The land is now ready for drilling. There is nothing gained by making the drills wide. Our distance is 24 inches; this leaves plenty of room for the horse-hoe, and for the entrance of abundant supplies of light and air to the growing plant. Numbers of acres of land are, comparatively, lost by drilling up at 36 inches for roots and even for Early-rose potatoes; by this error, a third of the ground is left unoccupied.

As soon as the drills are completed, the dung is to be carefully spread, and we will take the liberty of saying that this operation is conducted far from economically by many of our best farmers. It takes more time and labour to spread a heap of dung over five rows, than over three rows. The farmer should drive the horse in the middle of the first *three* drills, and drag out enough dung into the drill in which the horse is walking without stopping him for a moment. Another man divides the dung among the *three* drills, and this, it is evident, can be done with much more care, and in much less time per acre, than if it were attemped to dung five or more drills at once.

(To be continued.)

The Farm.

CENTRAL EXPERIMENTAL FARM.

Ottawa, May 9th 1899.

Dear Mr. Jenner Fust,

Enclosed herewith I am sending you a short article for your columns treating of the importance of thorough culture. It has always seemed to me getting the cart before the horse to make an outlay for soluble plant food before the soil is in the best condition possible—that is, that its nature will admit. I hope to send a sequel pointing out the physical and chemical benefits from the various mechanical operations, plowing, harrowing, etc.

Yours faithfully,

Frank T. Shutt.

THE IMPORTANCE OF SOIL CULTURE

(No. 1.)

By Frank T. Shutt, M.A., Chemist, Dominion Experimental Farms.

Ottawa, May 9th., 1899

During the past two months the greater part of the correspondence received by me from Quebec farmers has had reference to the use of commercial fertilizers. In many instances the queries—which generally take some such form as, what fertilizers, and how much per acre, should be used for wheat, oats, corn, roots, &c.?—have been accompanied by a sample of the soil, with a brief history of its manuring and cropping for a few years past. Before drawing the lessons which it is my intention to impress to-day upon all such who would have similar questions to ask, I wish to give expression to one or two thoughts brought home to me by this comparatively new phase of intelligent activity on the part or our farmers, fruit growers, and dairymen in the province of Quebec.

The first is, that there has been a wide-spread awakening lately—that is, within the last year or two—to the necessity of furnishing the crops with food, if profitable returns are to be expected. Many of the lands in the older townships have, undoubtedly, had their natural or native fertility reduced below the paying point by successive cropping, carried on without due regard to rotation and without any adequate return of plant food. Thus, the realization of the truth that our farm crops feed upon certain materials or elements in the soil has been forcced home in a very emphatic, practical way. But, nevertheless, I am led to believe that this conviction regarding the necessity of supplying more plant food is in a large measure due to the dissemination of literature upon the principles of agriculture by our Governments and the press. This, then, is an encouraging fact, since it shows that not only are our people a reading people, but that they are ready and willing to learn and improve their methods and their soil, and to avail themselves of the assistance offered them by the Government through its officers.

The second impression is, that the knowledge generally respecting the nature and composition of the plant food supplied by fertilizers is very hazy. For instance, the term "phosphate" is used by many to include all kinds of fertilizers, whether they contain phosphoric acid or all three of the essential elements of fertility. We are endeavouring, of course, to make the matter clear to our correspondents, and we hope shortly to issue a Bulletin which will give in detail information on this important subject, so that farmers can understand not only the special requirements of the different crops, but also learn that nitrate of soda derives its agricultural value from the presence of available nitrogen only, that muriate of potash