

As root-growers know, if there is any dominant fertilising element for root crops, it is superphosphate of lime, and the next one is salt. The large quantity of soda in the ash explains one, but the other has never been explained satisfactorily. Nitrogen is not considered as indispensable, but yet one pound of nitrate of soda has usually increased the crop one bushel of roots. The benefit of lime is especially noticeable, and this is no doubt because it supplies the need for the lime, and also makes potash in the soil available. As one principle in the culture of roots is that it should be a fertilized crop, and that liberality is profitable, its supposed exhaustive character is not worth considering. On the other hand, it is a feeding crop essentially, and is thus one of the most desirable ones, and at the same time the clean and thorough culture is another direct benefit to the land. The value for feeding is something more to be considered. The roots are entirely digestible, and, as is well known, this entire digestibility and the laxative effects on the digestive organs go to induce the greater digestibility of the other food and maintain a condition of healthfulness. This is especially the case in regard to sheep, which cannot be kept in wholly satisfactory health and profit without roots. In the dairy, too, they are exceedingly useful, and where they are supplied to swine the fatal cholera is never dreaded.

But let me reiterate, it is the prospective sugar supply which impels me to urge the culture of roots on the farmers; for there will never be an opening for this manufacture until we become skilful root-growers. And there are millions—a hundred every year of them—in the sugar industry, and most of this money will go to swell directly or indirectly the shruok pockets of the farmers.

I admit all the force of evidence in favor of ensilage, but we cannot make sugar of it.

H. STEWART.

CULTURE OF STRAWBERRY PLANTS.

TO THE EDITOR OF THE *Family Herald* AND *Weekly Star*:

In man's anxiety literally to gather the fruits of his labors he is, figuratively speaking, apt as of old "to kill the goose that lays the golden egg," and, as with other good things, so also with the strawberry plant. Being the result of artificial, or at least forced cultivation, the different varieties of strawberries are in a way liable to the same decline that we so frequently see in favorite sorts of potatoes and tomatoes whose lives of usefulness seldom exceed an average of fifteen years. In strawberries the term of vigor is happily somewhat longer. The Hovey originated as far back as 1830, was followed by the Wilson in about 1855, and the Crescent came into notice some ten years or so later. These three varieties have probably done more towards bringing the strawberry industry up to its present state of importance than all the other varieties put together. The Hovey has long since been superannuated and the Wilson is fast following its rival predecessor. Efforts are being made to restore it to its original vigor or at least to restore its lost reputation in the minds of the public, and we now hear of "pedigree plants" which I fancy like other families in the animal kingdom may have little but the reputation of their pedigrees to lean upon. In 1890 the Editor of the *American Garden* wrote to a number of the best known strawberry growers in the United States asking their opinions concerning the Wilson, the result being that he gave it as their opinion that the Wilson was failing and that other varieties were more profitable, and only one, Mr. F. M. Smith, of Green Bay, Wisconsin, wrote that it still was the most desirable berry with him. Knowing the extreme care which Mr. Smith had always taken in the cultivation of his plants and supposing that I had a strain which might

have been weakened by overcropping or want of proper attention, I sent for a dozen of his best plants. After three years of special care I can see no improvement over the old stock that I so long struggled with and they certainly stand to-day with me well at the foot of a long list of Bubacks, Haverlands, Warfields, Gaudys, Jessies, and Eureka's, as well as the older and better known Crescents, Downings, Windsors, Cumberlands, etc., etc., etc. It becomes a question then of very grave importance how these favorite and profitable varieties are to be retained in the fulness of their vigor. There is, I believe, fortunately a method which will not only accomplish this, but will also give us larger crops, while it at the same time simplifies the general plan of cultivation, and that is, never to take plants from those which have at any time borne fruit. Whether the single hill, or narrow row or matted bed system is followed, fruit is what we are after and not suckers, and the plan which I have found to give the most satisfactory results, whether with plants for sale or for one's own use, is to select in the spring the strongest young plants and to set them out on well manured soil with a good ball of earth adhering to their roots in rows four feet apart and the plants four feet apart in the rows. None of these should be allowed to blossom and no suckers allowed to start before the plants have made a vigorous root growth for themselves; say by the first of July. After this the runners are encouraged to strike out like spokes from a wheel till they meet every way, when any further suckering is checked, particularly from the forks of the runners. As winter comes on, a top dressing of fine, rotten manure will act as a protection and can be raked in amongst the plants, giving them a good start before transplanting time in spring. The next year strong plants are again selected and treated as before and in this way the strawberry fruiting beds and the strawberry plant beds are kept entirely distinct. By following this plan the extraordinary vigor of such a variety as the Crescent can be not only increased, but prolonged for many years, and when it is known that this variety has in one year produced from a single dozen plants as many as 10,000, it can be readily seen that it stands in danger of breaking down from overwork if the same plants are called upon to produce both fruit and runners at one and the same time. At present it still leads as a good all-round berry, and my own experience is only the same as most others, that the Crescent, where yield and profit are the main points, stands well at the head of the list, and when fertilized with the Downing makes for a near market (I have shipped them 300 miles without any trouble) probably the best general purpose strawberry of any yet brought out.

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Is the Shorthorn the General Purpose Cow?

BY JAS TOLTON WALKERTON, ONT.

In which breed, or in the crosses of what breeds, can the general cow be found? is a question that has been many times asked, but so far as I know has not been definitely answered. Neither do I suppose will it be settled for all time by this paper. The cow that is bred for special purposes, such as for beef, either by stall feeding or grazing, or for dairy purposes, has and always will have its admirers; but after all, what the general or average farmer wants is a cow that has, to as large extent as possible, all these qualities combined.

Before endeavoring to answer the question, it might be proper to try to define briefly what would constitute the general purpose cow. Would it not, to as large a degree as possible, be the cow that when judiciously mated, the produce,