

over the experimental plot in nine plantation plots (see map), varying from one-tenth to one-half acre in extent, so located as to secure representative conditions of soil, ground cover and shade.

A recount of these plants, made in September, shows 71 per cent. living, 17 per cent. dead. The remaining 12 per cent. could not be found. Possibly some of these "missings" hidden beneath slash may survive and increase the percentage of survivals. Careful records of these plots have been made.

Four one acre permanent sample plots, one each on a strip cut to 6-inch, 8-inch, 10-inch and 12-inch diameter limit respectively, were surveyed and mapped; every tree and sapling thereon numbered and recorded as to species, diameter breast high and crown condition, and the location shown on the map.

The primary objects of establishing these plots are to determine the effect of the thinnings:—

- (1) on the rate of growth of the remaining stand.
- (2) on the wind-firmness of the remaining stand.
- (3) on the rate of reproduction.
- (4) on the death rate.

It is proposed that these plots be measured and measurements recorded and compared every fifth year hereafter until at least four records have been taken.

A strip survey was run in which all trees, free, suppressed, dead or wind-fallen since the cut, and all stumps on strips cut to 6-inch, 8-inch, 10-inch or 12-inch diameter limit, were calipered and recorded. In all, 44.2 acres, principally in the coniferous type, were included in this survey.

From the data thus obtained, and by the use of the volume table previously mentioned, it is intended to determine:—

- (1) the volume of timber that stood on the various strips before the cutting;
- (2) the volume removed at cutting;
- (3) the percentage volume still standing and
- (4) the percentage of wind-fall since the cutting.

At the time the strip survey was being run, an estimate was made of the ground covered by slash under the various degrees of culling. This will be of interest in connection with the study of the progress of the natural regeneration.

The white spruce seed crop of last fall was a bumper one, and it was planned to sow a few acres with this species in various manners and locations on the plot, comprehensive records of these seedlings to be taken for future comparative studies. Frost and snow, however, intervened. The seeds are now on hand for the fulfilling of these plans at an early date next spring.

RECORD OF THE GROWTH OF A BALSAM POPLAR

THIS tree grew in a mixed bush of poplars, ash, soft maples, elms and the customary under wood in a swamp spot, in the lumber yards of McLachlin Bros., Ltd., Arnprior, Ontario. The entire grove covered about eight acres of ground. Several other poplars grew around the same spot as the one here referred to, reaching a diameter of from 20 to 25 inches two feet from the ground.

The land upon which these trees grew was cleared absolutely of all trees and underbrush of any kind under the supervision of the undersigned in the autumn of the year 1870. The tree was felled in December, 1920, and produced three saw logs, two of them 16 ft. long and the top

log 12 ft. long, 14-inch diameter at top end. The wood in the tree was sound without sign of rot anywhere.

Growth.

1872-1877	.....	3	inch diameter
1877-1882	.....	6¾	" "
1882-1887	.....	10	" "
1887-1892	.....	14¼	" "
1892-1897	.....	17¾	" "
1897-1902	.....	19¾	" "
1902-1907	.....	21¾	" "
1907-1912	.....	23¾	" "
1912-1917	.....	24¾	" "
1917-1920	.....	25½	" "

ARMON BURWASH.