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The Field.

Preserving Roots in Heaps.

It is probable that the cultivation of roots would become more general if the handling of such a bulky crop could be rendered easier than it is generally found to be. As they are too tender to stand the severe frosts of our winters, roots must be carefully protected; and the protection of a crop which under good cultivation may reach from 500 to 1,000 bushels



Fig. 1.—Building a Root-Heap.

per acre is no light task if they are to be carted to a cellar for storage and removed therefrom for use. But it is quite unnecessary that a cellar should be provided for them. As cellars are generally built beneath the dwelling house, and are also used for the preservation of the milk and butter, and as roots give off naturally a strong odor, which is often by reason of the inevitable decomposition of some parts of them very offensive, a cellar is in every way an unfit receptacle for any large quantity. The convenience and health of the family inhabiting the dwelling above are unfavorably affected: and butter in such a place acquires a disagreeable scent and flavor. Roots should therefore never be stored in the cellar beneath the house; but in pits, which is a method very much more convenient and equally safe. The pits may be made in the field where the crop is harvested, or they may be made in a yard or field near the barn. A slightly elevated spot should be chosen which will be dry at all seasons. On this the roots should be heaped in a pile about six feet wide at the bottom



Fig. 2.—Covering Heap with Earth.

and four feet high, sloping to a point at the top, as shown in fig. 1. The heap may be made of any length, or the roots may be put in several heaps. We last year saw one of these pits 1,000 feet long, which contained nearly 15,000 bushels of mangels.

The roots ought not to be put up until they have dried somewhat, nor should they be covered with earth until there is imminent danger of frost. There is then much less danger of heating and decay than when they are covered up before they become dry. The straw covering should be a foot thick. A foot of earth and three inches of straw is better than a foot of earth and three inches of straw. The straw should be laid on straight and evenly so as to shed rain. It should be gathered closely at the top for the same purpose. The covering of earth, which should be free from stones, should be about six inches thick, and should be laid on compactly and well beaten down. At spaces of about six feet apart there should be wisps of straight straw placed upright and projecting through the earth covering. These are for ventilators, and serve to carry off the moisture and heat from the roots during the sweating or fermentation which they are sure to undergo to some extent. One of these pits may be opened at any time during the winter in moderate weather, and when a stock of roots sufficient to last a week have been taken out it may be closed again, taking care that it be done as quickly as possible.—*American Agriculturist.*

How to Build Root Houses.

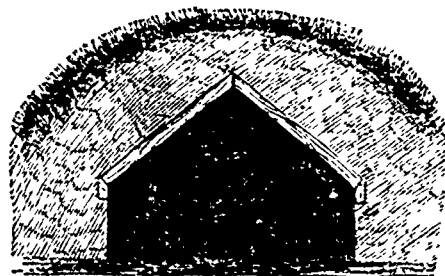


Fig. 1.—Section of Root House.

These who design to build root houses for the storage of their root crops, should undertake the work at once. In reply to many inquiries we have prepared the following suggestions and directions for building these store houses. Such frost-proof buildings are not only serviceable as root-cellars, but if carefully built will make very desirable dwellings both for winter and summer use, as what is proof against cold in winter is also proof against heat in summer. Figure 1 shows a section of the root house. Mainly, it is an excavation three or four feet deep, the earth from which is thrown up over the roof, forming a frost-proof embankment. If the earth is solid clay, no lining is needed, but a piece of timber or pieces of stone may be let into the upper edge of the excavation, as shown in the figure, as a support for the rafters. Where lumber is scarce, as on the Western prairies, the covering may be of brush and coarse hay, which will serve as a support for the earth. If the roof is then covered with sod it will very soon be-

come rain-proof, but as rain rarely falls when and where these houses are needed most, as during the winter season in the far West, this is not of very serious consequence. For the purposes of farmers further East, who enjoy greater facilities for procuring material, a good timber and plank roof well pitched or tarred, would be better. A stone building as shown in figure 2, would be still more preferable where its cost would not be too great. If the stone

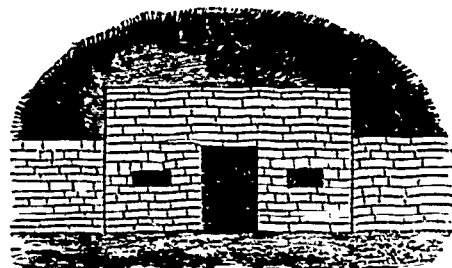


Fig. 2.—Root House with Stone Front.

can be gathered on the farm, such a root house with an arched roof and stone wall front, with an excavation four feet deep, 34 feet long, and 16 feet wide, should not cost more than \$150. By a little extra outlay in cementing or water-proofing the roof, and rough dressing the stone for the front, a very shapely and respectable looking building may be erected. Of course, double doors and windows are needed in all these buildings. The essential point, protection from frost, and variations of temperature, are the same in all of them. For those who live in a wooded country a log or heavy timber building would be the best. Such a one is shown at fig. 3. The interior is similar to those already described. A log house is built over the excavation with double walls at least a foot apart. The space between the walls is filled with earth, and the roof, which rests upon the inner walls, is covered with at least a foot of earth also. The earth roof may be covered with a double roof of boards, laid so as to leave an air space



Fig. 3.—Root House of Logs.

of three or four inches between the earth and the boards. Tight double doors should then be added, and one or two ventilators left in the roof; these may be filled with straw in severely cold weather.—*American Agriculturist.*