

with each other, a thing that has never been the case before; and it is under the management of an experienced director, who has gone to Europe to buy the implements and vessels wanted for the manufacture of beetroot-sugar. I trust we shall be able to fetch beets from this side of the country. To enable us to start, we wanted a small bonus from government, and we hope that in the coming session—at least M. Meroier gave us to understand as much—we shall receive a small grant to enable us to pay a high price per ton for the beets. Certain farmers complain that we do not give enough for the beets, and they complain, as well, that they are not familiar with their cultivation.

Gentlemen, I am not accustomed to public speaking, and I feel that you must have soon found that out. But I hope that your kindness will rise to the level of my incapacity.

Shortly, I thank you; I am confused by your goodwill and kindness, and will no longer detain you from listening to addresses much fuller of instruction than anything I am able to set before you.

L'ABBÉ CHARTIER.

From certain remarks that M. Casavant made, the meeting may be under the impression that, when I said that I had given up the cultivation of mangels for that of corn, I meant that I had thrown aside the cultivation of garden crops (*jardinage*). I did not at all mean that. We used to grow quantities of mangels—enough for our cows during the whole winter; I found that it was more economical to grow corn which, according to my experience, has the same value, weight for weight, as mangels. And when I speak of *betteraves* (beets) I mean *la betterave des champs*, *la betterave à vaches* (*mangels*); I do not speak of the *sugar-beet* (*betterave à sucre*).

I do not wish you to be under the impression that I want to put corn into the place of all other kinds of garden-crops (*jardinage*). At the Seminary, in spite of the change pointed out, we still have quantities of garden-crops, though we no longer grow turnips.

After reading these addresses, I had of course no difficulty in understanding the extreme reluctance of the farmers of French extraction to embark in the cultivation of root-crops. According to M. Chartier, a Frenchman, working 13 hours a day, took 6 days to single an arpent, which is equal to about 9 days of 10 hours to the imperial acre; but as this man was an extra good workman, M. Chartier does not expect to get his work done so cheaply by the ordinary farm-labourers of the country.

Now, let us see what the cost of the operation is in England.

I wrote, last June, to the editor of the Agricultural Gazette, the leading farm Journal published in England, and laid the case before him. In reply, I received the following:

Cost of hoeing Mangold. Swift and True—"Your Frenchman no doubt had a way of his own. We know that in Scotland two women will single an acre of swedes a day, and that three to four women may always be relied upon to do their acre a day. Again, the usual price for singling turnips or swedes would be 5s. 6d. (\$1.32) per acre, and 8s. (\$1.92) for doing the work twice over, and 10s. (\$2.40) for doing it three times. That is, we should contract for first, second, and third hoeings, all to be done for 10s. an acre, in England. In Scotland the drill rows are 27 in. apart, and in England from 18 in. to 20 in. apart. Mangold is rather more expensive to hoe than swedes, but only fractionally, and we perfectly agree with A. (Jenner Fust) that two women gapping out the rows with 7-inch hoes, followed by two more women singling the bun-

ches, could finish an acre in one day of ten hours. We think they could do more than an acre if each woman completed her own work of both gapping and singling."

"Your Frenchman" refers of course to M. Chartier's man. I agree with the editor's opinion that "four women could do more than an acre a day if each completed her own work of both gapping and singling;" but I had not time at Sorel to teach them how to single with the hoe without stooping too much.

It is not to be supposed for a moment that the English are naturally handier with tools than the Canadians. The latter are decidedly the sharper in learning anything they desire to learn, and before I left Sorel, I could show four French-Canadian women who could and did use the hoe in singling roots as well as any Scotchwoman I ever saw.

After all, there is no use in talking any more on this subject. The fact remains that what M. Chartier says cannot be done in one day by four women is done every season in England, and has been again done this summer by M. Séraphin Guévremont's *bande* on his farm at Sorel.

DE OMNIBUS REBUS.

Box 109, Upper Lachine—August 31st, 1888.

Sheep.—"We admire the flock of the flockmaster," says an American writer, "whatever we may think of his judgment, who declared in the course of a heated argument on the tariff: I would raise sheep, sir, if they had no wool at all on them"! I do not go so far as the enthusiast, but I am convinced that there is money in mutton both here and in the States. An amiable sheep breeder, who is evidently of the opinion that "there is nothing like leather," rejects with scorn the proposal to improve the native sheep by crossing with English rams, and insists upon the value of the merino as a mutton sheep. Another, from Vermont, says that the Cotswold is *the* sheep for the purpose. Every one for himself! The one breeds merinoes and the other Cotswolds, both wool- and not mutton-sheep. If the wealthier of our people desire to see mutton of good quality on their tables, the Downs must be chosen as the parents of the future.

Drainage.—Professor Kedzie, of the Michigan Agricultural Station, lately read a paper at a meeting of the society, on "Drainage in relation to flood and drought," an extract from which will be found on p. 156. The professor seems to hold the theory that certain soils are impermeable to water, an idea that I thought an English engineer, Parkes, had exploded 45 years ago. There is no such thing as a "surface soil impervious to water." Is not a clay of the stiffest quality wetter, three feet below the top, in autumn than in summer? There are no clays here, as far as my observation goes, equal in tenacity to our English Oxford and Lias clays, and these are so far from being impervious, or impermeable, that the first operation necessary to their improvement is drainage. So to say that "when the surface soil is impervious to water, it is manifestly a matter of indifference whether the subsoil is tiled or not," is absurd. The surface water can and does reach the tiles, and, as is clearly perceptible all over England, floods are occasioned by the rapid discharge of the rain-water through the drains. A mere inspection of the Valley of the Thames two days after a heavy fall of rain, would convince the most sceptical that drainage causes floods. Fifty years ago, before there were anything but open ditches in common use, water lay in the furrows of the heavy uplands of Glostershire, Oxfordshire, and Berkshire, for four or five days before the ditches discharged it into the brooks, and the brooks into the river; but even before I left England, thirty years ago, so greatly had the system of drains prevailed, that 24 hours