

wet places and helps the rotten logs to dry out too. Most of those that are too rotten to handle with a team can be burnt off without handling at all during August, by the coal oil method before described. The use of a bottle of coal oil and a bunch of matches, or a gum stick torch, will greatly reduce the time required for burning the brush heaps and branding up piles; in fact, 10 cents worth of coal oil will often save a day or even two days' work, as no kindling is required to start the fires, a small handful of leaves or dry ferns only. It is by using all these little time-saving devices that the cost of clearing is so greatly lessened.

Drains and Ditches.

On the average bush land very little draining is required, but as it is generally rolling there will probably be some few swales or wet places, which will be none the worse of a little ditching. As a rule, however, no systematic draining is required. A careful survey or prospecting should be made not only of the present clearing, but of the whole farm, to see which is the lowest place, or the natural outlet for the drainage. If this is not readily ascertainable, it is better to put off all the draining until the whole block is cleared for pasture, as a general bird's-eye view can then be got to very much better advantage. If the outlet is in an uncleared part of the farm, then put it off till that part is cleared, as the ditching is done much more cheaply when the land is chopped and burnt; if, however, the outlet is in a part already cleared, start to dig a ditch about two feet to two and one-half feet deep, and twelve to eighteen inches wide (depending upon amount of water to be carried in the winter), and following the hollow or wet place you want to drain. If this wet swale is much over four rods wide, it is better to dig a ditch on each side of it at the foot of the rising ground and let these two ditches come together again where the swale narrows. Always remember the ditch or underdrain is being dug to carry the winter's water, not the summer's. A creek or wet place that looks little or nothing in the summer may be quite an imposing stream in the winter.

Dig the ditch or drain straight; on no account ever put in any curves; it is almost impossible to box these for underdrains if they are curved; use two sticks and a piece of light wire to set it out with; do not trust to the eye. If the swale or low place to be drained is not straight (and it is very unlikely that it will be), then zig-zag the ditch to fit its curves; make sharp clear-cut angles at the bend of the ditch; never curve them on any account.

On level ground, in alluvial clay, the underdrains should be three feet deep, and in peaty land or black muck three feet six inches deep, but in upland clay or clay loam two feet six inches is deep enough, and often is ample; the character of the soil will determine the depth; twelve to eighteen inches wide is enough in all cases, but if the drain is to be an open ditch it should be two feet six inches to three feet six inches wide at top, and about twelve inches at bottom, with sloping sides, or if a considerable amount of water is to be carried, then wider in proportion. These ditches should always be left open for a year, or thereabouts, as it gives the land a better chance to thoroughly dry out. The best time to dig ditches is when the ground is soft, but there should not be too much water (say just enough to give a grade). Early summer or early fall is perhaps the best time, but they can often be dug to advantage in winter.