First Prize Essay.

Can our Present Methods of Farming be Improved upon, and if so, How?

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In answer to the first question, to be brief, I would submit, there is not a farmer in this fair land of ours, but will be ready to admit that the best of us can improve on present methods in farming. In answering the second, or rather in trying to answer the second, I would submit the following :—

1st.—More thorough draining.
2nd.—Better culture.
3rd.—A larger supply of manure.
4th.—The feeding of more stock.

1.—More Thorough Draining.

Judging from the appearance of many fields through some sections of Ontario, as a result of the heavy rainfall of the past autumn, one would come to the conclusion, that draining was not a subject of primary consideration, but I submit unless the land be properly drained, where necessary, much of the labor in cultivation, and also in the application of manure, will be abortive.

As to underdraining, I shall leave it to more practical hands, and confine myself briefly to surface draining.

Surface draining, as practised by many, if not the majority of farmers of Ontario, is simply running the plow through the water courses where necessary, and cleaning out with the shovel.

The system adopted by us for over a quarter of a century is to use the common road scraper and plow through the main water-courses, where required. In the first place we plow three or four furrows on either side of the centre of the drain, then with the scraper, take out the soil thus plowed, to a suitable distance from the drain.

The advantages from this system are many, the drain is easier to cross with waggons and machines, in harvesting; and when properly done will need very little labor with the shovel for years. Fields can be drained to better advantage by the judicious use of the plow and scraper.

2.—Better Culture.

There is more truth than poetry in the old proverb, "plow deep while sluggards sleep," for by deep cultivation of the soil, the crops are not so much affected by the extremes of drouth and wet.

From the fact that there are so many acres sown to grain in proportion to the pasture and meadow land, and the season so short, a large number of farms are only skimmed over with the plow; the result is, murmuring at the extremes of drouth or wet, when we are so often at fault ourselves.

As the fact is presenting itself so forcefully to the farmers of Canada, that many farms are being overrun by foul weeds of various kinds, there is more need to-day than ever of clean culture in the preparation of the soil for both grain and grass.

There are many acres in our fair land sown with grain and grass seed, that for want of more thorough preparation of the soil, are yielding but poor returns for the labor expended.

3.—A Larger Supply of Manure.

There are many acres in Ontario to-day giving but small returns for labor expended for want of a sufficient quantity of manure. The question therefore arises, from what source shall we obtain a larger supply. From the farm itself, the source is twofold, viz., the feeding of stock, and the liberal use of clover seed; the latter I submit is the cheapest and quickest plan to renovate worn out soil.

'Tis true, those convenient to towns or cities, can obtain a large supply of manure, but all are not so situated; therefore, in order to obtain a larger supply of manure, more stock must be fed on the farm.

4.—The Feeding of More Stock on the Farm.

The question arises, what kind of stock shall we feed, that will be most profitable? This depends somewhat on situation and circumstances.

Those living convenient to railway stations, or, who may have the milk taken daily from their door, find it profitable to feed cows for the production of milk, for city consumption; others find it more to their advantage to breed stock for sale, etc. But, whatever system be adopted, whether feeding for the production of milk, butter, cheese, beef, pork, etc., or the breeding of stock, food is required.

It has been asserted that "turnips have been the salvation of England." Although we may not have the cool, moist climate of the British Isles, still, on the sandy loam, if not on heavy clay, turnips may be grown to profit by judicious culture and a liberal supply of manure, while on the heavy clays, corn-fodder may be grown to profit.

I submit, there is no fodder can be grown on the farm to greater profit, than corn-fodder, but the question arises, how to secure it for winter feeding.

From my own experience and observation the silo supplies the long-felt want in the preservation of corn-fodder for winter feed, or future use, for if it is properly put in the silo, it will keep the year through and therefore may be used in summer-soiling to profit.

It will not be prudent for me to enlarge on the many advantages of ensilage in this essay, but I submit, by the use of ensilage, a larger number of cattle can be fed from a given number of acres than from any other system of feeding.

Having used the silo for six years, I can with confidence recommend its use to others. It may be safe to assert, there is no question coming before the minds of the enquiring agriculturists of America, that is so deeply interesting, as that of the silo.

At the Farmers' Institute held at Brampton, last winter, I had the honor of addressing them on the silo, its "construction and contents," and was surprised at the number who then appeared so deeply interested in the subject (and also many who have since come a long distance to enquire about it).

I submit therefore, that with the feeding of more turnips and ensilage, with the coarser grains crushed and mixed with the hay and best oat-straw run through a power-cutting box, more stock could be raised and fed on the farm and thus a larger supply of manure could be obtained, so the condition of the farm would improve and farming be more profitable.

Many other thoughts suggest themselves, but it may not be prudent to enlarge.

By way of closing I would suggest as a means to the improvement of methods of farming, the forming of Farmers' Institutes or associations where convenient, having for their object, the interchange of thought or the discussion of questions, which would not only prove interesting, but also instructive and profitable to the farming community, and therefore help them to be the better able to solve the various problems constantly presenting themselves on the farm, and also prepare themselves the better, should they be called to occupy positions of honor and responsibility, and through those positions, honor God, and bless humanity.

Description of First Prize Plan of Poultry House.

Fig. 1. The north side with doors to each division through which the pens may be more readily and easily cleaned; also showing door in west end to passage.

Fig. 2. The south side showing windows and small doors opposite each pen for allowing the hens to pass in and out.

Fig. 3. Ground plan, 18x48 feet, inside measurement. A. This room may be used for a storeroom for feed, etc., also as a workshop and toolhouse and may be converted into another pen when desirable as it is the same size and may be arranged in the same manner as the others. Should it be used as a workshop there should be a solid board partition between it and the next pen so that the fowls may not be disturbed. B. Pens, each 12x16. C. Roosts, which are placed in the centre of the pen in order to allow free access to all sides. D. Nests and feed boxes combined. E. Passageway, two feet wide, running the entire length of the building. F. Windows which should not be less than 2½x6 feet in size each in order to allow plenty of light to enter the pens. G. Door to passageway should room A be used as the others. H. Stove or furnace, the pipes from which should extend the full length of the poultry part of the building, below ceiling, entering chimney at the east end of the building. I. Outside doors to each pen. K. Dust boxes 1½x3 feet by 1 foot in depth. M. Wire doors for entering pens from passage. N. Vessels for holding drinking water.

As will be seen in the ground plan it will not be necessary to place extra doors, in the passage way opposite the partitions between the pens in order to keep different breeds separate, as the wire doors being the same width as the passage, will, when opened up to allow fowls to pass out, answer the same purpose equally as well, as they will exactly fit the passage so that the fowls cannot get past them. A fastening should be placed on the wall opposite each of these doors in order to keep them in place when opened up. Where it is desirable to keep the different breeds separate it will be necessary to erect yards opposite each pen, but this being a simple affair it may done as best suits the fancy of the builder.

Fig. 4. Interior showing wire partition between passageway and pens below which the nest and feed boxes are placed in order that the eggs may be gathered and hens fed without having to enter the pens; also showing wire doors by which the pens may be entered from passage when necessary and for allowing hens to pass in and out through small doors shown in Fig. 2. The cross partitions between the pens may be made of boards all through, but the better way is to make a board partition about two feet high finishing with wire as it allows a free circulation of air through the whole house and is almost as cheap in price.

Fig. 5. Enlarged plan of nest and feed boxes with lids open showing more plainly the manner in which they are constructed. These boxes should each be 5 feet in length which will allow a space of 2 feet between for wire doors as shown in Fig. 4. In height they should be 32 inches in all making each part 16 inches. The upper part, which is 12 inches in width, should be again divided into 5 apartments, each being 12x12x16 inches for nests, a cess to which may be had by simply lowering the lid as shown. The tops of the nests should be on an incline in order to prevent the fowls from roosting on them as would certainly be the case if they were flat. The bottom should project at least six inches in front of the nests for the hens to light upon before entering the nests, to complete which a board 5 inches wide should be nailed along the front in order to prevent the straw, or whatever composes the nest, from falling out. The lower division or feed box should be cut away to 8 inches as shown, a board 4 inches wide being placed along the bottom in front the same as in the upper part to prevent grain or feed from scattering too much when thrown in from passage. The lids of these boxes should be provided with straps at each end to prevent them from opening any further than necessary when in use.

Fig. 6. Enlarged plan of roosts. These should be made of strips 1½x3 inches and 3 feet in length. They should be about 1½ feet and put together in the manner shown, viz.: nail the end strips on firmly flatwise, while the four centre pieces should be halved together, which gives more solidity to the frame than when all are put on in the same way. The great advantage in this style of roosts is that they may be easily lifted up and leaned against the side of the pen when it becomes necessary to clean them out; besides being all the same height the fowls are not nearly so liable to try to crowd each other off.

COST OF CONSTRUCTION.

5 000 feet hemlock lumber at $7 per M	$ 35 00
1,000 " " scantling at $7 per M	7 00
16 squares shingles at $1.40 per square	22 40
Tar paper	4 00
Outside doors	6 25
Window sash and glass	5 00
Wire for partitions	5 00
Nails	5 00
Hinges	1 50
15 days' work for 2 carpenters at $1.50 each	45 00
Total	$136 15

The cost of constructing a building of this kind, will, of course, vary considerable in different localities; also according to the taste and ability of the person building it; but in order to ensure any degree of comfort to the fowls in cold weather it will be necessary to board it inside and out, using tar paper under the inside boards. This not only breaks the wind but is a great preventive against vermin which usually infest a poultry house. In regard to erecting the building and the arrangement of the interior there is nothing about it that any ordinary person with a few tools cannot do, but the cost of construction has been given with wages of practical carpenters included and with the belief that everything has been placed at outside figures so that instead of costing more than the price given it may with a little good management be made to cost considerably less. Mr. Brown has built a poultry-house, himself, on a plan somewhat similar to this (the walls being of concrete instead of wood) which he designed three years ago and he finds it not only handy and convenient in every way but the arrangement renders it more a pleasure than otherwise to care for the poultry.