

# THE CANADA FARMER

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NEW SERIES.

## The Field.

### Beet Root and Beet Root Sugar.

No. XI.

We have hitherto treated of the various processes necessary to reduce the root to pulp, to express the juice, to defecate it by boiling with lime (according to the old process), and by concreting the juice into rough syrup, to be afterwards purified, according to the new process. We have described everything in the plainest possible language, so that all may understand it, and in doing so we have condensed and transmitted to our readers all the practical information contained in all the best books which have been written on the subject that were procurable. We have given no opinion of our own on any material point, nor have we diverged from the information we have obtained. We now mean to assemble this information together, in order that it may be applied by our readers to the construction of small practicable works, fit for the Canadian farmer and country manufacturer, and such as will reduce the root to a rough merchantable extract, or merchantable "sucrate of lime," which substances will keep for any length of time, until the farmer can either purify and refine them himself, or find a market for them at the sugar refiners now established, or those which will surely be hereafter established.

And here, to assist the inexperienced in such matters, and to prevent misunderstandings and disappointments, we will make one remark, and it is a very important one namely:

No book that the writer ever yet met with (and he has been a most extensive reader) was ever found to set forth a process in manufacturing any article (where the success of the product is not altogether dependent on machinery) in such a manner as that the manufacturer, without practical know-

ledge, could take the book, follow out the instructions therein given, *verbatim et literatim*, and succeed (in a manufacturing point of view) in producing the article desired in perfection, or even at first to profit.

The writer understands, as well as he can understand from books, most of the ordinary manufacturing processes where practical chemistry is required, and several manufacturing businesses he thoroughly and practically understands, so that he can do them on a mercantile scale, and with success, with his own hands. On these latter businesses he has read nearly everything that has been written in the English language, and he does not hesitate to say, that not one of the processes, even in the most ably written book, is so described as to enable an unpractised person to take that book and proceed according to its directions, and produce a perfect manufacture, at one, or even at several trials.

While saying this, the writer does not for a moment mean to disparage "book-knowledge;" it is all important, and no manufacturer can proceed in an ordinary way of business, or keep up with the times, without books, and without the suggestions of learned men on the subject, but to enable him to apply such information usefully, he must have a certain amount of practical information, and the power of neat manipulation, and also of general knowledge, then he will find the experience of others, as transmitted to him by books, absolutely invaluable.

It is necessary to say this to prevent disappointment to parties who are inexperienced in the manipulations of manufacturing, and who have such a kind of superstitious veneration for what they see in books, that (until they find out that they cannot work by them alone) they believe every word that they find printed. One great reason why they fail is that they apply what is said according to the dictates of *their own* mind and judgment, and not in accordance with the mind and judgment of the author, or with his original intentions.

Bearing this in mind, none of our readers need be disheartened if they fail the first, second or third, or even tenth time in their experiments; they are all the time acquiring information, knowledge, and experience. Such disappointments are invariably necessary, and if they do not dishearten the experimenter, they are universally the precursors of success.

There is not a great and successful manufactory in the world but has spent far more money in failures than the finished and perfected machinery finally costs them.

It will be perceived by our readers that the beet root sugar manufacture is now in a transition state, and is carried on by two classes of persons. the first is the old system as established by the Great Napoleon's chemists, and since then greatly improved and added to by the professors of modern chemistry. This class of manufacturers still work the enormous factories which have cost many hundreds of thousands of dollars each to erect, and who, without dispute, make excellent sugar, and to good profit.

The second class has dropped most of the cumbersome and expensive machinery, has seized the great chemical facts eliminated by the originators of the system, and their entire attention has been directed to the lessening of machinery, and the simplifying the process—and from this class the two processes of working by "Sucrate of Lime," and by "Concretion"—which are certain to produce a revolution in the manufacture—have originated. We think the latter processes are more adapted to Canada than any other, and having given such information as we could collect on the first system, we shall in future treat more of the second, as that most likely to be useful to our readers.

XII.

We now proceed to our recapitulation.

First, the growing of the root:—

The roots must be grown from seed procured through a thoroughly reliable seedsman, from the best sugar districts in Germany, where the object of the manufacturer