

humus or duff catches, the fire often runs long distances under ground, and should this occur the only remedy is to make a trench deep enough to get through this layer.

Fires are extremely difficult to control on cut-over lands where tops and branches lie on the ground, and, drying out, offer inflammable material which, once ignited, burns with great fury and rapidity. Two methods of dealing with this question are proposed; to pile the tops and branches into heaps and burn them under safe weather conditions, and the other, to lop off the branches from the tops so that the debris will lie close to the ground and keep damp and rot rapidly. The former of these two methods is entirely out of the question in Eastern Canada, owing to the expense and the fact that the tops and branches cannot be piled until the snow is gone and by that time the choppers have left the woods.

The second plan seems more practicable as only the branches on the sides of the tree top need to be cut off, and as the snow melts the crown of the tree will settle down with its branches lying flat and close to the ground. No cost data for this sort of work have, to the best of my knowledge, been gathered.

That the fire risk can be practically eliminated is shown by the record of the past year in the St. Maurice Valley where in spite of the exceptionally dry weather no fires of any size have occurred and the loss has been practically nil; this, too, in spite of the construction of the Transcontinental Railway. One large concern with limits approximating 1,900 square miles has had only fourteen fires during the season, all but one of which were extinguished without damage, and that one swept through land which had been cut over, but with very little damage.

The Laurentide Paper Company, Limited, during the past season has used the following system of protection with excellent results. Its territory has been divided into districts through each of which a waterway existed practically dividing them in half. Two young men, from either a forestry or engineering course, with canoe, tent, sleeping bags and cooking outfit have patrolled each of these districts making complete round and return. When smoke was discovered or a fire found it was extinguished at once if possible. If not, aid was summoned. An inspector made the round of all the districts continuously and saw that the rangers did their duty. The results have been excellent, due to the intelligence and faithfulness of the men employed. All fires were stopped before becoming serious or doing much damage, and the Company regards highly, and will continue, this form of insurance.

However, the danger for this section, i.e., the St. Maurice Valley, is yet to come. As soon as steel is laid on the Transcontinental and the trains commence to run fires will be started by the engines, as they were along the line of the Q. & L. St.