

heat, as the resulting growth uses up sugar rapidly; excessive moisture inducing decay; and excessive dryness causing a withering. The conditions, therefore, are moderate and the aim is to preserve the beet in about the same condition in which it is as it comes from the ground before frost.

EARTH PITS. The earth pit or silo is most extensively used in Europe where the preservation in winter is as great a difficulty as with us in Ontario. These pits may be temporary and simple in construction or they may be permanent, well paved and walled. They are about six feet deep, ten feet wide, and as long as the extent of the crop demands. A small ditch down the centre of the pit permits the excess of water to escape and a free circulation of air is allowed by having an open floor of holes and a ventilating shaft through the centre. The beets, culled and sorted, are then carefully piled in, a sloping roof-shaped heap formed by them above ground, and then they are covered with earth. The depth of earth required in this province and the advisability of using straw between the beets and the earth will be matters of experiment for the future. The depth will, no doubt, be largely controlled by the severity of the weather.

OUR EXPERIMENT. The sugar beets grown at this farm in 1890 were placed in a pit or silo by Prof. Shaw, and the pit was opened on March 12th, 1891 (about the end of the sugar making season), for the purpose of examining the beets and of obtaining samples for analysis. Shortly afterwards the beets were fed to the stock. In general appearance the beets seemed about as when first pitted, except that sprouting had taken place in some. The loss in sugar amounting to a little over two per cent. would seem to indicate that they would have turned out a little better, for the producer at least, if they had been topped a little closer. The loss of sugar in the silo should not much exceed one per cent. At the same time the beets analysed weighed over one pound, a fraction more than the average taken last fall, whereas to get results fairly comparable, they should have weighed a little under one pound. The beets taken out were analysed in three lots. I give the results and also the average of 53 beets analysed by Mr. W. Skaife and myself of the freshly harvested beets, omitting however the larger beets from the outside row.

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