

THE FARMER.

PUBLISHED FOR PETER R. LAMB & CO.

Vol. 1. No. 1.

TORONTO, ONT., 1879.

AUXILIARY PUBLISHING CO.

Do 'Spornico ob de Rebrond Quaco Strong

Swing de gate wide 'Postle Petah !
Ring de big bell ! Beat de long !
Saints and martyrs den v. ll meet dar
Hrudder, Rebrond Quaco Strong.
Sound dat bugle Angel Gabriel !
Tell de elders loud and long !
Clar out dem high seats ob hebber !
Here comes de Rebrond Quaco Strong.

Turn de guard out Gen'ral Michael !
Arms present, de line along !
Let de band play "Contentin' Hero,"
For de Rebrond Quaco Strong
Den let Moses bring de crown, an'
Palma, an' weddin' gown along,
With persuasion to de laudin',
Here's de Rebrond Quaco Strong.

Tune your harp strings tight King David,
Sing your good "Ole Hundred" Song;
Let de seraphs dance with cymbals,
Roun' de Rebrond Quaco Strong.
Joseph march down with your brethren,
Tribes an' banners, Hebberly throug';
Speech ob welcome from ole Abraham,
Answer, Rebrond Quaco Strong.

Angola, heah me yell hosanner,
Heah my dulcun spiritual song ;
Halleluyer ! I'm a comin',
I'm de Rebrond Quaco Strong.
Make dat white robe radior spacious,
An' dat waist-belt stunnin' long,
'Cause 'twill take some room in glory
For de Rebrond Quaco Strong.

What, no' one to de laudin' !
'Pears like suffin nudder's wrong ;
Guess I'll gib dat sleepy Peah
Fits, from de Rebrond Quaco Strong.
How am' dia de gate all fastened ;
Out ob all dis abinin' frog ?
No mullatto cherub eben
Greets de Rebrond Quaco Strong.

What a narrow little gateway,
My l dat gate am' hard to move.
Who am dat ? says 'Postle Petah,
From de parapet above.
Uncle Petah, don't you know me—
Me, a abinin' light so long ?
Why, de berry niggahs call me
Good ole Rebrond Quaco Strong.

Dunno me l de aboutin' preacha !
Reglar hull-bog Wesleyan too !
What in de woods you been a loasin',
Some ole rooster's boddered you
I reckon ! Why I have converted
Hundreds ob darkeys in a song !
Dunno me, nor yet my massa !
I'm de Rebrond Quaco Strong !

Hark to de ar curious roarin' !
Far away, but rollin' nigher ;
See de drestel dragon flyin',
Heah like nigh an' mout ob fire !
'Tis de berry king ob debbels,
An' h'em rushin' right along ;
Oh I deah Petah l please to open
To class-leader Quaco Strong

Ole nick's comin' ! I can feel it
Clittin' warmer all about !
Oh I my good, kind, kumel Petah
Let me in, I'm all to stout
To go away wid majer Satan
Into dat warm climate, among
Fire an' brimstin'. Heah me knoeckin',
Ole church-member Quaco Strong.

Dat loud noise am' comin' nearer ;
Drestel amell l like powder smoke ;
'Nudder screech, good Hebben help me l
Lor' forgive dis poor ole moke.
Allus was so berry holy,
Singin' an' prayin' extra long ;
Now de debbel gwine to catch me,
Poor ole niggah Quaco Strong.

High l dat gate swing back a leetle,
Mighty squeeze to get froo !
Ole Appollyon howlin' louder !
Eberthing aroun' am' blue !
Bang de gate goes ! an' Belzebub,
A bunch ob wool upon his frong,
Goes 'long home widout de soul ob
Miserable sinner name ob Strong !

VISIT OF WM. WILD, ESQ.,

(Editor "Farmer's Advocate.")

To Peter R. Lamb & Co's Fertilizing Works.

Many of you would like to know something about the manufacture of our fertilizers. We made an inspection of Mr. Peter R. Lamb's Factory in Toronto. It is situated near the north-eastern extremity of the city, on the edge of a deep ravine that runs into the Don.

It is a very useful establishment, and shows how true it is that the dirty hands make the clean. To these works we are indebted for the whitest sugar that we consume in our coffee, tea, and confectionery, and our wives, daughters, and sweethearts are also indebted to them for their "bonnie blue ribbons."

Bones, cutting, and refuse meat and paring from hides are sent here from all parts of Ontario; teams are constantly going and coming. The smell did not appear to not injuriously on the health of Mr. Lamb, as he appears about as healthy as any man in Toronto.

FEED THE LAND AND IT WILL FEED YOU.

ESTABLISHED 1840.

PETER R. LAMB & CO.,

MANUFACTURERS.



FEED THE LAND AND IT WILL FEED YOU.

FEED THE LAND AND IT WILL FEED YOU.

PRICES.

Super-phosphate of Lime.....	\$30 per ton.
Fine Bone Dust.....	30 "
Half-inch Bone Dust.....	25 "
Three-quarter inch "	20 "

(Delivered Free of Charge at Railway Station in Toronto. No charge for Barrels or Bags.)

Address your orders,

PETER R. LAMB & CO.,

BOX 794, P. O., TORONTO, ONT.

TORONTO, ONT.

DEAR SIR,

We desire to call your special attention to the following remarks on Manures, as manufactured by us. We claim them to be cheaper and of better quality than any made in the Provinces. The value of Bones as a manure has been long known throughout England and the United States, but their use had not extended into Canada until the beginning of the year 1852, when the first Bone Mill was erected by Peter R. Lamb in this country, which he was awarded a Diploma at the Provincial Exhibition held in Toronto, September, 1853. The employment of Ground Bones for manure has increased rapidly since then, and its use has now extended throughout the whole of Canada.

We guarantee all Bone Dust sold by us to be free from any adulteration whatever, and the Bone Dust or Meal to be ground finer than in any other establishment on the continent. The **SUPER-PHOSPHATE OF LIME** is manufactured from bones and animal matter, decomposed by the addition of sulphuric acid, and we warrant every barrel to be free from the admixture of Gypsum or any cheap substance, whereby the weight may be increased, to the injury of the farmer or gardener, who, paying for a concentrated manure, expects to receive the benefits of such, but often finds to his cost that he has bought a worthless article, manufactured by speculators under the name of Super-phosphate, but which contains little or none of the soluble phosphates, being merely a mixture of Gypsum with other cheap and weak manures, which does not nourish the soil, but from their stimulating nature, produces exhaustion of the land.

SUPER-PHOSPHATE OF LIME, properly manufactured, supplies to the soil those ingredients that are taken out by repeated croppings. It fact it forms a food for the plant, nourishing it into vigorous growth.

FEED THE LAND AND IT WILL FEED YOU.

BONES are ground of two sizes, that is, in the shape of **Bone Dust or Meal**, and a coarser kind called **Half-inch Ground Bone**. In these forms they are most efficient, and as Bones give to the plants the food they require, and decompose gradually, it forms a cheap and beneficial manure, free from the seeds of obnoxious weeds, &c. All the substances which enter into the composition of Bones are desirable additions to the soil, but particularly the phosphates. Phosphoric acid, usually found with magnesia, and more particularly lime, enters into the structure of every plant and animal: it is a substance, therefore, which cannot be dispensed with either in the vegetable or animal economy. The fine sand-stone loams of Cheshire, England, were comparatively sterile in the end of last century, which was entirely owing to the deficiency of phosphoric acid in the soil, no doubt partly to be attributed to the quantity yearly abstracted by the produce sent to market. So much was this the case, that a liberal dressing of Ground Bones had the effect of at once doubling the value of the worn-out pastures. In England and the United States the quantity of Ground Bones applied to the acre is from 800 to 1,000 lbs., and the good effects can be seen from 12 to 20 years. It is, on application to the root crops, such as turnips, mangel wurzel, &c., that **Ground Bone** is so marked in its effects, even when the soil contains phosphoric acid in a considerable quantity. The reason of this is not difficult to trace. The seeds of the turnips, &c., are small, and are sown at the warm season, when the growth is rapid. The seeds themselves have only a limited quantity of Phosphates stored up for the benefit of the roots and leaves of the young plants. Unless the roots, therefore, while yet short, meet with a concentrated supply, the other elements for the food of the plant—carbonic acid, water, and ammonia—however abundantly they may be present, cannot be assimilated, and its growth is arrested. Besides, a liberal supply of **Bone Dust** has the effect of pushing on Root crops through their early stages, when it is so liable to injury from various insects.

FOR FRUIT TREES, RASPBERRIES, STRAWBERRIES, GRAPE and HOP VINES, it is invaluable, yielding a fine fruit and more abundantly, while to **Grass and Clover Lands** it imparts vigor to the soil, causing new grasses to sprout, and a more milk-yielding herbage to spring up, replacing the phosphates which are carried off in the form of milk, butter, veal, &c.

SUPER-PHOSPHATE OF LIME, a highly concentrated Manure, prepared so as to give a greater quantity of the soluble phosphates, &c., and, as manufactured by us, contains in combination all the ingredients necessary to the nutrition of plants, and to the fertilization of soils. It contains **Bi-phosphate and neutral Phosphate of Lime in abundance**, **Sulphate and Carbonate of Ammonia**, **Carbonaceous substances** and **Nitrogenous organic matter, &c.**, gradually yielding ammonia to the soil. Manufacturing it of the best materials, and in the most approved manner, we offer it with the utmost confidence, as being fully equal if not superior to the best Peruvian Guano.

It matures crops from ten to twenty days earlier, and greatly increases the yield.

It gives **Wheat, Rye, Barley, Oats, &c.**, a firm stalk, and produces a large head and plump kernel. To **Tobacco-growers** it is invaluable, giving a large, well-developed leaf, and protecting it from the worm. Pushing **Onions** into vigorous growth, it increases the yield, and prevents the attack of the maggot, so injurious to the plant.

The sinews and skins are made into glue, the hoofs are made into Russian blue, the fat is used for soap grease, and the hardest bones are picked out, burned to a particular stage, and then in a black, lumpy state are sold to sugar refiners to cleanse the brown sugar and turn it out white. Some of the bones are burned and make lamp-black and blacking to polish our boots. The horns are cleaned and sold to comb and button manufacturers. Many of the fancy items on tortoise shells and neck ornaments are made from the hoofs.

Now for our share of the products. The soft bones are crushed and ground by powerful machinery, and sold to farmers and gardeners to increase the fertility of the soil and produce our nicest fruits, vegetables and cereals of the best quality. A farmer named Hill, living near Norway, about five miles from Toronto, has made a good sum by the use of Lamb's superphosphate and bone-dust. He raises large crops of potatoes and produces them of a good size, while other farmers have only small scrubs of things about the size of marbles. He purchases a large quantity of this manure every year, and is filling his pockets by its use. There are but few of our farmers who know the real value of it. It is found by many to be cheaper than hauling manure from the barn. It must come largely into use in Canada.

When we were leaving the grounds we counted twenty-three cats by the side of the raving, the largest number we have ever seen together. They appeared as happy and contented as they could be. We expressed our surprise at such a sight and ask Mr. Lamb what he fed them on. He said: "We never feed them; we have about a hundred here; they live on rats and cannot kill them all."

It appears rather strange that superphosphate and farm manures should be shipped out of our country to foreign ports; but nevertheless this is a fact. We have heard of one American planter who expends \$10,000 annually in artificial manures. The superphosphate is made by dissolving the bones with sulphuric acid.

Feed the land and it will feed you.

Value of Manure.

A bushel of average manure, as shovelled from the mill, weighs about 50 lbs., or four tons. The average of eighty-four reports of premium crops, as given in the *Agriculture of Massachusetts*, shows twenty-eight loads or seven cords, or probably twenty-eight tons, of dung, applied in order to obtain the average estimated crop of eighty-one bushels of shelled corn. This would indicate a value for the manure, as applied by these farmers, of about three bushels of corn to the ton, or less, if calculated as it should be, on the increase, instead of on the crop gained from the natural fertility of the land and the dung.

Is this correct? It is certainly claimed that this method of calculation is proper, and that there are two values to dung, the one chemical and the other agricultural. Thus a ton of manure produces one bushel of increase in wheat, etc.

For our own part, we don't believe that we can assign to manures any value which we can define as agricultural as distinct from chemical. Give a sample of fertilizer to twenty chemists, and they will agree upon its chemical value. Give fertilizer to twenty farmers, and no two will value it alike. One may call it worthless, and no two will assign the same crop-production to its use. We might as well come to the conclusion at once that the agricultural value of a fertilizer depends upon who uses it,—on the land, on the crop, and on the judgment of the user. Given a ton of superphosphate to this man to grow corn, and let him use it on land unfit for corn, and the fertilizer is condemned. Give it to that man who applies it to corn land, and it is pronounced good. A hundred weight of fertilizer or dung applied to one field may produce double the crop of another field upon which one hundred pounds of the same fertilizer has been strown.

The only true basis for testing fertilizers is the chemical one; but this valuation of the chemist must be correctly interpreted. It is not sufficient to know how much nitrogen occurs, and how it is mixed with other elements of fertility, etc., etc., and so for the other elements. Do we ignore field trials? By no means. It is only through field trials that we can learn the action of fertilizers; but to accomplish this, the trials must be made by men who are willing to devote study to their interpretation.

Have manures and fertilizers an agricultural value? Certainly they have. But what is it? Only the chemist, who interprets the influence of constituents and combinations, and the other conditions termed physical and physiological can give it; and then when this chemist arises and gains enduring fame by giving it in its completeness, no two farmers can obtain the same value, nor the exact value that he assigns. Do not call our words contradictory, for, remember, the man who rules the conditions of his farming the best prevails over another who rules not at all; and further reflect that the MAN is indeed a prime necessity for the successful farm, and not merely the labourer, nor the dung, nor any other one factor can organize the highest success.

Feed the land and it will feed you.

My Little Wife

Our table is spread for two to-night
No guests our beauty share
The diamond ring is mine...

A French Detective's Story.

This is how I came to be mixed up with certain detectives of the Rue de Jerusalem, the Scotland Yard of Paris.
A friend of mine, a solicitor, had among his clients a firm of East India brokers...

"We," he continued, divide our police into two great divisions—the police politique and a police correctionnelle.
"Your police politique," he said, "is a division of the police correctionnelle who wear uniform and those who don't. The former are for keeping order in the streets...

After breakfast I set off to present my credentials at the Rue de Jerusalem; which, as most people know, is the headquarters of the Paris police.
I desired that the man should be shown up. He brought his parcel in with him and stood facing me as he nudged it, talking about the weather...

one of the waiters tapped at my door and announced that a man had brought me a couple of socks to look at from a shop on the boulevard.
I desired that the man should be shown up. He brought his parcel in with him and stood facing me as he nudged it, talking about the weather...

arrival in Paris the police had the whole affair at my finger's ends. It was just as they suspected. The securities had been pledged to a very low money-lending firm for something under five hundred pounds, they being worth twenty times the amount.
A little—or I should say not a little—pressure was put upon these "hylocks" who, for a premium of two thousand francs (240) were made to disgorge what may truly be called their plunder. They managed these things, if not better, at any rate more promptly in France than in England.

Chemical Department.

Plant Food.

It is now but little more than a generation since chemistry came to the farmer's aid, and offered her services to those who would employ them.

The chief aim of the husbandman is to supply plant food. For this purpose he applies his manure, he exercises his skill in culture, he sows his fallows or rotations.

We propose to offer a few ideas on the subject of plant food, premising that our statements all seem to have been experimentally proven, and to have been practically adopted, here and there, by the most intelligent of cultivators.

The elements of plant food which are most apt to be deficient in our soils are nitrogen, phosphoric acid, and potash. To obtain a full crop these have to be present, diffused throughout our land, and must be in that chemical condition which will allow of their being appropriated by the roots of our plant.

Now, one pound of soluble phosphoric acid, or one pound of a given condition of nitrogen, or one pound of a potash salt, properly diffused through our land, is as efficient as another pound of a like substance, without regard to its source of supply.

Let us not be understood as saying that one hundred pounds of dung containing one pound of soluble phosphoric acid is not better than ten pounds of superphosphate containing one pound of soluble phosphoric acid.

These are facts; now for the application. Plant food must be furnished by the farmer in order that he may be able continuously to crop his land.

Consequently, the farmer must study value, and provide for his crop the plant food from the source whence it can be obtained for the least money.

Dung or Chemicals?

Is dung better than chemicals? Not necessarily. The chemicals are better than dung; it does not follow. If dung and chemicals will raise the same quantity of crop year after year, then which the farmer wants to apply is the cheaper of the two.

We have here the whole question of purchased manures in a nutshell, provided our supposition be tenable. Let us show that it is, by the quoting of an actual experiment, which must tend to convince even the most sceptical.

Unmanured plot..... 1.32 tons. Applied chemicals for 100 ft. x 100 ft. average 11 tons dung..... 2.39 "

Barley. Unmanured plot..... 299 bush. Applied chemicals..... 44 " 24 yrs. average 11 tons dung..... 367 "

Wheat. Unmanured..... 154 bush. Applied chemicals..... 27 " 24 yrs. average 11 tons dung..... 261 "

We thus see that chemicals can produce the same results as are produced by dung. In the experiments quoted we have the average of many years' trials, so that the effect cannot be ascribed to a favourable season or otherwise.

Reason tells us that chemical farming must be successful, provided we apply to the land yearly what the crop removes, provided the elements which are applied are kept during the season of growth in a condi-

FEED THE LAND AND IT WILL FEED YOU.

Do not use less than 800 lbs. per acre.

It must be remembered that our Super-phosphate is a concentrated and active Manure; it should, therefore, be incorporated with the soil or scattered around growing plants, but on no account to come directly in contact with the seed or young plant.

DIRECTIONS FOR USING BONE DUST AND SUPER-PHOSPHATE OF LIME.

For Top Dressing Grass Lands.—About 500 lbs. per acre of Bone Dust, or of Super-Phosphate, on mowing lands, should be applied early in the Spring.

For Flax, Wheat, Rye, Oats, Barley, Buckwheat, Millet, &c.—Apply plenty on first application, after which less may be used.

For Corn, Potatoes, Beans, Peas, Squashes, Melons, Cucumbers, Cabbages, Tomatoes and Onions.—Apply half a handful of Super-phosphate or half a pint of Bone Dust to each hill—if sown in rows, in same proportion—mixing with a little soil, then drop the seed, and at first hoeing use a little round the plants as a top-dressing.

For Turnips, Beets, Carrots, Mangel Wurzel, &c.—Apply from 400 to 500 lbs. Bone Dust per acre, with the seed. The sowing should be done just before rain, if possible.

For Asparagus.—Apply 10 quarts of Bone Dust or a little less of Super-phosphate, mixed with 8 quarts of salt, to the square rod at the time of digging, over the beds in the Spring; to be well raked in.

For Strawberries.—From 4 to 6 quarts to a square rod, broadcast, early in the Spring, with a good dressing of loam mould, which will keep the ground soft and moist, and ensure a good crop, improving the quality of the fruit.

For Fruit Trees, Raspberries, Currants, Grape and Hop Vines, Ground Pines are an invaluable and lasting Manure. When the Trees or Vines are first planted, a liberal supply of half-inch Ground Bone should be used about the roots, and fine Bone Dust or Super-phosphate applied as a top-dressing.

FARMERS

Sometimes complain that Super-phosphate costs too much to use.

Farmers—it saves labour, it costs less per acre than stable manure, if you take in hauling stable manure and spreading it out. But suppose it does cost more, it is 100 per cent. better.

FARMERS, do you think 25c. per cent a good investment?

Lamb's Super-phosphate of Lime will pay more than 50 per cent.

We publish a letter from Mr. Daniel Woodriff, who said his Hay Crop was trebled where he used Super-phosphate of Lime. Does this pay?

And also another letter from Mr. Wm. Whitelaw, Guelph, to the Canada Farmer, that at an outlay of \$7.50 he got 625 bushels of Turnips to the acre, where he used Lamb's Super-phosphate of Lime. In the field that he used no Super-phosphate of Lime on, he got 360 bushels per acre, showing a net gain of 265 bushels per acre, at a cost of \$7.50.

Farmers, does this pay? It does pay.

The Agricultural Gazette says that Mr. Brown, of Wellington, by the use of five hundred dollars worth of ground bones per year increased his herd of cows, on a ninety acre farm, from eight, in 1851, to thirty, and his sales of butter from \$350 in 1851, to \$2,355 of butter and cheese in 1857.

The English Farmer quotes Mr. Milborn, a Yorkshire farmer, as saying that bones form one of the most valuable manures for Turnips, on account of their portable and stimulating character.

"From Prof. Liebig's familiar letters on Agricultural Chemistry, one pound of Bone contains as much phosphoric acid as a hundred weight of grain."

"Without Phosphate of Lime our horses, sheep and cattle would be without bones."

"A field in which Phosphate of Lime or the alkaline phosphates forms no part of the soil, is totally incapable of producing Grain, Peas or Beans."

"It was observed that many English fields exhausted of Phosphates immediately doubled their produce as if by a miracle, when dressed with Bone earth imported from the continent."

TESTIMONIALS—(a few out of many).

(FROM THE HON. GEORGE BROWN, TORONTO) I certify that I purchased last spring, from Messrs. Peter R. Lamb & Co., Ten Tons of Super-phosphate, and used it on my farm, Bow Park, near Bradford.

(FROM DANIEL WOODRIF, ESQ., GUY, HERON COUNTY.) I have great pleasure in testifying to the excellence of the Super-phosphate I purchased from you last spring. I applied the article to clover but not to the entire field, and I am sure that I am quite safe in saying that the Hay Crop was trebled where it was top dressed with your manure.

(FROM JAMES WALLIS, ESQ., PETERBORO') GENT.—In regard to your Super-phosphate of Lime, I have great pleasure in testifying to its beneficial qualities to Root Crops and Vegetables in general. I put a small quantity on about a quarter of an acre of Turnips in the middle of a field, and a passer-by can easily distinguish the superiority of the crop in that part of the field.

(FROM WM. YOUNG, ESQ., WESTER.) GENT.—The Super-phosphate of Lime you sent me gave me great satisfaction; the greater part of it was sown on Barley, and when my neighbours, both east and west, had their crops flattened, so that some had to be cut with a Mowing Machine, mine, more exposed to the storm, was all standing good, so that I cut round the whole field with the Reaper. I tried one barrel on Spring Wheat, which plainly proved its good qualities, the Wheat being stronger on that acre, and about four or five days earlier. I also tried an acre of Turnips, dunged all alike, and then I put on at the rate of one barrel per acre of the Super-phosphate, which, from the first to the present, is quite superior to any of the rest of the field.

(FROM WM. WHITELAW, ESQ., GUELPH.) GENT.—In reference to the Super-phosphate of Lime purchased from you last Spring, I have to state that I applied it on my Turnip Crop, &c.; the results up to the present time are entirely satisfactory, as I shall have a large crop; but I will be enabled to state more fully hereafter as to actual results, as by way of experiment. I have in the same field used barn-yard manure and Bone Dust—the latter at the same cost per acre as the Super-phosphate—and also applied the Super-phosphate both with and without manure of any kind; but if I should judge from present appearance, the crops will be decidedly best where Super-phosphate has been applied.

ANALYSIS.

(FROM THOMAS HEYS, ESQ., Professor of Chemistry, Ontario School of Chemistry and Pharmacy, Toronto.) DEAR SIR,—I have made a careful analysis of your Super-phosphate of Lime, and find as follows:— Moisture..... 2.64 Insoluble Phosphate..... 31.24 Soluble..... 7.92 Ammonia..... 2.12 Soda Salts..... 4.82 Organic Matter..... 25.80 Sulphate of Lime, etc..... 18.46

tion for appropriation by the plant, and provided they are thoroughly diffused throughout the land.

Reason also tells us that manure farming is successful under like conditions of application.

Experience tells us that with abundant manure we can raise on the average maximum crops for our land. Experience also tells us that with an abundant supply of chemicals we can do likewise.

Thus reason and experience coincide. Practically, however, we have other questions to consider, and the subject is not as simple as at first sight appears. Practically, it is found, it has been found, that we need apply barn-yard manure containing chemical elements far in excess of the chemical elements removed by the crop to produce the crop.

The condition of the soil and the facts of cultivation have also to be considered while we are considering plant food; for in all farm questions like this we have two sides to our subject. The plant food must be present; the plant must also be able to appropriate it, and this latter fact is an important one.

When we Apply Manures

to our land it is in a large bulk; the plant food is diluted with much inert matter. The plough turns under the mass in lumps, and there it remains, patches of fertility surrounded by earth. The plan has to obtain its supplies by advancing its roots through comparatively sterile soil to reach the rich deposit.

Our Chemicals.

on the contrary, are spread on the field in a concentrated state. They have no mould of mixture which disturbs their chemical affinities, or which hinders them in absorption. The rains come, or the waters of the earth dissolve, and they immediately diffuse themselves to the extent allowed by the laws governing this action, and each particle of earth holds on to its own allowance, and passes the surplus on to its neighbour.

Action of Soil on Plant Food.

Now, soil changes the condition of the plant food as applied. For instance, a potash or nitrogen salt is decomposed; the base is retained with more or less persistency. Phosphoric acid, after prolonged contact with the soil, becomes insoluble—or at least a portion does. Let it be remembered that these elements are the same chemically, whether in manure or in fertilizer, and are thus acted on by the earth.

We are now prepared to claim that on the plant food side of the question between manure and chemicals, the latter have the advantage. Yet, as farming is not entirely a question of plant food, and as we must take into consideration the physical properties of what we apply and mix with the soil, we must not fall into the error of under-rating the value of dung, or ignoring it. The farmer will, and he should, hold on to all the manure he can obtain; this bold experience and theory indicate as the correct way. If he has sufficient manure to dress heavily all he desires to cultivate, then let him place his whole dependence upon manure, and use it patiently for a continuous time; and then, like some farms we know of, his fields will teem with crops, and additional fertilizing will be but a waste.

In chemistry a salt is the union of an acid and a base.

This reasoning we have used for some time, but never could find an experimental verification until lately, when we read the mention by Hildebrand of Halle, Germany, of an experiment in sowing which seems to render this view certain.

A Zoological Romance

By CHARLES F. ADAMS
Sweetest girl who ever saw
Was Betty Martin's daughter dear.
With saffron hair, small, taper waist,
And the world's most perfect nose to taste.

A Coin of Eucratides.

There is a delightful seat about it, this finding of a unique coin, a bit of money which remains alone of the thousands which were made ages ago, which no one but the true numismatist can feel. The survival of the coins of the Greek and Roman periods appear, when one thinks about it, quite remarkable. It is the fate of the precious metals to change often in form, for eventually all the gold and silver goes to the melting-pot.

hara were found. The landlord of the house said: "The man you wish to see is just going to bed. I know that he has been trying to find you. Shall I call him down?"
"Yes, at once," cried the expert.

Now came the moment of trial. The expert lit a cigarette and smoked to calm his nerves. Then, blowing the smoke from his lips, he said: "I tell you what I will do. I will give you, right now, my cheque for £1,000 for the piece. If the coin is not mine in 20 minutes, I shall offer you £300 for it, and so on until I get to £500. If you don't close with me to-night, to-morrow I will not take it at any price."

"Twenty minutes passed," said the expert, "like an instant. The Bokhara man seemed unimpressed in deep thought. Then he turned on me suddenly," continued the expert, "pierced me through with his black eyes, and put the much-coveted coin in my hand, while his long, bird-like fingers were bent like talons to take the cheque. The coin was mine. I slept," said the expert, "with that coin under my pillow; that is, I tried to sleep, but so excited was I that I never closed my eyes that night."

Among the Alps the cold has been intense during the present winter. A correspondent of the London Daily News writes that in the valley of Freyung in the snow is more than two metres (over two yards) deep. The roads are every where impassable. The postmen even are unable to get from place to place. Neither wood or coal can be obtained for love or money. The people are outliving their trees, and trying to warm themselves with green wood. The sufferings are terrible.

How an Election was Won.

The Madison (Ind.) Star says: Some years ago Russ, our own G. W., lived in our adjoining county of Ripley. He was then a Republican in a Democratic county. What his politics are now we don't know, and don't care, and we think he don't know or care either. We only know he is a manly, big-hearted, genial gentleman, and that's all we care about these times. But to the story.

Antinous.

Who was Antinous, and what is known of him? He was a native of Bithynium or Claudiopolis, a Greek town claiming to have been a colony from Arcadia, which was situated near the Sangarius, in the Roman province of Bithynia; therefore he may have had pure Hellenic blood in his veins, or what is more probable, his ancestry may have been hybrid between the Greek immigrants and the native populations of Asia Minor.

An Uncommon Malformation.

(From the Pittsburgh (Pa.) Telegraph.)
A woman named Spitzohler, living in a court off Sixth-street, whose husband is Henry Spitzahler, driver for Myers & Co., gave birth to a child, or rather two children, day before yesterday, and the case is considered by the medical fraternity to be a marvel. The children were conjoined at the breast bone in such a way as to bring them face to face. The flesh, extending from about the centre of the breast bone downward to the lower part of the abdomen, and in width taking up the whole front part of the body, holds them together. In all other respects they are perfectly formed children, hands, arms, feet, and other parts of the body showing no malformation whatever. They are just about like perfectly-formed twin female children, with the exception of the link which connects them together. The muscles of the body, the feet, head, neck, and arms were flexible, so that each part of the body could be moved naturally. They were born about 7.30 o'clock Wednesday morning and died shortly after, but the mother is well and rapidly recovering.

MISCELLANEOUS ITEMS.

A MAN is not always upright who has been brought up right.
A POLITE young lady speaks of her brother's "loot-job."
It is hard to get ahead of time, but a musician often beats it.
To remove paint from the wall—look up against it before it gets dry.
If Noah was a consistent Jew, what induced him to take him into the ark?
It has not yet been clearly proved in Paris that electricity is cheaper than gas.
A HAMILTON woman has just made her husband unhappy by her fourth pair of twins.

Nothing can reach out farther than a cough at church. It may come from the remotest corner in the rear, but its echo tickles the throat of those in front, and then creeps down the aisle, and touches the nethers, and floats from the choir to the minister, and never leaves it hold until it has wrung a sympathetic explosion from every victim. Perhaps you've noticed it.
How a sweet is the babbling of babyhood—almost like music when the wee one is playing with the sunbeams, or reaching for the moon. But when orb of night has gone down, and darkness and stillness have come, and humanity is coughing sleep, the infantile expressions are charged to demoniacal ravings that cannot be lulled with anything short of the contents of a drug store.

Whelmed by the Floods.

The Appalling Calamity that has Befallen a Hungarian City.

A calamity to which Hungary has long been considered peculiarly liable has overtaken Szegedin...

The River Theiss overflowed its banks, despite the precautions that had been taken from the moment the danger of such an occurrence was observed...

The scenes that ensued defy description, for, to add to the situation, the tremendous current undermined the foundations of the buildings in which the inhabitants lived...

Some years ago the Government received proposals from an English engineer to furnish a remedy for the inundation which the Theiss has threatened each spring...

Reliance had been placed upon several large dykes which protected the bank of the town, but these gradually succumbed to the force of the water...

At Szegedin active measures were taken to meet assistance to the afflicted city; the municipal authorities directed that relief trains be prepared without delay...

The Government has sent 40,000 florins for the relief of the inhabitants. This generosity does not save it, however, from being violently attacked by the radicals...

Sixty thousand persons were without a roof to cover them. The upper floors of all high houses were crammed with spectators in momentary fear of death.

The Tyrolese.

(From Harper's Magazine.)

It is not easy to see how, in a country so broken as this, and where so many farms and even whole villages have no access to market except over mountain foot-paths...

The mental and moral characteristics of any people can of course be only very imperfectly measured by the casual traveller. The Tyrolese are represented as being extremely superstitious and priest-ridden...

Wrestling and "finger-hacking" (hooking the middle fingers and twisting for the mastery, even at the risk of the joint) are still common, and are watched by comrades with the same interest that attaches to a cock-fight or a dog-fight in England.

Fou Hi's Musical Invention.

(From Harper's Magazine.)

The history of music plainly shows that the elements of musical art were in a manner systematized from the very earliest ages of mankind. The Chinese have records of one of their emperors who fixed the twelve degrees of the chromatic scale at the wake-and-call-me-early period of 3468 B.C.

Pictures Which Have Been Burned.

(From the Athenaeum.)

Within the last few years prodigious losses have been incurred by fire. Chief among these were nearly a hundred pictures burned at Holker Hall. The famous "Strolling Attendants in a Barn," one of Hogarth's best pictures, was consumed at Littleton not long since...

This hospitable Jones—"Yes, we're in the same old place where you dined with us last year. By the by, old man, I wish you and your wife would come up and take pot-luck with us again on the—"

NEW YORK FASHIONS.

SPRING BONNETS.

The large bonnets to be introduced with the first warm days of spring are not the daring coronet shapes lately worn to frame the face and surround it as with a halo. The new wide brims extend forward as well as upward...

The large bonnets to be introduced with the first warm days of spring are not the daring coronet shapes lately worn to frame the face and surround it as with a halo. The new wide brims extend forward as well as upward...

Among the new ornaments are straw beads strung in fringes or in patterns as galloons. The tinsel galloons are also shown in colours dusted with silver or gold.

Brocade ribbons are shown in Japanese designs delicately tinted, and so artistically done that they look like water-colour paintings. These are beautiful on the Tuscan hats for the watering-places.

Rustic straw bonnets to be worn with morning or travelling suits, show two or three bright colours mingled with the black or brown braid that forms the greater part of the bonnet.

The black net bonnets are most often all black, with jet ornaments, jet feathers, and black Breton lace for trimmings; the material of the bonnet is Brussels net of very small meshes, without dots, laid smoothly over the frame.

The combination of colours most seen is that of dark red with cream-colour; this arrangement is as popular for bonnets as for the brunettes by whom it was originally used.

DRESS GOODS.

Panama tweeds are now loosely woven wool goods of light weight for spring and summer dresses. They are woven in small checks of three or four threads each way...

Chaser can scarcely fail to make a stylish selection, provided she confines herself to the tan, olive, and gray shades. The gendarme blue is shown in many of these fabrics, especially in the moire striped woollens...

SPRING BATHING, ETC.

Short scantily gored shirts of gray mohair are made up for bathing petticoats. They are either plain or striped, have but one side gored, and are trimmed with one or two pleated flounces.

Now white muslin skirts are trimmed with two or three pleated frills of Hamburg embroidery. They still continue to be made with deep yokes at the top, and the longer skirts have fan trains.

FEW LINGERIES.

Louis Quatorze jackets made very full and very long are the dressy novelties provided instead of the small throat bows. There are made of the shortest India muslin laid in many fine pleats...

Small loops of pleated muslin and Breton lace are shown for cravat bows in white, pink, and blue for 75 cents to \$1.

The favourite pleating for the neck and wrists of dresses is also of Breton lace in two rows, one of which is wider than the other.

Scarfs of fine net edged with Breton lace are used for two purposes. They may be worn as bonnet strings that begin on the crown with a bow or in pleatings, or else they may serve as a scarf for the neck to be tied in a large bow at the throat...

BREAKFAST TURBANS.

The Oriental turbans now worn for breakfast caps cost from \$1.25 upward, according to the value of the handkerchiefs used in making them.

BREAKFAST SHAWLS.

For house shawls the favourite choice is the square Chuddah, which is sold in very fair qualities for \$10, while the best squares in good red shades, creamy white, and soft gray cost \$12 or \$15.

How Her Sight Was Improved.

(From Ferny's Progress.)

Mrs. C., dressmaker, has a great deal of trouble with her sewing-girls. The other day one of them came to her to say, "Madame, I fear that I will not be able to work much longer. I think I am getting blind."

Milk as a Soporific.

According to the Pharmacist, it is a frequent practice in the New York asylum for incurables to administer to the patients at bedtime a glass of milk to produce sleep, and the result is often found satisfactory...

ALL SORTS.

To Do or Not to Do.

"To keep house or board, that is the question, whether 'tis better for a pair To try the trials of a hired girl, Or to take up a domestic And 'sweep out To board, to pay your board In advance, ay? There's the rub, for when the Friday comes, 'tis to one There isn't a shot in the locker."

Never.

"What, never? No, never! What, never? Well, hardly ever."

Never refer to a gift you have made or a favour you have rendered. Never clean the nails or pick the teeth in company.

Never fail to give a polite answer to a civil question. Never call a new acquaintance by the Christian name, unless requested to do so.

Never refuse to receive an apology. You may not receive friendship, but courtesy will require, when an apology is offered, that you accept it.

Never insult another by harsh words when applied to for a favour. Kind words do not cost much, and yet they carry untold happiness to the one to whom they are spoken.

Never, when talking arm and arm with a young lady, be continually changing and going to the other side, because of a change of corners. It shows too much attention to form.

Never should a lady accept of expensive gifts at the hands of a gentleman not related or engaged to her. Gifts of flowers, music, or confectionery may be accepted.

The first person singular—Adam. A cold snap—the bite of a turtle. Music of the future—Premissory notes. Ick cream—When a lady skater gets a fall.

A thermometer gains notoriety by degrees. A garrulous servant is the friend of the burglar. How can ignorance be regarded as desirable?

Why should a layman care for a sitting in a church? There must be a nerve center somewhere in the nose.

Chorus of the cider apples: "Just as we go to press." Speaking of Lent, it reigns forty days and forty nights.

The moustache of a very young man has a downright look about it. The hotel cook ought to be well known. It is in everybody's mouth.

Many men whistle from want of thought, but few from thought of waste. "When I was a child I spoke as a child," and often got spanked for doing it.

Who steals a ham, however much in need. By social law is deemed a thief, indeed. But he who steals his million from a bank, is deemed a business man of far more rank.

"Isn't it funny?" he exclaimed, as he leaned back in his seat at theatre, and wiped away the tears that the laughter-provoking comedian had produced. "Yes, I should say so," responded his fair companion; "it's one of her sister's old ones made over."

His jaw dropped into his lap, as he turned his gaze upon the young lady in front, whose personal his partner had been studying.

The agents of two rival iron safe manufacturers were recently presenting the claims of their respective articles. One was a Yankee—the other wasn't. The one that wasn't told his story. A game-cock had been shut up in one of his safes, and then it was exposed to the most intense heat. When the door was opened, the cock stalked out, flapped his wings, and crowed loudly, as if nothing had happened. It was now the Yankee's turn. A cock had also been shut up in one of his safes, with a pound of fresh butter, and the safe was submitted to the trial of a tremendous heat for more than a week. The legs of the safe were melted off, and the door itself so far fused as to require the use of a cold-chisel to get it open. When it was opened the cock was found frozen dead, and the butter so solid that a man who knocked off a piece of it with his hammer had his eye put out by a frozen butter splinter.

A Bird that Would not Sing.

(From the Theatre.)

There was in Berlin a prima donna who, whenever anything or anybody displeased her, invariably became too hoarse to sing. One day an opera in her repertory was to be performed. At the appointed hour the manager came forward, and announced that owing to a sore throat she was unable to appear. The audience prepared to leave, but the King rose and commanded them to keep their places, which they wonderingly did. A few minutes afterward an officer and four dragoons entered the capricious lady's room. "Mademoiselle," quoth the officer, "the King enquires after your health." "The King is very good; I have a sore throat." "His Majesty knows it, and has charged me to take you at once to the military hospital to be cured." "Mademoiselle, turning very pale, suggested that they were jesting, but was told that Prussian officers never indulged in such a thing. Before long she found herself in the coach with the four men. "I am a little better now," she faltered out. "I will try to sing." "Back to the theatre," said the officer to the coachman. Mademoiselle thought she had remedied too easily. "I shall not be able to sing my best," she said. "I think not." "And why?" "Because two dragoons in attendance behind the scenes have orders to carry you off to the military hospital at the least cause." Never did the lady sing better.

Applying Superphosphates.

EDW. COLEMAN, GENTLEMAN.—On page 725 there is an account of some experiments with fertilizers by T. Sharpless. The result was quite different from those in my experience. I have used superphosphate for several years to grow my corn crop on sod, and have never failed to get pay for the fertilizer and all cost of application, in the increased crop, and many times I get quite a profit. It has sometimes increased my crop 33 per cent. I think the reason Mr. Sharpless received so little benefit was the result of his method in applying the fertilizer. In order to receive the most benefit to the first crop, all fertilizers, whether special or farm manures, should be applied on grass lands, as early as September the fall previous, or if not at that time it should be applied on the surface after the land is ploughed. I believe, as John Johnston long ago said, "that a rich soil contains all the elements for a good crop of corn." Sometimes on sod land the young corn requires stimulating a little until its roots get hold of the soil, and superphosphate, if applied in the hill, will do this. It generally puts the crop two weeks ahead early in the season, which is very important in this section. I always apply superphosphate in the hill on sod land at the rate of 250 or 300 lbs. per acre—never more than the above amount—and it has never failed to pay well. On old land the result has not been as favourable. As a general rule, I am in favour of surface application of all fertilizers. HENRY LANE, Addison County, Vt.

—In the statement of experiments with phosphates by Mr. T. Sharpless, he says he sowed it upon the sod and ploughed it under six inches deep. It is a wonder that it had as much effect as it did. It should have been applied upon the surface after ploughing, or as near the seed as practicable and not prevent germination. What would be the result if just food enough was given to a young animal to preserve its existence and cause a feeble growth until it had reached sufficient age to forage for itself? An irreparable injury would be the result. The same principle applies to plants. The first stages of their existence are the most important ones, and if they ever need any extra food, that is the time.

There are thousands of tons used in Western New York. It is destined to come into general use in this section and add greatly to the wealth of farmers. It is important that it be rightly applied, and should not be condemned when not applied properly. For the small grains it gives the best results when drilled with the seed by means of a fertilizer attachment to the drill. Where corn is drilled with one of these drills, the fertilizer may be drilled at the same time, but all the tubes should be allowed to discharge; or at least one on each side of the row of corn, which should be at least forty inches apart. Where corn is planted in hills it may be applied where the hills are to be, and around them, or may be applied upon the surface of the hills soon after planting, but in either case another portion should be sown broadcast upon the surface, as the roots of corn soon extend beyond that applied to the hills. For grapes the soil should be ploughed and turned from the roots early in the spring, then sow the fertilizer broadcast at the rate of 400 or 600 lbs. per acre. J. M. Penn Yan, N.Y.

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Fine Bone Dust,	30 00 "
1/2-inch Bone Dust	25 00 "
3/4-inch Bone Dust	20 00 "

CHEMICALS:

Nitrate Soda, 95 per cent. purity,	50c per lb.
Nitrate Potash	10c " "
Sulphate Ammonia, 24 to 25 per cent. sul. ammonia	5c " "
Sulphate Magnesia, 55 to 60 per cent. sul. magnesia	2c " "
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Poultry—Will lay more eggs, and be improved in condition.

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Feed the land and it will feed you.

An old darkey who was asked if, in his experience, prayer was answered, replied: "Well, sah, some prays is stand and some im't—peeds on w'at you asse fo'; just arter the wuh, w'en it was mighty hard scratchin' fo' de oulled briedin', I bearded dat whenebber I pray de Loid to eat' one o' Marse Peyton's fat turkeys for de ole man, dere was no notice took ob de pansion; but w'en I pray dat he would eat' de ole man fo' de turkey, de matter was tended to befo' sun ap nex' mornin', dead certin'."

Feed the land and it will feed you.