

thirty pounds, or more for both bulbs and tops, while any other ordinary crop needs less than fifty pounds. Phosphates have been used in England mostly on roots. The roots have been consumed for fodder on the farm; the quantity of farm-yard manure has therefore been increased, and the cereals have been manured with the farm-yard manure, instead of with the phosphate directly. I question, although I am not prepared to support my opinion with statistics, whether better results have been obtained with phosphates in any country than in England, and for the reason that they have largely pursued this sensible plan in their mode of using the manure—have used it to increase their stock of stable manure, by applying it to the fodder crops. A good illustration of this point comes to me very opportunely in that excellent agricultural monthly, the *Scientific Farmer*. In a lecture recently delivered by Mr. J. B. Lawes, of England, to whom farmers in all parts of the world owe a great deal for his admirable investigations in agriculture, he makes the following statements:—

"It is a somewhat remarkable circumstance that in almost every instance where we have used superphosphate alone upon a land kept continuously in one crop, the result has been of a very negative description. For instance, on permanent pasture a liberal annual manuring of superphosphate has not increased the hay more than one hundred weight per acre over unmanured. It is not that the superphosphate had produced good crops at first, and then the crops had fallen off, from the exhaustion of some other ingredient, the difference has been about the same from the first to the twenty-first crop. The increase in the barley does not show an increase of five bushels per acre over the unmanured crop, which would hardly pay for the manure. Even on the field where we grow permanent roots, and where you would say that the superphosphate would be the master of the situation, it is actually the fact that on the continuously manured land stable manure alone has, as a rule, given a larger weight of roots than the same manure with superphosphate added to it." He then goes on to show that it is in the rotation of several crops that the superphosphate comes into play to the best advantage, and he gives the results of some rotation experiments that have been going on now for thirty years. One such rotation consists of Swedes, barley, beans, and wheat, with the exception that twice in the course of thirty years clover has taken the place of the beans, with an interval of twenty-four years between the two clover crops. The bean crops were small, and but little larger with the phosphate than without manure. The Swedes are fed on the land, without any other food to the animals for the time being, so that all the manure is

produced on these roots. An unmanured plot, that is, receiving no superphosphate but receiving all the manure from the animals that fed off the roots, was carried along with the same rotation, and here are the figures for the eighth set of crops:—

	No Manure.	Superphosphate.
1873—Barley.....	23 bushels.	29 bushels.
1874—Clover Hay.....	1 ton 8 cwt.	3 tons 2 cwt.
1875—Wheat.....	19½ bushels.	31½ bushels.
1866-7—Swedes.....	1 ton.	11 tons.

The products are given, it will be seen, for one of the two rotations in which clover was grown instead of beans. The superphosphate was applied only every fourth year, and yet increased the crop of wheat by more than one-third, and the crop of barley by more than one-fourth, to say nothing of the remarkable increase in the crop of clover. This is certainly a good lesson in favour of the use of superphosphate in connection with root culture for fodder.—*Toronto Globe*.

GRIMES' GOLDEN PIPPIN.

In the spring of 1857, an enthusiastic pomological friend called on me, with the enquiry, "Did you see that article on Grimes' Golden Pippin in the January *Agriculturist*?" "No! I did not notice it particularly." "Well! let's have a look at it." Reference thereto assured us that Grimes' Golden Pippin was a most desirable variety, the tree a vigorous, thrifty grower, and an annual bearer, while the fruit was not only best in quality, but a long keeper, in season from December to March.

I agreed to send at once for a few scions, of which my friend was to have half, and mailed 50 cents to T. B. Marshall, Massillon, Ohio, who was then introducing G. G. Pippin to the public. The money was returned, "they were using all their scions for propagating, buy some trees." I was not then ready for trees, and sending the fifty once more, with a few words of explanation, was rewarded for my perseverance, with scions four inches long. Of these my friend got three. I divided my three into six pieces, gave two each to two friends, buried my two pieces in the ground for a few days, as they were a little dry, and then used them on stocks of different ages; both took root and made fine trees.

In the spring of 1869, with several thousand assorted apple, pear, and plum root grafts, from the F. R. Phoenix, of Bloomington, Illinois, I imported from Mr. Marshall 100 scions, 200 root grafts, and 100 two year old trees of G. G. Pippin, which were distributed over the County. The trees, where properly cared for, have made a uniform, strong growth, forming a remarkably symmetrical, round topped tree, recognizable anywhere in the orchard by one acquainted with it.

Within the last three years the trees are coming into bearing rapidly; the first barrel from the Carleton Club Farm in 1877, brought at auction \$5; last fall, 1878, the crop of this variety had increased to fifteen barrels, and brought at auction a higher price than any other apple in the market.

In the spring of 1871, our Club Farm manager, Mr. William Bustin, of Belleisle, Annapolis Co., left us to take charge of his place there, and took a few scions of G. S. Pippin with him. In October last he sent me a barrel of the fruit, which brought at auction \$3, nearly double the price the best Nova Scotian or American apples were selling at. It is, without exception, the most attractive barrel of apples I ever saw, the fruit of uniform, medium size, a clear, golden yellow, with a beautiful brilliant blush on many of the specimens, the perfume from it is exquisite, whilst the quality is not far behind the best American and Canadian apples.

I have the Snow from Montreal, some fifteen choice varieties from the Niagara District, Ontario, and the Newton Pippin from New York, but this barrel of Grimes' Golden Pippin from Annapolis bears the palm from all for beauty.

I would not recommend it for our Atlantic coast, i. e., out on the shore, but anywhere a few miles inland, and in all our best fruit counties, Grimes' Golden Pippin should be propagated as rapidly as possible. It has been exhibited at several of our Provincial Exhibitions as an off variety, but should be included among the best varieties for which special prizes are offered in the Provincial prize list. Its beauty and long keeping qualities especially adapt it as a variety for export.

Soon after getting it I sent scions to Cornwallis, Dr. C. C. Hamilton, Port Williams, R. W. Starr, Port Williams, (has trees ready for the orchard probably,) George V. Rand, Wolfville, William Bustin, Belleisle, Annapolis, or Charles E. Brown Yarmouth, for 25 cents to pay for trouble and postage, will no doubt send a liberal package of scions to any applicant.

I send you a few specimens of the apple for approval and endorsement, as this season there are few varieties in Nova Scotia in such perfect condition and of equal quality.

By the first steamer, I intend to send specimens to Mr. Charles Downing, to show the beautiful blush which none of the fruit books mention, as a characteristic of this fine apple, and which may be the peculiar endowment of the Belleisle sun or soil, or of the sunny season of 1878.

CHARLES E. BROWN.
Yarmouth, March 3rd, 1878.

[Additional remarks crowded out.]