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The Editor, Forest Notes.

Dear Sir,

When the response of a crop of two factors added together is larger than the sum of the responses to each separately, the two factors are said to have a positive interaction.

In the last issue of Forest Notes (Vol. 5, no. 2), Mr. Underwood discussed the Nitrogen-Phosphorus interaction, the behaviour of phosphorus in the soil and the effects of nitrogen additions on this behaviour. The addition of nitrogen generally increases uptake by plants of both soil and fertiliser phosphorus (Underwood).

This factor alone cannot fully explain the marked Nitrogen-Phosphorus interaction observed on the Gleneagle laterites, since the addition of nitrogen fertilisers on their own failed to produce a significant response in growth (Clifton). Even in the presence of adequate nitrogen, phosphorus deficiency limits plant growth.

It is important, therefore, to be able to explain part of the Nitrogen-Phosphorus interaction in some other way. The Law of the Minimum, proposed by Liebig, states that the amount of plant growth is regulated by the factor present in the minimum quantity and rises or falls accordingly as this is increased or decreased. This law implies that if two factors are limiting, or nearly limiting growth, adding only one of these will have little effect on growth, whereas adding both will produce considerable effects.

Both phosphorus and nitrogen are known to be deficient in soils of lateritic origin. The poor growth resulting from these deficiencies may be overcome by adequate fertilisation with a combination of both elements.

Frank Batini,

A.D.F.O.

The Editor, Forest Notes.

Dear Sir,

I read with some interest the views expressed by J. McCormick in his article 'Just for Appearance Sake' (Forest Notes, vol. 5, no. 2).

I would defend pure pine block planting along road sides as a form of window dressing particularly since I cannot agree that it lacks interest. During my time at the old Gleneagle Office it was a common occurrence for visitors to call in and enquire about pine trees in the Albany Highway Plots. All comments made by visitors were enthusiastic and complimentary.

The main reason for this I feel is that these blocks are different. Certainly they are out of context but with present high speed travel along the highways through the somewhat mono-chrome Jarrah Forest these plots catch the eye and create interest.

Conversely the eucalypt plots have not created the interest one would expect. They do not appear to be sufficiently different from the surrounding bush to be readily discernable from a car - perhaps with the introduction of a state wide speed limit this may change!

J. Robley

A POSSIBLE TIME-SAVER FOR BUSY FORESTERS

by G.S. McCutcheon

A very compact tape recorder now available makes it possible to dictate notes, memos, etc. while moving in a vehicle or through the bush.

Measuring $6\frac{1}{2}$ " x $2\frac{1}{2}$ " x $1\frac{1}{2}$ " and weighing less than 15 oz., the machine is complete with microphone plugged in on one end and is controlled by a four position switch placed for operation by the thumb. The positions are "Record", "Off", "Playback" and "Rewind". There is a spring loaded return from "Rewind" to "Playback", a stepped movement between "Playback" and "Off" and a sliding lock operating on the "Rewind" and "Off" positions.

The tape is in a reversable slide-in cassette allowing a total recording time of 44 minutes, and the machine is powered by three pan-light batteries. The recording level is such that extraneous noise does not become a problem. It is possible to use the recorder effectively while travelling in a Jeep on a corrugated road at 40 mph.

A padded plastic cover with carrying strap is a necessary accessory, while other accessories allow of typing while listening to dictation played by the machine, or to a re-recording on an office machine (from the same maker) equipped with a foot control.

The switch was found to be rather stiff, and at first difficult to operate without visually checking the position. In spite of the step in the movement it was found possible to overshoot the "Off" position to "Replay", which accident resulted in a considerable gap in the recording. This becomes an annoyance when replaying a series of comments.

ADVERTISEMENT OF THE YEAR

The following was taken verbatim from the "Inverness Courier" and is a good example of the peculiar skills required by the sawmilling industry in Scotland.

SAWMILLER

required for friction feed circular rack bench, 1st November or before.

Must be able to maintain and sharpen himself. Good hourly rate and bonus. Excellent conditions, five-day week. House with 3 bedrooms free. Good opportunity for right man.

For further particulars apply;

F. OSLEN

Fasnacloich Sawmill, Appin, Argyll.

Contributed by J.A. Robley

TO BURN, OR NOT TO BURN

by L.D. O'Grady

Despite the tremendous losses, both in life and property, caused by uncont-rolled fires there are still many learned, and unlearned, people who for various reasons are opposed to controlled burning.

While the main aim of controlled burning is a precautionary measure against destructive summer fires, the practice is also justified on the score of the improvement brought about in the forest environment and tree growth.

In 1947 the annual spring butning of the Banksia sand plain bush external to the Collier Plantation was commenced and has been carried out annually as part of plantation protection against external fires. Though much of this original country is now occupied by houses a section of approximately 50 acres is still more or less in its natural state. A point to remember is that when an area is burnt over yearly the burn is usually patchy - i.e. a patch burnt this year may not burn the following year, or the year after that, but would burn probably every third year. Under these conditions it is rare to scorch the foliage of the dominant species.

Results over the 30 years show a noticeable increase in Banksia stocking and a more striking and prolonged display of wildflowers. The Headmaster of the local school was so impressed with the wildflowers that he requested we refrain from further burning off. He was still not convinced when told that the healthy trees and the floral display were the result of regular Control Burning. This particular teacher, a very keen nature lover, has left approximately 5 acres of the School Grounds as a native garden. This has been left unburnt, with the following result - after almost 6 years the area is a dangerous fire hazard, scrub growth is dense, and withered looking, and objectionable species tend to flourish at the expense of the smaller floral types. It is also interesting to note that all the Jarrah Trees on the reserve have lost approximately 90% of their crown, are stag-headed, and the trees on the way out.

To summarise - 30 years of annual control burning has resulted in a healthy stand of Banksia and associated species. The scrub has been kept under control and healthy with the result that there is an excellent floral display during most parts of the year.

By contrast - an area not burnt is in a poor state, and the Jarrah trees are dying out. The dense sepub growth has no coubt taken possession of the site to the detriment of the large trees.

It was proved that Pines could not compete with native scrub and it appears that this could also hold true for the Eucalypt.

W.A.'s BIGGEST TREE STOLEN TO WIN BET

MANJIMUP (W.A.). - Five young men admitted in court here today they had taken Western Australia's king jarrah tree - the biggest tree in the State - for a bet.

The five were charged with being in possession of a 150 ft. high jarrah tree suspected of being stolen.

The tree has a girth of 30 feet and contains enough timber to build several houses.

It is on a special one-acre reserve two miles east of here, and for years had been a major tourist attraction.

Police told the court the Manjimup tourist bureau director had complained the tree was missing when he visited the reserve last week.

All that remained was a halo 40 feet deep and 50 feet in circumference.

Subsequent inquiries had led police to the home of one of the defendants.

Planted in his backyard was a jarrah tree 150 feet high and 30 feet in girth.

The defendant had at first denied it was the missing king jarrah claiming he had planted it himself as a lad.

When told that neighbours had said the tree was not there three days previously, he admitted that he and four companions had taken it for a bet.

 Λ sixth man had be: them they could not dig it up and remove it in six hours. Actually it had taken them seven hours, so they lost the wager.

The magistrate sail the removal of the tree was an act of vandalism which was irreparable.

Nobody knew how to fill in the bloody great hole it had left.

The above report is an extract from a limited circulation Eastern States Paper and shows how facts can be distorted to make interesting reading.

ONE BRIEF ACT

Scene - A clearing in the forest on which stands a wooden house with a tin roof: a ladder is propped up against the gable and a forester in shirtsleeves atop the ladder is engaged in fixing a sheet of tin which has come loose. As he works he sings; keeping time with his hammer.

FORESTER GREEN "Tis a wonderful country to practice economy in" - (Tap Tap Tap).

(Enter below; a stranger, city clad and wearing a scarlet cravat).

MEPH. "Hello there !"

GREEN "Who the divil are you?"

MEPH. "Right first time."

GREEN "I'll be down in a minute" (carries on working and singing.)

"Tis a wonderful country to study asthronomy in You can lie on your back an' see stars through the roof."

(Tap Tap Tap)

"That's fixed it; Here I come" (descends ladder) "You said you were

MEPH. "Mephistopheles."

GREEN "You don't say. Now isn't it strange the people yez would be meeting in Austhralia. Surely you are travelled a long way from Scotland."

MEPH. "My flock is scattered these days and it is a hard job to keep up with them all."

GREEN "Haven't you any assistants to help you out?"

MEPH. "I did have a few but had to get rid of them; not quite with it you know."

GREEN "And why was that?"

MEPH. "They simply couldn't select recruits with a high standard error."

GREEN "And who might they be?"

MEPH. "O, just people who considered themselves beyond the average. In the old days we called them the 'unco guid'. (Pauses, sits down on a log.) "I'll rest here for a bit."

GREEN "By the way, would you have many Irishmen down in "

MEPH. "The Netherland? No. We did have a number of your countrymen at one time but they believed in fairies."

GREEN "And saints."

MEPH. "Saints and fairies alike, it's all one to the Irish."

GREEN "And Austhralians?"

MEPH. "Yes, we have quite a number; in fact, they are on the increase."

GREEN "You tell me; and how do you account for that?"

MEPH. " Decimal currency."

GREEN "Explain yourself."

MEPH. "It's quite simple really, once an Australian had one note now he has two and fancies himself richer and therefore better than he was. Anyway, they do enjoy their stay with us; the climate suits them admirably. (goes on) You are by profession?"

GREEN "A forester."

MEPH. "A forester-salesman."

GREEN "No, just a forester; I don't sell anything."

MEPH. "Don't you sell timber?"

GREEN "No, the owner does that: sure the last forester who sold wood from this place got tramped."

MEPH. "I understood that all employees should speak well of their firm."

GREEN "I'm not with you."

MEPH. "I mean by reason that every employee should be a good salesman in that he speak well of the establishment he is part of."

GREEN "Tis divils reasoning. Hm! I beg your pardon, sor."

MEPH. "That's alright, I'm used to it."

GREEN "To my way of thinking, a good firm would not employ a bad salesman."

(Bullseye: a native rushes on)

BULL. "Boss! Boss! him big fire all alonga track; him hop over all time, plenty plurry hot."

GREEN "Where?"

BULL. "Him down alonga deep creek, boss. (Points in direction from whence Mephistopheles has recently come.)

GREEN "Alright Bullseye, I'll see to it. Go and fetch Rob and tell him to start the pumper."

(Bullseye runs off. Green, after sounding alarm, goes off.)

MEPH. (Left alone - grinning to himself.) "An odd fellow, but for his reasoning he would be damned."

CURTAIN

J. McCormick.

RESULTS OF THE 1967 PROMOTIONAL EXAMS

Forest Notes congratulates the following officers who were successful in the 1967 promotional exams:

Forest	Guard	Bar

- C. Broadbent
- W. Edgecombe
- J. Evans
- J. McKenzie

Forest Ranger

- N. Belton
- T. Court

Assistant Forester

- J. Robson
- N. Bukelis
- N. Rutherford
- H. Deadman

NORFOLK ISLAND PINES AT HAMEL NURSERY

No issue of 'Forest Notes' would be complete without a recent measurement of a massive tree somewhere in the State. For those readers bored with reports of giant Karri and Jarrah the following statistics will be of interest.

Two Norfolk Island pines (Araucaria excelsa) growing near the nursery potting shed were measured up when felled.

Tree No. 1. Felled Feb., 1960.

- 1. Planted about 1902.
- 2. Height to tip 100 feet.
- 3. Height to 4" crown, 91 feet.
- 4. Midgirth of 1st 10' length, 7'10" (Presumably 0.B.)
- 5. Volume of marketable timber 209 cubic feet.

Tree No. 2. Felled January 1968.

- 1. Age about 66 years.
- 2. Height to tip 109'.
- 3. Mid girth at 53'6", $4'8\frac{1}{2}$ " 0.B.
- 4. Log lengths: 3×26 ' and 1×17 '10" (total 95'10").
- 5. Volume of marketable timber 0.B. 175 cubic feet, representing an M.A.I. of approximately 32 c. ft./annum.

(Data contributed by A.J. Hart)

HIGHLIGHTS OF EASTERN STATES - NURSERIES INSPECTION

by A.J. Hart

The following brief notes are a summarized form of the main features of a recent visit to selected Eastern States nurseries by the writer in August of 1967.

N.S.W.

Commercial nurseries of very high standard; electronic eye control in mass production methods of seedling production of flowers for resale. U.C. system throughout and seed sterilisation before sowing.

Government and semi-governmental nurseries also of high standard but largely manual labour including semi-incapacitated. Muswellbrook the best seen in the N.S.W. Forest Commission output, gradually increasing, at present 60,000 tubes per season. Methyl bromide sterilization of soil.

A.C.T.

Drought has precluded plantings for four years in a row and nursery problems include weeds and soil pathogen control. Yarralumla nursery has been upgraded as regards procedures since 1964 with U.C. being introduced more fully and glass house misting propagation methods more widely used. Mr. Peter Satchell, a knowledgeable and capable technician, has some new ideas forthcoming.

VICTORIA

Commercial nurseries the best in Australia without doubt as regards hygiene.

Commission nurseries about the same standard as our own but are looking to glass houses for further progress in the introduction of tip grafts and clone propagation in glass houses of elite tree material.

A.P.M. has moved into a new nursery site selection in "sterile" areas away from weeds and Rostile pathogens in remote, poorer class forest areas. Soil sterilization will be used with aerial fertilizing and mechanized weed control if required and mechanical lifting and pruning.

S.A.

Progress in Departmental nurseries is looked for in flying nurseries in the second Valley area innoculated with pine sawdust to overcome pathogens, weeds and wild life. Top pruning practiced in P. radiata and P. pinaster which appalled me! Old nurseries similar to Hamel have similar probelms but are accentuated by salt problems in water supplies, watering for 4 - 5 hours being necessary to leach out toxic salts.

Commercial nurseries equal to any seen in the Eastern States but are troubled with salt in water and are trying to get bore water at least of uniform salinity. Mist propagation also used with economic results.

Summaries of Part 1. and Part 11 of the report with recommendations are included herewith.

Summary of Part 1.

- 1. The concept of plant growth under U.C. or controlled environment conditions is outlined.
- 2. Apparent principles of methods and organisation in nurseries is outlined in association with (1) above.
- 3. Brief resume given of current practices in container seed treatment, glass houses, provenances of Euc. camaldulensis, fertilizer management, salinity problems and large scale field nurseries operations.

Summary of Part 11.

- 1. Current practices in fungicide and pathogen control in E.S. nurseries is outlined.
- 2. Weed control problems are outlined with means of control.
- 3. Watering systems currently being used in some E.S. nurseries are outlined.
- 4. Some pathological and general notes on mycorrhiza are included with a method of composting sawdust.
- 5. Species worthy of trial for hedge rows and salt tolerance are included.
- 6. Horticultural courses available are commented on.
- 7. A comparison of E.S. nurseries with W.A. standards is made.

Recommendations.

- 1. Precincts of the Hamel pottery shed, paths and standard areas be sealed with a bituminous compound.
- 2. Further details be obtained to guide the programmed introduction of a steam sterilization unit and glasshouse at this nursery, purchase being subject to inspection by Plant Engineers.
- 3. Technical details and costs be obtained with a view to procuring a soil mixer blending machine.
- 4. Gradual replacement of earthenware pots be carried out with suitable types of disposable plastic pots; this is rather dependent on current tests and implementation of recommendations.
- 5. If plantation policy warrants the expansion, further investigations be made with a view to procuring the "Pottall" machine for filling collapsible plastic bags and tubes; otherwise the current method be continued.
- 6. The Department pay tuition and correspondence fees of any nursery supervisor prepared to complete the courses as set in paragraph 3 page 18 of the report.
- 7. Further experiments be carried out in the use of soil sterilants and equipment to perform this task efficiently.
- 8. Further trials with plastic containers be carried out to determine the most suitable pot for local purposes.
- 9. The medium sized methyl bromide gas dispenser be obtained to obviate risk of injury with current practices and improve quantities of soil which can be readily fumigated.
- 10. Inspection and procurement if considered suitable of "Perma-Rain" double barrelled filter for installation in the water mains reticulation of the nursery.

For anyone interested, this complete report is to be lodged in the Library.

FIREBREAK

by J. McCormick

Plantation fires I'm sure you'll agree Are never a pleasant sight to see And must be stopped at all costs But unless we find a firebreak tree I fear that all may be lost.

There's Populus black and Populus white Perhaps the sad Cypress would be just right There's Cedar of Lebanon, Tamarix - Yew And P. euphraticus that C---- well knew And then the three haiches, Yet so slow to grow Hoak, Hash and Helm as you very well know, And Pinus postoffus the telegraph pole With narry a branch or a twig on its bole An excellent break tree, so it is said Because of the lack of litter it sheds.

However - let's shun the ridiculous and let us see If we can find the sublime tree
For sandy environments down on the plain
And contour firebreaks on the Darling Range.

ADVICE TO SENIOR OFFICERS

HOW TO KEEP YOUR TYPIST HAPPY

Don't dictate everything at once - dole it out a little at a time, say, every hour or so. Keep her on the run.

Every so often, give her a little dictation at five to five, just to show her who's boss.

Make a few long-winded telephone calls while she's sitting there.

Never make yourself understood when you can avoid it. Swallowing every other word helps, as does chewing on a pencil, holding your hand over your mouth, talking to your belt buckle.

Another thing - just because you've already said something one way, doesn't mean you can't change it. Make full use of inserts, crossouts, deletions. And, when her notes look as if they've been through the wars, ask her to read them back ... just for laughs.

If you feel grouchy, why hide it? Hive her a piece of your mind regularly, just on general principle. A good way to get rid of pent-up emotions is to revise all those nicely finished letters on your desk. Ink in all the corrections you want to.

Never spell out unusual names. And every once in a while throw in a foreign phrase or two without blinking an eyelash.

When she asks questions beat around the bush, and make it clear that you don't encourage that sort of nonsense.

And, when you're in a suitable mood to play a really funny joke, dictate a long, long report ... and don't tell her you want an extra carbon until after it's finished.

Taken from: Coresearch, no. 107, Feb. 1958.
