

powder, and are particularly useful on land on which the timber has not been cut down very long and the stumps are comparatively green. However, before anybody invests money in any kind of stumping-machine it will be advisable for him to spend a few days, or even a week or two in going round and watching somebody else use the same machine. The satisfactory and economical use of any kind of machinery means a certain amount of mechanical ability on the part of the man who is going to use it, and unless he has this mechanical ability he had far better keep away from any kind of machinery at all and depend upon powder, an axe, a shovel, and a saw.

THE ACID OR DOPE METHOD OF STUMPING.

For the last thirty years, and probably longer, there have been, generally in the Sunday editions of the daily papers, although occasionally in the more widely read weeklies, accounts of some wonderful new method of taking out stumps with some kind of acid or mysterious preparation which is supposed to make a stump particularly easy to burn, without the usual more or less laborious method of taking out the stump first. About every three or four years there is an epidemic of these newspaper articles. They generally come out in the slack season in newspaper offices. It is a strange thing that, although these systems of taking out stumps at a nominal cost have been continually brought before the public for so many years, none of them seem to have come into general use, and it is just as well to issue a word of warning to the settler against spending either money or time in experimenting on these lines. If there was anything in it, there is no doubt that some of the many agricultural associations, governmental and otherwise, would have taken this system up long ago. As a matter of fact, in many parts of this Province certain kinds of stumps can be burned out completely without any "dope preparation" or "stumping" in the ordinary sense of the word. This is more particularly the case in the dry and semi-dry districts, but in the Lower Fraser and on the Coast, where the land-clearing problem is of real importance, the ground a few inches below the surface is always so moist that the wood-fibre of the stump never really dries out, and until it is dried out it is obviously impossible to burn it. No acid or dope preparation can forcibly eject this water in the wood-fibre of the stump. The natural juices of the wood are only circulating while the tree is living. When it is dead (like the blood in the human body) they cease to circulate, and unless the moisture in the stump can in some way be got rid of it is obvious that it could not be replaced by any of these dope preparations—acid or anything else. In the writer's rather long experience of clearing land he has never come across any instance of any of these acid systems of getting rid of stumps having been tried successfully, or even with partial success.

COST OF CLEARING.

In the previous edition of this pamphlet estimates were given of the costs of the various operations of clearing land—chopping, burning, branding-up, logging, stumping, and so forth. These estimates were made over twelve years ago and are entirely out of date now. Comparatively little contract-work has been done in recent years—since the great rise in wages occurred—so that it would not be safe to make any estimates of the costs now. The writer, however, has cleared up a good many hundreds of acres of average-timbered land in the Lower Fraser Valley, and some of it in years gone by has been put in cultivation at as low a figure as \$50 an acre. The same land to-day, if the work were done by either contract or day-work, would probably cost \$200 an acre and sometimes more to clear; but any settler who is taking hold of a piece of bush land cannot take into consideration the present scale of wages, as a great deal of the work of clearing is done in his spare time and between seasons. It was a usual thing some years ago to contract for the taking-out of large old-growth cedar stumps at from \$1.50 to \$2.50 each. The work was done with teams and blocks and tackle, with practically no powder. At that time a man and team were worth \$5 a day and a man without a team \$2 a day. This work was