SX 82508 V

PLoughing as a method of site improvement in northern Vancouver Island

Working Plan

F. Nuszdorfer 1982
Working Plan For a SX Trial

Title: Ploughing as a method of site improvement in northern Vancouver Island

Introduction: In northern Vancouver Island there are extensive areas of decadent old growth of western hemlock and western redcedar. Regeneration on these ecosystems is often poor and there is little record of planting of western hemlock on them. In contrast, ecosystems on similar topographic positions and with similar soil characteristics that have been disturbed by windthrow of the previous forest regenerate more rapidly and are much more productive. The soils of these windthrown ecosystems have a lower bulk density and increased incorporation of organic matter than those of the undisturbed ecosystems.

It is possible to simulate windthrow on these undisturbed ecosystems with a back-hoe. The effectiveness of this method in improving survival and growth of planted western hemlock must be evaluated.

Objective: To monitor growth of western hemlock after planting it on areas that have been disturbed by back-hoeing; and to determine foliar nutrient changes

Methods: An area that has been disturbed by a back-hoe and planted to western hemlock in the spring of 1981 will be compared to an adjacent one in the same block that has not been treated but has also been planted. In both areas sixty trees will be permanently marked for sampling for height growth. In addition, nine trees from each area will be destructively sampled and analysed for major and minor nutrient elements.

Height growth and foliage sampling will be done annually for three years and then at 5, 10, and 20 years

For the first sample survival will be determined on the basis of 400 trees. After this it will be based on the permanently marked sample trees.

Duration: Intensive for three years, minor monitoring to 20 years

Budget: First Year

1. Researcher salery two weeks 1000
2. Technician salery two weeks 800
3. Travel Port Hardy/Vancouver 400
4. Vehicle lease 250

Total 2450
Second Year

1. Researcher salary one month  
   2600
2. Technician salary two weeks  
   900
3. Travel Port Hardy/Vancouver  
   450
4. Vehicle lease  
   300

Total  
   4250

Third Year

1. Researcher salary one month  
   2600
2. Technician salary two weeks  
   900
3. Travel Port Hardy/Vancouver  
   450
4. Vehicle lease  
   300

Total  
   4250

Total for three years  
   10950

Additional years

Minimum levels similar to other years (2 and 3)