On a further examination of *table* 5, it may be observed that from April to October no fresh cows came in, although the yield was remarkably uniform and large. This is the more striking since the herd has not had the advantage of fresh pastures, having been stall-fed the whole summer. The full herd numbered 26 heads, and the number of acres under cultivation—inside the city limits of Quebec—does not exceed 12 in all, which supplied us with about 100 tons of ensilage for winter feed, besides the summer food, as above.

This herd is stall-fed the year round. For seven months out of twelve our cows are tied to a stanchion all the time, except at calving, when the cow is allowed the range of a comfortable box, for from one to three weeks, this being the average time these cows go dry. As soon as the after birth has come away, the cow goes back to her stanchion (1).

When the warm weather comes, our cows are allowed an airing in the sun of about two hours in all per day. In the heat of summer they are turned out early in the morning. When colder weather sets in, about September, they go out at noon, and early in October—generally, with us—they take to their winter quarters entirely, until late in May.

Last summer and fall, we had to provide temporarily for our stock and used a shed roofed in and entirely opened on both sides. This answered very well until the September winds and rains prevailed, when the cows suddenly shrank greatly in milk, and thus continued until late in October, when their winter quarters were made ready; proving that in such climate as Quebec, heavy milking cows need full protection from the weather, as soon as the wet fall-weather sets in.

We have since adopted a very thorough system of ventilation in our stables, which is shown in the following drawings. (2) We expect that in future the herd will do very well in those stables, both winter and summer, continuing of course the two hours of exercise outside during the warm season. In fact, from very thorough experiments we made last summer, we have every hope of securing, in the heat of summer, a cooler temperature in our stables, than what generally obtains outside.

Crops for soiling—How situated. (3).

Crops for soiling, being watery, are heavy to carry, containing as they do about three times as much water as those grown to maturity, or for hay, &c. It is therefore indispensable to grow such crops in a special rotation, and in such fields as immediately surround the stables. Here, the bull and milking cows are kept, perhaps for 22 hours out of 24, and, to be profitable, every comfort, such as thorough cleanliness, ventilation, pure water, and every convenience for feeding, milking and stable cleaning— besides proper husbanding of all droppings—must have been provided for, in order to reduce to a minimum the amount of manual and other labor required, and of possible loss.

After mature consideration, and several years of experimental work in this direction, I have adopted a special rotation for soiling crops, as follows :

First year: Maize— of a variety *sure to mature* in our climate, and sown—according to its natural size, very much as if grown for seed, and only when the ground is thoroughly warmed up, viz: when the white oak is coming well into leaf;—if possible, on a rich meadow lea, well manured, early in the previous fall and to which about 300 lbs. of plain superphosphate per acre is added, to hasten and enrich the crop in solids. If the season has been favourable, a light crop of grass, from 10 to 12 inches high, is cut and fed, or ensiled, the plough started, followed immediately by the *acme* or *similar* breaking harrow, and, if possible again, the corn sowed in rows, but on the flat—*the same day as ploughed.* (1).

This maize is neither fed nor ensiled until the ears are fairly well glazed. The cultivation in the mean time—done entirely with horses—is thoroughly carried on, in order to keep the soil perfectly clean and aerated, until the crop allows no more interference with it.

As soon as the crop is removed, the land is carefully fall-ploughed and treated to from 8 to 10 bushels of quick lime per acre, put into small heaps covered with earth, and finally when entirely pulverised, shovelled over the whole field. (2).

2nd Year.—As soon as the soil is fit, in the spring, four to five bushels of a mixture,—of oats and rye (half and half), and tares and peas (half and half)—is sown, thoroughly harrowed in and over this, 15 lbs. of mixed red clovers are *bushed* in and rolled,—if light land and *pressed* down with the *acme harrow and leveller*,—if heavy soil, likely to cake. This crop is used for food, or ensiled, as soon as necessary, and *always* carried away entirely before the crop can possibly get laid and rot at the bottom; this, in order to have better food, and save clover killing. In good time a second crop, mainly clover, is carried away to the stock, or the silo, the same season. As soon as this second crop is carried away, a half dose of manure—or more, if the soil be not sufficiently rich—is given, with the Kemp manure distributor.

3rd Year.—Three cuttings of clover, in order to obtain rich, palatable food, by no means woody and over fibrous. A more or less heavy coat of manure is given in the fall, with 200 lbs. of plain superphosphate to the acre, after the last cutting is removed.

4th Year.—A light crop of grass being removed—maize follows,—exactly as above (see 1st year).

5st Year.—A mixture of seeds,—oats, rye, tares and peas—exactly as in the 2nd year, the clover seed being here replaced by 25 lbs. of the best hay seed mixture, according to the nature of the soil; but without any red clovers, this, to avoid clover *sickness* in the future.

6th, 7th and 8th Year.—Mixed grasses—cut *thrice* each season, and manured, more or less heavily, every second year at the latest.

I count that good land so treated should feed two cows and produce from 14,000 to 15,000 lbs. of milk, per acre, provided from 4 to 5 lbs. of good straw, finely chaffed and mixed with the green food every day, and about 1250 lbs. of cotton seed meal and 350 lbs. of bran be added per annum, per

herd of milking cows averaged about 9c. a day last winter, and now, with *increased feed*, as above, the ration costs 11c.3 per day.

The estimate of 1c per lb for milk, the year round, takes in the value of butter and cheese of the best quality, and also the value of skimmed milk or whey for feeding purposes. Most, if not all farmers in Canada are in a position to average at least that much with their milk, no matter how distant they may be from a good market. But for all who reside in the proximity of a town or city, milk will sell for fully double that price, winter milk selling generally from 5 to 8 cents per quart of 2¼ lbs, according to locality &c.

(1) The calf is removed immediately after birth, before the cow has seen or perhaps even heard it, and thenceforth is entirely hand-fed.

(2) See appendix.

(3) The following article, by the same author, is here reproduced from his previous writings, but with some considerable additions. It explains more fully the exact system followed out in summer, in the feeding and care of the above mentioned herd.

(1). With our frequent droughts, we think it advisable to sow the superphosphate *on growing grass* in the fall, in order to secure its more perfect solubility for the coming corn crop.

(2). In most parts of the province of Quebec, lime is found wanting, and therefore should be added, as above, once in six years or so. Lime, moreover, acts as a disaggregator of solubility in the soil and, as such, is most beneficial.