

wood placed around the entire base of the stump is the cheapest process, and no other fuel than that to be found on the premises is necessary.

Fourth: The use of artificial aids to combustion requires considerable skill in order to control the amount of heat generated, and will not be generally successful in the hands of common operators.

Fifth: Roots that have not been burned deep enough may be buried again, always endest at the charred end. Both stumps and roots are eaten from the under-side.

The experiments were conducted at different places with the view of better teaching the methods in the varied soil conditions and to give the greater number of those interested an opportunity to see the methods.

DIRECTIONS FOR USING THE CHAR-PIT METHOD OF DESTROYING STUMPS.

We first give directions for the method as applied to clay soils. Starting in after "a good burn" on the stumps, if the operator will follow as soon as the ground is sufficiently cool, he will find many stumps with sufficient fire as not to require any more than perhaps a few fragments of bark or other light material added to them to secure a good start, which should be covered immediately with earth. Stumps not so burning should be treated as follows:—

First remove the bark to the ground; then if the sap-wood is wet or green, chop into the inner, dry wood. Now procure some fuel for the good start: in the dry season any half rotted material that can be secured easily will answer, providing there is enough dry material to start the fire. Pile this fuel around the base of the stump in such a manner that the fire will follow. The fuel should be continuous and fairly uniform in quantity and quality. It does not make any difference whether the wood is set on end or laid lengthwise. Where some of the fuel is long and there is a portion of the stump where there is a side sufficiently straight to allow the piling of long pieces without leaving too much space between the fuel and the stump, this may be done so as to save labour or breaking up the wood. As to the amount of fuel to be used much depends upon conditions. If the fuel is piled to reach about 15 inches high and about the same distance out at the ground-line, this will be sufficient. Our experience indicates that it is best to have less rather than more kindling material if it is so arranged that the fire will burn evenly, thus allowing the cover to settle uniformly. If the fuel burns quicker in some places than in others, the cover settling down as the fire is burned in these places leaves breaks, thus permitting the heat to escape.

Place some of the finer material to act as kindling next to the stump and under the main supply of fuel to lead the fire and start the burning next to the stump, keeping the fire as near as possible to that which it is to burn. To further conserve the heat, cover over the fuel with the soil most convenient. In friable, loose soil the manner of putting on this cover is important. If carelessly done, or if an operator stand at a distance and throws the soil, there will be a breaking up into the finer subdivisions of soil, which will fall into the crevices of the fuel and perhaps considerable portions of it drift in between the fuel and the stump, thus protecting the stump from the fire. Hence, the best results will be secured by laying each shovelful of earth on the fuel without throwing; and if the soil shows a tendency to break up, fill in around the stump at the top of the fuel with the most convenient material