| | | |
|---|---|---|
| (Formerly) | 132/38 | 132/38 |

# TREE PLANTING IN THE FALKLAND ISLANDS.

---

CONNECTED FILES.

| NUMBER | |
|---|---|
| 1 | |

C.S.

SCIENTIFIC
(Forestry)

No. 132/38.

19 38.

30/9/37
Ent 19/8/37

C.S.O.

SUBJECT.

1938.

22nd June.

TREE PLANTING IN THE FALKLAND ISLANDS.

Previous Paper.

MINUTES.

EXTRACT FROM LETTER RECEIVED FROM DIRECTOR, ROYAL BOTANIC GARDENS, KEW, SURREY, OF 20TH SEPTEMBER, 1934.

.....

I should also be very glad to have some further information as to the growth of the various trees and shrubs which we have sent out to you from Kew from time to time. You will remember that some years ago we sent out a consignment of trees - correspondence on the matter going back to the year 1927 and earlier. Should you have any photographs showing the growth of the trees round about Port Stanley or elsewhere I should be very glad to see them and hear whether the experiment has been in any way successful.

.....

K.I.V. photographs. thc

1-2.

Letter received from Director, Royal Botanic Gardens, Kew, of 16. 5. 38.

Agric: Adviser.

For report and your recommendations please. See reds 1-2.

24. 6. 38

Subsequent Paper.

Hon Colonial Secretary,

I have the honour to submit that the history of tree planting in the Falklands rather discourages further attempts at aforestation. The results have been meagre indeed, and there is practically nothing to show for the efforts put forward from time to time in the past to establish plantations.

A number of trees will certainly do well if shelter is provided, but this limits the sites for trees to walled gardens or ground adjacent to buildings.

The Caragana Aborescens Shrubs, mentioned in the Honourable Colonial Secretary's letter of 8th March, 1935, to The Director, Kew, which were planted in a sheltered spot in Government House Gardens failed to establish themselves as did their predecessors.

D A Wen
Agricultural Adviser.
21st July, 1938.

H. Submitted. Experiments with trees have been going on for many years with negligible results even when a Forest Officer was available.

H.E.H. C.
21.7.38

Please reply to ptd 2 saying that I have to tell him I am report to say that [a item 3 of a Assembly]

Add in my name that I am particularly appreciative of the interest he takes in the efforts to grow trees at Port Stanley and will be very glad to see a Mr Trees has a further opportunity undertaking a further scheme of tree planting when he returns to the Colony.

H.E.H. 22/7/38

C.S.O. No. 132/38

*Inside Minute Paper.*

*Sheet No.* 1

3. Letter to Sir A.W. Hill of 22.7.38.

Agric: Adviser.

To note.

WEH

C.

25.7.38

Hon. Col. Sec.

noted

Draw.

3/8/38

C.H.

4/8/38

4. Letter from Director, Royal Botanic Gardens, Kew, 16/9/38.

Agricultural Adviser.

To see (4). Did you receive any seeds or plants?

WEH C.

31. X. 38

Hon-Col. Sec.

I have not received any seeds or plants

Draw

AA. 13/12/38

See X of (4).

They come by Mr. Evans, Gardener.

WEH

C.

P.A.

Letter from Sir A. W. Hill of 23. 3. 39. (5)

---

Agric: Adviser.

To note.

MCH
CS
15. 5. 39.

Hon. Col. Lee.

noted.

H.E. has spoken to me to make arrangements for Evans to visit Hill Cove to see the plantations there, [illegible] voyage of the Lafonia.

RAW
A-A. 16/5/39

Letter to Sir A.W. Hill, of 18/5/39. (6)

RAW
18/5/39

---

Y.

The Agric: Adviser has asked me to inform Y. that he has received a reply from the Manager, Hill Cove, stating it is unlikely he will be coming in.

MCH
CS
28. 7. 39.

Y HHH 28/7

Agric: Adviser.

To note.

MCH
28. 7. 39.

Hon Col. Lee:

Mr. Evans will proceed to West Falklands by Lafonia 3rd August

RAW
A-A. 29/7/39

C.S.O. No. 132/38

*Inside Minute Paper.*

*Sheet No.* 2

Seen. MCH C.
31. 7. 39.

Agric: Adviser.
Will you kindly inform Mr. Harding that Mr. Evans is going out. MCH C.
31. 7. 39.

Hon. Col. Sec.
Yes
DAW
F.A. 1/8/39

Hon. Col. Sec.
I have the honour to inform you that Evans left by the Lafonia last night on a tour of West Falklands.
DAW
F.A. 3/8/39

Seen.
MCH C.
3. 8. 39.

GA 2/8/39

4-10. Minute from Ag. Adviser of 2/8/39.

Submitted.

MCH
CS.

22. 8. 39.

For letter to Sec. W. J. Australia

Letter to Secretary, W. F. M. Association 29.8.39 11-12.

Submitted. Something appears to have been omitted from the end of para: 4 of the draft.

MCH
CS.
29. 8. 39.

The words "the fact that" should be omitted and "penalty" substituted for "fine".

35/5

Agric: Adviser
To see.

MCH
CS.
4. 9. 39.

Hon-Col' Sec.

Seen

Dan
A-A-6/9/39

P.T.

C.S.O. No. 132/38

*Inside Minute Paper.* *Sheet No. 3*

13-16. Letter from Messrs: MacLean & Stapledon of 24/9/40.

17. Minute from Director of Agriculture of 3/2/41.

18. Letter to H.M. Consul, Montevideo of 7/2/41.

PA

19. Letter from H.M. Consul Montevideo 11/6/41.

D. fa

to note.

C. S. for C.S. 28/6/41.

Noted JK 30/6/41.

PA

20. Minute from Agricultural Adviser of 29/7/41.

21. Letter to H.M. Consul, Montevideo of 30/7/41.

PA

22-26. Letter from H.M. Consul, Montevideo, 16/12/41.

D. fa.

Reposed to you.

C. S. for C.S. 22/12/41.

Recalled 30/12/41.

27. Minute from Director of Agriculture of 20.12.41.

Hon. S.S.

Competent authority.

any objection to Rea 27 please?

C. S. for C.S. 31/12/41.

C.S.O. No. 132/38

*Inside Minute Paper.* *Sheet No. 4*

34. Minute from Director of Agriculture of 1.10.42.

35-36. Letter to British Consul, Montevideo of 2.10.42. fa.

37. Letter from H.M. Consul, Montevideo 4/11/42.

D. of A. (38)
To see read (34), pl.
A.H.Q. for C.S. 24/11/42

A.C.S. (39)
Noted. Would you please have this file brought up in April 1943 & referred to me
J.L. 7/12/42

Rem 1/4/43.

D. of A. (40)
M.S. referred to you as requested at (49), pl.
A.H.Q. for C.S. 1/4/43.

41. Minute from H.E. the Governor of 27.XII.46

42. " " O/c. Ag. Dept. of 30.XII.46

43

1/E.
(42) replies to (41). In view see how long Do.
A.B.L. 2/1.

K.I.V. mc 2/1

Rem. 31/1/47 A.B.L. 3/1

45

O/c Ag. Dept.
Have you anything to report?
A.B.L. 3.4.47

Hon Col Sec
The seeds sent by Dr. Gilbs were planted in mid Feb. and, so far, have not germinated.
J.B.B. O/c Ag Dept. 8/4/47

Rem. 9/4/47 A.B.L. 9/4

47.

EXTRACT FROM HIS EXCELLENCY THE GOVERNOR'S MINUTE
OF THE 18th of JANUARY, 1947.
(Original filed in 118/40 - Ag. Dept. Report, 1939).

C.S.

.....

2. I hope that the experimental plantations are being cared for e.g. drainage at No.3. plantation SOE (p201) during winter.

3. If Trepassey comes down again this year (or another Newfoundland boat) she should bring some SOH east coast seedlings - see p 204.

4. Has Kew been kept informed of progress?

(intld) H.C.
18/6

VP.

(48)

G.I.C. Ag. Dept

47 for report &c. The references are to the Govt. Report.

A.B.L. 4.7

49

Hon Col See

Some 300 trees have been staked and tied up, 900 more seedlings (Cupressus Macrocarpa) will be ready to go out later in the season, ground is now being prepared for these, also a little draining.

I cannot find anything to shows that Kew has been kept informed of progress.

Care of the trees is being supervised by Mr Clarke, whose report is submitted.

J.B.B. O/c Ag Dept. 7/7/47

C.S.O. No.....

*Inside Minute Paper.*

50 – 50 H
Removed from 118/50 (Agric. Report 39)

*Sheet No.....*

50 –

Report on Experimental Tree Planting 1940-46 by A.R. Evans.
15/6/46

51

O/c Ag. Dept.

47 § 4 ? Re. see x x ^

(50 A).

C.B.
15.7

52

Hon Col Sec

Mr Evans worked the experimental tree plantations with the g.t. garden staff, and although there is nothing to show that Kew has been kept informed, I believe Mr Evans did so, on his own, but not through this office.

J.B.B. O/c Ag Dept.
21/7/47

53

I/E.

A ^ 50 – x x with 47–52.

In may await the printing of the Evans report & then send it to Kew 'ti.', together with such other information as O.C. Ag. Dept. may be able to furnish?

2. 47 § 3 to K.I.V.

C.B.
1.8

MC 1/VIII

50 – 50 H passed to H Hunter
with 2/8/47

H.P.

What is the position regarding printing 50 - 50 H.? It is not urgent compared with some other printing.

A.B.
22/9

56.

H.C.S.

I'm afraid that 50-50 H. cannot be undertaken until after Leg. Co. meeting at earliest.

H.S.
22/9

B.
22/12
A.B.
22/9

57.

H.C.S.

Mr Sedgwick does not think he will be able to commence this work before the end of March, 1948.

H.C.S.
22.12.47

B.
31.3.48
A.B.
23/12

58.

H.S.

What is the position now, pl?

H.C.S.
7.4.48

59

H.C.S.

The rate work is coming in this job will have to be shelved for at least six months

H.H.S.
H.P.
7.4.48.

60.

A.O.

To speak to Cmsn re pensn.

B. (for A.O.)
7.4.48
A.B.
8.4

61

H.C.S. Have perused somewhat would you fix meeting to talk about same to suit yourself.

J.R.O. A.O. 20/9/48

B.B. 31/3/49
A.B. 31/3

62

There is no objection whatever to printing the Evans Report (with the removal therefrom of the Gibbs' Report if there is a separate) as a Command.

2. Bn. 3 months

3 1 copy to A.G.

20/9

Lord Privy Seal to see

31/12/49

31/12/49

31/12

Bn 20/9

20/9

BM 31/12/49 31/3/50

BM 31/12/49 31/3/50

30/9

63.

Record

Red 50 handed to Printer p.m. 20/6/50.

64

20/6/50

Now returned

4/3/55

65 Extract from minutes from H.H. the D.A.G.

Parker 65

66 Copies Memo. from F.I.C. re Tree Planting on the Falklands.

67.

Mr. Fenn to see.

C.G.J.F.

13/12

The Agric Officer.

To see 66 pl.

WFenn
for C.S.
14/12/55

67 Telegram to Macstaple, Montevideo of 31/12/55.

68.

A.O.

To see 66 pl. (file was mislaid)

WFenn
for C.S.
10/1/56.

69

H.C.S.

noted. May I ask if any seeds arrived?

S.J.F
A/O. 20/1/56.

Letter from Macstaple of 3. 1. 56.

70.
KIV 69.

~~A.C.~~ H.C.S. 71

Did Seeds mentioned in 66A arrive?

Mr. Barton may have mentioned to A.C.? (Mr. Bound).

WFenn
20/2/56

72

No.

2½

73.

S.A.O.

Yr. 69. Seeds have not yet been received pl.

WH/HCS
22/2

74

H.C.S. Noted: Thanks. S.J.F. H.O. 20/2/56

WFenn
7/3/56.

75. Letter from H. R. Evans of 28/1/59.

76.

O. i/c Ag Dept.

75 Ld provide material for a reply to be sent to Mr. Evans. Someone might take some photos for you.

D Ch 4/3/59

77 Memo from O. i/c Ag. Dept.

78 Letter to H. R. Evans, of the 14/10/59.

79.

79

While I think of it ~~it~~ would be interesting if we could try whether Beech trees would grow here. Dr. Holdgate said he thought they would (vide marking reserve for Jan.)

Perhaps A. O could bring back some seeds or small plants.

12/2/62. Brf

80.

O i/c Agric.

Would you please enquire if possible obtain some for experimental purposes.

16/2/62

132/38

80

Y.E.

I asked the Agricultural Officer to try to pick up some plants of South African beech trees in Punta Arenas and he has succeeded in doing so. I thought of this as a result of the talk by Doctor Holgate who said that he thought these trees would do very well in the Falkland Islands. The Agricultural Officer thinks that they should not be planted out until the spring. ~~I do not~~ There are some I do not know whether Y.E. would like any or all to be planted in Government House. If there are any to spare I could put one in Sulivan and no doubt any others could be disposed of in some of the Government houses around. The nurseries which supplied these trees are willing to supply up to 200 free at any time and I thought I could ask the Agricultural Officer to put a news item about them in the News Letter.

R 12/3/62

RHDM/LH

81

HCS

I suggest 4 for GH, 2 for Sulivan

EBA 13.3.62

AO 82

Would you please arrange accordingly

Would you also like us to put a news item?

I do not know their other name

R 13/3/62

83

HAS

I have delivered the South American Beach Trees to Government & Sulivan House, and I think there must be a misunderstanding about the 200 trees being free and as this is not the first of these trees I dont know what we could do for a news item.

84

no need of news item

F 22/3/62

G.A.S.
26/3/62

85 Letter from Etablissements Versepuy, France

86 Minute from H.E. the Governor.

87 Natural Resources Committee - Polythene tree planting pots.

88 Extract from Minutes of N.R.C. Meeting of 18.7.66.

89. Letter from Richard J. Hartesveldt of San Jose State College dated 27.10

90. Letter to " " " " " " " " 11.11.

91 Extract from Minutes of N.R.C. Meeting of 4.5.67

92. Extract from Minutes of N.R.C. Meeting of 18.10.67.

93. Public notice, of 23.1.68

94 Extract from Minutes of Meeting of Development Committee of 25/7/68.

By 27. 9.68.

95 Extracts from Minutes of Meeting of Development Committee 17.10.

96 Letter out dated 1.11.68.

97 Telegram to Blake R.M.S. Darwin - 5.11.68.

~~98~~ ~~Extract from Minutes of~~

C.S.

Stimulated by the recent broadcast programmes of tree planting in the Falklands, there is an obvious increased interest in Stanley & I am wondering if we couldn't take advantage of Darwin's April visit to Punta Arenas to import tree seedlings from that source. I had in mind a similar exercise to the "Potato Scheme" which Govt. sponsored last year.

31.1.69

C.S. I welcome this interest but my own experience is that trees from Punta Arenas are very expensive. I forget what G.H. paid in December 1964 for trees which I got Captain Turnbull to bring but it was far far too high and completely uneconomic. Trees can be grown in the Falklands from seed quite easily and I am proud to display about 100 or more macrocarpa grown from seed at G.H. and now already 2 to 2½ feet high — none more than 4 years old from date of sowing seed.

I think we could put on a display at the Horticultural Show on 8th March. GA 31/1/69

DA

YE.

Please see minute from ACS opposite folio 98.

It is a good idea – could you recommend a line of action. Eg. what trees should we encourage?

Please see my minute

ED 30/1

ACS 4/1. ED.

DS 31/1

If we can help you again, as we have dn the past, in sending out seeds, young plants orings of suitable trees, I shall be pleased to gibu such assistance as may be possible.

I am,

Sir,

Your obedient Servas

(Sgd.) Arthur Hill,

DIRECTOR.

Original filed in M.P. 17/177.

(2)

EXTRACT FROM LETTER RECEIVED FROM DIRECTOR, ROY[AL] BOTANIC GARDENS, KEW, SURREY, DATED THE 16TH MAY.

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Sir,

.....

As I am writing, I shall be very glad to know whether any of the trees sent out from Kew to the Falklan Islands have survived. In your letter No. 147/34 of March, 8th, 1935, in reply to mine of 20th September, 1934, (Ref. 2/F.I./1) you said that "with but few exceptions the trees which were planted died", and I a wondering whether any may still be alive. Also I should be glad to know whether the shrubs of Caragana Aborescens which were showing signs of new bud have r any growth.

Red 9
Red 8.
in M.P. 147/34

I am still hoping it may be possible to grow trees at Port Stanley provided sufficient care is taken of them in the early stages, and if a continuous policy is followed with regard to tree-planting and the building up of the necessary wind-breaks in the way of dwarf peat walls while the trees are young. I feel, from what I know of the Falkland Islands, that if the young trees can be screened from the wind those under the lee of the protection will gradually make some reasonable growth.

I much hope that when Mr. Evans returns to the Falklan Islands he will be able to be entrusted with a scheme for tree planting. I have had some talks with him on the matter and he agrees with me that it should be possible to grow trees in certain parts and I much hope that after his experience in Scotland he will be put in charge of some tree-planting operations which, as I feel sure you will agree, will be of very great benefit to the neighbourhood of Stanley.

132/38.

22nd July, 38.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter dated the 16th of May, 1938, and to say that His Excellency regrets to have to inform you that the Caragana Aborescens Shrubs, mentioned in my letter No. 174/34 of the 8th of March, 1935, which were planted in a sheltered spot in Government House Gardens failed to establish themselves as did their predecessors.

2. I am to add that His Excellency is particularly appreciative of the interest you take in the efforts to grow trees at Port Stanley and will be very glad to see that Mr. Evans has a further opportunity of undertaking a further scheme of tree planting when he returns to the Colony.

I am,

Sir,

Your obedient

Colo

Sir Arthur W. Hill, K.C.M.G., F.R.S.,
Director,
Royal Botanic Gardens,
Kew,
ENGLAND.

(4)

ROYAL BOTANIC GARDENS,

KEW, SURREY.

All communications should be addressed to
THE DIRECTOR,
quoting the following number:—
2/F.I./1.



16th September, 1938.

Sir,

Rec'd.

I have to acknowledge receipt of your letter no.132/38 of July 22nd and must ask you to thank His Excellency the Governor for the information about the shrubs of Caragana arborescens to which you referred in your letter of March 8th, 1935.

I much regret to hear that these shrubs have failed to establish themselves, so that it appears useless to send any further seed of this particular shrub which we had hoped would be suitable for growing at Port Stanley.

I shall hope to send out a consignment of seeds of suitable plants for experimental purposes at Port Stanley by Mr. Evans when he returns to the Falkland Islands, and possibly some young trees and other plants, should Mr. Evans be able to take them with him and should there be a favourable boat which will make the journey to Port Stanley in reasonable time.

I am,

Sir,

Your obedient Servant,

Arthur Hill
DIRECTOR.

The Colonial Secretary,
Colonial Secretary's Office,
PORT STANLEY, Falkland Islands.

(5)

ROYAL BOTANIC GARDENS.

KEW, SURREY.

All communications should be addressed to—
THE DIRECTOR,
quoting the following number:

2/F.I./1.

COLONIAL SECRETARY'S OFFICE
12 MAY. 1939
FALKLAND ISLANDS

23rd March, 1939.

Sir,

Red 3.

With reference to your last letter to me, No.132/38 of 22nd July, 1938, and in connexion with Mr. Evans's return to the Falkland Islands, I have pleasure in informing you that we have despatched a box of plants for Mr. Evans to bring out with him to the Falkland Islands. These are being shipped by the s.s."Highland Monarch", the boat on which Mr. Evans is sailing, and I shall hope to hear in due course that the various plants we have selected for trial at Port Stanley have arrived safely, and later on of their successful cultivation in the Falkland Islands.

I feel sure that Mr. Evans has very greatly profited by his stay at Kew and elsewhere in this country, and I much hope that as a result of his visit he will be able to make some successful experiments in growing plants round about Port Stanley.

I am,

Sir,

Your obedient Servant,

Arthur Hill
DIRECTOR.

The Colonial Secretary,
Colonial Secretary's Office,
PORT STANLEY, Falkland Islands.

(6)

132/38.

18th May, 39.

Sir,

I am directed by the Governor to acknowledge and thank you for your letter 2/F.I./1 of the 23rd of March, 1939, and to inform you that the various plants you kindly selected for trial here arrived safely and are being attended to by Mr. Evans who is very keen on their successful cultivation.

2. The Agricultural Adviser has arranged for Mr. Evans to visit Hill Cove on the West Falklands to see the plantation at that place. The visit should prove of value to Mr. Evans in carrying out trial cultivation at Stanley.

I am,

Sir,

Your obedient servant,

mcH

Colonial Secretary.

Sir Arthur W. Hill, K.C.M.G., F.R.S.,
Director,
Royal Botanic Gardens,
Kew, Surrey,
ENGLAND.

(9)

Government House Cardens,

STANLEY.

11th August, 1939.

The Agricultural Adviser,

STANLEY.

Sir,

Herein is the report of my recent visit to the Tree Plantations at Hill Cove, and further to the farms, namely Chartres and Fox Bay East.

Plantations made by the Government.

These consist mainly of Pine (Pinus Sylvestris) Fir (Abies Concolar) and Spruce (Picea Excelsa).

The Pines and Firs have done comparatively well considering the conditions under which they are growing.

Spruce forms quite a large section, but here growth has become "stunted" caused by the strangling effect of undergrowth.

Sheep are also allowed to pasture among this variety causing considerable damage by eating the tender young growing points.

OLD PLANTATION.

This consists mainly of Poplars, there being also a small number of Pines and Willows.

The Pines show signs of suppression, being outgrown by the stronger growing Poplars.

The Plantations on the whole are in a disgraceful state of neglect, grass is growing strongly about the plants; when in this state plants are unable to make normal growth.

It is remarkable that even under these unfavourable conditions some trees have attained a height of 6 feet.

The/

The first rule when planting forest trees is, that undergrowth must be kept down until the plants have attained a stage wherein the branch system meets.

Had the plantations been taken care of after being handed over by the Government I am sure that today there would be sufficient proof to justify the making of further plantations.

Advisory Work on Horticulture.

In most cases where advice was given, I found the Farm Managers to be disinterested. They were merely satisfied that I inspect their gardens in the company of the man responsible.

I feel sure that any advice I gave would have been of great value to the manager himself.

At Port San Carlos I inspected a small experimental plantation of trees, here I found the manager showed a deep interest, even in view of the fact that his plantation was not a success. This was solely due to the method of transplanting. I understand that a further experiment is to be carried out. I have given this case as an example of what could be done if other managers were interested in like manner.

At Hill Cove advice was given on several subjects more especially on the cultivation of fruit. Weather conditions did not permit a visit to the garden.

Chartres.

Here I was able to inspect the gardens and small conservatory. Advice was given on the cultivation of garden crops in general, also on the care of glass-house plants.

I was surprised to learn that potatoes and Swedes were

being/

being cultivated in the same soil each year.

Fox Bay East.

Here I was disappointed to learn that my services were not required.

H. R. Evans
GARDENER.

CAN.

No.

(It is requested that, in any reference to this minute, the above Number and the date may be quoted).

# MINUTE.

21st August, 1939.

*From* The Agricultural Adviser,

Stanley, Falkland Islands.

*To* The Honourable,

The Colonial Secretary,

STANLEY.

I have the honour to forward herewith, for the information of His Excellency the Governor, a report made by Mr H.Evans, Head Gardener, on his recent tour of farms. From this report and from conversations with Mr Evans it would appear that, for the most part, the farmers visited did not take full advantage of the expert advice thus made available to them by Government,

D A Niven

Agricultural Adviser

AN.

132/38.

29th August, 39.

Sir,

I am directed to inform you that Mr. H. R. Evans, Government House Gardener, has reported on his recent visit to the West Falkland.

2. He has the following comments to make on the tree plantations at Hill Cove :-

Plantations made by the Government.

Those consist mainly of Pine (Pinus Sylvestris) Fir (Abies Concolar) and Spruce (Picea Excelsa).
The Pines and Firs have done comparatively well considering the conditions under which they are growing.
Spruce forms quite a large section, but here growth has become "stunted" caused by the strangling effect of undergrowth.
Sheep are also allowed to pasture among this variety causing considerable damage by eating the tender young growing points.

Old Plantation.

This consists mainly of Poplars, there being also a small number of Pines and Willows.
The Pines show signs of suppression, being outgrown by the stronger growing Poplars.

3. He states further that the plantations as a whole are in a very serious state of neglect and that the trees have been unable to make normal growth owing to the strong growth of grass. The first rule when planting trees is that undergrowth must be kept down until the plants reach maturity. There appears to be little doubt that had care been taken of the

Plantations/

he S
W
and Managers Association,
FALKLAND.

plantations there would be sufficient proof to justify the making of further plantations.

4. The object of the visit of Mr. Evans was to enable Managers on the farms visited on the West to benefit by his advice whether in the matter of trees or gardens. Mr. Evans has only recently returned from a full two years course in the United Kingdom in horticulture and arboriculture.

5. It was believed that Managers would be glad to take advantage of the opportunity to meet him and accompany him round their gardens but at the three stations visited complete detachment was shewn.

6. The inestimable value that trees would bring to the country - and it is understood that continued endeavours despite failures eventually have succeeded elsewhere - is beyond question. The importance of increasing the consumption of vegetables in this country and the desirability of making the utmost of vegetable gardens have been emphasized in connection with the nutrition campaign.

7. I am to express His Excellency's hope that farm Managers may be prepared to welcome personally in future such advice and assistance in the above matters as may be proffered. They may differ in their views from the opinion of a fully trained gardener but I am to suggest that they might at least give him a hearing.

I am,

Sir,

Your obedient servant,

Colonial Secretary.

(15.)

COPIA.-

Agricultural Department
Port Stanley
Islas Malvinas

27 de Julio de 1940.-

Señor Director de la
Sección Forestal del
Ministerio de Ganadería y Agricultura
Ingeniero Don Ciro Sapriza Vera
MONTEVIDEO

Muy Señor nuestro:

Deseamos aprovechar su amable oferta de enviarnos algunos árboles de abrigo de semillero para ser plantados en las Islas Malvinas en caracter experimental. En Port Stanley existen varios Cupressus macrocarpa posiblemente de unos 20 años de edad y de una altura de 12 a 16 pies.- Existen también algunas especies de Pinus, Salix, Berberis, y también algunas especies de Ribes, que se presume hayan sido traídas de Patagonia.-

La tierra se compone predominantemente de turba cruda, cubierta de pasto nativo de heath (ericaceous), y en esta época del año casi empantanada.- Nuestro clima comprende nieve y heladas (alrededor de 20ºF.)y vientos normalmente de 20 a 30 millas por hora, y también una regular proporción de cielo cubierto.-

No creo que haya necesidad de tomar en cuenta el daño ocasionado por la llovizna salada producida por las rompientes excepto a una milla o dos de la costa abierta.- Notará Vd. que en estas condiciones se requieren árboles resistentes al viento y al frío moderado, y raíces que toleren una condición algo húmeda.- Yo no creo que pueda haber duda alguna que árboles eventualmente crecerán aca (a pesar de lo que dicen los libros), y creo que el buen éxito será obtenido con algunos de los siguientes ejemplares:

| | |
|---|---|
| Pinus Laricio | larix europeca |
| P.laricio var.Nágricans | betula alba |
| P. sylvestris | Fagus sylvatica |
| P. murrayana | Notho fagus sp. |
| P. montana | Thuya plicata |
| P.contorta | Cupressus macrocarpa |
| P. ponderosa | C.lawsoniana |
| P. ponderosa var.scopulorum | Berberis vulgaris |

Posiblemente algunas Acacias Eucalypta fuertes también puedan servir.-

Al hacer la lista arriba detallada hemos considerado en primer lugar las condiciones de crecimiento superficial, y no hemos dado mucha importancia a la tolerancia de esos árboles a una alta humedad del suelo.-

Nos gustaría mucho saber su opinión respecto a las especies más adecuadas, y desearíamos probar cualquier especie que Vd. crea pueda crecer aca.-

Debido a las circunstancias creadas por la guerra nos es imposible avisarle cuando saldrá el vapor de Montevideo, pero podrá Vd. averiguar de los Agentes Sres. Maclean & Stapledon (Casilla de correo 193-Montevideo) cuando desearían recibir las plantas.-

Saludamos a Vd. muy atte.-

Firmado J.G.Gibbs
Director de Agricultura

SECCION FORESTAL

Toledo, Agosto 13 de 1940.-

Elévese a consideración de la Dirección de Agronomía, signifi-

/ado que, hace algún tiempo, estuvo a visitar este Vivero el Director de Agricultura de las Islas Malvinas, Sr. J. G. Gibbs, el que me manifestó el deseo de llevar algunas plantas y semillas para hacer ensayos de aclimatación en aquellas Islas, y relacionada con esa visita, acabamos de recibir la carta cuya traducción adjuntamos.-

Ahora bien; si se nos autorizara, podríamos enviar la colección de plantas y semillas que a continuación detallamos, las que a nuestro entender, podrían ensayarse en Las Malvinas con algunas probabilidades de éxito:

PLANTAS: 25 Acacias Blancas.- 25 idem Melanoxylón de macetas.-25 Alamo Rosado.- 25 Alamo Blanco.- 25 Casuarina Stricta.- 25 Ciprés Horizantalis.25Ciprés Lambertina.- 25 Ciprés Glauca.- 25 Fresno Excelsa.- 25 Fresno Alba.-25 Gledistchia Triacanthus.- 25 Maclura.- 25 Olmos.- 5 Pinos Marítimos.- 5 Pinos Insignis.-10 Palmas Phoenix de maceta.- 25 Paraíso Común.- 25 Paraíso Gigante.- 25 Roules.- 25 Sophora Japónica.- 25 Thuyas.- 25 Trasparentes.- 25 Tamariscos. 25 Almes.- 10 Brachichiton.- 10Eucaliptus Andreana.- 10 idem Andreana.- 10 Botryoides.-10 Gomphocephala.- 10 idem Longifolia.- 10 idem Leucoxylón.- 10 idem Rostratas.- 10 idem Resinífera y 10 idem Sideroxylón.-

SEMILLAS: 100 grs Acacia Melanoxylón.-
50 id id Mollíssima
50 id id Blanca.
100 id Casuarina Stricta.-
10 id Almes.
25 id Ciprés Horizontalis
25 id id Lambertiana
25 id id Glauca
25 id Eucalipto Andreana.
25 id id Rostrata
25 id id Robusta
25 id id Botryoides.
10 id id Siderophylia
10 id id Sideroxylón
100 id Pinos Marítimo.
100 id id Insignis
100 id Paraísos.Común
100 id id Gigante
10 id Sophora Japónica
100 id Tipas.
50 id Thuyas.
5n id Trasparentes.-

---

Entendemos que tratándose de un pedido de esta naturaleza correspondería donarse en intercambio, o teniendo en cuenta que Inglaterra es un país amigo y gran cliente del Uruguay por lo que habría quizás interés en sostener relaciones cordiales de este orden.- El costo de estas plantas sería de unos $13.00 aproximadamente.-

Ingº Ciro Sapiza Vera
Director Sec. Forestal

DIRECCIÓN DE AGRONOMIA.

Montevideo, Agosto 1o de 1940.-

Elévese al Ministerio de Ganadería y Agricultura, solicitándole autorización para la donación que se menciona precedentemente.-

Socrates Rodriguez
Director

MINISTERIO DE GANADERIA Y AGRICULTURA

Montevideo, agosto 21 de 1940.

//

(13.)

// Con la autorización solicitada, vualva.

VILARO RUBIO

**DIRECCION DE AGRONOMIA.** Montevideo, agosto 21 de 1940.

Vuelva a la Sección de procedencia a sus efectos.-

Por el Director
CARLOS R. ESCALA

**SECCION FORESTAL.**

Toledo, agosto 23 de 1940.-

Enterado, cumplido archívese.-

Ingº CIRO SAPRIZA VERA
Director Sec. Forestal

---

16.

# MACLEAN & STAPLEDON S.A.

CODES USED
WESTERN UNION
A.I.A.B.C. 5TH EDITION
SCOTTS 10TH EDITION
BENTLEYS

CASILLA DE CORREO 193

MONTEVIDEO
(URUGUAY)

TELEGRAPHIC ADDRESS
MACSTAPLE MONTEVIDEO

TELEPHONE
UTE 82510

24th. September, 1940.-

The Colonial Secretary,

Colonial Secretary's Office,

PORT STANLEY.

Sir,

We beg to enclose herewith copies of letters exchanged in connection with the plants forwarded recently to your Agricultural Department, which we have received from Ing. Ciro Sapriza Vera, Director de la Sección Forestal, from which you will see that the said plants have been forwarded free of all charge.

We remain, Sir,

Your obedient servants,

MACLEAN & STAPLEDON, S.A.

No. _____

(It is requested that, in any reference to this minute, the above Number and the date may be quoted).

COLONIAL SECRETARY'S OFFICE * FALKLAND ISLANDS * 3 FEB 1941

# MINUTE.

3rd February, 1941.

*From* The Director of Agriculture, *To* The Honourable,

The Colonial Secretary,

STANLEY.

Stanley, Falkland Islands.

Reels 13-16.

Hereunder is a report on the performance of the seedling trees which were received from Montevideo last September. As you know these trees were donated by the Forestry Station of the Uruguayan Department of Agriculture. The Director of the Forrestry Station would no doubt be glad to have a copy of this report through the diplomatic channels. His address is :

Senor Director de la
Seccion Forestal del
Ministerio de Ganaderia y Agricultura,
Ingeniero Don Ciro Sapriza Vera.
MONTEVIDEO.

F. Gladstone
Director of Agriculture.

Acacia trinervis (25 trees). The majority of these trees are still alive but have not grown since arrival. The species appears ~~even less~~ suitable than melanoxylon.

Acacia blanca. (25 trees) All trees are growing but the foliage is not a healthy colour.

Acacia melanoxylon (25 trees) Five seedlings have died since arrival. The others have shown no advancement. They appear to be unsuited to the locality and unlikely to survive the winter.

Alamo Rosado (25 trees) All trees growing vigourously, shoots averagin three inches long, some up to six inches. One of the best types sent

Alamo Blanco ( 25 trees) All trees showing healthy growth shoots about $1\frac{1}{2}$ inches. Species appears well suited to the Falkland Islands and at present growing in comparatively exposed position.

~~Alamo~~ Casuarina stricta (25 trees) Has shown no growth since arrival but appears to have gone backward. No trees have actually died.

Cipres horizontalis (25 trees) Four trees have died. Those which remain look healthy but lack the vigour of the other cipres species The terminal growth ~~really~~ are exceeds two inches. Plants have an ope type of growth.

Cipres lambertiana (25 trees) All trees growing vigourously and app well suited to the climate. The growth is strong and the species seems slightly hardier than C.glauca.

Cipres glauca (25 trees) These trees are doing exceptiona y well at present. Terminal growth is at least five inches an liage i very healthy in colour.

Cipres blanca (? not listed in Uruguayan letter) (25 tree ry similar in all respects to C.glauca. Growth about the s

Fresno excelsa (25 trees) Thirteen trees doing very well, f tre dead, the remainder alive but buds very slow in moving.

Fresno alba (25 trees) Ten trees are growing well, three have died, the remainder are alive but backward

Macluras (25 trees) All trees are alive and growing slowly. It is doubtful if this tree is suited to the Islands.

Olmos (25 trees) Nine trees have died, the remainder have small leaves and short growth but are of good colour. Their suitability for the Falkland Islands is doubtful. They are growing in a comparatively exposed position near Alamo blanco.

Pino maritimo ( 5 trees) These trees are just living. They have not gone back but new growth is very stunted. They do not appear to be suited to the climate.

Pino insignis (5 trees) One tree has died. Planted in a very sheltered position. Four trees growing vigourously. This species would probably grow satisfactorily if sheltered on all sides by more hardy trees, though it may be unsuitable on account of its early spring growth.

Palmas phoenix (10 trees) Trees unsuited to the climate.

Paraiso communis (25 trees)This species is growing a little better than P.gigantia, but it offers little hope of surviving under local conditions.

~~(Paraiso gigantia (25 trees) Two trees dead. Eight growing poorly. Fifteen growing satisfactorily.~~

Sophora japonica (25 trees) The wood is still green but there has been no growth since arrival. Does not appear suitable to the Islands.

Thuyas (25 trees) These were set out on arrival in 6 inch pots. One plant has died. The remainder are healthy with ½ to 1 inch new growth at the tips of shoots. If nursed should prove suitable here.

Robels (25 trees) Two trees dead. Eight growing poorly. Fifteen growing satisfactorily.

Paraiso gigantia (25 trees) All shoots very late, looking sickly. Probabl unsuited to the Islands.

Transparentes (25 trees) All trees are alive. They have shed their older leaves and have produced a crop of new leaves without any real growth of wood. They are growing in a sheltered position but appear unsuited to the Islands.

Tamarisco (100 trees) Sixteen dead, fifteen growing poorly, but sixty-nine growing fairly well ~~but~~ and vigourously.

Almes (25 trees) Five with small late shoots, remainder green wood with no shoots. Unsuited to the locality.

Brachichiton (10 trees) Commenced to grow but are now all dead.

Eucaliptus species. These trees were put into the corner of the garden until a permanent site could be prepared for them. We regret to report that they have now unaccountably disappeared.

The tree seeds which were sown under glass have germinated satisfactorily and are now being hardened off. These seedlings will probably be placed in cold frames during the first winter. The Robinia is doing particularly well as also are almes, all cipres species and thuyas.

(18)

132/38.

7th February, 41.

Sir,

I am directed to inform you that in September, 1940, the Director of the Foresty Station of the Uruguayan Department of Agriculture very kindly forwarded to this Government free of charge a number of seedling trees for experimental purposes.

2. A report on the performance of these trees a copy of which is enclosed has been received from the Director of Agriculture, and I am to request that you will forward to Ing. Cáro Sapriza Vera, Montevideo, for his information.

I am,
Sir,
Your obedient servant,

(Sgd.) A.I. Fleuret.
for Colonial Secretary.

His Majesty's Consul,
British Consulate,
MONTEVIDEO.

BRITISH CONSULATE,
MONTEVIDEO.

June 11th, 1941.

Sir,

With reference to your communication No. 132/38 of the 7th. February last I have to inform you that your enclosure, the report on the performance of certain seedling trees supplied by the Director of the Forestry Section of the Uruguayan Department of Agriculture to the Government of the Falkland Islands for experimental purposes, was duly forwarded to Ing. Ciro Sapriza Vera, who has replied as follows:-

Red 18.

"The report has proved extremely interesting to me, because various species emerge from the experiment which appear to resist and thrive in that climate, as regards which we had the impression that it was difficult to secure forest trees capable of growing there in the normal way.

Now we should be interested if you could let us have another similar report for the coming year in order that we may follow the test in all its details. Moreover, if you should desire the despatch of any other species as also of seeds of forest trees, we are always at your service."

I am,
Sir,
Your obedient Servant,

N.O.W. Stewart.

H.M.Consul.

The Colonial Secretary,
Falkland Islands.

# REPORT ON THE PERFORMANCE OF TREE SEEDS

Acacia and Eucalintus species : No seeds of these species were sown pending information on the suitability of the seedlings that you sent us Since none of the seedlings have survived I do not think it worth while experimenting with these seeds.

Almes australis : Seeds germinated under glass and were placed in cold frames in February. All plants were killed by frosts in April.

Casuarina : Plants in glass house are nine inches high. Those which were placed in the cold frames were killed by the frosts in April.

Cipres glauca and Cipres lambertiana : Seedlings are now 4 inches high and have been transplanted into tins. Though slightly bronzed by frost they appear healthy. No deaths have occurred.

Pinus insignis : Seed (sown in January) has not germinated.

Paraiso Comun. and P.gigante : Seed germinated well but all plants have been killed by frosts.

Robinia pseudoacacia : Seed germinated well. Plants six to nine inches high all killed by frosts.

Machaerium tipu : Seed germinated well but plants six to nine inches high have been killed by frosts.

Thuya orientalis : Seed germinated well. Plants now three inches high Have been burned by frost but will probably recover.

Pinus pinaster : Seed germinated very well. Plants now four to five inches high. Have grown slowly during the winter in spite of frosts; A quicker growing seedlthan the Cipres, probably the best suited to our conditions.

Copy

Agricultural Dept,
Port Stanley,
Falkland Islands.

29th July, 1941.

Senor Director de la
Seccion Forestal del
Ministerio de Ganaderia y Agricultura,
Ingeniero Don Ciro Bapriza Vera,
MONTEVIDEO.

Dear Sir,

As I was preparing a second report to you on the performance of the seedlings and tree seeds that you sent us, I found on the file your letter dated 24th January which arrived while I was travelling in the Islands, and which I regret has not yet been acknowledged.

We were pleased to receive the address of Snr. Izquierdo of Santa Ines. We hope to make contact with him when an opportunity occurs.

Your offer of more trees from your institution for experimental planting here is very generous. I think some of those you mentioned will be worth trying, especially Alamo del Canada and Sauce-alamo (Salix alba). Have you also some seedlings of Betula alba (abedul blanco) and Pino pinaster ? Probably 25 of each would be sufficient to give an indication of their suitability. It is possible that other Alamos would be worth trying, but I do not know anything about those you have mentioned.

The Casuarina and Acacias do not appear to be well suited to this climate. Perhaps they may do better when we have more shelter available for them.

It is very good of you to offer to look up information concerning the trees which you think may be available from Southern Chile and Argentine. We would like to know something of the Nothofagus species and the Podocarpus. Species of both these genera grow well in the South of New Zealand. If any that you mentioned are adapted to wet or acid soil, low temperature or high altitude they should be worth trying here. I am sending up a small piece of a Nothofagus species which is growing here in a very exposed position but very poor. Do you think you could have it identified ? The plants here are about 18 years old but not more than 1 metre high.

Some of the trees you sent, especially the Acacias, Transparentes and Macluras, have been killed by winter frosts. We shall make a further report on them next summer. The Alamo rosado and A.blanco and some of the Almes have been planted out on a hill side, and the Cipres will be planted amongst them later.

Cipres lambertiana, C.Glauca and C.Blanco all seem very well suited to the climate here. They are still semi sheltered but the upper half and new growths are exposed to wind and sleet. Very few of the growing tips have been damaged. Many of these have made 0.20 - 0.25 metre growth since they arrived last September.

I am enclosing herewith a report on our results with the seeds you sent.

The Cipres seems so well suited that I think it would be worth while planting an experimental block of Lambertiana, Glauca and Blanco to see whether they could be used to make shelter belts in these Islands. The outer trees of such a block should protect those in

in the middle from wind and sleet. Under our conditions I think planting 3 feet apart in each direction would be wise, and hope to provide sufficient money to purchase about 400 or more trees of each of these species next year. Pino pinaster is another species which should be worth while trying in this way. Perhaps you might be able to let us have about 400 of one of these species this year for the experiment. Do you think 'wrenched' plants from the nursery would be satisfactory, or would you advise us to use those grown in tins.

We would be very glad if you could spare us also some more Pinus pinaster seed and some seed of the Cipres species. Cipres horizontalis does not appear as suitable as the species I have mentioned above.

Yours faithfully,

Sgd. J.G.Gibbs.
Director of Agriculture.

(20)

No. _____

(It is requested that, in any reference to this minute, the above Number and the date may be quoted).

COLONIAL SECRETARY'S OFFICE
29 JUL 1941
FALKLAND ISLANDS

**MINUTE.**

29th July, 1941.

*From* Director of Agriculture

Stanley, Falkland Islands.

*To* The Honourable,

The Colonial Secretary,

STANLEY.

Herewith letter and a report on the tree seeds which were received from Montevideo last year. I would be very pleased if it could be forwarded through the official channels.

for Director of Agriculture

132/38.

(21)

30th July, 41.

Sir,

With reference to your letter of the 11th of June, 1941, I am directed to transmit a further report on the performance of certain seedling trees supplied by the Director of the Forestry Section of the Uruguayan Department of Agriculture to this Government for experimental purposes together with a letter addressed to the Ingeniero Don Ciro Sapriza Vera by the Director of Agriculture.

I am,

Sir,

Your obedient servant,

for Colonial Secretary.

. Consul,
tevideo,
RUGUAY.

27.

# MINUTE.

No. _____

20th December, 1941.

*From* Director of Agriculture,

~~THE COLONIAL SECRETARY~~,

Stanley, Falkland Islands.

*To* The Honourable,

The Colonial Secretary,

STANLEY.

---

We have received from the British Consul at Punta Arenas, Chile a list of tree seedlings and prices for delivery in autumn. We have made the following list as being desirable for experimental use here and would be pleased if the order could be arranged for execution during the next visit of the "Fitzroy" :-

| | | |
|---|---|---|
| 150 | Notufagus oblicua @$3 | £3.-15.-0. |
| 150 | Noturagus Dombey @$5 | 6. 5. 0. |
| 50 | Populus pyramidal @$2 | 16. 8. |
| 50 | Populus black @$3 | 1. 5. 0. |
| 25 | Picea excelsa @ $12. | 1. 5. 0. |
| 50 | Retamo @$5 | 2. 1. 8. |
| 475 | | £ 15. 8. 4. |

4 Abedul @$38

I would be pleased to have permission to incur the necessary expenditure in Punta Arenas.

Director of Agriculture

(28.)

2nd June 2

Senor Director de la Seccion

Forestal del Ministerio de Canaderia
y Agriculture,
Igenero Don Cire Sapriza Vera,
Montevideo.

Dear Sir,

We were very pleased to receive your enthusiastic letter o 255/942 of May 5, and are very glad to learn that you can let us have the trees that we need for the experimental plantings. We have already written to the Falkland Island Government Agents in Montevideo, and asked them to let you know when an opportunity of shipping the trees will occur.

I had not realized that the Alamo Monilifera was the Alamo of Carolina. Carolina is so warm that I do not think monilifera will be satisfactory here, but if it is not too much trouble to you we would like to try some cuttings. One cannot be sure of anything until it has been tried. I do not think that the perennial leaf form of Populus pyramidalis will grow here. The deciduous form should be better suited to our conditions.

I agree with you that Pino maritime would probably be better grown in seed-beds here. The seedlings that we produce from the seed you sent in 1940 are very strong, and have survived transplanting from nursery boxes to rows. I believe that we have been able to inoculate them with the mycorrhiza of Boletus species that I brought with me from New Zealand, but so far there have been no fructifications of thew fungus in the nursery,

Theremay be an opportunity of sending the trees about the middle of July. I think this date would be very satisfactory, and hope that it will be possible to send both the trees and the tree seeds that yuuhave mentioned.

From Scotland we have received a small amount of seed of Japanese larch It has germinated well but now after about eight months the plants are dying. I think the trouble is due to the lack of mychorriza, but have not yet fund anything to cure the trouble.

We shall let you have a further report on thetrees that you sent, and which were planted into their permanent positions last winter. The cypres have done well and some of the Deciduous trees that we thought dead have sprouted from the base of the stem; But I have not the details at present.

Yours faithfully,

Director of Agriculture.

(29.)

2nd. June, 42

Sir,

I am enclosing herewith a letter for transmission, to the Director of the Forestry Section of the Ministry of Agriculture, and would be pleased if you would forward it.

I am, Sir,

Your obedient Servant,

His Majesty's Consul
Montevideo.

for C[illegible]ial Secretary.

2nd. June, 42.

H.M.Consul,
British Consulate,
Montevideo, URUGUAY.

Sir,

I am enclosing herewith a letter for transmission to Senor Don Ciro Bendrew, Director of the Forestry Section of the Department of Agriculture, and would be glad if you would forward it.

for Colonial Secretary.

(31)

BRITISH CONSULATE,
MONTEVIDEO.
July 14th, 1934

Sir,

At the request of Ingeniero Agrónomo don Ciro Sapriza Vera, Director of the Forestry Section of the Uruguayan Ministry of Agriculture, I have to forward herewith in original a letter of the 10th. July addressed to the Director of Agriculture of the Falkland Islands and should be obliged if you would cause it to be transmitted, should there be no objection, to the addressee.



I am,
Sir,
Your obedient Servant,

N.o.s. Stewart
H.M.Consul.

The Colonial Secretary,
Falkland Islands.

No.

(It is requested that, in any reference to this minute, the above Number and the date may be quoted).

# MINUTE.

1st October 1942.

*From* Director of Agriculture.

Stanley, Falkland Islands.

*To* The Honourable,

The Colonial Secretary,

Stanley.

I would be pleased if you would forward the enclosed letter addressed to Senor Igeniero Don Ciro Sapriza Vera through the British Consulate at Montevideo.

Director of Agriculture.

Department of Agriculture,
1st October, 1942.
Stanley, Falkland Is.

Senor Director de la Seccion,
Forestal del Ministerio de Canaderia y Agriculture,
Ingeniero Don Ciro Sapriza Vera.

Dear Sir,

We have much pleasure in acknowledging receipt of the case of seedlings and packets of seed which you forwarded to us. The trees have arrived in excellent condition but have since arrival been subjected to a three day period of cold weather, during which the minimum temperature fell to 22° F. The trees however seem to have survived satisfactorily.

Yours faithfully,

(Sgd.) J. G. Gibbs,

Directof of Agriculture.

132/38

2nd October, 42.

Sir,

I have the honour to enclose herewith a letter for transmission to the Director of the Forestry Section of the Ministry of Agriculture, and would be pleased if you would forward it.

I have the honour to be,

Sir,

Your obedient servant,

for Colonial Secretary.

Majesty's Consul,
ritish Consulate,
Montevideo,
URUGUAY.

(37.)

BRITISH CONSULATE,
MONTEVIDEO.

November 4th, 1942.

Sir,

At the request of Ingeniero Agrónomo don Ciro Sapriza Vera, Director of the Forestry Section of the Uruguayan Ministry of Agriculture, I have the honour to inform you, in reply to the enclosure in your communication No.132/38 of the 2nd. October, that the recipient is much gratified to have the Director of Agriculture's report, but that he would be interested to know the result of the planting and would be glad to have news in the autumn of this planting, in detail as full as the Director has been good enough to furnish on past occasions.

Red 36

I have the honour to be,
Sir,
Your obedient Servant,

N.A.S. Stewart

H.M.Consul.

The Colonial Secretary,
Falkland Islands.

HCS.

Have the seeds sent out by Dr. Gibbs recently been planted? Have we a record of them?

If unable (a) Casuarina or (b) Eucalyptus or Wattle have been tried here? ~~If not~~

~~we have [illegible] from here?~~

Mic 27/XII

O/c R. Dept.

Pse early report pse

27.12

Mr 31/12

ARMY FORM C2128. (Pads of 100).

# MESSAGE FORM

Serial No.

CALL AND INSTRUCTIONS | IN / OUT

No. of Groups. GR.

OFFICE DATE STAMP

(ABOVE THIS LINE IS FOR SIGNALS USE ONLY.)

TO

FROM

| Originator's Number | Date | In Reply to Number |
|---|---|---|
| | | |

...SAGE MAY BE SENT AS WRITTEN BY ...LS | EXCEPT ..... | WIRELESS.

THIS MESSAGE MUST BE SENT IN CIPHER IF LIABLE TO INTERCEPTION OR TO FALL INTO ENEMY HANDS.

SIGNED

ORIGINATOR'S INSTRUCTIONS
DEGREE OF PRIORITY

TIME OF ORIGIN

T.H.I.

T.O.R.

(BELOW THIS LINE IS FOR SIGNALS USE ONLY.)

| ...E IN | READER | SENDER | SYSTEM OUT | TIME OUT | READER | SENDER | SYSTEM OUT | TIME OUT | READER | SENDER |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

...delete "except" and insert "including."

W. B. & S. Ltd. 51-4364.

No. 6/2/3.

(It is requested that, in any reference to this minute, the above Number and the date may be quoted).

# MINUTE.

30th. December, 1946.

*From* The Officer-in-Charge,
Dept. of Agriculture,
Stanley, Falkland Islands.

*To* The Honourable,
The Colonial Secretary,
Stanley.

The seeds sent by Dr. Gibbs will be sown during February 1947, this being the most favourable month for germination of such seeds. A record of them has been filed in the office.

2. Casuarina and Eucalyptus have both been tried, the former were a complete failure. Eucalyptus globulus has been grown in a sheltered town garden to a height of about six feet but due to constant injury by wind above the shelter line , the plant has become shrub-like in habit.

3. None of the Wattles have yet been tried.

H. R. Evans.
Officer-in-Charge.

49a

# REPORT ON EXPERIMENTAL FORESTRY IN THE FALKLAND ISLANDS.

## 1946 - 47.

The Spring weather came in very cold resulting in about one good week f fine weather, bad weather continued throughout the remainder of the pring and Summer. This proved to be a great set back to all the trees.

In February 262 trees,(C.Macrocarpa) were taken from the nursery and lanted in Plantation No.3. The Larch showed a loss of 12, and these were eplaced with (Pinus Contorta), the remainder of the trees are all in a very ealthy condition, excepting the larch as above mentioned.

Growth showed an increase of 7 ins. in spite of the severe weather ey encountered.

The trees which were imported from Punta Arenas in 1944 do not show h top growth, the bottom growth is 6¼ ins. in 12 months, this shows that will take many years to prove itself worthy.

A. Clarke.

Gardener.

65

Extracts from Minutes in file 0375.

Y.H.

50 ..... I see little point in printing the attached reports, they were written in 1945 and 1946.

(Intld) S.G.T. 14/7/55

C.S.

I agree. Presumably they will be carefully filed as they are becoming somewhat tattered.

.....

A.G.D.T.
21/7/55.

119 1066A 4

ARBORETET, HØRSHOLM

ARBORETET OG FORSØGSSTATION HAVE SIDEN 1936

13th October, 1955.

L. W. Young, Esq.,
Managing Director,
The Falkland Island Company, Ltd.,
12o, Pall Mall, London, S.W. 1,

Dear Sir,

In accordance with your letter dated 9th September, I am hereby sending you some samples of seeds, which should have a reasonable chance to grow in the Falkland Islands.

Mountain Pine, Pinus Montana: Mr. Ohrstrom described some pine, which he had seen down there, and I think it is Mountain Pine.

Shore Pine, Pinus contorta: The place of origin is the west coast of Northamerica. Faster growing than Mountain Pine, and grows to a bigger tree.

Very resistant against the wind, and the requirement to the quality of the soil is very low.

In 2o-3o years old experiments on the Faroe Islands, this species was the best.

White Spruce, Picea canadensis: The place of origin is Canada from the Atlantic sea to Alaska. A very easily satisfied species, commenly used for shelter belts.

Sitka Spruce, Picea sitchensis,: From the west coast of Northamerica where it grows in a few miles wide belt from Oregon to Alaska. In Denmark we have got plantations right out to the sea, and the trees do not suffer from the salt dust. Furthermore I can refer tosome very successful experiments on Iceland.

Japanese Larch, Larix leptolepis: Although its home is Japan, it has shown very ~~successful~~ useful under different conditions. Just as other species of Larch it has got the characteristic, that it can stand 'catastrophes' as loosing its needles on account of storms, caterpillars etc.. Resistant against the wind, but not as much as Sitka Spruce.

Black Alder, Alnus glutinosa. Hardy tree of the hardwoods. Has got

P.T.O. /some root bacteria

66B

DEN KGL. VETERINÆR- OG LANDBOHØJSKOLE
ARBORETET, HØRSHOLM

TELEFON: HØRSHOLM 641

ARBORETFORSTANDER
FORSTBOTANISK HAVE, ØRSTED 1925 1964

continued. / Has got
some root bacteria, which can utilize the nitrogen from the air. Used in mixed stands to help the other trees.

Regarding the sowing, I will suggest, that you take some small portions from each species, and sow them in flowerpots in a greenhouse, and at the same time sow some bigger portions in seedbeds in open air. The rest of the seeds you can keep one year without it looses much of its germinating power.

When the seedlings are one or two years old, depending on how they grow, you transplant them, and after one or two years you can transplant them to the final place.

It is a rather slow process, but if it does succeed, then you can not expect more, as it takes just as long time in Europe. Regarding the soil there will not be anything special to take into consideration with these species.

I hope that the experiment with these seeds will succeed, and that they will reach the Falkland Islands at springtime. I am sorry, that we can not send you some plants at the moment, as they are not "autumn riped", but we may revert to this matter later on, as this must not delay the sending of the seeds.

Yours faithfully,

C. Syrach Larsen.

66c

DEN KGL. VETERINÆR- OG LANDBOHØJSKOLE
ARBORETET, HØRSHOLM

KONTOR: HØRSHOLM 841

ARBORETFORESTANDER
FORSTBOTANISK HAVE, ORDRUP

6-9 1955

Mr.Young,
Managing Director,
The Falkland Island Company, Ltd.,
12o,Pall Mall, London, S.W.1

Dear Sir.

On the 16th of August I had a very succesful visit by Mr.C.Øhrstrøm from Sweden, whom you had mentioned in your letter of June 8.

Mr.Øhrstrøm told me lively and detailed about the conditions at the Falkland Islands and gave much written information, so I feel to have got a rather good impression of the possibilites for growing trees there.

Both the soil and particularly the continious strong wind will, no doubt, make it a difficult task to grow proper forests. On the other hand, I am of opinion that a fair chance might exist to make small plantations of trees in various ways.

The transport of the plants, however, will be the the most difficult problem as it is not likely that the plants can stand the long journey. I should prefer to send the seed and have the plants raised on the Falkland Islands.

Futher I have understood that October and particularly November will be spring time at the Falklands Islands. We will try to have collected some lots of seed of various tree-speches, and possibly also a small number of one year old seedlings - as an experimental transport - to send over. If we do not get any other instructions we will send the seed and the plants to the Company's main office in London. We shall try to have it sent in the beginning of October.

According to mr.Øhrstrøm mr. Oliver or mr. A.G. Barton will be able to se in charge of the sewing and planting.

Yours faithfully

C.Syrach Larsen

66

With compliments

The Falkland Islands Company Ltd

COLONIAL SECRETARY'S OFFICE
9 DEC 1955
FALKLAND ISLANDS

7/12/55

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

67

# SENT

| Number | Office of Origin | Words | Handed in at | Date |
|---|---|---|---|---|
| | | | | 31.12.45 |

To

MACSTAPLE, MONTEVIDEO BOA/C

SEND PER PATHOY ADDRESSED AGRICULTURE OFFICER STANLEY EQUIVALENT FIVE POUNDS STERLING WORTH OF YOUNG CUPRESSUS HORIZONTALIS TREES IN TINES EX DOMINGO BASSO MONTEVIDEO

SECRETARY

A.O. reports that purchase authorised by H.E. Governor.
(Intld) W.H.
31/12

/IR

See 70

9 JAN

70

# MACLEAN & STAPLEDON S.A.

132/38

CODES USED
A.1. A.B.C. 5TH EDITION
SCOTT'S 10TH EDITION
BENTLEY'S

CASILLA DE CORREO 193
COLON 1486-90
MONTEVIDEO
(URUGUAY)

TELEGRAPHIC ADDRESS
MACSTAPLE MONTEVIDEO
TELEPHONES 86382
85042
82940

January 3rd. 1956

Sir:-

67

We beg to acknowledge receipt of your telegram of 31st December last, reading as follows:

"SEND PER FITZROY ADDRESSED AGRICULTURE OFFICER STANLEY EQUIVALENT FIVE POUNDS STERLING WORTH OF YOUNG CUPRESSUS HORIZONTALIS TREES IN TINS DOMINGO BASSO MONTEVIDEO"

contents of which merited our attention and in reply beg to advise that there being a special selling price for 100 trees, we are forwarding same per this "Fitzroy", debiting cost in account current in the usual manner.

Yours faithfully,
MACLEAN & STAPLEDON, S. A.

Colonial Secretary
PORT STANLEY

JG/vD.

Ag.
12/1

K.L.V. 69.

76 146/42

Ref. A.O. to provide the material for a reply. He could possibly persuade someone to take some photos. 6/4/59 2.S. to

P.O. Box 100,
Molo,
Kenya.
28th January 1959

75

- 2 MAR 1959

The Honourable,
The Colonial Secretary,
Colonial Secretary's Office,
Stanley,
Falkland Islands.

Report at ~~176~~ 58

Sir,

Between the years 1939/46. I had the privilege of conducting small experiments in connection with the establishment of trees under exposed conditions in the Falklands. Many species were introduced into the Colony or were raised from seeds. Several plantings were made but the three largest experimental plantings were made on the hillside behind the Government House gardens. The plantings included several species, but on leaving the Colony in 1947, the indications were that, though a few species were promising, a single species, Cupressus macrocarpa was likely to be the most promising for planting under the very exposed conditions characteristic of the Falklands.

As some 12 years have elapsed since I left the Falkland Islands, I am wondering if these small tree plantings have survived and if so, what progress in growth has been achieved. Over the years, I have endeavoured to obtain information about the trees from friends or relatives but without success. Consequently, I should be grateful if you could give me any information concerning the tree plantings. I am especially interested in the circumference or the girth growth of the Cupressus macrocarpa species at one foot above soil level. Measurements of say twelve of the largest and twelve of the smallest trees would provide sufficient data. Approximate height measurements would also be useful together with some comments on wind damage to the exposed side of the trees and to the terminal growth. A note on the plantation on the whole would also be appreciated. Is there any evidence to show that trees on the windward side are providing any shelter for those on the leeward side. Have many of the trees died and if so have there been any recent deaths not attributed to physical damage.

Finally, though I feel I have asked for so much already, may I go to the full extent and ask if it would be possible to have a photograph or two, one of which might show a close

Reply at 78.

57A

up of one of the better trees using some object as a scale to indicate size.

Yours faithfully,

H. R. Evans.

(H.R. EVANS)

BY AIR MAIL

PAR AVION

AIR LETTER

AEROGRAMME


The Honourable,

The Colonial Secretary,

Colonial Secretary's Office,

Stanley,

Falkland Islands.

First fold here

Second fold here

Sender's name and address :

AN AIR LETTER SHOULD NOT CONTAIN ANY ENCLOSURE; IF IT DOES IT WILL BE SURCHARGED OR SENT BY ORDINARY MAIL.

To open cut here

H.C.S.

With reference to Mr. Evans' letter at page 75 I examined the the trees on the hillside behind Government House gardens. The species Cupressus macrocarpa have taken, and the following data has been collected for Mr. Evans:-

| Plant | Circumference of Girth | Height |
|---|---|---|
| Cupressus macrocarpa | 1' 6½" | 11' 6" |
| " | 1' 4½" | 10' 6" |
| " | 1' 2" | 10' 9" |
| " | 1' 9" | 10'11" |
| " | 1' 7½" | 10'11" |
| " | 1' 8½" | 12' 6" |
| " | 1' 8" | 11' 1" |
| " | 1' 9" | 13' 6" |
| " | 1' 8" | 12' 4" |
| " | 1' 4½" | 12' 9" |
| " | 1' 11" | 13' 3" |
| " | 1' 3" | 10' 0" |
| " | 9" | 6' 9" |
| " | 10½" | 7' 7" |
| " | 7" | 5' 3" |
| " | 11½" | 8' 0" |
| " | 7½" | 6'10" |
| " | 5½" | 5' 5" |
| " | 4" | 5' 0" |
| " | 4" | 4' 0" |
| " | 6½" | 6'11" |
| " | 7" | 5'11" |
| " | 3½" | 3'11" |
| " | 4½" | 3' 7" |

It is my opinion that these trees have made considerable progress but it would appear now that perhaps some trimming can, and attention should be given to these trees.

G.J.

Mr. Hobbs has taken photographs which are on a colour film, which can not be processed in the Falkland Islands but he has taken Mr. Evans' address and has promised to forward the picture on to him from England.

G. A. Stewart

Officer-in-Charge
Agricultural Dept.

132/38

79

14th October, 59

Dear Howell,

735 Please refer to your letter of the 28th January, 1959, on the subject of the experimental tree planting you did here. Firstly let me apologise for the delay in replying which was accasioned by the fire which completely destroyed the Secretariat together with many of our files. However your letter survived and George Stewart has made some measurements of the Cupressus Macrocarpa as requested and these are given below:-

| Larger Trees | Circumference of Girth | Height |
|---|---|---|
| 1 | 1' 6½" | 11' 6" |
| 2 | 1' 4½" | 10' 6" |
| 3 | 1' 2" | 10' 9" |
| 4 | 1' 9" | 10' 11" |
| 5 | 1' 7½" | 10' 11" |
| 6 | 1' 8½" | 12' 6" |
| 7 | 1' 8" | 11' 1" |
| 8 | 1' 9" | 13' 6" |
| 9 | 1' 8" | 12' 4" |
| 10 | 1' 4½" | 12' 9" |
| 11 | 1' 11" | 13' 3" |
| 12 | 1' 3" | 10' 0" |

| Smaller Trees | | |
|---|---|---|
| 1 | 9" | 6' 9" |
| 2 | 10½" | 7' 7" |
| 3 | 7" | 5' 3" |
| 4 | 11½" | 8' 0" |
| 5 | 7½" | 6' 10" |
| 6 | 5½" | 5' 5" |
| 7 | 4" | 5' 0" |
| 8 | 4" | 4' 0" |
| 9 | 6½" | 6' 11" |
| 10 | 7" | 5' 11" |
| 11 | 3½" | 3' 11" |
| 12 | 4½" | 3' 7" |

From these measurements you will note that there has been considerable progress since you left here. The measurements were taken from the westerly plantation immediately behind Government House gardens and wind damage is apparent on the windwood side of the first row and partially on the second. From there on the trees have been little affected by the wind. None of the trees appear to have died from other than physical causes.

Reply at 4 in 146/42/II

2. The easterly/.....

H.R. Evans, Esq.,
P.O. Box 100,
Molo,
KENYA.

IB/LH

The easterly patch, which is the more sheltered, is thriving well as are the trees planted on the northern entrance to Government House drive.

I am afraid that the trees planted on the 'ridge' to the south of the above plantations have had a bad time and few if any have survived.

A Mr. G.J. Hobbs of the Falkland Islands Dependencies Survey photographed the trees from the patch where the measurements were taken and when he left the Colony he took with him your address and promised to send the photographs to you when processed.

I do hope the above information will be of some use to you.

Extracted to 146/42/11

You enquired about the printing of your manuscript "Horticulture in the Falkland Islands" and I am happy to say that it survived the fire but the printing situation is even worse now than when you saw Henry Sedgwick in the United Kingdom last year. Two of our printers have recently left us for New Zealand and the staff situation is such that I cannot hold out any hope of completing the job for some time to come.

Kind regards,

Yours sincerely,

John Bound.

Polythene Planting Pots.

For the purpose of planting trees, the most efficient method I have yet come across is to prick out seedlings into polythene pots. These pots have no bottom. They are really sections of a polythene tube measuring about 5-inches from top to bottom and with a diameter of about 4-inches. As I hope that it will be possible to encourage an increasing number of people to plant trees in the Falklands, I would like to know prices of these polythene pots. Perhaps Mr. C.D. Young has someinformation on the subject.

BM 27.4.65
Ask Mr Young about this pl

NATURAL RESOURCES COMMITTEE

Use of Polythene Pots for Tree Planting

Interest in tree planting appears to be on the increase in the Colony and members will no doubt be aware of the advantages of planting out seedling trees without the necessity of disturbing their root system.

A method used by forestry departments in various parts of the world is to grow trees from seed in nursery beds and to transplant when only an inch or two high into polythene pots, known as "sleeves". The trees remain in these sleeves until they are ready to be planted out in the open ground when the sleeve can be quickly removed by slitting it vertically with a knife. It is possible to draw off the sleeve for re-use but this is a time-consuming job and is almost certain to result in some damage to the root system. Forestry departments regard the sleeves as expendable.

Sleeves were obtained for the Government House garden through the Crown Agents from a firm called Transatlantic Plastics Limited, 45 Victoria Road, Surbiton, Surrey (telephone, Elmbridge 5271) at a cost of 37/- per thousand, i.e. rather less than a halfpenny each.

Examples of trees growing in these sleeves may be seen by anyone interested at the Government House greenhouse.

14th July 1966

for Colonial Secretary

EXTRACT FROM MINUTES OF THE MEETING OF THE NATURAL RESOURCES COMMITTEE

HELD ON THE 18th JULY 1966.

9. Use of polythene sleeves for tree planting

Members noted the paper on this subject dated 14th July 1966. His Excellency explained that the growth of trees planted in these sleeves was without doubt better and quicker than those taken from ordinary nursery beds. The paper gave the cost of the polythene sleeves and where they might be purchased.

Arising out of discussion on this subject, Mr Miller mentioned that a visitor, Senor Lopez, had told him about a type of quick-growing shrub called "transparente" which was much used in South America as wind breaks. Sr Lopez had considered that this plant should flourish in the Falkland Islands.

Mr Blake said that he had purchased a machine for spraying round young trees with Gramoxone, a herbicide which killed off the weeds.

His Excellency mentioned that on some farms he had noticed that young trees are planted below the level of the surrounding ground, the object being to provide some shelter for the first years of growth. He doubted whether this was sound practice because water tended to stand around the roots. He advocated hessian bagging as a wind break or, where this is considered too expensive, shelter provided by a few sods on the windward side of the tree.

EXTRACT FROM MINUTES OF THE MEETING OF THE NATURAL RESOURCES COMMITTEE HELD ON THE 4th MAY 1967.

18. Hedging plant

H.E. mentioned the plant called "transparente" (myoporum laetum) of which specimens had been sent to him by Sr Lopez last year and were planted along part of the north boundary of the Government House kitchen garden. This plant was of New Zealand origin and had been successfully cultivated in South America for wind breaks. H.E. had sent some of the plants to Mr Miller, who said they were doing well at Roy Cove and he would be transplanting them shortly.

# EXTRACT FROM MINUTES OF MEETING OF THE NATURAL RESOURCES COMMITTEE

## HELD ON THE 18TH OCTOBER 1967.

### "TRANSPARENTE" (MYOPORUM LAETUM) AS A WIND BREAK

Mr Miller said that the transparente at Roy Cove had barely survived the winter and H.E. said that he had only about 30 left at Government House and they did not look very healthy. Mr Young said that the transparente at Hill Cove were looking well. He mentioned the New Zealand flax grown in Carcass Island as perhaps having a better chance of survival in our climate. It was tough and a good wind break.

# PUBLIC NOTICE

## Government Tree Plantation

In 1966 a considerable number of young pine trees were planted as a public amenity in the shelter of the western plantation on the hill above Government House. Growth has been most satisfactory.

Unfortunately these young trees have very recently suffered from the attention of some unknown person or people who have uprooted a number of trees and scattered them up to 20 yards away. This senseless act has served merely to destroy an amenity which could give pleasure to many people.

The assistance of the public is sought in preventing a recurrence of this vandalism. It would also be appreciated if parents would warn children that these young trees exist and should not be interfered with nor should branches of the mature trees in the plantation be broken.

Colonial Secretary's Office,
Stanley, Falkland Islands.

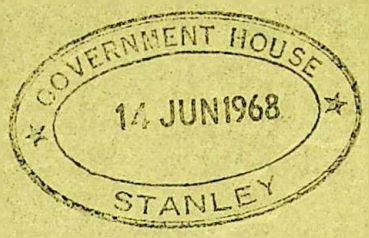
23rd January, 1968.

Ref: 132/38

EG

(J)

Casilla de Correo 1207
Montevideo, Uruguay
27 May, 1968




Sir Cosmo Haskard
Government House
Port Stanley, Falkland Islands

Dear Sir Cosmo:

Enclosed are two small packets of pine seeds which a friend collected for your use. Both of these species are indigenous to the Pacific Coast of North America. They are adapted to endure cold winds from the ocean.

Pinus muricata, Bishop pine, grows in a few small patches along the coast of northern California. It is similar to, but not the same as P. radiata (P. insignes), Monterey pine which I believe you now have in the Falklands.

Pinus contorta (shore pine) occurs along the Pacific coast from near San Francisco to Alaska. It should not be confused with the lodge-pole pine of the western United States and Canada which has also been called P. contorta. Some of the pines in the Falklands may be shore pine but I am not certain.

Like all pines, these species require the development of certain fungi on their roots for good growth. I suggest that you take a little surface soil and litter from under an already established forest of pines (not spruce or araucaria) to innoculate the seedbed shortly after the seeds have germinated.

The seeds should germinate rather promptly at about room temperature. Let us hope that you know someone with a green thumb who will take the trouble to try these.

When you receive this, Mrs. LeBarron and I probably will have left Uruguay enroute to our home:

421 W. Second St.
North Platte, Nebraska 69111 EE. UU.

We wish to thank you again for your kindnesses during our visit. Perhaps some day we may be able to return and stay a little longer. We send our best wishes to Lady Haskard and to you, and wish you all success in your work!

Yours truly,

Russell K. LeBarron

Russell K. LeBarron

C.S. file when read
LS 18/7
9th Lic

9 July 1968

Thank you very much indeed for your letter dated 27th May which I received on 12th June. I am sorry that you cannot receive an acknowledgement for some time as, due to the irregularity of our mails, this letter cannot leave here until 12th July.

I am most grateful to you for sending me the two packets of pine seeds from the Pacific coast of North America. We shall shortly be sowing the muricata and contorta seed and we shall be careful to innoculate the seed bed shortly after the seeds have germinated, using soil from beneath established pines as you have described.

I was interested to read that this soil should not come from beneath spruce or araucaria and I should be interested to know the reason for this.

I see from your letter that you are moving to your home in Nebraska and I hope that by now you have safely accomplished the journey.

I would like once more to thank you very much for your interest in the Falkland Islands and I shall hope to send you a line some months hence to tell you how your seeds are progressing.

LS

Russell K. LeBarron Esq.,
421 W. Second Street,
North Platte,
Nebraska 69111 EE. UU.

EXTRACT FROM MINUTES OF A MEETING OF THE DEVELOPMENT COMMITTEE

HELD ON 25TH JULY 1968.

(e) Tree planting publicity - After discussing this subject, members suggested that a radio programme was perhaps the best way of raising public interest in tree-planting. Members of the Committee could take part together with such other interested persons as might be willing to participate (names suggested: Mr. S. Miller, Mr. L.G. Blake, Mrs. D. Barton, Mr. D. Williams, Mr. H. Luxton and Mr. T. Braxton).

95

# EXTRACT FROM MINUTES OF MEETING OF DEVELOPMENT COMMITTEE HELD ON 17TH OCTOBER 1968.

132/38

2. Matters arising

(a) Tree Planting - The Committee felt that publicity on this subject should be encouraged and that the proposed radio programme on trees and tree-planting should now be produced.

It was recommended that the request for an agricultural advisory team to visit the Colony should include the suggestion that, if possible, one of the team should be someone able to give advice on silviculture.

75
96

Ref: 132/38

Colonial Secretary's Office,
Stanley, Falkland Islands.

1st November 1968.

Dear Sirs,

Radio Broadcast
Discussion on Trees

His Excellency The Governor has suggested that a broadcast discussion of about 15 minutes duration would be worth recording.

Accordingly you are all invited to take part and I shall be obliged if you would kindly telephone the Private Secretary at Government House letting her know whether you agree to do so. Sir Cosmo will also be taking part.

The recording will be made at the Studio at 2.30 p.m. on Thursday 7th November.

The suggestions for the programme are:

Duration: about 15 minutes, with another session later if popular.

Object: provide shelter for stock and for gardens.

Subject matter: brief historical references - early travellers mistaking tussac for trees - Bougainville's attempt at tree planting - Ross's ditto.

Work done at Hill Cove (Blake), Carcass, Roy Cove, Weddell, Port Stephens, Teal Inlet, Mount Low.

Stanley plantations - Government House, Stanley House, many individual trees.

Government forest officer of early 20's.

Dr. Gibbs' report.

Need for shelter - different methods.

Protection against stock - fencing, stones around young trees.

Varieties preferred.

Mycorrhiza.

Lack of moisture - high rate of evaporation.

Forestry Commission bulletin "Forestry Practice".

This is very long and allows for only one minute per subject. Some cutting will have to be done, and, it may be that a second programme will be necessary. Much depends on listeners response.

Yours faithfully,

(W. H. THOMPSON)
COLONIAL SECRETARY

The Hon. Mr. R.W. Hills,
R.W. Blake, Esq.,
R.D. Williams, Esq.,
T.N. Braxton, Esq.,
J.T. Luxton, Esq.,
STANLEY

Copies to: HE The Governor.
Director of Broadcasting.
Broadcast Secretary.

FA

97

DECODE.

# TELEGRAM.

*From* H.E. The Governor

*To* Blake: R.M.S. Darwin

*Despatched :* 5th November *19* 68 *Time :* a.m.

*Received :* *19* *Time :*

HOPE YOU WILL AGREE PARTICIPATE IN SHORT RADIO DISCUSSION ON TREE PLANTING AFTERNOON THURSDAY 7th NOVEMBER

REGARDS

GOVERNOR

Copy to A. Sloggie, Esq.,
F.I.C.

C.S. f.y.i & filing as discussed with HM 5/11

132/38

98

# REPORT ON EXPERIMENTAL TREE PLANTING 1940-1946.

by
H. R. EVANS.

It has been generally accepted that soil and climatic conditions in the Colony are totally unsuitable for the growth of any tree. Nevertheless, many trees are to be found growing successfully in cultivated gardens throughout the country, and the most prominent being Cupressus Macrocarpa which has generally attained an appreciable height. One or two Pinus sylvestris have reached fair dimensions but in the main, they remain stunted. Broad leaved species are somewhat shrub-like in habit but this fact should not be taken to indicate that such species are not likely to attain height. The shrub habit is not so much induced by wind, but by lack of pruning during early stages of growth. Undoubtedly, all these species are growing in cultivated soils and have been afforded shelter during their infancy, which is a factor contributing to their establishment. At the same time, none of the evergreen show any serious wind injury after having passed beyond the shelter boundary, and continue to grow vertically. This is especially the case with Cupressus macrocarpa.

2. Now these trees are not growing in dense groups but as isolated specimens, and therefore, it is almost certain that the most promising species of our gardens could be utilized for the formation of shelter belts on exposed situations throughout the country. Moreover, this suggestion has already been proved a possibility as a result of our experimental work. A shelter belt is simply a narrow belt of closely planted trees solely designed to protect farmsteads, stock, cultivated areas and less hardy trees, against wind. Once such shelter belts are established, it will be possible to establish other more delicate species, which, though suitable to our soil conditions, are unable to withstand consistent winds.

3. During April 1939, the Department of Agriculture decided to experiment with trees under forest conditions in exposed situations, the sole object of which was to locate a species, or number of species, that could be utilized in forming shelter belts. This, of course, was sound policy, because it is absolutely futile to experiment for other purposes when no other natural shelter was available. Until natural shelter belts can be established throughout the Colony, afforestation on any scale cannot be attempted.

## Provision of Stock and Nursery Treatment.

4. At the commencement, as may be imagined, our stocks of trees, cuttings and seeds were almost negligible. 700 cuttings of Populus alba were made from local stock plants. Plants cuttings and seed were donated by the Director of the Royal Botanical Gardens, Kew. With these and one small packet of Cupressus macrocarpa seeds, the venture was launched. From then on, our sources of supply extended and became continuous, so much so, that it was impossible to handle the quantities of seed with the existing propagating facilities. In addition to the donations from Kew, stocks of seedlings and seeds have also been donated by the Department of Forestry, Uruguay, and purchases have also been made from that source. Other donations of seeds have been received from the Forest Research Officer, Edinburgh; the U.S. Forest Service; the New York Botanical Garden; the New Zealand State Forest Service and the Newfoundland Department of Agriculture. Considerable purchases of trees, large and small have been also made from private sources in Punta Arenas, Chile, and the Director personally collected one thousand Nothofagus betuloids, and a small number of other species during a visit to Puerto Arturo in February, 1946.

5./.....

5. As suitable nursery space was unavailable, it was decided to utilize a small portion of Government House Gardens for the purpose. This area was sufficient to permit an annual output of approximately four hundred trees. Imported living species were usually large enough to plant in position immediately, thereby conserving nursery space for our own production.

6. Lack of mycorrhiza has been suggested as the possible cause of tree failures, especially among pinus. The failures of the past may have been due to absence of suitable mycorrhiza but efforts have been made to overcome this in the present experiments and seedlings have been imported from established nurseries or transplanted into beds previously used for imported tree seedlings.

7. If at any time, a new nursery were to be made, the subject of mycorrhizal inoculation of the seed beds would have to be considered.

8. Cuttings, with the exception of Willow which were planted in situ were always propagated in the nursery, and were allowed to remain thus for two years before planting in permanent positions. As it was not possible to transplant the rooted cuttings during the nursery period to encourage vibrus rooting, covering of the roots with a sharp spade, while the plants remained in the ground, was resorted to as an alternative.

9. All seeds were sown in seed boxes under glass, either in heated or unheated houses, depending upon the nature of the seed to be propagated; here the seedlingswere permitted to remain until an inch or two of growth had been made. They were then placed in an open cold frame to harden off. Often they remained thus for one year, after which time they were removed from the seed boxes, rogued, bunched, the roots reduced and then planted in the nursery where they would remain for two growing periods before planting in place. Cupressus were the only species receiving different treatment. They were kept under glass until they had made about six inches of growth and were then potted up into tins of not less than four inches in diameter, keeping them under glass if possible for a further fortnight before placing them in an open frame outdoors. Here they would remain for a further growing season, before being planted in place, but it was found that the complete removal of the plants from the tins was essential. Removal of the bottom only was entirely unsatisfactory.

10. By the winter and spring of 1941 we had one thousand and sixty-nine trees with which to commence our first plantation.

Plantations.

11. At the present time there is approximately three quarters of an acre planted with young trees on a variety of soil types. The first two sites had been portions of well grazed fields and carried a pasture of bent grasses. The third is commonage and carried a white grass-bent mountain berry pasture. All are situated immediately behind Government House.

No.1 Plantation. The site of this plantation was on a rocky hillside with a northerly aspect. The surface soil was composed of fairly well drained, consolidated peat with a gravelly, sandy clay subsoil and carried a good bent pasture. In places an iron pan had formed between the surface layer and the subsoil; this pan had, therefore, to be broken before planting could be effected. Preparation of the area was performed by digging trenches eighteen inches wide, one spade deep and three feet asunder in a north and south direction. However, this method of soil

preparation/. . . . .

preparation was not considered satisfactory because the trenches served to act as drains which were not required on such a slope and the depth of a spade did not open the subsoil. Therefore, at planting time, the pit system was adopted throughout; a system which permitted more thorough preparation of the actual planting position by breaking up the subsoil and iron pan where encountered. Basic slag and lime were applied to the strips immediately after their preparation at the rate of two ounces and four ounces per square yard respectively. The trees were planted three feet either way, using the triangular system.

No.2 Plantation. This site was prepared and planted during 1942, being parallel with the first plantation, though about 100 yards further west. The site was composed of peat and a fibrous loam, being better supplied with moisture than the original plantation. It carried a similar pasture. There was only one rock outcrop, and no evidence of pan formation was observed, but in the loamy area the subsoil consisted of close clay. A soil preparation experiment was carried out here; one third of the area being ploughed, one third trenched and the remainder pits. Though the results of this experiment upon the young plants seem to indicate that the ploughed portion favoured quicker establishment, it should be remembered that our soils do not permit easy access to the plough and even if they did, ploughing would be too costly for an afforestation scheme. No distinct advantages have been recorded as a result of the other two methods of preparation.

12. It is interesting to note that Cupressus macrocarpa and Cupressus lambertiana established themselves more quickly than in the first plantation even though the situation here was more exposed. In this instance, however, the improved soil and moisture conditions must be taken into account.

No.3 Plantation. Planting was commenced during 1944 but as the area enclosed covers about three and a half acres, some years must elapse before planting is completed, that is, if the present planting rate is not increased. The whole site is characterized by rock outcrops which provide considerable shelter in certain locations. The soil is of a raw peaty nature, not being so consolidated by stock as the two former plantations. The peat is deeper, in most places a good eighteen inches, and covers either solid rock or friable clay.

13. Soil preparation was carried out during the winter; this was considered imperative owing to the raw, peaty nature of the soil. The pit system was adopted throughout; but the planting distance varies, being influenced by the rocky nature of the soil, both above and below the surface. Heavy applications of ground limestone, at the rate of eight ounces per square yard were applied at the time of preparation, plus basic slag at the rate of two ounces; superphosphate was applied at the rate of two ounces per square yard at planting time.

Care and Management of Plantations. Whenever possible, but more especially during the first three years, the undergrowth has been removed from the immediate vicinity of the trees. At no time during the growing season has this important operation been omitted even though it was possible only once each season. Clearance of undergrowth is desirable at least twice during the growing season, preferably during November and February.

14. Staking was essential for Cupressus macrocarpa, but other coniferous species did not require such support. Ties, however, must be examined frequently, as movement of tree and exposure, very soon causes

them/. . . . .

them to break. Tarred string, was used for this purpose.

15. Pruning was attempted upon the deciduous species to encourage height but was discontinued to encourage branch development and the ultimate meeting of the branch system, both in the rows and between. By encouraging such development as quickly as possible, undergrowth will be destroyed and upward growth automatically assured.

16. Due to the favourable aspect of all the experimental plots, no drainage has yet been necessary; small drains will, no doubt, be required in the third plantation to drain small depressions which hold water during the winter months.

AVERAGE ANNUAL GROWTH RATES FROM TIME OF PLANTATION.

| Species | Plantation No. 1, 6 year period. | Plantation No. 2, 3 year period. | Plantation No. 3, 2 year period. | *Mortality during the first year in permanent location. |
|---|---|---|---|---|
| Cupressus macrocarpa. | 7 inches. | 9 inches. | - | 5.9% |
| Cupressus lawsoniana. | 1½ " | - | - | - |
| Cupressus lambertiana. | 2 " | - | - | - |
| Cupressus glauca. | - | 4 inches. | - | 45.4% |
| Populus alba. | 2 inches. | 2¾ " | - | 1.45% |
| Populus alba var Nivea. | - | 2¾ " | - | - |
| Populus nigra var sempervirens. | - | 2 " | - | - |
| Pinus radiata. | 4 inches. | - | - | - |
| Pinus contorta. | - | - | 4½ inches. | - |
| Pinus pinaster. | - | 5 inches. | - | 23.3% |
| Picea sitchensis. | - | - | 5 inches. | - |

*(Mortality is negligible to date after this period).

17. An interesting comparison is available of two C.macrocarpa grown from seed, and planted at the same time (1940), one in the shelter of a three-foot-six stone wall in cultivated soil, the other in exposed situation in virgin soil. The first made robust dense growth attaining a height of five feet six inches. The latter made three feet eight inches but with open growth caused by the retardation of shoots by wind.

18. The largest number of species under trial are coniferous; broad-leaved species being confined mainly to Populus and varieties. Of the forty three species under trial comprising eighteen genera only Cupressus macrocarpa can, with absolute certainty, be listed as entirely satisfactory for planting in fully exposed situations. Incidentally it would be of great value to experiment with varieties of C.macrocarpa some of which have a reputation of being quicker and more hardy. There are three other species which posses outstanding possibilities namely, Pinus contorta, Picea sitchensis and Pinus radiata sometimes known as insignis. As yet the two first mentioned are too young to enable any conclusive statement to be made, but since being planted in place during

1944, they have not suffered any serious injury from wind, and both appear to be vigorous and healthy. In addition, they both transplanted exceptionally well, so much so, that no deaths have been recorded among either species, which is all the more striking in view of the fairly raw, peaty state of the soil. Pinus radiata was one of the consignment of growing plants sent to us from Kew, and though growth has been exceptionally slow, the tree has withstood wind as well, if not better than any of the aforementioned named species. It is extremely robust and healthy. Its chief defect may be the earliness with which it commences growth, a defect which might make it subject to frost injury which opens the way to "die-back".

19. The Species which proved complete failures were:-

| | | |
|---|---|---|
| Alnus maritima. | Nothofagus antartica* | Tilia vulgaris. |
| Alnus ruguso. | Picea ormika. | Thuya orientalis. |
| Amelanchieri laevis. | Prunis communis. | Ulmus excelsior. |
| Acacia pauedo-acacia. | Populus carolina. | Ulmus alba. |
| Cupressus horizontalis. | Quercua robus. | Fagus sylvatica.* |
| Salix coerulea. | | |

(*Failure due, possibly, to injury by salt spray).

Experiments on Waste Sand Areas.

20. During the past three years simple trials have been carried out in the Yorke Bay area but none have been entirely satisfactory. In view of the fact that overseas, many such areas had been successfully afforested, it was decided to use Pinus pinaster as a trial plant because of its adaptability to such soil conditions. A hundred seedlings about six inches in height were conveyed to the area being planted in and around the base of the dunes. Unfortunately, few survived the transplanting, and the number of living plants gradually decreased and at the moment only one survives, which looks extremely healthy having made six inches of growth this season. Those planted about the base of the dunes gave most promise when first planted, managing to survive longer than those situated higher up. It must be said, however, that the site was ill chosen due to the considerable movement of stock in the vicinity which undoubtedly contributed greatly to the failure. Moreover, this particular species did not withstand transplanting at all well, the root system being incapable of retaining soil. Therefore, it should not be completely accepted that failure was entirely due to the unsuitability of the species, but rather to method of transplanting and stock. A much more satisfactory method of transplanting would be to put the seedlings into tins and when sufficient growth has been made, transplant direct from the receptacle, thereby eliminating undue root disturbance. Three pounds of P. pinaster seed was also sown at the same time. The germination was good, but of the thirty three groups located none can now be traced. No mycorrhiza were introduced to these areas and stock again probably had much to do with failure.

21. Further sowings of the same species were made in the same area a year later, during 1944, though in a different location believed to be comparatively free of stock. The seedlings have germinated freely, but give little promise.

22. No soil preparation of any kind was carried out in either location and no fertilizers were supplied. It is highly probable that if mycorrhiza had been introduced the results would have been more satisfactory.

23. Though Sitka spruce has not been tried in sand here, it has a reputation for adaptability on such areas. It is possible, that as the plant moves with a good ball of earth, establishment may be assured though fencing, to prevent entry of stock, is imperative.

24. The factors which appear to limit the types of trees that have become established in previous attempts at afforestation may be summarized thus:-

(a) Raw acid peat soils often impervious to surface water.

(b) Water-logging of prepared holes in which trees are planted.

(c) High winds which become laden with salt after passing over hundreds of miles of ocean.

(d) Lack of mycorrhiza.

(e) Late frosts, and low summer temperatures.

25. However, if soil is prepared, it is possible that some trees that grow under somewhat similar and rigorous conditions might be worth trying in future experiments. Among these may be included the following selected from Sudbury's (1907) Forest Trees of the Pacific Slopes.

| | | |
|---|---|---|
| Abies lasiocarpa. | Betula alaskana. | Picea canadensis. |
| Acer glabrum. | Chamacyparis nootkatensis. | Pinus muricata. |
| Alnus tenuifolia. | Cupressus pygmea. | Populus balsamifera. |
| Alnus sitchensis. | Larix larinina. | Populus tremuloides. |
| Betula kenaica. | Picea mariana. | |

26. In addition to these it is possible that trees which grow on the eastern coast of Newfoundland or Nova Scotia and are there subjected to heavy salt laden winds, may be found suitable in the Falklands. They would certainly be worth trying.

27. Skottsberg 1942: Recommends Pilgerodendron (Libocedrus) uviferum, Nothofagus antarctica, Drimys winteri, Maytenus magellanica in addition to pines and species of Betula and Sorbus.

(Signed) H. R. Evans

15th June, 1946.

Copied TB.

132|38

99

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
WASHINGTON, D.C. 20250

IN REPLY REFER TO

4100

January 29, 1969

Mr. W. H. Thompson
The Colonial Secretary
Port Stanley, Falkland Islands
(Islas Malvinas), South Atlantic

Dear Mr. Thompson:

We are sending to you by airmail two lots of seed of Picea glauca from Alaska. This seed has been inspected by the Plant Quarantine Division, USDA, and their certificate is attached to the package. Seed origin data is enclosed with the seed.

This seed was requested for you by Mr. John R. Camp, Executive Vice President, American International Association for Economic and Social Development, 50 Rockefeller Plaza, New York, N. Y.

We were not able to obtain seed from near timberline in 1968. But we will attempt to do so this year, and will also try once more to secure seed from trees growing along the Alaska coast.

This seed should be stratified in moist sand at 41°F for 30 days before sowing in order to ensure maximum germination. We hope you will succeed in obtaining enough seedlings for your needs, and would be interested to hear how the trees are doing after they have been in the field for several years.

Sincerely,

Reply ck 150

John C. Barber

FOR CARL E. OSTROM, Director
Timber Management Research

P. S. We are also sending seed of these same lots to Mr. Desmond King and Tim Blake.

100

3rd April, 69

Dear Mr Ostrom,

99

Thank you for your letter reference 4,100 of the 29th January, 1969 and the enclosure of two lots of Picea glauca from Alaska. It is extremely kind of you to send us seeds from time to time.

I am leaving the Falkland Islands but my successor, Mr J.A. Jones, has been asked to take a continuing interest and to let you have some future reports.

Yours sincerely,

COLONIAL SECRETARY

Carl E. Ostrom, Esq.,
Director of the Timber Management Research,
U.S. Department of Agriculture,
Washington D.C. 20250,
U. S. A.

SC

FOR THE NEWSREADER 15th May, 1970.

## TREE PLANTING

Listeners who are interested in tree planting are reminded that the month of May is the most favourable time for transplanting young trees. Although it is possible to transplant trees at various time of the year, undoubtedly the best time is when the sap is low, that is to say in May and early June.

It is worth remembering that trees get a better start if, at the time of planting, a few handfuls of earth from underneath old trees of the same species are mixed into the soil near the roots of the young trees.

Care taken in planting is well worthwhile. The following tips are worth remembering:-

(1) the earth level at the new site should not come higher up the stem of the young tree than it did before the tree was transplanted;

(2) do not plant a young tree at the bottom of a pit which will catch rain water. Trees do not like to have their roots standing in water;

(3) make certain that when you have carefully planted your tree the ground round about it is really well pressed down.

And it is worth remembering two other things. First, that your tree will grow better if it is given some shelter (hessian seems to be the most satisfactory shelter) and, secondly, however carefully you plant your tree this will be of no use if you allow stock to have access to it.

101

120 Pall Mall
London S.W1

7th April 1970

Dear Sir Cosmo

I have been making some enquiries of the Forestry Commission about the cost and availability of trees ready for planting in their final situation and the feasibility of shipping them to the Falklands.

They inform me that:-

1. They could supply pinus contorta at 170/- to ~~XXX~~-222/- and Sitka spruce at from 234/- to 258/- per thousand, depending on age and size. Leyland cypress, for which they quote in response to my query concerning cupressus macrocarpa, would cost 3/6 to 4/6 each.

2. The best time to lift trees for cold storage is February-March. They can be stored safely for six months at around 2°C., -2°C. being the lowest safe limit.

It seems therefore that we could get them delivered next February for shipment in the vegetable store of M.V. 'A.E.S.' They are packed in plastic bags containing 100. March or April should be quite a good time for planting out.

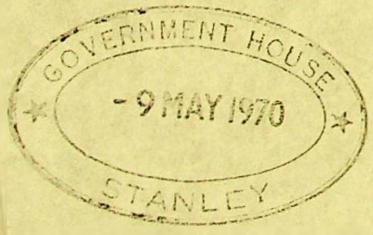
If you would like me to order any, please let me know in good time.

Yours sincerely

Bill

P.S. I am afraid this is too late for you, but I thought Government might be interested. The ~~att~~ original cost of the Sitka and contorta works out at only 2d - 3d each.

Reply at 102



102

12th June, 1970

Thank you very much indeed for sending me a copy of your letter of 7th April about young trees from the Forestry Commission.

101

The idea is certainly interesting and the original cost of the seedlings is reasonable but transport by sea and handling charges would presumably raise the cost a good deal.

We are having such good results from home grown macrocarpa here that I am a trifle diffident about going overseas.

In August we are intending to have a wireless programme similar to that in which you participated in October or November 1968. It should stimulate further activity.

CS

W.W. Blake, Esq.,
120 Pall Mall
London S.W.1.

CS. for appropriate file please,
Miss BV.
CS 12/6

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

**RECEIVED**

103

P2538 P4776/32/401381 500 11/66 R. Ward 843

| Number | Office of Origin | Words | Handed in at | Date |
|---|---|---|---|---|
| 167 | CARCASS IS | 14 | 1425 | 14.8.70 |

To

PRIVATE SECRETARY GOVERNMENT HOUSE STANLEY

TALLEST RADIATA PINE 13ft . GIRTH 8" ABOVE GROUND 24½"

BERTRAND

ENS

Time

C.S. for filing at Secretariat please. This broadcast was recorded in August 1970. I hope that before he leaves his colony J.T. Clement will take the chair at a follow up broadcast discussion. CA. 9/9/70

10L

NOTES FOR BROADCAST DISCUSSION ON TREES

J.T. Clement R. Ferguson.

Participants: Tim Blake, Roddy Napier, ~~Mrs Berry,~~ either Doly Williams or ~~Gen. Williams,~~ ~~? Harold Rumbelt,~~ ? Henry Luxton

We had a discussion on tree planting in November 1968 and it is thought it might be worthwhile having another.

No doubt that increased interest is being taken by many people.

Question ~~of~~ to Gen. or Doly Williams recording growth rate of macrocarpa and other trees at Government House.

Reference to success of Cecil Bertrand at Carcass Island with radiata (insignis) and Austrian pines. (data already asked for by letter)

Question to Roddy Napier regarding growth of his radiata and macrocarpa planted by Walter Felton.

Interesting letter from Bill Blake in England saying that the Forestry Commission can supply pinus contorta at between 170/- and 220/- per thousand and sitka spruce at from 234/- to 258/- per thousand, depending on age and size.

The Forestry Commission also quoted Leyland cypress at 3/6d. to 4/6d. each. It appears that this tree is similar to macrocarpa.

Question to Tim Blake. "I believe you are interested in getting out some of these trees. What have you got to say about that?" I see that Bill Blake quotes the Forestry Commission as saying the best time to lift trees for cold storage is February and March and that they can be stored safely for six months at around 2°C, with minus 2°C being the lowest safe limit. They are packed in plastic bags containing 100 and could come out by the February voyage of "A.E.S." in time to plant in March or April.

What about transport charges and handling charges?

Discussion on relative cost of raising seed locally or bringing seedlings from England.

United States Department of Agriculture, Forest Service, in January 1969 sent two lots of seed of picea Gauca from Alaska to the Colonial Secretary, to Mr Des. King and to Mr Tim Blake. Any comments on how these seeds have done?

General question - To make trees an economic proposition they need to serve a definite purpose. One very obvious purpose is to shelter gardens, but what experience can farmers draw on in connexion with shelter for stock. Will sheep in the Falklands make use of shelter from trees? What is the experience of Weddell Island (if Ferguson is in town invite him to this meeting).

seedlings

Reference to developments at Hill Cove, Carcass, West Point Island, Keppel Island, Roy Cove, Weddell Island, Port Stephens, Teal Inlet, Fitzroy (if J.T. Clement prepared to participate in programme invite him) Port San Carlos, San Carlos, Rincon Grande, Johnsons Harbour, Long Island. (and Berry)

Protection against stock by fencing. Laying flat stones around young trees to deter poultry and conserve moisture.

Varieties preferred.

High rate of evaporation means that in spring it may be necessary to do some watering.

Importance of shelter for young trees. Hessian sacking seems to give the best result and metal drums the worst result.

Importance of placing in each planting hole some soil from beneath existing successful trees, in order to transfer the mycorrhiza and ensure good growth.

Monsieur Rolland, Chief Administrator of the French Southern and Antarctic Territories had sent a packet of phillica seed from Kerguelen Island and this was being grown at Government House. Monsieur Rolland thought that it might provide a suitable windbreak plant in the Falklands (ask Ian Strange if I may borrow his Royal Horticultural Society dictionary of Gardening to look up details).

New Zealand hemp at Carcass Island has been planted out as a wind break round a paddock in the settlement and despite the dry weather when it was planted it appears to be taking root. It might be part of the answer for stock shelter.

Reference to early work done by Howell Evans and growth of plantations behind Government House.

Scots pines grow but are mainly decorative rather than providing useful shelter.

Factors against success in tree planting

(1) Raw acid peat soils impervious to surface water;
(2) Waterlogging of prepared holes;
(3) High winds laden with salt;
(4) Late frosts and low summer temperatures;
(5) Lack of mycorrhiza.

1892 to 1898 Mr Robert Blake was active planting at Hill Cove, one of the favourite varieties being Scots pine. In 1925 the Hill Cove plantations which had not done particularly well were largely replanted to extent of 10 acres and since that time have prospered.

Tree planting at Bluff Cove.

Letters received after the previous broadcast discussion from
Mrs Rose Stuart, Bluff Cove
Mr and Mrs Peck, Port Louis
Ronald McCormack, Port Howard
F.C.W. Newman, Port Stephens

Osmond Smith planted 30 macrocarpa in the paddock at Volunteer Camp.

By contrast to growth rate here two schizolobium trees planted by my wife and myself in Northern Nyasaland in 1960 were measured in 1968 and were then 30 feet and 25 feet high, with a girth of 3 feet and 2' 4" respectively.