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Please address all correspondence to Executive Director, P.O. Box 104, COMO W.A. 6152

Your Ref:

Our Ref:

Enquiries:

Phone:

5-4/3 JB:DB 22 December 1988

Dr Farran Dixon
Regional Manager
Department of Agriculture
Bunbury

Dear Farran,

I have spoken to John Wise of your Busselton Office who suggested I contact you to propose locating some of our tree breeding work in your Vasse Research Station.

CALM conducts a large tree breeding program. With our recent interest in tree planting schemes on farms we are looking to establish tree breeding populations on farmland. However, it is difficult to obtain sites where we can have assured security and a high level of management in order to minimize risk. Your Vasse Research Station could provide this for us.

We are presently looking for planting sites for 4 species which will require the following areas:-

Eucalyptus	globulus	25ha) 1989
"	botryoides	5) 1989
"	viminialis	20) 1990
Acacia	elata	5) 1990

These would be laid out in several replicated blocks within buffers and could be moulded into a shape to fit the available space. We would be happy to meet costs of fencing and water. It is our expectation that the wood value grown on these plots would be comparable with the value of agricultural production otherwise obtainable. All wood production benefits would be the property of the Research Station. We would therefore hope to avoid paying any lease or rental. The plots would have a working life of 10-20 years.

.../2

With the expanding interest in farm tree crops and their value as an integrated farming practice, I believe your support for this proposal would be seen as progressive and attract some kudos. I would be happy to provide further detail, either in writing or personally, for this proposal.

Yours sincerely,

John Bartle

J.R. Bartle
Principal Research Scientist

GENETIC IMPROVEMENT OF TREE CROPS

Spring 1988

Notes for Vasse Research Station Field Day.

J. R. Bartle, Department of Conservation and Land Management.

There is good potential to develop some tree species into crops from which farmers may gain competitive economic returns. In addition tree crops could be planted in patterns which provide other benefits such as shade/shelter, erosion control, relief of waterlogging/salinity and capture of water and nutrients which might otherwise flow to waste. There is good evidence to show that a mixed tree crops plus conventional agriculture system (i.e. 10 to 20% tree crops) will give greater total returns than either a pure tree crop or a pure conventional agriculture system. Furthermore, if tree crops are widely adopted, they could reduce salinity in rivers and eutrophication of estuaries.

One of the major, long term tasks in developing a new crop is to improve its genetic quality. Two plots were established at Vasse Research Station during winter 1989 which are part of a large program of genetic improvement of potential tree crop species. This program is led by CALM and supported by WA Chip and Pulp, Alcoa of Australia and the Department of Agriculture. The two Vasse plots contain two promising species. They are Eucalyptus globulus (Tasmanian blue gum) and Eucalyptus botryoides (false mahogany). The blue gum is well known to be an adaptable, fast growing species. False mahogany is also fast growing, can tolerate waterlogged, brackish soil conditions and should do well on sandy wet flats in the Busseton district.

The plots contain what plant breeders call 'breeding populations'. Breeding populations are made up of families of individuals (i.e. seed from the same parent tree) taken from parent trees from across the full geographic range and representing the full genetic diversity of the species. The performance of each tree will be followed and the poorest individuals and poorest families will be progressively culled. The select retained trees will produce seed for the next generation breeding population and then become an orchard for producing superior seed for planting operations. In the E. globulus plot there are 380 families, each represented by nine replicate subplots and each containing five trees. In the E. botryoides plot there are 120 families in nine replicate five-tree subplots.

The plots will be actively tended until they commence seed production in about 6-8 years.

four copy John

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

TO: District Manager
Collie/Busselton

FROM: John Bartle, Como Research

OUR REF: JB:GG 8 May 1989
5-4/3

SUBJECT: E. Globulus provenance trials 1989

In the 1989 planting season the Research Division will plant three large (20 ha: area) provenance trials of E. globulus. This is a joint program with Alcoa and WACAP. Sites have been chosen on the Stenes and Wunnerbergs properties at Collie, WACAP property at Mumballup and on the Dept of Agriculture Vasse Research Station.

Part of WACAP's contribution to this program is to provide planters. The requirement is estimated to be 16 man weeks at each site. WACAP will plant the Mumballup site with its own resources but it would not be efficient for them to also do the Collie and Busselton sites.

Could you plan to provide 16 man weeks of labour to plant the site in your District? All costs will be recouped from WACAP. The target planting month is June. Research Division will provide the field supervision.

John.


J.R. Bartle
Principal Research Scientist

cc: Trevor Butcher, Como
Richard Mazanec, Dwellingup
Richard Briedahl, WACAP, Manjimup

VASSE RESEARCH
STATION

"main block"



 SITE FOR
3 ha E. L. PLANTING.

VASSE RESEARCH STN

HILL BLK

LOC N° 3025 + 3026



TO VRS
OFFICE
↙

TD
10

CLOVER

9

11

TD

13

14

8

4

TD

CROP

7

5

3

2

PAD 1.

TD

6

TD

SITE FOR
20 ha E. J
PLANTING.

