OSMOCOTE-NUTRICOTE TRIAL

FINAL REPORT

R.G. Matthews 1983
TITLE Osmocote-Nutricote Trial

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Report & Distribution approved by: (Signature) (for Regions - Silviculture Office) (Typed)

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Objective

To compare growth resulting from the use of Osmocote 13-13-13 (9 month release) compared to standard Osmocote 18-6-12 (9 month release). To compare growth with a new slow release fertilizer Nutricote 14-14-14 (4 month release) with Osmocote 14-14-14 (4 month release).

Experimental Design

Each treatment consisted of 3 PSB 211 Styroblocks. Seedlots tested were Spruce 1831 and Lodgepole pine 2620.

Treatment 1 (Control) was standard 3:1 Peat-vermiculite containing
- 3 kg m\(^{-3}\) 12 mesh and finer Green Valley dolomite lime
- 6.5 kg m\(^{-3}\) Osmocote 18-6-12 (9 month)
- 0.13 kg m\(^{-3}\) FTE 503 trace elements.

Treatment 2 Same as treatment 1 except Osmocote 18-6-12 was replaced with Osmocote 13-13-13 (9 month) at 6.5 kg m\(^{-3}\).

Treatment 3 Same as treatment 1 except Osmocote 18-6-12 was replaced with Osmocote 14-14-14 (4 month) at 5.85 kg m\(^{-3}\).

Treatment 4 Same as treatment 1 except Osmocote 18-6-12 was replaced with Nutricote 14-14-14 (4 month) at 5.85 kg m\(^{-3}\).

Observations were made of general vigour and colour. Samples were assessed for dry weights at the end of the growing season.

Results

Bar graphs of final dry weights are attached. Vigour of Osmocote 13-13-13 in pine did not keep up to other treatments for the whole season. Nutricote also was depleted before fall but it lasted longer than the 4 months anticipated. Treatments that became depleted were then supplemented with soluble fertilizers.

In pine, the Osmocote 13-13-13 did not last as long as expected and all comparative growth was reduced. All other root weights were good, but height growth of Nutricote was considerably less than the 4 month Osmocote.

In spruce, root weights were low and comparatively equal. Heights were acceptable and relatively even in all treatments.
Conclusions

Osmocote 13-13-13 did not last as long as it should have in pine trials, and it would not be considered at present as a substitute for Osmocote 18-6-12.

Nutricote is a new product in competition with Osmocote. Both are temperature dependent in their release rates and release times are calculated on 22-25°C soil temperatures. Under outdoor growing conditions, both products apparently lasted more than 4 months.

The Nutricote formulation performed acceptably compared to Osmocote. Many release times are available which will be useful in new cropping trials.

G. Matthews