

absolutely insoluble and if time enough is allowed the whole of it may be taken into solution; but more than this is always required for remunerative plant-growth. There must be a greater rapidity of solution, so that the wheat crop can, during the growing season, easily find its eighteen pounds of phosphoric acid, or the Indian corn its fifty pounds or more, or the turnip crop its one hundred and forty or fifty pounds.

All three of the calcic phosphates which I have described are to be found, at least in nearly all cases, in our ordinary superphosphates. The tri-calcic phosphate, from its insolubility, is known as insoluble phosphate the mono-calcic phosphate as soluble phosphate, and the di-calcic salt as the reverted phosphate, because it is supposed to be produced by reversion of the mono-calcic or soluble phosphate back to the di-calcic as the superphosphate becomes old. In reports of analysis of phosphates, the terms soluble, reverted, and insoluble phosphoric acid are commonly used, instead of soluble, reverted, and insoluble phosphate. It is hardly necessary to add that the larger the proportion of soluble acid a superphosphate contains, the more valuable it is. In regard to the relative value of the three conditions of the acid, soluble, reverted, and insoluble, there is some variety of opinion among chemists, for the values are hard to fix with any degree of accuracy, but reverted acid is generally considered to be worth from two to three times, and soluble acid from three to four times, as much as the insoluble acid, such as we find it in mineral phosphates; and chemists are also generally agreed in giving to soluble acid the value of from twelve to twelve and a half cents per pound. My own opinion is, that it would be more correct to call insoluble acid worth only one-sixth as much as the soluble, or two cents a pound. Most of the experiments that have been performed with a view to utilize the ground mineral phosphate at once as a manure, without first converting it into superphosphate, or in other words, first converting at least a part of its insoluble acid into soluble acid, have yielded such unfavourable results as to justify us, it seems to me, in setting such a low estimate on the value of the insoluble acid in such phosphates. In bone meal the insoluble phosphate is worth more than in mineral phosphates—the South Carolina mineral, for instance—because it is accompanied by other substances that bring about its solution more readily. The bone meal will putrify, or decay wherever it is put, whether in the pile of rotting manure or in the field, and as it decays its phosphoric acid becomes soluble to a great extent, while the mineral phosphate suffers no such change.

Bass River, Londonderry,
25th March, 1879.

An Agricultural Society was organized in this place on the 23rd inst., called "The Bass River Agricultural Society." The following are the officers:—J. L. Fulton, Esq., *President*; R. D. Fulton, *Vice-President*; A. R. Fulton, *Secretary*; Robert Sterritt, *Treasurer*; J. Longworth, *Representative to Central Board*. 45 members to date, with good prospects of increase. We would be thankful for any advice or instruction you could give us.

Yours truly,

A. R. FULTON, Sec'y B. R. Ag. Soc'y.

QUANTITY OF SEEDS USUALLY SOWN TO THE ACRE.

	Broadcast. lbs.	Drilled. lbs.
Barley	100 to 150	80 to 120
Beans (Dwarf)		75 to 100
Beet		74 to 6
Buckwheat	50 to 75	40 to 60
" (for soiling)	75 to 100	
Carrot		2 to 4
Clover	10 to 15	
Corn (for fodder)	150 to 200	125 to 150
Flax	75 to 100	
Grasses,—		
Kentucky Blue....	25 to 30	
Lawn Grass.....	40 to 50	fine growth.
Orchard Grass....	25 to 30	
Red Top.....	16 to 18	
Rye Grass.....	20 to 25	
Timothy	16 to 20	
Hemp	50 to 65	
Hungarian	30 to 40	
Indian Corn.....		30 to 50
Mangel Wurtzel.....		3 to 4
Millet	30 to 40	
Mustard	15 to 20	
Oats	75 to 100	60 to 70
Onion, for marketing bulbs.....		7 to 10
" for dry bulbs.....		4 to 6
Parsnip		4 to 5
Peas	125 to 175	80 to 120
Potato (cut tubers).....		500 to 650
Radish.....		8 to 12
Rape	6 to 8	5 to 6
Rye (Fall).....	75 to 100	50 to 75
Sage		7 to 10
Salsify		6 to 8
Spinach.....		9 to 12
Tares (Vetches).....	150 to 175	
Turnip.....	3 to 5	2 to 3
Wheat.....	100 to 150	80 to 100

In hills or beds.

Beans (pole or running) in hills.....	20 to 25 lbs.
Cabbage, in hills.....	1 to 1 lb.
" in beds to transplant.....	1 lb.
Corn, in hills.....	14 to 18 lbs.
Cucumber, in hills.....	1 1/2 to 2 lbs.
Melon, in hills.....	2 to 4 lbs.
Pumpkin, in hills.....	4 to 6 lbs.
Squash (running varieties) in hills.....	2 to 4 lbs.
" (bush varieties) in hills.....	4 to 6 lbs.
Tomato, for transplanting in beds.....	1 lb.

DISPOSAL OF A GIVEN QUANTITY OF SEEDS.

	Number Hills.	Feet of Drill.
1 oz. Asparagus		60
1 lb. Beans (dwarf)	125	60
1 lb. " (pole)	100	
1 oz. Beet		50
1 oz. Carrot		150
1 oz. Chickory		75
1 lb. Corn	125	
1 oz. Cucumber	50	
1 oz. Endive		125
1 oz. Leek		100
1 oz. Melon	50	
1 oz. Okra (Gombo).....		50
1 oz. Onion		100
1 oz. Parsley.....		150
1 oz. Parsnip.....		175
1 lb. Peas.....		60
1 oz. Pumpkin	25	
1 oz. Radish		100
1 oz. Salsify		80
1 oz. Spinach.....		100
1 oz. Squash.....	30	
1 oz. Turnip.....		150

From Seed Catalogue of W. Rennie, Toronto.

POTATOES will be largely planted hereabouts. The crop of last year was light, but the high price has made it fully as remunerative as usual, and wherever the crop was well cared for, it has paid better than any other. Some of the new varieties are heavy croppers, and those of equally good qualities promise to supersede Early Rose, which, for this locality, has had its day. Originally the Early Rose was one of the most prolific sorts, but it has become extremely variable both in yield and quality. I know farmers who last year did not get thirty bushels of marketable Early Rose per acre, while on adjoining land Wells' Seedling, which is every whit as good as Early Rose, and not distinguishable in appearance from it, yielded 150 to 175 bushels per acre. Late Rose is also very prolific, but its quality is variable, and on some soils it is hardly fit to be eaten.

Of course there is a risk in planting potatoes largely. A heavy yield all over the country, might repeat the experience of 1875, when potatoes were dug at 18 to 25 cents per bushel. But our old varieties have so far run out that a general success would be more surprising than a general failure. There is vastly more poor seed than good in the country today, and in the scarcity of potatoes at planting, much of this poor seed is sure to go into the ground. Poor seed was one cause of the general failure of the potato crop in 1878, and the evil is likely to be worse this year than last. It must be an exceptionally favorable season for potatoes that will bring through much of what will be planted the coming spring. Hence, while it is probable that many will lose money in potatoes this year, the time was never better for those who thoroughly understand potato-growing, and will give it the care and labor that this crop now, more than ever, requires. It is perhaps fortunate for skilful planters that the potato crop has been taken out of the list of crops which even the laziest and least skilful can grow. There never is and never can be very much profit in anything that everybody can do.

Munroe County, N. Y.

—Country Gentleman.

An opinion, which we believe to be either intuitive or hereditary, exists in the minds of many intelligent men, namely, that a University training is necessary only for scientific, literary or professional men, and that it is folly for any one expecting to become "a hardy son of toil" to indulge in such an apparent luxury. We fail to see any reason why the latter class should not receive that excellent mental culture which is intended to inculcate such sound fundamental principles as are calculated to exalt the interests of a nation. Let us consider the necessity