

Per mile:—

204,800 lineal feet props.

192,000 feet B. M. lumber.

The total probable waste per square mile is therefore:—

366,400 lineal feet mining props.

480,000 feet B. M. lumber.

The revenue to the government from the above at current stumpage rates would be \$295.75 per square mile. The value of the wasted timber at current market prices is \$9,012 per square mile.

Logging in the east slope should be under the superintendence of some one who would exercise his judgment in following the ideas here outlined. The first care in logging a protective forest such as that on the east slope should be that the forest cover should never be removed on steep slopes where too rapid run-off or erosion would result in damage. In all situations the removal of the timber should be followed by as rapid a reproduction as possible. Fortunately both objects are capable of practical solution. It has been mentioned that it may be found advisable in the Crow's Nest valley to grow spruce for lumber and pine for mining props, ties and polewood. In the valley heads and in the steep and usually moist slopes, where a protective forest is needed and where spruce grows naturally, spruce may be maintained. It will be cut to a diameter limit as it is at present, but not an arbitrary limit. It will not be so heavily cut over as at present, but just sufficient to open up the stand and permit natural reproduction. The amount and manner of cutting should be decided by the forester in charge, and should be such as to impose no hardships on lumbering operators. On the gentler slopes and terraces comprising the greater part of the area, pine and fir may be encouraged. In this case clear cutting would be the rule, the scheme being to leave small blocks of seed trees in the most advantageous positions, properly fire-guarded, to take everything else, down to props, lagging, and cordwood, and to scatter the brush and burn it. The burned-over land would provide the best possible seed-bed for pine and fir, and judging from observations and experience elsewhere a dense reproduction, such as to insure a permanent forest cover and timber supply, would follow immediately.

In the interest of closer utilization of the diminishing supply of timber and to reduce as much as possible the slash left on the ground operators should be encouraged to take out everything they can handle without a loss. A good plan would be to scale and levy stumpage dues on:—

- (a) All stumps over 12 inches in height.
- (b) All timber over 6 inches in diameter left in the top.
- (c) All logs over 10 feet long and 6 inches in diameter left in skids and rollways or left lying in the woods.
- (d) All mining props left in the woods where such are marketable.

Dead Timber.

The present supply of dead timber is being sold at a rate which will ensure its removal before decay ruins its value. When it is sold under contract in blocks the mining companies make a clean cutting, remove all the sound wood down to four inches and leave the ground in good shape. Provision should be made whereby the license should be cancelled on all cut-over land, and all title to and interest in the land should be held by the government.

Agricultural Settlement.

In the interests of the development of the country and the utilization of all natural resources agricultural settlement should be permitted wherever there is fertile