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only during the beet season. All practical people know that a factory out of work decays and destroys far faster than whilst it is in full operation. The great argument in favor of monster factories has always been, "You must have them so large as to work up your whole crop in five months," and therefore everything must be on a great scale. The consequence has been that the factory ceased working for seven months, to the great loss of all concerned. No manufacturing business can work profitably by fits and starts. To do things in the best possible way they must be done continuously.

Beets are dried by being cut into slices, and then exposed to air and heat, so as to get the surface moisture off as soon as possible. Those who can dry apples can dry beets without instruction. Those who have or can construct a drying kiln will, of course, use it. Everybody understands the use of a kiln, and so I shall not describe it. The roots will, in all cases where possible, be cut up by machinery—an ordinary root-cutting machine will answer all purposes.

Those who have neither kiln nor machine may proceed in the following manner, but the kiln and machine is best. Cut the roots up in slices across, taking care to cut up the whole of the bottom of the root, and be very careful of the lower and small slices, for they afford not only the most but the best sugar.

Provide some strong iron wire. Cut some sticks of any common wood across into sections of about two inches in diameter and a quarter of an inch thick. Cut the wire into lengths of from two feet six inches to three feet, and sharpen one end of the pieces on a grindstone. Fit on one of the sections of wood to each wire, and bend the end, so as to prevent its slipping off. Separate the large slices of beet root from the small pieces, have one parcel to the right and the other to the left. Set your wires upright on a bench, having made little cleats to hold them in a vertical position. Now take a small piece of the root in one hand, string it on to the wire until it touches the bottom, then string on a large piece, then a small one, and so on until the wire is nearly full. Then bend over the upper end in an open curve, so that you can hang the string of roots on a stick. Proceed with the rest, doing the work as quickly as possible, and hang up the wires as fast as done in an open, airy place—where the sun shines, if possible—at any rate, out of the damp, and rain. The roots thus prepared will dry, and shrivel up very quickly, and completely, and as there are no two extended surfaces lying together, no change in the roots will take place. When you have enough done, you should have a small building heated with a stove, and pipes, and finish drying the roots in that. You must be careful that the cut roots always get plenty of air, to prevent mould, or rotting. Persons will soon learn expertness in the foregoing process, and will operate with both hands, and thus prepare a

very large amount of roots in a day. The roots, when dry, should be thoroughly dry, so as to crush, or grind, if necessary. The crooked ends of the wires may then be straightened, the dried pieces run off, and the wires used again. In selling dried roots: you can always insist on getting paid according to quality. Those best done will bring the highest price. Roots thus prepared either with the wires, or kila, will dry into about one-tenth of their original weight, and thus save carriage, and hauling. The value of such dried roots, if well done, will be from forty to fifty dollars per ton, or a greater value than barley, and, of course, can be carried to market as great a distance as that grain.

The dried roots can be used by the diffusion process, and leached with water in the same manner as with green roots, or, if leached with strong spirit, as is done by the "Schützenbach" method, the result is a purified, refined sugar, of the first quality, entirely free from salts. As the spirit will not dissolve the salts, although it does dissolve the sugar. This is, however, a process that requires great capital, and extensive premises. Schützenbach, of Galicia, in Europe, employs this method. In his factories he works up some millions of tons of roots annually, and employs many thousands of hands.

Those who prepare dried roots, should feed the upper third of their roots to the cattle, and reserve for drying the lower portions, they will thus be sure of the best results.

In an address on the agriculture of the Old World, lately delivered by the Hon. J. R. Dodge, before the Rural Club of New York, has says, speaking of agricultural progress in Austria:—

"The beet sugar interest is prominent, 'having now 199 factories in operation,' (these, it must be recollected are of immense size and capacity) 'of which 126 are 'in Bohemia. The average price of dry 'beets is four florins and eighty kreutzers: 'per centner, or about \$2.40 for 136 lbs.' (Equal to \$35.40 per ton of 2000 lbs., but this price will, of course, be governed in a great measure by the state of dryness in which the sliced roots are brought to market).

"The industry gives employment to 31, '858 men and 18,939 women; the wages of 'the former ranging from 18 to 80 cents per 'day, and of the latter from 13 to 75 cents."

It will, therefore, be seen that the preparation of beet roots by drying is now a recognized institution in one of the principal centres of the beet sugar industry.

SUCRATE OF LIME PROCESS.

There is another process in the beet sugar manufacture, which is too important to be passed over in silence. The writer gives it in the language of others, merely remarking that there seems some uncertainty about it, and that although, in his own case, he has repeatedly succeeded in the process, so much so as to lead to every hope of success, with