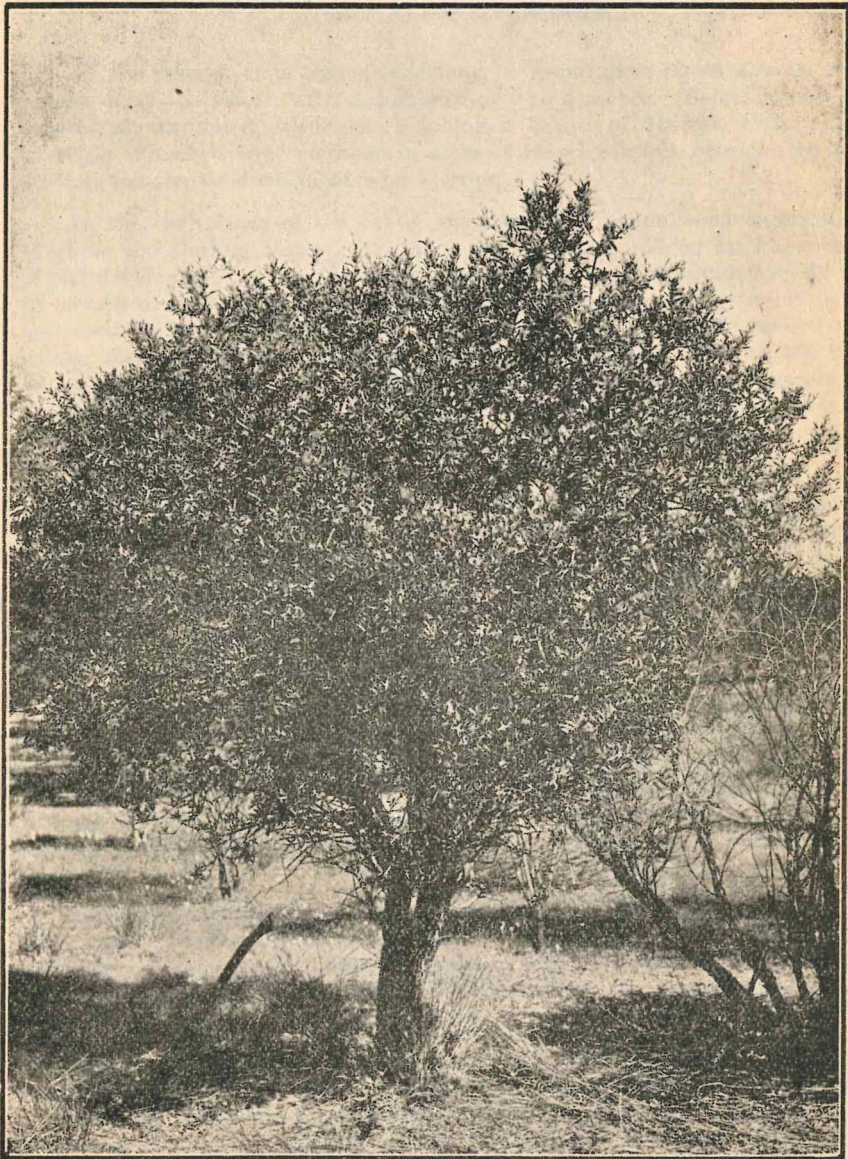


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FORESTS DEPARTMENT.

SANDALWOOD



Issued under the authority of the Minister controlling the Forests
Department, the Hon. John Scaddan, M.L.A.



SANDALWOOD

(SANTALUM CYGNORUM.)

At the present time this species may be found growing as a small tree to a height of 12 to 16 feet, with a diameter of 6 to 8 inches. Before it had been so extensively exploited, specimens reaching a height of 25 feet, with a diameter of 10 to 12 inches, were common in areas of better rainfall, now cleared and cultivated for the production of wheat crops.

In the early days of the State, the habitat of sandalwood extended as far West as the Darling Range. In those days the tree played an important part in the development of Western Australia, as it always commanded ready money, by reason of its value as an article of export to China, where it is highly prized and used for ceremonial purposes. The tree has now practically ceased to exist in the Wheat Belt, and present supplies are often hauled in 50 to 100 miles to the railway lines running to gold-mining centres of the interior, so that the benefit of obtaining a commodity commanding ready cash, which tided the wheat farmer over his difficulties in the early days, is now enjoyed by prospectors and others on the goldfields.

The wood is a light yellow in colour, and the heartwood is strongly aromatic. It is this latter property which has led to its extensive use by the Chinese in the manufacture of "Joss sticks" for burning in religious ceremonies. In addition, much sandalwood is used for fancy carved woodwork, the making of trinket boxes, and a host of other small articles. Up to the end of June, 1923, 358,259 tons of sandalwood, of a value of £3,408,142 had been exported from Western Australia. Export commenced in 1845.

Until the last few years the total output of sandalwood from Western Australia was exported to the Far East, but, after considerable experimental work, a local firm has succeeded in producing a sandalwood oil claimed to be superior to the oil distilled from the *Santalum album* of Mysore, and the rapidly increasing demand for the Western Australian product would appear to bear out this contention. The export value of sandalwood oil, which was £3,764 in 1920, rose to £20,075 in 1923.

Natural regeneration is scanty, even in areas which have not been put under cultivation. The tree is very susceptible to fire, and the foliage of the seedling is evidently palatable to all classes of grazing animals, particularly rabbits. The damage done by grazing is probably accentuated by the fact that an abundance of grass is common under the associated species with which it is found.

The frequent association of sandalwood with Raspberry Jam (*Acacia acuminata*) led to investigations which have shown that there is definite root parasitism by sandalwood on the jam. Although jam is by no means the only host of sandalwood, the most vigorous development of sandalwood is found in association with this species. Root parasitism means that the sandalwood roots,

instead of searching for water and mineral food material in solution on their own account, have developed the faculty of fastening on to the roots of other species and robbing them of this solution of "raw food material." Unlike a complete parasite, the root parasite takes the food material and manufactures it for its own use in its leaves, like any other plant.

Reforestation measures are being started in various centres. Owing, however, to the value of the land on which sandalwood is naturally found in areas of generous rainfall, some difficulty has been experienced in obtaining suitable country for the purpose. It is found that ready germination is secured by merely placing the hard-shelled nuts in the ground in areas where jam trees are already growing. Plantations in the early years will have to be protected from grazing, but, as they develop, it is intended that controlled grazing shall be permitted. At all stages of their development, sandalwood plantations will need to be rigorously protected from fire.

In the past the return obtained by the State of Western Australia and the persons employed in the industry has scarcely been in keeping with the value of the commodity. The royalty to the Government was 5s. per ton up to March, 1920, when it was increased to £2 per ton, while the price received by the puller for sandalwood forwarded on rails at port of shipment averaged about £9 per ton. Periodic booms in the trade occurred, which usually reacted to the detriment of the local industry.

Owing to such unsatisfactory conditions, further regulations were gazetted on 30th October, 1923, which have enabled the Government to restrict the export of sandalwood to a quantity which can be regularly absorbed by the overseas market at a greatly increased price. As a result of these regulations, the royalty value to the Government has been increased from £2 to £9 per ton, and, as the minimum export has been fixed at 5,000 and the maximum export at 6,000 tons per annum, the value of the increased royalty rate is apparent.

In order that the sandalwood getter may be protected, payment to the puller for sandalwood of fair average quality is fixed by regulation at £16 a ton f.o.r. Fremantle, free of royalty. All persons pulling, cleaning, and carting sandalwood must be registered at the Forests Department, Perth, in accordance with forest regulations, and may only operate on Crown lands after obtaining an order from one of the firms who hold a license to pull and remove a stipulated quantity of sandalwood per month from Crown lands.