

# TREE ESTABLISHMENT IN THE WHEATBELT

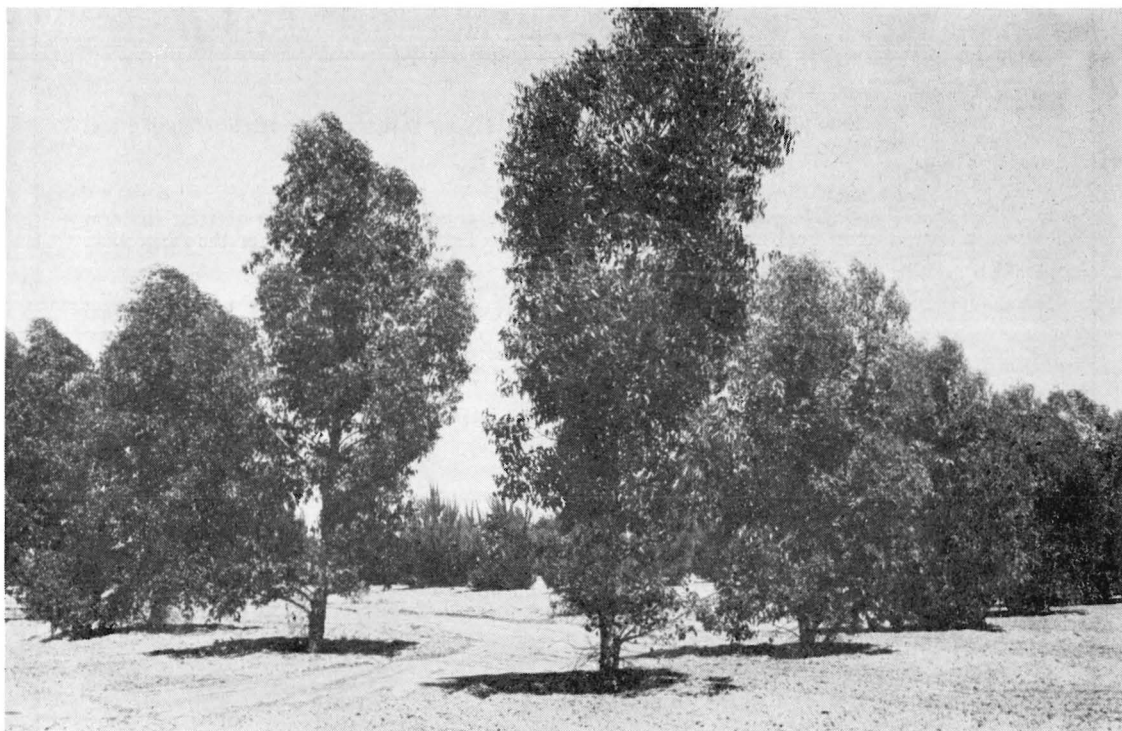
By F. BATINI, *Silviculturist, Forests Department*

Although most of the Forests Department's activity has centred around the State Forests in the higher rainfall areas, the Department has, for many years, encouraged the planting and conservation of trees throughout the farming areas.

This involvement began when the Hamel nursery was established in 1896 to supply trees for farmers and other residents of country areas. Another nursery was established at Kalgoorlie in 1946. In 1955, the Kalgoorlie nursery was transferred to Dryandra

and in 1967 the present nursery was built at Narrogin.

From 1917, trees from these nurseries were distributed at cost. By 1916 the annual distribution of seedlings had already exceeded 90,000 and, during 1969, over 274,000 young trees were sold.



*Part of the arboretum at the Wongan Hills Research Station. Trees were 5½ years old when the picture was taken and some species were more than 25 ft high. Species being tested include sugar gum (E. cladocalyx) in the centre and left foreground, brown mallet (E. astringens) in the right foreground and maritime pine (Pinus pinaster) in the background*

Other common poisons tested for were oxalates, nitrates and nitrites, none of which was detected.

Following a case of suspected poison sedge toxicity at Carnamah in 1952 it was reported that prussic acid was the probable toxic principle. However, there are no records of plant analyses or detailed post-mortem examinations.

In last year's investigation we were unable to detect prussic acid in poison sedge and the material fed to experimental animals was still toxic several days after collection. This and the presence of thoracic fluid are not consistent with prussic acid poisoning.

It seems that poison sedge is not always toxic, as subsequent feeding of more than

1,000 grams of plant material collected from the Scott River property at a later date failed to induce symptoms of poisoning in two sheep.

It may be significant that the material shown to be toxic was collected not long after rain had fallen. It has also been reported that most poison sedge mortalities normally occur in autumn following the burning of vegetation.

#### **Treatment**

Sheep affected by poison sedge should be denied further access to the plant and disturbed as little as possible, to avoid precipitating respiratory distress. There is no known antidote to the poison sedge toxin.

### **THE FARM MANAGEMENT FOUNDATION OF WESTERN AUSTRALIA (INC.)**

#### **COURSE OUTLINES—1971**

Course 6: March 15 - April 30, 1971

Course 7: June 14 - July 30

Course 8: August 9 - September 24

- Week 1 Perth:  
Business planning, budgeting, financing, labour management, estate planning and taxation.
- Week 2 Perth:  
Monday—Visit to first case study farm.  
Tuesday-Friday—First case study will be conducted as a group exercise in farm management and members will return to Perth on Monday after the farm visit.
- Week 3 Northam OR Moora:  
Monday—Visit to second case study farm.  
Tuesday, Wednesday—Examination of alternatives, planning, budgeting and financing.  
Thursday—Visit to third case study farm.  
Friday—Evaluation of alternatives for third case study farm.
- Week 4 Perth:  
Monday-Thursday—Four days of technical agriculture in Perth with visiting speakers to lead discussions on beef, sheep, pasture and cash crops.
- Long Weekend Friday-Monday:  
These four days will provide an opportunity for you to catch up on work at home. It is provided at the request of previous course members.
- Week 5 Katanning:  
Tuesday—Visit to fourth case study farm.  
Wednesday-Friday—This case study will be conducted in smaller groups with members reporting back to the full course. Evening discussions will be held.
- Week 6 Perth:  
Monday-Friday—Course members will have a choice between visiting a fifth case study farm or alternatively using information from their own farm. Each member will work individually and will obtain assistance as necessary.
- Week 7 Perth:  
Monday-Friday—Training and instruction of farm employees, marketing, consulting and managerial accounting services, requirements of lenders and the consequences of economic growth on rural industries including reconstruction proposals.

Restoration of a salt area with trees and grasses at Wongan Hills. Tree species include Tamarisk (*T. gallica*), salt river gum (*E. sargentii*) and swamp mallet (*E. spathulata*)



More than 200 species are grown at these nurseries. The most popular eucalypt species are:

- river gum—*Eucalyptus camaldulensis*
- tuart—*Eucalyptus gomphocephala*
- dwarf sugar gum—*Eucalyptus cladocalyx* var. *nana*
- bald island marlock—*Eucalyptus lehmannii*
- salt river gum—*Eucalyptus sargentii*
- coral flowered gum—*Eucalyptus torquata*
- sugar gum—*Eucalyptus cladocalyx*
- Tasmanian blue gum—*Eucalyptus globulus*

To test the suitability of various species for the arid and semi-arid regions of the State and to demonstrate the real value of tree planting in these areas, the Forests Department has, since 1949, maintained a programme of arboreta establishment throughout the farming areas. More than 60 arboreta have been established, containing some 9,000 trees of different species. These arboreta cover a wide area ranging from Yuna in the north to Kalgoorlie in the east and Esperance and Boxwood Hills in the south.

The arboreta have enabled the Department to assess the most suitable species for different localities, and to investigate spacing and establishment of the trees. The plots have also proven to be an invaluable aid to the Department's advisory service.

The severe drought to which the trees were subjected during 1969-1970 provided a real

test of their drought resistance. Results of a recent assessment have been very encouraging in that, almost without exception, well established trees have survived.

The performance of various species in the arboreta was considered in a recent revision of the list of trees recommended for planting in the agricultural areas of Western Australia. A price list for the Hamel and Narrogin nurseries had been recently published under the title "Catalogue of Trees for Growing under Western Australian conditions." Copies of this catalogue are available, free of charge, from the Forests Department, Perth or from either of the two nurseries. The catalogue sets out the recommended trees for specific areas and needs, and gives a brief description of each tree as well as advice on tree planting techniques and the care of trees in general.

Last year, at the request of the Department of Agriculture's Wheat and Sheep Division, Forests Department officers attended Field Days at Badgingarra and Wongan Hills Research Stations. At both field days farmers showed a great deal of interest in the arboreta.

Few persons would question the desirability of establishing trees in the agricultural areas, particularly on the largely treeless heaths which have figured so prominently in recent agricultural development schemes. Patient and painstaking work has enabled the Forests Department to offer sound advice on questions of tree planting in these areas.