CANADA

Timber Talks

Department of Fisheries and Forestry

Prepared by V. H. Phelps, Forest Research Laboratory, 506 W. Burnside Road, Victoria, B.C.

Can Root-rot be controlled? No. 67

The extensive loss in coniferous stands from butt rot and root decay, after freshly cut wounds and stumps have been colonized by the airborne spores of the fungus Fomes annosus, is well known. Current forest management practices are directed toward thinning immature stands to increase yield or reduce rotation age, but such silvicultural treatment increases the number of potential infection courts and consequently increases butt rot and root decay. To minimize the potential loss from this disease-producing fungus, methods for its control were investigated.

Trials were initiated in August and October, 1967, and September, 1968, to determine the efficacy of various chemicals as protectants against infection from the fungus. Douglas fir and western hemlock trees were felled and the stumps immediately treated with a chemical and an inoculum of the basidiospores of the fungus. Chemicals applied in the 1967 trials were two forms of borax and urea, copper oxychloride and sodium nitrite; in 1968 Timbor, 2 formulations of Permatox, 2 different forms of borax and 6 forms of urea were used. Chemical and inoculum solutions were poured on the stumps in the first year, and sprayed on in 1968. Six months after treatment, discs were cut from the stumps and examined for infection.

Results from all trials were so variable that specific recommendations for preferred treatment were not possible. Spraying seemed preferable to pouring as better stump coverage was usually obtained, less solution was required and application was easy. In all treatments, except one, the incidence of infection was reduced. In the 1967 trials, borax, applied either as a dry powder or as a 10% suspension in water, gave best results and urea the poorest. Results from the 1968 trials suggested that the most effective protection for hemlock stumps are Timbor, Permatox and a 10% solution of urea; a 20% aqueous solution of urea pellets and solutions of borax in glycol seemed best for Douglas-fir stumps.

Comparative rating of effectiveness of treatments was calculated by considering all data. Borax applied as a dry powder, in aqueous or in glycol solution, Timbor and a 20% aqueous solution of urea pellets were considered to be the most effective. The variability in results emphasized the need for further investigation.

REPORT: Experiments in Control of Annosus Root-rot in Douglas fir and western hemlock. L.C. Weir. Forest Research Laboratory, Victoria, B.C.