1993 TRIALS - SAANICH TEST NURSERY

SUBJECT: LONG TERM SLOW RELEASE FERTILIZERS

Background

Trials conducted by Ralph Winter of Silviculture Branch in the 1980's demonstrated good growth results when high rates of Osmocote® 18-6-12 (8-9 month) were incorporated into the growing media (stock grown at Saanich Test Nursery). Grace Sierra is now producing different Osmocote formulations with longer release times. Esso Agricultural Chemicals in Edmonton is producing some slow release products (coated urea). These products will be tested in a nursery trial to test the degree of release during the initial growing season. They will then be outplanted in nursery field beds to assess growth differences during the next 2-3 years. The outplanting phase of this trial will be conducted in cooperation with the Regeneration section of Silviculture Branch (Rob Bowden). A seedlot has been chosen from the MacGregor area of Prince George District. Rob Bowden will oversee the planting of the trial stock in an appropriate area in the spring of 1994.

Trial Work Required

The proposed treatments for this trial are:

1. Control - no slow release fertilizer in the growing media
2. Osmocote 16-7-12 (10 month release at 90 degrees F soil temperatures) - low rate
3. Osmocote 16-7-12 (10 month release at 90 degrees F soil temperatures) - high rate
4. Osmocote High N 24-4-6 (14 to 16 months) - low rate
5. Osmocote High N 24-4-6 (14 to 16 months) - high rate
6. Esso Chemicals LNA-775 44-0-0 (2 years) - low rate
7. Esso Chemicals LNA-775 44-0-0 (2 years) - high rate
8. Esso Chemicals LNA-801 44-0-0 (3-4 years) - low rate
9. Esso Chemicals LNA-801 44-0-0 (3-4 years) - high rate

Seedlot: Sw 04205 B2\DPG\950 m.\80% germ.\516 s/g.

The trial will be grown as 1-0 stock in 313B's for spring 1994 planting. Standard 3:1 peat:vermiculite growing media will be used. Static height measurements will be taken throughout the growing season to produce growth curves. The growing media will be monitored regularly for pH and conductivity. Samples for foliar analysis will be taken three times during the growing season. At the end of the growing season, a morphological assessment will be conducted on a random sample. Samples will also be lifted for root growth capacity testing, Prince George District outplanting and nursery field outplanting in the spring of 1994.