

PRICE OF SUPER-PHOSPHATE OF LIME, \$40 PER TON.

PETER R. LAMB & CO. MANUFACTURERS.



PRICES OF GROUND BONE, The Bone Dust, 82.50 per Ton. Finest Ground Bone, 22.00

TERMS—CASH, OR CITY REFERENCES TO ACCOMPANY ALL ORDERS.

WAS ESTABLISHED in 1837 by the late Peter R. Lamb. The business is now carried on by Mr. DANIEL LAMB, under the style of PETER R. LAMB & CO. The premises are situated in the North-Eastern portion of a City of Toronto, and in every respect capacious and adapted for the purpose for which they are used. Twenty-five hands and two steam engines are employed. Formerly the demand for the goods manufactured was so great, that it was found impossible to fill all orders for BONE DUST and SUPER-PHOSPHATE OF LIME. During the last year extensive improvements have been made in order to meet the increase of business.

PERMANENT MANURES NOT THE MOST VALUABLE.

A CORRESPONDENT of the "CANADA FARMER" asks the editor of that paper the following questions:

- 1. What is the proper quantity of super-phosphate to apply to the acre?
- 2. What is the proper way to apply it to turnips?
- 3. Is Super-phosphate of Lime merely a stimulant, or is it a permanent manure?
- 4. Is Bone-Dust a permanent manure, and if both these are permanent, which of the two is most so?

To the first question the editor correctly replies, that from two hundred pounds to four hundred pounds is generally recommended. In answer to the second, he says: "Care should be taken to incorporate the super-phosphate with the soil, as it is of so concentrated a nature that it ought not to come into direct contact with plant roots." We have used super-phosphate for many years, and never know of its "burning the roots of plants. It differs in this respect from Peruvian guano. The English farmers drill in the super-phosphate with the turnip seed, and find that it so stimulates the young plants that they are soon out of the reach of the "fly." We believe that turnip culture will never become as general as is desirable till we use super-phosphate, and have a drill to sow it on the ridges with the seed. As the Canadian farmers raise so many turnips, we hope that drills of this kind will be introduced, if they have not been already. They are very common in England. It is a point of great importance. Super-phosphate drilled in with the seed will double the crop of turnips.

In reply to the third question, the editor of the "CANADA FARMER" says:—"Super-phosphate is a permanent manure (in a comparative sense) if really good, and its effects will be observed for many years after its application."

In reply to the fourth question, he says:—"Bone dust is a permanent manure also, but we cannot say which will last the longest. Our impression is that super-phosphate will act the more quickly of the two, but whether the bone dust will out last it, is a point we are unable to determine."

Now the fact is that super-phosphate, if really good, is not a permanent manure. Too better the super-phosphate the less permanent it is. And this, strange as it may appear to some, is true of all manures. Think a moment! Why do you pay more for bone-dust than for rough bones? The latter will last twice as long as the former. What the gardeners term "right manure," (that can be cut with a spade, is by no means as permanent as the coarse, litters, unfermented manure from which it is obtained. And yet the former is considered the most valuable. It is so in all cases. Hair, wool, horn, and hide, contain as much nitrogen as the best Peruvian guano, but being much less permanent, are not considered half as valuable.

Why is this? Why are coarse, rich bones so much cheaper than fine bone dust? The answer is plain. The fine bone dust decomposes more rapidly, and produces a greater effect, but of course will not last as long. If it could be ground as fine as flour it would act still quicker and produce a better result—or what is the same thing, a less quantity would be needed to produce a given effect.

So if super-phosphate of lime. The manure is simply bones made soluble by sulphuric acid. Of course, being soluble, it acts quicker than bones, and is consequently less permanent. Two hundred pounds of bone dust treated with one hundred pounds of sulphuric acid—in other words super-phosphate—will have a greater effect on an acre of turnips than half a ton of bones. But will it last as long? It is absurd to suppose so. If it is a really good article—in other words, if all the insoluble phosphate of the bones is converted into soluble phosphates, it will be all used up the first year. If only a portion of the bone is converted into soluble phosphate, it will produce a less effect, but will last longer. If it is a very inferior article—if it is little better than ground bones—it will be nearly as "permanent" as bone-dust.

The advantage of super-phosphate as compared with bones, is that you get a much greater effect in a given time. You apply it to a crop and get the whole effect (if a good article) the first year. And the crop, if consistent or the farm will make manure for the subsequent crops. In this sense, super-phosphate is a permanent manure. Its effect will be seen on the farm five, ten, twenty, or a hundred years hence—provided you use the crops, as all good farmers do, to make manure and enrich the land.—Genese Farmer.

The reader will be interested in the subjoined statement, condensed from a paper in a recent scientific English periodical—"The imports of guano since 1840 have amounted to three and a quarter millions of tons, the import of cubic nitre, which averaged 10,000 to 14,000 tons per annum up to 1858, have since varied from 25,000 to 40,000 tons per annum. The imports of bones since 1858 have increased from 30,000 to 70,000 or 80,000 tons annually. All these are valuable manuring substances. From 75,000 to 80,000 tons of Suffolk and Cambridgehire phosphates, and 15,000 to 20,000 tons of Combrero phosphate, are also used in the super-phosphate manufacture, which it probably exceeds in worth £1,000,000 per annum.

MIDGE AND MANURE.

That veteran farmer, John Johnston, in a letter to the editor of the Genese Farmer, makes some interesting and suggestive statements about the effect of manure on the wheat crop in counteracting the ravages of the midge. He has been trying an experiment the present season, the result of which speaks volumes in favour of a better system of farming. He applied manure of it liberally on part of his wheat; another portion received a lighter dressing, while one acre was left without manuring at all. Now for the result. The straw on the whole was abundant, rather too rank on the best manured part, but the midge has done comparatively little damage on this portion, a great deal more damage on that less manured, and far more on that not manured at all.

The reasons Mr. Johnston assigns for the effects above described are these:—"That heaviest manured stood the winter best, came earlier forward in spring, and came in ear earlier. That manured less was a week later, and the one acre without manure was quite behind." He adds, "I can have Scotch wheat early enough if I only had plenty of manure of the right kind."

The Editor of the Genese Farmer remarks on the above experiment:—"This is just what I have always contended. If we could sufficiently enrich our land with rich manure, (not rotted straw,) and if it was well drained and cultivated and sown at the right season, we should have no reason to apprehend much damage from the midge."

We hope our readers will make a note of this. Many of them can testify as to the prevalence of midge upon insufficiently manured land, let them try the other portion of the experiment, and see how the wheat fares on ground thoroughly manured and deeply tilled. We are quite aware of the difficulty that is in the way of putting this thing to a proper test. Manure is scarce. Our best farmers could advantageously use a great deal more than they can make. John Johnston in the above extract tells us what he could do if he only had plenty of manure, and in the same letter he says he has contracted for eight tons of oak cake to feed the coming winter, mainly for the sake of the rich manure it makes. Manure making must take a more prominent place among the operations of the farm. It may be an unjustifiable opinion, but we cannot help thinking that many of the ills which agriculture is heir to owe their parentage to poor systems of husbandry. A poverty-stricken soil can only produce plants of feeble constitution, so to speak. Their growth is slow, and they have not vigour enough to contend successfully against insect and other enemies.

LAMB'S SUPER-PHOSPHATE OF LIME.

We have already manufactured for this Spring Trade a large quantity, being twice as much as manufactured any previous year, and is A VERY SUPERIOR ARTICLE, AND WARRANTED FREE FROM ALL ADULTERATION. Farmers, send in your orders to insure to have them fulfilled.

PETER R. LAMB & Co., Manufacturers, Toronto.