

THE CHAR-PIT METHOD OF DESTROYING STUMPS.

There seems to be a well-founded report that this method was first used by some Germans in Oregon about twenty years ago, but for some unknown reason the art was lost, or, rather, seemed to be dormant for several years. Rumours of the method had gone out, and we believe the later methods are due to difference of understanding of these first reports. After investigations, we became convinced of the value of the method and gave our first public demonstration of it under the management of the Extension Department of the State College of Washington, during a meeting of the Cowlitz County Pomona Grange, October 28th, 1906. Several demonstrations were given in different parts of the State as a part of the regular Farmers' Institute work. After learning that the method, while proving so successful in the clay soils, was a failure in sandy, gravelly, loam soils, we commenced some experiments at Lake Whatcom in the winter of 1906-10 with the object of learning the reason of this, but were called away from the work again before any definite results were reached. Taking up the work again in co-operation with the Bureau of Plant Industry, Department of Agriculture, Washington, D.C., in September of 1910, Mr. Harry Thompson, representing the Federal Department, and the writer undertook work on the farm of Mr. Henry Dupurtis, at Adna, in order to obtain reliable data of the costs, and to study the factors with view of extending the system to the supposed unfavourable soils.

Later in the fall and winter I undertook a series of experiments designed to make the method applicable to stumps in soils which were too sandy or gravelly to permit its successful use without some soil-blender, and other experiments to ascertain whether fuel-oil or other cheap combustible matter might not be successfully and economically used in starting the fires under the stump.

COST DATA.

The following data as to cost of removing stumps from burned-over land was obtained during the fall of 1910. Three distinct methods of firing the stumps have been observed, and cost data for each method were secured. The plan most generally used is that known as the "Yount method," after Mr. Harry Yount, of Woodland, Washington, was one of the first farmers who made use of this method of destroying stumps. His method consists essentially in starting a fire entirely around the base of the stump, under a covering of earth and soil, which confines all the heat of the fire to the stump and causes it to "char" or become destroyed by the same general process as is utilized in charcoal-pits. Mr. Yount has been using the method for several years, and in order to furnish exact data on the cost, he commenced August 30th, 1910, to fire twenty-four stumps, performing all the labour necessary to complete burning-out of these stumps in thirty-six hours, which at 25 cents per hour gave a total cost of $32\frac{1}{2}$ cents per stump. These stumps were of an average size, 40 inches at the cut-off, varying from 24 inches for the smallest up to 72 inches for the largest.

About the 1st of September, Mr. Harry Thompson and myself fired 100 stumps on the farm of Henry Dupurtis, of Adna, Washington, the average diameters of which were 32 inches at the cut-off and 46 inches at the bottom. The work of firing the 100 stumps was complete in four days and four hours. The after-care consisted of one hour each morning and evening for three weeks, making a total of 130 hours, at 25 cents per hour equals \$3.33. Ninety-seven of these 100 stumps were burned out successfully, which gave an average cost