

tion, for an average of 7½ cents per lb., which would make one store worth nearly 80 dols. Under these circumstances it is better to take the lower figure of 80 dols. So much for the one side.

Then, for Canada, we are at the present moment masters of the position—no opposition and no equal conditions in producing the material, and yet, oddly enough, we do not seem to realise this. But, if we enter into this new trade, can we take the price offered, and what would be the advantage, if any, or disadvantages to us as a nation?

“We cannot produce a store store, 1,050 lbs., on foot here, when 18 or 20 months old, at less than 40 dols., and we want one cent more per pound to make a certain profit; thus the shipper gets our store for 50 dols. Experience is now plentiful in showing that it costs 20 dols. per head to land the animal at a British port, so that there remains a margin of 10 dols. in bargain-money between the British farmer and the party who takes all risks. Where are we now? It must be admitted that, so far, things look well enough. What would be the effect on our agricultural practice? and first, would it pay better to export our cattle as stores than as ready for the butcher six months afterwards? We have settled the price and profit on stores; and, though the other be better known, in experience it is the easier understood. Suppose that the Canadian farmer keeps this store in place of selling for 50 dols. in September or October. It is stalled up to May in such a manner as to go out at 1,400 lbs.; to do less would be useless. We think it unwise to advise anything over six cents per pound as the future of our British trade in live stock fit for the shambles, and hence the store in question will, in the hands of the Canadian feeder, fetch 85 dols., or 70 per cent. more than the store price. But to do this there is an absolute cash outlay of 35 dols., which reduces the profit to 50 dols., or actually no more than what we could have got seven months previous. Now, where are we? Is it not obvious, at first sight, that the problem is in favor of selling stores; because we get our money one-third earlier, so that in an ordinary life of 35 years we would live about 45 years, and because there would necessarily be more inducement to live stock breeding, and because it would necessitate more and better pasture for cheap production. On the other hand, there would be serious drawbacks. As Canada must continue a grower of grain, and maintain soil fertility, and as the sale of stores would produce less manure in quantity and value per head, the position must be cautiously handled. Immediate value is not necessarily the best value.”

DURING the last twenty years it has been scarcely possible to open an agricultural paper without encountering an article on strawberries. The strawberry has grown upon the public hundreds of new varieties have been raised, and almost every phase in strawberry management, from planting the new, to digging or ploughing up the old beds has been very fully discussed. One matter has been almost entirely overlooked, at least so far as regards any attention to it in a precise scientific way, for all that scientific education claims to do for cultivators is to help them to greater precision. It has been often enough enforced that the strawberry loves a rich soil, well fertilized; but rich in what? fertilized with what? these are questions that have been variously answered by suggested mixtures of this and that, artificial fertilizers, special manures, composts, well decomposed natural material, and the like. We know that all these contain, as a general rule, ammonia, phosphates, potash, and lime salts, etc.; but the precise relations between the strawberry plant and these applications, in the way of demand and supply, has scarcely been touched upon.

The strawberry has become in Nova Scotia an important field crop, not only in the Counties of Kings and Annapolis, so highly favored with enterprising and intelligent cultivators, but also in Sackville District, in Halifax County, in Yarmouth, and in a few other parts of the Province. It is but right therefore to call attention to the chemical composition of the ash of ripe strawberries, as revealed by the recent analysis of Dr. Munro, of the Downton College*—

The ripe strawberries was found to contain by weight:—

Water	89.30 per cent.
Organic matter	10.27 “
Ash	0.43 “
	100.00 “

The first suggestion is one that will occur to the consumer, that, when he purchases half a pound weight of strawberries he gets a little over three-fourths of an ounce of solid material, and more than 7 ounces of water. This liberal supply of the purest and least injurious material that enters our stomachs may be considered rather high in price at 20 or 25 cents a quart, but then the value of a thing is just the money it will bring, and if the consuming public prefer to purchase this commodity in the elegant and luscious form presented by the strawberry grower, and to pay the highest market price for it instead, of buying from the City Corporation the water

offered from rusty pipes at a lower price, no great evil can result to the purchaser, and much benefit may be derived by our strawberry growers.

The point, however, which we desire specially to dwell upon is the chemical aspect of strawberry culture. Like other crops the strawberry has its special needs that must be supplied to the soil, and every annual crop of the fruit carried to market takes out of the soil a certain amount of valuable material. What is the nature of that material? what is its amount? and in what form can it be returned to the land at the least possible expense?

All the substances of commercial value taken from the soil by a crop, except ammonia, are found in the ash of the crop after being burnt.

The composition of the ash of ripe strawberries is as follows:—

Silica and insoluble matter	6.61 p. c.
Phosphate of Lime	23.91 “
Containing 11.70 of P ₂ O ₅ .	
Phosphate of Magnesia	trace
Carbonate of Potash	60.77 “
Containing 41.40 K O.	
Magnesia	2.93 “
Soda	1.29 “
Sulphuric Acid (Anhydride SO ₂)	3.88 “
Undetermined	0.61 “
	100.00 “

Dr. Munro points out, what is evident from the above figures, that in strawberries the whole of the potash exists in combination with organic acid, and the whole of the phosphoric acid as phosphate of lime. The quantity of potash present is very considerable, even when compared with that contained in the grape. Dr. Munro has been informed that, in case strawberries grown with guano in very rich soil, although many blossoms are produced, they do not all set, or, if they do, the fruit is inferior in size and quality to the smaller quantity produced by less vigorous plants grown in poorer soil. The stronger and more highly forced plants are also found to be more liable to mildew.

Considering the benefit often derived by the grape vine from applications of potash manure, it seems possible that a special manure containing a fair proportion of potash would produce good results.

We shall return to this subject. Meantime, if some of our Nova Scotian strawberry growers will kindly send us notes of their experience with different manures, composts and fertilizers, and the results obtained as regards quantity and quality of fruit, it will greatly help us in the attempt to ascertain how far actual practice corresponds with the chemical data so far obtained.

* *Chemical News*, London, Nov. 14th, 1884, vol. 50, p. 227.