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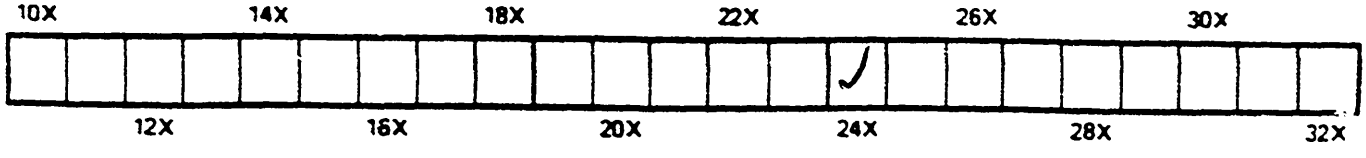

THE

CANADIAN AGRICULTURAL JOURNAL.

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AGRICULTURAL REPORT.

Our last report came down to a late period of August, we shall therefore only refer to the last few days of that month, and up to the present date. The latter end of August was exceeding favourable for harvesting, and what remained out, of the barley crop, we believe, was secured. A large portion of the wheat crop was also housed in good condition. On the first September the weather changed to wet, and has, up to this date, been unfavourable for finishing the wheat harvest. We do not apprehend that much injury has been done, but the harvest has been retarded, and some of the wheat crop too long uncut. We hope the weather may now change to fine, and if it only continues fine to the end of the month, we shall have a most productive harvest, and a valuable one, from the present prospects. If the wheat crop is safely secured, we are persuaded that more wheat will be raised in Eastern Canada this year than has been raised in the last seven years put together. The quantity would be still larger, if farmers would only be taught by past experience to choose a variety of seed that could be sown late, and so avoid the fly. We have been informed that wheat sown previous to the 20th of May has been considerably damaged by the fly, while that sown subsequently was perfectly safe. We sowed our wheat on the 25th of May, and it has not suffered by either fly or rust, and is now being harvested. There is now abundance of wheat in the country to give seed to every farmer in it, which may be sown after the 20th of May, and yield a good crop. The quality of the grain may not be fully equal to that of the wheat grown heretofore in Canada, but it will make up in quantity. There is now a favourable prospect for farmers if they will only make the most of their advantages. Wheat should be the staple produce of this country, as it is almost the only grain that can be exported advantageously. Beans and peas might be exported, but the merchants do not pay a price for either that offers much encouragement to the farmer to grow them. In general, an acre of land will not produce so many bushels of peas as of wheat, and the price of the latter, per bushel, is generally double that of the former. There is this difference, however, that a poorer soil, and one unfit for wheat, will produce a crop of peas, and that peas are not so scourging on the soil as wheat. The greater part of the month of August was excessively hot, and had a tendency to hasten the ripening of the crops injuriously, with the exception of wheat. Oats in particular we have seen much injured. The great heat appeared to produce rust in the crop in the most luxuriant stage of its growth, and nearly destroyed both straw and grain. A part of the barley, also, did not fill properly. We would recommend that Oats should be sown as early as possible in the spring. We never had a better crop than when sown early in April. The hot weather of August is very apt to injure the oat crop, when it is not nearly at maturity. There is nothing to prevent early sowing of oats, peas, barley and beans, and the sowing of these seeds should not be deferred a moment after the soil is fit to receive them. Of Indian-corn we cannot say much, but suppose it must be good in suitable soil, as the last month was very favourable for it. Potatoes are reported to have the disease of rot in the tubers, in many fields, but we hope it is not general. Our own crop is safe up to this time, having planted them in grass land previously manured. The tops are yet quite green. We would recommend where the tops are withered to have them cut off and carried away, leaving the crop in the ground as long as it will be possible with safety from frost. The potatoes that are sound will keep better mixed with the soil, than in any other way; and those that are at all affected with the disease will become so decidedly so, in another month, that they can be separated

from the sound potatoes when taken up to be housed. We managed our potatoes this way last year, and the sound portion of the crop kept very well until spring—scarcely one was unsound. We have not seen this disease reasonably accounted for. We have observed a great quantity of flies about the potatoe stalks in the latter end of August, and we have seen many small bugs upon the stalks, but we cannot say whether either insects have any connection with the decay of the stalks or the rotting of the tubers. Our own opinion is, that the decay in the stalks takes place previous to that of the tubers, as in most instances the whole of the tops decay, when only a small portion of the tubers are affected. This was the case in our own crop last year; the whole of the top became black in two or three days, without the slightest frost, and not more than a third or fourth of the tubers were diseased. The state of the soil at a time that the stalks are in a most luxuriant stage of their growth, may cause the decay, and this decay may infect the tubers, then in a very soft state; and we have observed that the potatoes nearest the surface are the most diseased. We believe it is injurious to apply a large quantity of recent manure in planting, and think it would be much better to have the manure previously well mixed with the soil, in land prepared for potatoes.

The pastures have very much improved by the late rains, and we hope the farmer's stock will be in good condition before the winter commences. The dairy produce sells at a fair price, and will probably continue so to the end of the year. The market is well supplied with butcher's meat—particularly with beef, mutton, and lamb. Indeed, our market exhibits lamb, mutton, and beef that might satisfy any epicure; and though we have often heard it stated to the contrary, we think the flavour of our beef and mutton is sweeter and better here than in the British isles, as we have not so much *forcing in feeding* cattle and sheep as at home. The improvement in the quality of our meat latterly is very great, and if we would only pay a little more attention to the breeding and selection of stock, and to our pastures, we should soon observe a further improvement. The prospect of our farmers, if the remainder of the harvest turns out fine, will be more favourable than it has been for some years. They will have a considerable quantity of wheat to sell, and probably get a good price. We do not wish to see very high prices, but we wish to see them remunerating. This is the time for finishing summer fallows, and thoroughly cleaning them. It is also the time for draining and top dressing grass lands. As we have so often before stated, draining is the first requisite to improvement, and successful farming. Without it we never can have good farming, or be sure of good crops. It is the want of it that in most instances prevents early sowing and planting. Wheat must be sown late to escape the fly, but all other grain crops might be sown early, and they would have a much better chance of maturing perfectly, and be harvested well, and in good time. The great cause of bad crops is the unfit state of the land for harrowing in Spring, when the weeds that are in the soil commence growing, and hence keep a-head of the crop until both are cut down. No land that is not sufficiently drained can be cultivated to advantage for any crop. A large portion of the soil of Canada is strong clay; and when this is ploughed in the Fall, and left in a state that the water cannot drain off quickly in Spring, it runs into a mass again, that when dried by the sun, is not fit to be sown or harrowed until again ploughed. This every farmer may know who has any experience here. Labour has been at a high price this year, and scarce in the market, so that farmers found it difficult to procure as many hands as they required. The consequence of this is always a loss, from not having help to do the work. It cannot fail to be a favourable year for emigrants coming here for employment, as they have work offered in every direction of town and country, and this employment is likely to continue.

Cote St. Paul, September 12, 1845.

MANURES.

The following paper has been submitted to the Royal English Agricultural Society, and we copy it for our subscribers, as it contains hints that might be as useful to the Canadian farmer as to the English. We do not wish to give any selections but such as may be useful:—

To grow the greatest quantity of produce at least possible expense must be viewed as a subject of very great importance both to the landholder and farmer, which is only to be accomplished by *properly constructed farmyards*, with tanks, drains, &c. No farm can literally be considered eligible without it. On this subject I have addressed the Royal Agricultural Societies of England, Scotland, and Ireland, and also many noblemen and eminent landholders.

It must be obvious to every thinking mind that a great increase of the produce of the soil would very much add to the employment of the labourer; and it may also be viewed as a national benefit.

Nothing, in agricultural pursuits, has been so grossly neglected as the management of manure in farm-yards, &c., the abominable waste of which has been a most painful subject to myself for a long time past, and one to which I have given mature consideration. It is this which has prompted me in addressing the leading agricultural societies on the subject.

From a calculation lately made, it is proved that, for want of manure, a loss to the United Kingdom is sustained to the amount of from *eleven to twelve millions of pounds annually*. Could this increase of growth be accomplished (or one-half of it,) we should hear but little of the *complaints of labourers, or of corn-bills, or corn laws*: our country would be amply supplied from our own soil. I am very much inclined to think that this could in a great measure be accomplished by a *proper system* being adopted in every farm-yard in which the dung is deposited, so that the liquid manure could be saved and used at discretion.

The surface of the farm-yard should be of a concave shape, with a round brick tank in the centre, surrounded by a low dwarf wall, and bounded by a drain for carrying off the surface water which may fall from the surrounding buildings.

To the tank a pump should be fixed, elevated five or six feet for the accommodation of the *water-cart*, a most valuable appendage to every farm. To this tank bring the drainage of your stables, cattle-sheds, pigsties, wash-house, water-closet, &c. Bear in mind that "that which is despised is often the most useful." This liquid you will find invaluable in the manufacturing of manure, which is at present suffered to pass off in draining. Instead of allowing the great mass of manure to remain on the surface of the yard (which robs it of many of its valuable properties), have it formed into ricks round your tank, in the inside of the dwarf wall so that they may be supplied with the liquid during the time of making, and that the tank may receive the drainage.

The exposure of manure to the atmosphere, on the present plan, is a most ruinous practice, and may truly be called one of the agricultural evils.

Do away with the detestable practice of burning your coach-grass, &c. "Remember, what will produce a cart-load of manure decomposed, will only produce a wheelbarrow of ashes." Bring it home to your bartons, also the cuttings and parings from your roads, deposits in your ditches (which are principally vegetable matter), rubbish from your gardens, &c. &c.; and let all be deposited in your manure-ricks, according to the following directions, namely:—

A layer of stable-dung, one foot thick, salted;
Do. vegetable matter, six inches thick, limed;*
Do. stable-dung, one foot thick, salted;
Do. vegetable matter, six inches thick, limed;
Do. stable-dung, one foot thick, salted.

On the top of this fifth laying, saturate with the liquid from the tank in a sufficient quantity to pass through the whole. Begin again, and repeat the layers as before with the dressings; and make your ricks to any size you may judge proper, the larger the better.

After you have made them to the size you may wish, and thoroughly saturated with the liquid from the tank, cover them up close with long dung or straw, to keep in the ammonia, and prevent the rain from penetrating. The covering should be removed from the centre, and the liquid applied, once a week; and remain six months before used.

In making your manure-ricks, introduce a wicker, cone-shaped tube in the centre, to receive the supply. A few layers of draining-tiles will be also desirable at the bottom, to give the information that the liquid has passed through the whole body, and to convey the waste to the tank. "A large supply of this liquid will give unbounded scope to the farmer in the manufacturing of manure." The ricks should never be suffered to heat beyond 80 or 90 deg., otherwise you deteriorate its value considerably. This is one of the most important points in the management of manure: the loss sustained by inattention to this subject is incalculable. By this neglect the manure is ruinously degenerated, and great quantities of vermin are generated and taken to the land. To this remark I beg to draw particular attention. Application of the liquid from the tank will at all times check the evil.

This liquid, after passing through the manure, will have imbibed *salt, lime, &c.*, and may then be considered a valuable liquid manure, either for meadow or fallow land. *This powerful mixture* only requires to be known to be appreciated, and should be applied immediately after the crops are taken off the ground.

To meadow land it will be best applied in damp weather, and to fallow land at any time. A second application will be desirable after the plough. It will not only manure the soil, but will destroy the vermin, decompose the filth left after the crop, clean the land, and prepare it for early cultivation. It will also be found to be a capital manure for gardening purposes, and would, after the effect had been tried, be appreciated, and considered the most valuable part of the manure.

By a general adoption of this plan, it would very soon be the pride of every farmer to see his barton well stocked with manure-ricks, and very pleasing to the landholder to see a provision made for his land. A very short period will convince every person who may think proper to adopt the plan, that the growth of crops will be very considerably increased, and that their expense and trouble have been amply repaid.

The Earl Ducie's model farm, in 1839, let for £200 per annum, and employed five persons. It now employs 20, and the produce is increased more than four times, and is valued for the poor-rates at £564 per annum.

The farm contains 240 acres. The produce last year (1844) was 120 acres of wheat, 20 do. mangel, 20 do. potatoes, 20 do. carrots, 20 do. turnips, and 40 do. clover. The wheat crop is expected to average 40 bushels per acre, 1,200 sacks!

Self-support and economy of manures are the leading points in the management of this farm.

In the manufacturing of liquid manure on the plan I have suggested, *no attention whatever is required from the farmer*. The tank is supplied imperceptibly by underground drains from the various resources, is at all times ready for use, and, *without any expense*.

In applying liquid manure to meadow land, no

* Lime grist will be best, which is less than half the price of knob-lime.

injury is sustained to the plant, its application being instantaneous, and no desight in appearance, which is the case with farm-yard manure. The cattle can also feed from the pasture immediately after it is applied. Neither is the application expensive; a *single* horse and boy are all the strength required.

Few persons have made the subject of manure a closer study than myself, for some years past, having always considered it the *mainspring* of the agricultural profession, and seeing at the same time very gross neglect, and great scope for improvement.

In the present day patronage is a strong stimulus; and without it, persons feeling inclined to persevere in any public business have great difficulties to encounter.

My experience enables me to say, the plan I have suggested is so very plain and simple as to be in the power of any person to adopt; and, it will be observed, it gives two distinct kinds of manures.

From the practice I have had, I am convinced that those who may be inclined to adopt the plan will find their manure more than doubled in value.

The application of liquid manure is as yet quite in its infancy. A clean farm ought to be the pride of every farmer; and this is not to be obtained without attending to the use of manure properly decomposed, and also to that of liquid manure, as it then takes no filth to the land. A general adoption of collecting and manufacturing manure would very much increase labour, and prove a decided remuneration to the employer, which is a great object in the present day. The unbounded scope which is given to the cultivators of the soil in collecting everything which is decomposable for manure, has never been properly appreciated; and it is a mystery that a subject of such vast importance should have remained so long neglected, when it cannot be viewed in any other light than being profitable to the employer. Vegetable matter ought to be more highly valued.

The formation of the farm-yard, tank, drains, &c., must be a part and parcel of the farm, and provided at the expense of the landholder, who would ultimately receive a hundredfold for the outlay.

Complicated recommendations for a general plan to be adopted in the manufacturing of farm-yard manure, would, I am convinced from the long experience I have had with agriculturists, have no general effect.

In the manufacturing of manure for general purposes, the greater the variety of proper articles combined, the more powerful the manure will be after decomposition has taken place. "See the cottager's manure heaps:" one cart-load is equal to two of farm-yard manure in producing crops.

Having taken the opinion of many eminent landholders and practical farmers on the subject of my address, and not *one objection* having been made against it, convinces me that, if properly carried out, the result would be most satisfactory.

It must be acknowledged that this is a very important subject, and one that cannot be confuted; and, if supported by the royal societies and the leading landholders, it would very shortly become a prominent question with agriculturists generally, and if so, *the result must be prodigious*. A great change has already taken place in the cultivation of the soil. Not one-half the sum has been expended this last year in artificial manures as there was in the year before; and this evil will increase if not counteracted. It is now very generally acknowledged that the *waste of the liquid from* manures has been a long growing evil; but with whom does the evil rest? Decidedly, not with the farmer. If the proper arrangements are provided by the landholder, the evil will be quickly removed. If high cultivation can be obtained at a moderate expense, a demand for labour must undoubtedly follow.

It may also be considered a great neglect in not erecting lime-kilns on farms. By this omission the farmer sustains a great loss. In most cases he has to send miles for lime, and pay more than double the amount the article could be manufactured for on the farm, and does not use a tenth part of the quantity he would do if it could be obtained at a lower price. Its value for agricultural purposes is inestimable.

There cannot be a doubt respecting the preference which would be given to liming land, instead of the present cold system of chalking, if the article could be obtained cheap, it being so quick and effective in its application, the bountiful use of which would materially change the system of farming.

Liquid manure tanks would be very valuable appendages to farms in case of fire, the liquid "from the mixture" being most effective.

It is truly distressing to see the miserable crops housed by so many farmers, when, at the same time, the means are on the farm for growing a good crop.

It is very questionable if this country could not, in a very short time, be brought into such a state of cultivation as to produce sufficient grain for its consumption.

See the Chinese, with their immense population, to be exporters of manure.

Improved cultivation will be found to be the most effective remedy for dispersing the great gloom which is so fast gathering over agriculturists.

I beg to recommend a preparation of lime grist and salt, to be prepared in the month of October, for a top-dressing for wheat crops in the spring. This mixture will protect the crop from the slug, and will also be a protection from game. The proportion should be one bushel of salt to three of lime; and, before using it in the spring, add one cwt. of black sulphur to every 40 bushels, to be well mixed before used, and applied at the rate of 10 or 12 bushels to the acre. The same dressing will be found to answer well for the turnip crop, which should be applied immediately after the sowing. This will be found a most excellent preventive from the fly, and will be very beneficial to the growth of the crops. A general adoption of this plan would remove much anxiety from the farmer.

I also beg to recommend the use of sawdust, in cases of scarcity of straw, for stall-fed cattle, pigs, &c. It would be found a good substitute for straw in keeping the cattle clean, and not a bad mixture with manure. It will also prevent the waste of urine, and will act well with the vegetable matter. It is easily obtained, and very cheap.

Cleanliness is too much neglected in the management of cattle. Many of the diseases may be attributed to this neglect, and also to the feeding of cattle on decomposed vegetable matter. Cleanliness and feeding are very important subjects, which ought to claim more particular attention. I beg to solicit a perusal of the following table, which will show the amount of dry organic matter contained in the most usual kinds of

FOOD FOR CATTLE.

	Organic Matter.	Ashes.	Water.
	lbs.	lbs.	lbs.
100lbs. of Peas contain	80½	3½	16
— Beans . .	82½	3½	14
— Lentils . .	81	3	16
— Oats . . .	79	3	18
— Oatmeal . .	89	2	9
— Barley-meal	82½	2	15½
— Hay . . .	76½	7½	16
— Wheat-straw	79	3	18
— Turnips . .	10	1	89
— Swedish turnips	14	1	85
— Mangel worzel	10	1	89
— White carrots	12	1	87
— Potatoes . .	27	1	72
— Red beet . .	10	1	89
— Linseed-cake	75½	7½	17
— Bran . . .	81	5	14

DRAINING LAND.

(*From the American Agriculturist.*)

I propose to note a few facts, the result of my own observation and experience, on a subject which I conceive to be of vital importance to the farmer's interest. Everybody knows that *standing water is death to all useful vegetation in this climate:* this fact I hold to be sufficient proof of the utility of draining. The draining of marshes, swamps, and low meadow land, tends, also, to ameliorate the climate of a country, and render it more healthy, and the influences of the atmosphere more favourable.

To reap advantages from draining, like other branches of farming, it must be well done. Cut good, wide, deep ditches into the subsoil, if there is descent enough to carry all the water off, but by no means so deep that you form a tank to hold water. If your neighbour's land is higher than yours, cut a deep ditch along the line fence, if practicable, and parallel with it, and thus arrest water that would otherwise flow on you, and irrigate land that would be better without it. Abandon the idea that by cutting so many ditches here and there, you are wasting just so much land: this impression is decidedly erroneous. By drying the remainder, you render it more light and porous, easier of cultivation, and consequently more productive.

In the month of July last, I observed from my window two mowers cutting a small lot of coarse bog grass, on land so wet that they could not keep dry feet. They complained of the crop as hardly worth the cutting, except perhaps for yard litter, or very ordinary cow fodder. Now I happen to know that this very identical spot of ground was thoroughly and effectually drained a few years ago, a good deep ditch being cut entirely around it; and that season and the one following, the most valuable crops of grass were taken from it I ever knew before or since. But you ask, "Why has no good crop come from it since?" I will tell you. The draining was done, and I am satisfied, *well* done; but this is not always sufficient. If farmers would be permanently benefited by draining land, they must keep the ditches well cleared out, that the water may not only pass off, but pass off quickly; and after a ditch is well opened, a little labor every season will suffice to keep it so. Now, in the above instance, the ditches were never opened but once, consequently they soon became filled up again; and the trouble is, the owner would rather *drain his glass of brandy* than his meadow, which kind of *draining* he understands perfectly; but, allow me to add, that kind of draining wont answer for farmers, and if he had as effectually drained his meadow, a large increase of good hay would annually have been added to his store.

Draining has done wonders for me, and I only wish the anti "book farmers" and all doubting minds could visit my nursery, and *see* it, *instead of* hear tell of it. A few years ago, I came into possession of a few acres of a cold, neglected, stiff clay soil, with a retentive yellow clay subsoil, so wet that we often could not even *plough* the ground until many of our neighbour had *planted* theirs. A very uninviting spot for a nursery, you will say. It really was; but as it was the *best I had, I had to* make the *best* of it, and if every farmer would make the *best* of what he has, we should have far less complaining, less discontent, and less of the "western mania."

I soon conceived the necessity of thoroughly and completely draining this wet field, and accordingly employed two hands and one head, which were *my own*, and set to work, cutting good wide ditches all around and through it, and set it to "bleeding at every pore"—making "blind ditches" of those that ran across the lot, that I might plough over them.—The result is, that I have now healthy and thrifty fruit trees growing on land that was much of it wet bog holes, and we are enabled to cultivate it in good season, weeks earlier than ever before. A single fact will show the importance of draining such land. One ditch runs directly through a low marshy bog-hole (that was,) cut deep unto the subsoil, the pores of which were filled with water, and the deeper I went the more the water would ooze out. This very spot is now quite dry and mellow, beautiful to work in, and is the richest spot of ground in the whole nursery. My neighbour's land, which joins me, is higher than mine, and sloping towards it; consequently all the surface water is washed from his upon mine. This communication I cut off by making a ditch near and parallel with the line-fence; this answers the desired purpose, and is a benefit to both of us. His land is so peculiarly situated that he can drain to little purpose, unless he turns his drains into mine, which have a free outlet. This I cheerfully allow him to do, and he is now draining to some extent, and intends to do much more.

I do not conceive it necessary to lay down any very definite rules on paper, for draining land; as the length, breadth, or depth of a ditch; the direction in which it should run, &c. Every farm is differently situated. One is high ground, perhaps, best suited for blind drains; another is low ground, and suited for open ditches. A certain course pursued on one farm, will not answer for another.—Every farmer in this, as well everything else, should exercise his own judgement, and adapt his efforts to circumstances.

W. D.

Morristown, N. J.

REFUSE OF THE GARDEN.

One of the most important things to be attended to in a garden, is that of saving every atom of vegetables that can be scraped together. The stems of peas and beans, the mowings of grass, the cuttings and prunings from trees and shrubs, the fallen leaves, should be as carefully preserved, to be returned to the ground, as if they were the richest manure. In some instances, this refuse may be dug into the ground at once in its green state; in others, it may be thrown into a proper place to decompose, and the decomposition be assisted by the means of other applications.

The objection made by some to digging in the refuse in its green state, has been, chiefly, the liability to nourish instead of destroying the various eggs of the pests which annoy them, and that by throwing the refuse in a heap to rot, a good deal of this is destroyed.

The refuse of a gardon has been undervalued, or rather not valued at all, up to a very recent period; for, even outside market gardens in the vicinity of London, there have been seen large quantities of cabbage and brocoli leaves, and vegetable waste of all kinds, thrown there to be taken by any one who cared for it, and removed by cottagers for their pigs and cows, or perhaps for the very purpose to which the gardener ought to have applied them—the manuring of the ground.

Self-manuring, as it has been called, has been of late the subject of experiment in many places, and has been written and talked of by many as if it were a novelty, though we have been in the habit of using every description of waste, not only for the garden, but on the field where it came from. Thus, potato vines have been dug in where potatoes came off; cabbage leaves, turnip, carrot and parsnip tops have been dug in where the crops were grown; the cuttings of currant and gooseberry bushes have been chopped up and dug in between the bushes; and strawberry clearings have been used between the rows of plants, as the only dressing they had. While these matters rotted slowly, they kept the ground open, and as they decomposed, they enriched it.

The finest piece of strawberries we ever saw, was in a celebrated market-gardener's ground at Deptford, where the trimmings were always dug in. We have unquestionable evidence that in some places on the continent, where vines are cultivated, the leaves and clippings are carefully forked in about the roots as a dressing for the next year.

We do not mean to infer that this dressing is sufficient in all cases, because the bulk which goes away in the crop has always had something from the soil; though we deny that it has taken anything near the quantity of matter found in it, because we have mentioned, and have proved by experiment, that much of the contents of any crop, no matter what, is taken from the water and the atmosphere. But let us mention one application which has never failed us—the leaves of trees laid on pink beds, pansy beds, and autumn planted ranunculuses, and other subjects which are the better for protection, will almost always rot by spring, and if then forked into the ground carefully without damaging the roots, will be found an excellent dressing; protecting all winter, and nourishing as they rot. And it is well known that where leaves are allowed to rot into mould, there is not a more efficacious dressing.—*London Horticultural Magazine.*

THE NAKED BARLEY OR BARLEY WHEAT.

This valuable grain is worthy of the serious consideration of the agriculturist, as returning a greater profit than the barley in general cultivation; and, if grown side by side, will yield more bushels, more flour for human food, and 25 per cent. more beer, and also will feed more stock, because—

1. It contains more flour than any other grain, rice only excepted.

2. It weighs more than 60lbs. per bushel.

3. The flour is whiter and sweeter than common barley flour.

4. The flour absorbs more water than other flour: consequently, it produces more weight of bread.

5. Bread made from any barley flour is better made into thick cakes; and if from a fourth to an eighth of an ounce of carbonate of soda is dissolved in the yeast, it improves all bread, and takes the bitter taste away.

6. By plain boiling, it is good food for children.

7. The malt made from it increases in measure more than from common barley.

8. The malt will make in seven days less than common barley.

9. It can be made one month earlier and one month later than from common barley.

10. It weighs considerably more than the malt from common barley.

11. The quantity of beer made from this malt is 25 per cent. more than from common malt, and of superior flavour.

12. Three bushels will seed the land as well as four of other barley.

13. It should be sown in March or April.

14. It ripens in 80 or 90 days only.

15. If sown without grass it can be harvested in two or three days.

16. If sown early, it may be harvested in time for a following good crop of turnips.

17. It only requires the same cultivation as other barley.

18. The straw is much superior for fodder.

19. It very seldom lodges, and is not subject to disease.

20. Each acre of this barley produces about one-third more food.

N.B.—The produce of this barley, both in quantity and weight, surpasses all others; and, as regards its malting qualities, and extract of saccharine, is even *superior* to the best Chevalier barley in quality as well as quantity.—*Northampton Herald.*

STRAWBERRY CULTURE.

Mr. Kenrick gives the following methods as practised by market gardeners near *Boston*. The first one strikes us as being the most economical way of working strawberries on a large scale that we have seen:

"In the vicinity of Boston, the following mode is often adopted. The vines are usually transplanted in August. The rows are formed from 18 inches to two feet asunder. The runners, during the first year, are destroyed. In the second year, they are suffered to grow and fill the interval, and in the autumn of that year, the whole old rows are turned under with the spade, and the rows are thus shifted to the middle of the space. The same process is repeated every second year.

Another mode, which may be recommended generally is to plant the strawberries in rows 30 inches asunder, and 9 inches distant in the row, and suffer the vines to extend to the width of 18 inches, leaving 12 inches space for an alley; or allow 18 inches width to the alleys, and three feet asunder to the rows; and to form new beds every three years, or never to suffer the bed to exist over four years; and to plant out in August in preference to spring."

Dr. Bayne, of Alexandria, D. C., gives his method of producing very large fruit. A peculiarity of his treatment is the use of undecomposed or green manure. Almost every other cultivator recommends well rotted manure; and we are inclined to think, with the better reason. We have found some English cultivators who agree with him, but the most dissuade from the practice, as making plants productive of leaves rather than fruit:

"To produce strawberries of extraordinary size for exhibition, I would recommend the following preparation: select the best soil and trench it at least two feet deep; incorporate well with the first twelve inches an abundance of strong undecomposed manure; pulverize and rake the ground well, then mark off the rows twelve or fifteen inches asunder, and set the plants in the rows from 12 to 15 inches, according to the luxuriance and vigor of the variety. During the first year the runners must be carefully

and frequently destroyed before they become rooted. By this means the stools become very vigorous and bear the most abundant crops. In the spring, after the fruit is set, place around each plant a small quantity of straw, or what is much better, cover the whole surface of the ground one inch thick with wheat chaff. This prevents evaporation, protects the fruit from the earth, improves the flavor, and will greatly increase the size."—*Indiana Far. and Guard.*

ITALIAN RYE-GRASS.

The following communications were read at a Council meeting of the Royal Agricultural Society of England:—

"7, *Curzon-street, May Fair, London,*
"*July* 12, 1845.

"I beg to send your Grace a report of my mode of cultivating Italian rye-grass as food for my horses, the success of which has astonished me very much, and which I am anxious to make known for the general welfare of agriculturists at large.

"My land, a strong clay in good heart, and underdrained, is finely pulverised during the summer months, after tares, or any early crop of corn; is sown broadcast with four bushels per acre of seed, grown by myself—without weeds—harrowed very lightly with bushes,—iron harrows bury the seeds too deeply; if weeds grow they are pulled, and the grass stands for a crop, which in 1844 was cut the first time the first week in March, with about ten inches of grass; April 13th it was cut the second time, May 4th the third time, May 24th the fourth time, June 14th the fifth time, July 22d the sixth time, with ripe seed and three loads of hay straw to the acre. Immediately after each of these crops the land was watered once from a London street water-cart, with two parts of pure urine from the stables, and one part of water, the produce of each crop increasing with the temperature of the atmosphere, from three quarters of a load per acre, as hay, to three loads per acre. The crop having shed a quantity of seed, I was doubtful the urine might injure its growing, so discontinued to water, but well harrowed it with iron harrows, and left it expecting nothing more from it; it produced, however, three or four, I believe four, light crops afterwards, and has now standing upon it again three loads to the acre, the third crop for seed. My first cutting (1845) this year, was not till April 6th; second, May 3d; third, June 9th; fourth, two feet and a half long, now standing on the land. I think it necessary to observe, from my own experience, Italian rye-grass differs as much in quality and variety as English rye-grasses or English fruits; there are Italian rye-grasses that bloom at one foot and a half high; and that I grow, as your Grace has seen, stands from four to five feet. Any further information that may be required, so far as I am able, shall be given to any one wishing to grow the plant. I attach a letter sent me by a practical farmer, to whom I supplied seed for an acre, which will furnish interesting information to sheep graziers.

(Signed) "WILLIAM DICKINSON."

[Mr. J. Hunt to Mr. Dickinson.]

"*Hayes Gate, near Uxbridge, July* 1.

"With the Italian Rye Grass seed I had of you, I sowed about an acre the first week in September last, after a crop of spring tares; the ground was manured with about 10 tons of good horse-dung. The second week in April I began to feed it off with ewes and lambs, and they made very quick progress, especially the lambs: the Grass producing an abundance of milk. There were forty-two couples, and the grass supplied them three weeks, giving the ewes chaff and oats, and the lambs peas.—After this they began to feed it again for want of other food. I took them off the grass on the 13th of May, and on the 18th of June we mowed the whole for hay, which produced nearly two loads per acre; this was about five weeks growth. I should not have pursued this plan had I not had tares which I wanted off the land to sow with Swedes. The grass is now growing freely, but not so fast as after feeding off. I want your water cart. I am quite satisfied of its being the most valuable plant I know of, especially for early spring feed: it comes to perfection for feed quite as early as rye, and the comparison between the two for feeding qualities is as ten to one in favour of the Italian rye-grass. I am so well satisfied of its goodness that I intend sowing a much larger breadth in the ensuing autumn after wheat.

(Signed) J. HUNT."

The President informed the Council that he had made arrangements for the trial of Mr. Dickinson's plan on the clays and alluvial soils of Somersetshire, as well as on the chalks of Dorsetshire; the result of which he would in due time communicate to the Council, along with those of an extended comparative trial he had instituted of the cultivation of the various wheats on the soils of Dorsetshire.

Germination of Seeds.—The President laid before the Council the following communication addressed to him by Mr. La Beaume, in reference to the application of electric currents to seeds for the purpose of exciting their vitality and quickening their growth.

"*London*, 11 *Argyle-street, July* 30, 1845.

"As the President of your Society, I beg to lay before you the following facts, which I think important to the interests of agriculture, horticulture, and floriculture. By former, and also more recent experiments on a limited scale, I have fully succeeded in quickening the germination of various seeds, invigorating their plants, increasing the fecundity, and improving the quality of the produce. This is particularly important in turnip-seeds, as you well know. The means I have employed are not atmospheric electricity, galvanism, or electro-magnetism, which cannot apply, but electricity developed by a machine of adequate powers, and by a simple, peculiar, effective process, easily understood, and easily used with very little manual labour. The time required is, on the whole, about half an hour, and 1,000 bushels of wheat, or any other grain, can be electrified as easily as an ounce at the same time. I beg also to remark, that this my process applies equally to the resuscitation of the impaired vitality of old as well as bad seeds, to the revivification of withering plants, and to the increase of the quality and quantity of their fruit. In order to a more extended trial, and to the establishment of the facts I have communicated, if several members of your body will send me some packets of turnip and other seeds, I will freely and cheerfully electrify and return them in a day or two, so that success may be proved by an impartial trial under your auspices, and I shall neither seek or receive any other reward than your approbation, and the satisfaction of diffusing practical knowledge for the public good.

(Signed) "M. LA BEAUME."

COAL ASHES AS MANURE.

I observed in your last paper an article on the use of coal ashes. I have tried them in various ways, and find them a good manure, particularly on heavy clayey soil.—Put a good coat of coal ashes on such soil and it will make the soil light and mellow—more so than anything I ever tried. There are pieces of grass in this place where top-dressing with stable manure seemed to have little or no effect; but a coat of coal ashes acted like magic, and produced two large crops in a season. I believe it a good manure for almost any kind of soil. Our Alms House farm collects all the manure from the streets in the city, and there is an abundance of coal ashes among it; and the keeper informs me that the more ashes the better the manure. I was told the other day by one of our principal hotel keepers, when I applied to him for his ashes, that he had sold them all to a farmer in Farmington, who had to cart them about ten miles, and no man would be fool enough to cart them so far, if they were not of great value.

We have had a long and severe drought, so much so that our hay crop will be light. Our uplands, where we have cut two tons to the acre, will not yield us this season one ton. We will not have more than half a crop, if we

do that. If it were not for our meadows, which are annually overflowed, we should have but a sorry crop, I assure you. The old crop is all gone, and as there will be none left over, hay will command a good price. Those who are fortunate enough to have a few loads left on hand, will do well to hold on to it. Our other crops are from fair to middling.—*Conn. Cor. of Brooklyn Gazette.*

The Canadian Agricultural Journal.

MONTREAL, SEPTEMBER 1, 1845.

We beg to remind the Montreal Agricultural Society, that they can obtain, by application to our publisher, twenty five copies of our Journal for this year, to be distributed by them to farmers in the county who do not subscribe to any Agricultural Paper. We give these copies without any charge, and hope the Society will distribute them as we suggest.

We offer our best thanks to John Harland Esq., of Guelph, Canada West, for his remittance for eighty copies of our Journal for this year, ordered by that gentleman for the Wellington Agricutural Society. We shall continue to forward the Journal to the Society to the end of the year, for which we acknowledge payment in full.

Several Agricultural Societies, in Canada West, take a number of copies of our Journal for distribution. We trust it will, in future, be regularly published the first week of each month.

It appears that wheat has been very much injured by the fly both in England and Scotland this year. The potatoes are also complained of as being affected by rot in the ground, as with us. The cause of this disease, however, is not attempted to be accounted for.

Had farmers been more particular in making selection of seed wheat last spring, we should have had a much larger produce of wheat this harvest. We warned farmers that it was dangerous to sow any wheat except that which might be sown late, or after the 21st May, and of that variety that is known not to rust. There was abundance of such wheat in the country, and we had a considerable quantity ourselves, but had no demand for it. We know the fly is still in the country, and we believe only wants sufficient food to make them numerous as ever, and we may be satisfied that if our wheat is sown at such periods as to bring it into ear any time between the 25th of June and 15th of July, we will not be safe from the ravages of the fly, unless it is a variety of wheat which the fly cannot injure, and we suppose there is none such yet in Canada, though such wheat may be had. We wonder that efforts were not made long ago to provide suitable seed for farmers. The country has been allowed to become impoverished for the last ten years, and no public means are yet adopted to remedy an evil that has caused a loss to Canada of at least six million pounds currency. We have, during the whole time that wheat has failed here, suggested and urged the expediency of providing the seed we have got now, and other varieties we have not got, but without effect. The Agricultural Societies would do well to apply some of the funds at their disposal to purchase seed, and distribute it to the farmers at a moderate price. It would be much better to encourage farmers to produce good crops, and have their land well managed, and in good condition, than to give premiums for a few pampered animals exhibited at cattle shows, and particularly when these premiums generally go to a few individuals, favourably circumstanced as regards skill and capital, and who know so well the advantages of good farming, that they would not follow any other system, though they should get a premium for doing so. It does, indeed, appear an absurdity in such a country as this, to give money from the public revenue for the encouragement of improvement in agriculture, and allow those funds to be paid as premiums on cattle, instead of encouraging improvement of the land and crops, which should go before all other improvements. It is perfectly clear to all competent farmers, that the land must be in a good condition before good stock can be kept; should we not, therefore, apply all our efforts to encourage this improvement, by instruction and reward, to those who are not good farmers, rather than expend the funds by paying them away to persons who require no reward for doing what they know to be their interest to do? We are not aware which of the County Agricultural Societies in this District is the oldest, to entitle it to the public funds assigned by the new Agricultural Act, to enable it to give premiums as a District Society this year; but we hope that whatever Society may be entitled to these large funds, they will apply them so as to encourage improvement generally where most required, and so produce the greatest amount of benefit to the public.

The improvements in progress in Montreal, are

highly creditable to the taste of the citizens, and a substantial proof of the abundance of capital in the hands of owners of property. No individual in the community can rejoice more than we do to witness this great improvement of our city, or more sincerely wish that it may go on increasing every year, until it becomes the largest, best built, the most wealthy, and as it is so, the most healthy city in North America; and it certainly has a fair chance to become all this at no distant period, if every member of the community will do their duty as they find opportunity. With all this vast improvement, however, we cannot disguise from ourselves, that fine houses will not feed and clothe the inmates for a single day, unless supported from other sources; nor can the fine houses be preserved from decay, if they have not a revenue derived from a produce created in Canada. This proposition may appear doubtful to our citizens, but it is not the less true. The enquiry then is,—What are the sources that must supply means of support to both city and citizens? Without hesitation we reply, that it is the produce of Canada which can alone furnish the chief means. The importation of merchandize, to whatever extent, can never pay for city improvement, or support the citizens, unless the country produces what will pay for this merchandize. The rent of houses in town, as well as the city assessment, must be paid for by the produce of the country. It is the profits on trade that must pay rent and assessment, as well as support those employed in commerce and trade—and those profits, of course, consist of the amount that goods are sold for to consumers, over the first cost. It is a perfectly plain proposition, and easy to prove. Many, we know, are of opinion that Montreal might go on improving, independent altogether of the country. No doubt individuals might carry on a successful trade without much intercourse with the country; but the great bulk of persons engaged in commerce and trade, in Montreal, could not do so for one month,—and, of course, the means of the country people to purchase must be derived from a new produce raised in the country. Rents in town are generally paid from the profits of trade and commerce, so are town taxes, or assessments, and we may add, that the income of those engaged in commerce, trade, and almost all professions, are derived from the productions of the country, because it is those productions that must furnish the means to put the whole machinery in motion. We introduce this subject to show how much every member of the community, except those who have an income from another country, are interested in advancing the improvement of agriculture, and in augmenting the amount and value of its productions. If our imports were only to the extent that could be disposed of to foreigners, they would soon diminish three-fourths, and our revenue in the same proportion, and our fine city would soon have grass and weeds growing in our best streets. It is trade with the beautiful country which surrounds Montreal that must support the progress of the improvements going on in the city, and not the trade with foreigners, which, we believe, has been more a loosing one for many years past to our merchants, than a profitable one, at least so far as grain and flour. For these two articles, we understand, a higher price has been paid to the foreigner, in proportion, than the price it has sold for subsequently in the English markets, and therefore it has not been generally a profitable trade; indeed, trade in these articles has been very like gambling, considering the extreme uncertainty of the prices in England, the success of the speculation depending upon the failure of the crops in the British Isles. The principal object of all those who really desire the prosperity of every class in Canada should be, to endeavour to augment our own productions to the uttermost, for our own supply, and for exportation to Britain. They will be the true friends of Canada who shall, with steady purpose, act thus; and those who will not be disposed to act thus, are only the friends of their own personal interests. There is no danger of over production here,—an abundant production creates means for consumption, independent of the almost unlimited market we have for our surplus productions by exportation. We have every inducement to encourage an improved system of agriculture. This will increase articles for exportation—and pay for our imports. It is not with the productions of a foreign state we can pay for imports we require. We cannot obtain these foreign productions without paying for them. The lands of Canada, under proper management, would be able to produce amply sufficient means for all our wants. Why should we not, therefore, do all in our power to make these means available? While we neglect to do this, we sacrifice the best interests of the country. There is now an increased necessity that this should be done, in order that we may

be able to make a profitable use of the grand water communications we shall soon have, and for the money expended upon which we have become accountable. It is much better that we shall have our own productions to transport upon these waters, than depend upon the carrying trade of foreign productions to pay the interest and capital that will be expended. We have no objection to the carrying trade, but we would regret that we should be altogether depending upon what is subject, at any time, to interruption. If the canals and railroads are not fully employed, the interest of the money expended will become a charge on the Provincial revenue, and it is to prevent this that we would strenuously urge the necessity of attention to the improvement of our country and resources as our first duty. If any better means for securing the prosperity of the population of Canada can be devised, we shall rejoice at it. Whatever is possible to be done, ought to be done, that we may be able to repay the large amount that has been loaned to us by the mother country, so that should we require another loan we may be able to obtain it. It will also be an encouragement to the investment of capital in Canada if we can prove it to be safe to do so. Much has been done for us by the mother country, and it now behoves us to do something for ourselves, possessed as we are of one of the finest countries on earth. To forward these objects, we humbly conceive, is not unworthy the attention of the government and legislature. At all events, we are certain, that if they could be accomplished, it would be conferring a greater general benefit upon the people than would be possible by any other means that could be devised. We submit the subject for consideration, and can do no more; and we have no object in doing this, but that the improvement and prosperity of Canada may be promoted and secured.

In our last we alluded to the New Municipal Law, and the benefits it was capable of producing, by acting judiciously under its provisions. We regret, however, that our experience of the working of that law has not confirmed the favourable opinion we first entertained of it. Were the law better understood, no doubt it would work more for the good of the public; but no sooner were Parish, Township, or Municipal Councils formed, than attempts were made to break them up into several small Municipalities, so that every little village must have a Mayor, Council, and other officers of their own, which must incur considerable expenses, and would require all the Tavern Licenses, and much more, to pay them. Hence, revenues that might be applied most beneficially for the people, for the support of schools in particular, will be appropriated to the payment of officers and other expenses that would be unnecessary if each Parish, Township, and Municipality, would rest contented with one Mayor and Council, which we conceive would, in most cases, be amply sufficient for all useful purposes. We regret exceedingly that the people would not allow the law to have a fair trial before they would attempt to divide it into small parties, that never can do the same good as if acting together. It would also be desirable that no expenses, except such as were unavoidable, would be incurred, until the people would be more reconciled to assessment, and be convinced of the utility of it for local purposes. When they perceive, on the contrary, that numerous officers are imposed upon them who have to be paid, and who can render very trifling service in return, the people will be dissatisfied with the law, and the amount of good to be expected from it, under such circumstances, will not be much, and will not be very likely to help to reconcile our population to paying assessment. The benefit derived from assessment must be made clearly manifest before the people of Canada will be friendly to the payment of it. It is very well to have officers, paid and unpaid, provided they can render proportionate service for the honour and emolument they receive, but without this, the fewer we have in Canada the better it will be for us, particularly the paid portion of them.

We conceive that a council, chosen from a parish or township at large, would be much more likely to act for the general good than several chosen for several sections of a parish or township, who will feel interested only for these separate sections, and probably will not be persuaded that the general interest can be consistent with the particular interest of each separated section. We would not allude to this subject, only that we think it is one very interesting to the agricultural population of Canada.

AGRICULTURE IN CHINA.

By our intercourse with China, we discover

the great attention that is given to agriculture in that country, which is supposed to contain one-third of the population of the earth. From a late work, "Recollections of service in China," we give the following selections in reference to the agriculture of that vast Empire:—

"Nothing can exceed the high state of cultivation which the whole of this group is under, every inch of ground being occupied with some description of kitchen-garden stuff. All is tilled with manual labour alone, with the exception of the low, wet, rice fields at the base of the valleys, which are occasionally ploughed by the assistance of the ox. We were much surprised to see so much cultivation, evidently the work of a large population. * * * The greatest degree of pains and care is taken by this thrifty nation to improve their soil by constantly manuring it, thus enabling them always to obtain two crops, and very frequently three, from the same land in one year. They have been for centuries in the habit of transporting manure from the large towns on the sea-cost, to the fertile districts in central China, made up, and pressed into a form much resembling our oil-cake. * * * The country through which it (the River) wound its way was a perfect flat, as far as the eye could reach, and in as high a state of cultivation as the market gardens around London; small farm-houses stand in every direction, neatly encircled with flower-gardens, the whole presenting a perfect picture of wealth, fertility, industry, and comfort; and when we were informed —a circumstance we had every reason to believe perfectly true—that the same state of things existed, not only throughout the whole of this, but of all the neighbouring Provinces, any one of which, as regards extent, would make a handsome kindgom for a European potentate, some slight idea may be formed of the endless internal agricultural wealth of the Chinese Empire, and the little concern the Emperor of this mighty country has been accustomed to bestow upon foreign nations, their commerce, trade, or anything else concerning them. Numerous implements of agriculture, which we supposed only to be known to the most scientific and highly instructed European nations, were discovered in great numbers, and in constant use among them—from the plough and common harrow, to the winnow and thrashing machine, with which scarcely any farm-house, however small, was unprovided; added to which, for the purpose of irrigation, there was scarcely any considerable field that did not possess a chain-pump for the purpose of irrigating their crops, by drawing water from the lower levels, with comparatively small labour to themselves, from which models I have not the smallest doubt, those at present in use in our navy or merchantmen were taken."

We have seen other books lately published, which state in what high respect agriculture is held in China, from the Emperor downwards. It is, therefore, no wonder that the country should be highly cultivated. When the wealthy and educated of any country have the common sense to regard with some interest that which *must* form the basis of the prosperity of the whole population, we may expect great improvement in Canadian agriculture, but not before, we believe. It must commence with the wealthy and educated, or with the Government, to take a direct and active part to promote agricultural improvement in this or any other country, and until they do this, all the public money appropriated for these purposes will not produce the improvement required.

PROSPECT OF THE HARVEST.

To the Editor of the Mark-Lane Express.

SIR,—At this momentous season, important not only to the agriculturist, but likewise to the nation at large, a candid statement as to the present appearance and apparent future prospect of the wheat and p[illegible] crops grown in this district (Goole and Marshland) will not, I trust, prove unacceptable to your subscribers.

I am well aware if, instead of genial sunshine, we experience a continuance of dull and gloomy weather at that period when the former is considered as essentially necessary for the early maturing and securing these valuable productions, the farmer is very liable to form a hasty, and thus not unfrequently an erroneous, opinion as to the result; hence, no doubt, arises the gloomy forebodings with which your paper last week was inundated.

With these few preliminary remarks, I would first observe that, in order to arrive at a fair conclusion, particular notice should be taken of the preceding summer, as to its general character for preparing the land to receive the seed, and what was the effect produced upon it after germination during the following seasons, in its several stages of shooting, flowering, and maturing.

I believe it is generally admitted that a dry year is the prognosticator of a good crop of wheat, and all will agree that such was the summer of 1844. Wheat received a good bed, and more than an average breadth was sown. Gentle rains succeeded, and the winter frosts merely gave it a salutary check. The appearance in March was most propitious, but the absence of snow during the winter had left the soil in a very light state; and about this time we experienced high winds, which considerably affected the gentler soils, changing their hitherto-luxuriant to a barren appearance, and in some districts it was considered necessary to plough it up. From April until the middle of June we had favourable weather; patchy wheat was observed to branch and fill up in every direction, and the general opinion prevailed that wheat would be a very abundant crop; from that period up to the 18th of the present month it was cold and calm, with occasional heavy rains, lodging the stronger crops, and no doubt injuring its yield; on that day it commenced raining, and continued, with very little intermission, for fifty hours, causing extensive damage to the potatoe and corn crops; but the fine weather since has done much to repair the mischief, except where the land was laid so low as to remain flooded for two or three days. I find, on referring to my books, I commenced harvesting—*In*

1842,	on the	19th	of	August.
1843,	"	13th	"	
1844,	"	13th	"	And in the
present year,	"	23rd	"	

We have therefore seen that the breadth of wheat sown was large, and in good condition—that it wintered well—that the injury done by the high winds and paucity of snow is to a great degree repaired by the branching and after filling up—that, although the summer was cool, it was *calm*, and therefore congenial to flowering—that the lodging of the crops is *partial*, and where not much laid, *well fed*—that the damage done by the continued rain last week is *local*, and that the *time* of reaping is only *eight* days later than the average of the three preceding years. I cannot, therefore, come to any other conclusion than that the crop will prove an average one in quantity, though not perhaps in quality; and, should

we have a continuance of the fine weather we at present enjoy, I trust that even that evil will be partly obviated; and if we further take into consideration the large stock of old wheat remaining in the country, there really can be no reason for sounding the tocsin so prematurely.

The potatoe crops bear every appearance of proving well in quantity, and I have pleasure in adding that no symptoms of disease similar to what have been experienced in Kent and other districts, have yet made their appearance; neither do I remember so few failures from dry rot since 1830. The beautiful weather we had in the months of April and May gave the farmers an opportunity of cleansing a large area of ground to plant with this valuable esculent in *lieu* of a summer fallow; but I am not so sanguine as to the quality, much will depend upon the ensuing month.

Trusting you will excuse this copious detail, which has only emanated from me to allay groundless apprehensions, and in the hope that some of my brother farmers in other districts will give equal publicity respecting the crops in their respective localities,

I beg to subscribe myself, Sir, your obedient servant,

JOHN WELLS.

Armyn Pastures, Goole, Aug. 28.

THE POTATO CROP.

(From Correspondents of the Mark Lane Express.)

It has been my employ, for the last few days, to make myself fully acquainted with the reality of the potato crop, and I find on all descriptions of land, and all descriptions of crop, whether early, late, or the intermediate crops, that by far the greater part is lost as human food. The better parts are about to be tried for the feeding of pigs; time only will tell the result. A person who came from Devonshire yesterday, finds things there quite as bad, and in Cornwall worse; this statement takes in four counties, Gloucester, Somerset, Devon and Cornwall. As the knowledge of the real state of the potato crop is next in importance to wheat, it is very desirable that the Editor should turn his attention to the subject, and give his opinion weekly till the crop is secured. As yet the writer hopes, as no account has reached him from the north of England or Ireland, that the evil has not extended so far.—August 28.

What we say of corn is sadly contrasted by the condition of the potato plant. We feel, among others, the sad truth, first announced from the Isle of Wight, and witness the havoc produced among crops the most superb in growth that can be recollected. Suddenly dark brown spottings were perceived on one or more of the folioles; these enlarged, spread, passed to entire leaves, and thus, in many instances, whole plants became blackened remains of what three days before were masses of verdant foliage. The tuber was more or less diseased, the first symptom being the suffusion over part of the surface of a tawny brown shade, which affected the texture and adhesion of the cuticle. In aggravated cases internal blotches, like pustules, penetrated below the coat, and spottiness, with decomposition of the pulp, succeeded. As to cure, there is none; prevention will be found in the fine weather; but the cause must be traced to those winds of the season, which are just so many electrical currents of a peculiar specific energy. The phenomena which exist point to the cause, for the leaf and stem of an affected plant has all the appearance of having been scalded, not burnt: the tissue and fibres are lax, and the entire leaf becomes pendulous. When a large plot is attacked, an odour is emitted like that of a plant over which boiling water has been thrown—faint, oppressive, even at the distance of many yards, but not at all putrid. A mulberry tree stands in the midst of our large plot; its fruit is red, yet the entire top of the tree is turned completely yellow. Thus it should appear that with some storms of wind from S. W., like those of the 19th, a degree of cold not far short of freezing may have paralyzed the foliage, and produced organic disease in the tissue. We trust the pest is abating under the present power of sun.

Now let us turn to speak on the potatoes; and, here, I am sorry to say, the more they are examined, the more appears the injury. I know of two who dug their white sorts and early kidneys for seed, and put them away—now find nearly half rotting. I saw a person digging to-day where they are grown largely: he said they got worse and worse; and he was giving them to the pigs as fast as he could, and selling them at 2s. 6d. per 280lbs. I have also heard that an acre of the affected ones has been offered at £2. The early winter potatoes are the most injured, the later set ones being comparatively free. The potato is generally first found injured at the smaller end, or where there are most eyes beginning to decay, and, if dug and put away apparently sound, soon shew that they are diseased. I cannot find any one who has yet traced the disease, or the remembrance of ever seeing it before; and I do not find any soil or situation in any way exempt; but we shall weekly add to our knowledge of the injury sustained and likely to follow.

THE CROPS.

(From Correspondents of the Mark Lane Express.)

The harvest being now in such a state of forwardness as to enable me to speak with some degree of confidence to the amount of produce, I beg to hand you the following statement, drawn from observation and examination of the crops throughout the counties of Suffolk, Essex, Middlesex, and Surrey. Wheat under an average, say nearly two-fifths under last year, which I admit was an extremely productive one. Barley, a very bulky one on the well cultivated, light, and mixed soil land, but thin on wet and cold clays; on the whole, more than an average, but very coarse in quality. In oats the same remarks will apply, excepting that the quality will be better. Early beans a full crop, but the late ones very bad in most places, perhaps about an average together. Peas, excepting the very early sown ones, not more than two-thirds of a crop, and bad in sample, being very "buggy." Roots, generally, not so good as they were expected to have been in the early period of their growth. Potatoes almost an entire failure, the tops dead and the tubers partially rotten and unfit for food; a loss not to be calculated to the labouring poor, the produce of their cottage gardens and allotments being rendered nearly worthless to them. A considerable quantity of the corn in the earlier districts is carried, little of it however in condition for present spending; but should the weather continue fair, the greater portion of the wheats will be housed in a better state in the course of this and the following week.

HULL, AUG. 29.—In this district the weather has been fine for harvest operations during the whole of the past week, excepting a little rain on the morning of Tuesday. Nearly all of our farmers have commenced cutting wheat in this neighbourhood, as well as the northern parts of Lincolnshire. On inspecting several fields very closely, I find a many deficient ears, and the quality very middling generally speaking; it will be several shillings per quarter below the quality of last year's produce, but the quantity per acre, I anticipate, will not be below a fair average; the stock stands very thick upon the ground, and is turning out a far better crop than it appeared to be before it was cut into. Several of the speculators in old wheat a short time ago, are turning very anxious sellers, which plainly tell that the excitement and alarm for the safety of the coming wheat crop was greatly exaggerated; nearly all the principal corn markets in the kingdom appear to be overwhelmed with wheat, even at declining prices; and should the present splendid weather continue, a considerable further reduction in price may be reasonably calculated on.

CONSUMPTION OF WHEAT.—In the Circular to Bankers, which appeared in the *Express* of the 11th instant, a material point, in reference to the probable stock of Wheat now remaining of the harvest of 1844, is not adverted to, namely, the enormous increase of consumption of the past year over that of preceding ones. The extent of this increase may, I think, be measured with tolerable

accuracy by comparing the aggregate of the returns of the quantities from the 290 towns which form the averages of 1844, with that of 1845: now, in the eleven months ending July 26, 1845, this amounted to 5,879,377 quarters against 4,794,901 qrs. at the same period in 1844, showing an increase in the former of about one-fifth. Now the quantity set down in the Circular to Bankers, of 18,000,000 of qrs., has been considered the minimum of the annual consumption for some years past, and admitting it to have been no more in 1844, the increased consumption of one-fifth in 1845 will be about 3,600,000 qrs., which deducted from the 6,000,000 qrs., which he calculates as left from the surplus produce of the crop of 1844, gives 2,400,000 qrs. only to aid us in the year to come, which I conceive will be very inadequate to make good the deficiency and defects of the present crop, to say nothing of the great failure in potatoes in the southern parts of the kindom.

Sevenoaks, Aug. 28.—The potato crop in this neighbourhood is considerably affected, but not to the extent we apprehend it is in some places, probably owing to our high, and consequently dry, situation.

Guernsey, Aug. 16.—We have had a week of extremely fine weather; with the exception of Thursday and Friday, which were cloudy, but little rain. Harvest is begun, but will not be general for a week to come. I have visited the fields where cutting was going on. This you will find to be as near as can be the general report of all the farmers:—Wheat, where it is not laid, one-third less than last year; where laid, not worth reaping. In many fields the grain is so small and shrivelled that it is more like rye; it will in general yield much less than expected, so that when thrashing begins the *real deficiency* will then show itself. Barley and oats, where not laid, a most abundant crop, and quality good. But the great distress of the farmer is the total failure of the potato crop. Up to Monday last the promise was the most abundant ever known—the whole looked healthy; in one night the mischief was done, the whole of the stalk and leaf turned as black as your hat, and the potatoes rot in the ground. This is a sad state of things; and the general opinion is that sufficient will not be saved of the crop for seed. A friend of mine has just returned from a visit in France. He says, in the whole of Normandy and Brittany the crop is a total failure—the damage done in one night; they attribute it there to frost. Here the farmers say that after heavy rain and so long continued, and hot weather set in, the ground heats the potato. I believe this to be true, as it begins to blacken at the foot of the stalk. It has been very hot to-day; the farmers fear, from the great heat, the grain will shrivel much. It is to be hoped a good crop of wheat will yet be saved in England. Prices may fall, but only for a short period; or if you are visited with the plague to the potato in England, Scotland, and Ireland, the consequences are awful to contemplate. I had about 12 acres, but fear they are all lost. I hear in some parts they are ploughing up the land and sowing late turnips.

Ireland.—The weather is still cold and uncertain, rain falling almost every night. We are happy to learn from highly-respectable agriculturists that the corn crops will have suffered but little injury, and, if we were blessed with some days of warm or sultry weather, there would be little or no damage sustained by the late unseasonable rains.—*Nenagh Guardian, Aug.* 20.

Worcestershire.—Reaping commenced in this neighbourhood last week, and nearly the whole of the week bringing fine weather, the scythe and sickle were in pretty general operation; thus we have in the present season seen the corn and hay crops cut down together—in fact, many fields of grass were not cut till after the wheat harvest had commenced. Much hay has been destroyed everywhere but there is abundance of rough keep. During the last trying weather the farmers generally evinced exemplary patience; we are told of one at Tenbury who had 100 acres of grass cut and lying on the ground during the whole of the rain, but he took it pleasantly, and has now stacked the whole with no more damage than a little stain. We are not yet in a position to state what will be the probable yield of wheat; it is said that there will be a deficiency in bulk, but that it will be compensated by the increased breadth of land sown in this locality. The general report leads us to expect nearly an average crop, though an abundant yield has never been experienced after so wet a summer. Everything, at this critical moment, depends on the weather; yesterday was a November day—rain, rain, and darkness; to-day the weather is more variable.—*Worcester Journaal. A,2g·1s*

Sussex.—The harvest had been hindered by frequent showers till Monday evening, when it began to rain heavily, and continued the whole night and great part of Tuesday morning, almost without ceasing; and the wind, blowing very strong from the south-east, has laid the corn much more than it was before. The temperature is very low, and we hear of no sprouted corn; but reaping can hardly be said to be very general yet, as, even with good weather, many farmers will not begin their wheat till next week. We had a sample of new wheat at our market last week, which was grown by Mr. Rigden, and was tolerably fair and dry; we did not hear the price. The rain very much dried up again yesterday by a strong wind, but we sadly want sun to ripen everything.—*Brighton Paper, Aug.* 21.

Kent.—Harvesting has been commenced in this vicinity, and haymaking has progressed. On Sunday we saw some hay being turned, which was ready for making a month or five weeks ago, had the weather permitted the operation. It is, of course, greatly discoloured, and deprived of sweetness. Sunday, being a drying day, gave a spur to the reaper, and a great quantity of corn fell on Monday; but on Tuesday the fields were deluged with heavy rains, succeeded yesterday by sunshine and fine drying winds, which, if continued a few days, would prove of inestimable value. The disease in the potato crop is increasing.—*Kentish Observer, Aug.* 21.

EXPEDITIOUS MODE OF PLANTING POTATOES.

(*From the Farmer's Gazette.*)

Sir,—I see in this day's paper a remark regarding a speedy way of planting potatoes; and as I have planted, in ten days, twenty-two English acres, which I think good work, I give you my plan:—

I have the field first cleared of weeds, and harrowed, so as to leave no obstacle in the way. I keep seven horses at work; two opening and closing drills as fast as they can go, the other five drawing out manure and sets (the manure being principally in the field). I put two men to assist the cart-men in filling the carts, so as to occasion no delay. I keep also two men in the field to assist in unloading, one working at each hind corner of the cart. The driver, standing in the cart, with his grape (fork), throws the dung into the middle drill—the two others manuring their respective drills on each side of him. Three drills are thus dunged, while the horse is slowly moving onwards. After them I have three women spreading the grapefuls thus deposited, and three more dropping the potatoes about ten inches apart. I have in this way, in one day, put in nearly three English acres—the one pair of horses opening and closing. The great thing is, to have all things ready before commencing, so that no time may be lost; and also to have sufficient hands, so as to prevent the horses from being kept unnecessarily idle.

Yours, &c.,

A Subscriber.

Lisburn, 27th April, 1845.

AFTER-CULTURE OF DRILL POTATOES.

Sir,—The after-culture of drill potatoes is usually done by paring or cutting the drill, at each side of the plant, and within three inches of it; then the drill harrow and roller, if necessary, are applied, to break any lumps the harrow may bring to the surface; weeding, &c., is then performed; the fine earth is then put to the potatoes by a double moulding plough; this operation is again executed when the work is finished. It is after this fashion that all

the practical farmers act, that I know of, with the exception of one, who, I admit, is entitled to take the first place as a really practical and successful agriculturist. His plan is, not to pare or cut his drills, but to cut the centre between them; and then put the earth up to the plant. His reason for not cutting is, not to injure or disturb the roots; but he takes great pains in hoeing and weeding.

It may be, that some information can be supplied through the columns of the *Gazette* on this practice; and perhaps you might favour the public with your own observations on the relative merits of both plans.

Yours, &c.,

LUMPER.

[In the course of our practice, we never had the earth cut away from the drill, unless by the coulters of the scarifier; and this we consider necessary, in order to have the ground properly cleared, and kept loose and open for the admission of air. This can be done with safety, in the early stages of the plant, before the roots have extended themselves; yet we consider a distance of three inches from the plant too little, as the manure would be liable to be dragged out, and the sets displaced. Six inches on each side of the plant will be near enough in the first instance; and in our succeeding application of the implement, it must be contracted according to the increased space occupied by the roots.]

30th April, 1845.

Mr. Richard Williamson, of Reascheath, near Nantwich, has a cow, which, on the 7th February, 1843, calved two full grown calves, which lived, and were fattened: in February, 1844, she calved two more, which also lived; and on the 16th of April, 1845, she brought forth *four fine and perfectly formed calves*, two of each sex; they were dead when born, but were ascertained to be alive a few hours before. The owner of the cow has sent the four calves to be prepared and stuffed as objects of curiosity.

The common strawberry is a natural dentifrice, and its juice, without any preparation, dissolves the tartareous incrustations on the teeth, and makes the breath sweet and agreeable.

The distance between London and Birmingham (110 miles) was lately performed in 105 minutes.

EATING SALADS.—A lad, who had lately gone to service, having had salad served up for dinner every day for a week, ran away; and when asked why he left his place, replied—"They made me yeat grass in the summer, and I were afraid they'd make me yeat hay in the winter, and I could not stand that, so I weer off."

A COMMON CASE.—"Doctor," said a person once to a surgeon, "my daughter has had a terrible fit this morning; she continued full half an hour without knowledge or understanding." "Oh!" replied the doctor, "never mind that, many people continue so all their lives."

A surgeon, who was in the navy, was in the habit of prescribing salt water for sailors. While angling upon a fine day, he happened to fall overboard. The captain, who was at the time walking on deck, heard the splash, and inquired of a sailor near him what that was? "Nothing, your honour," replied Jack, "only the surgeon tumbled into his medicine chest."

In London there are 1793 omnibus conductors, 1662 drivers of cabs, and 4546 drivers of hackney carriages and omnibuses.

PLEDGING.—Pledging each other in drinking is a custom which took its origin from the time when the Danes were in England. These ferocious barbarians used to stab natives at their festivals; and they invited to their banquets those island chiefs whom they wished to put out of the way either by the dagger or by poison. The consequence was that no native would drink at a Danish festival, unless his entertainers, or one of them, would "pledge" his safety in a cup of wine before-hand; and, even amongst those barbarian invaders, this pledge was deemed sacred.

SIR A. FITZHERBERT ON THE USE OF OXEN IN HUSBANDRY, 1532.—If any sorance betide a horse, as old age, bruisings, blindness, or lameness, then is he worth nothing, except for a kennell of noise-begetting hounds (the learned judge was evidently no friend to the delights of the chase); but, if any mischief befall an ox, as age, bruise, or lameness, for ten shillings at any time he may be fed, and then he is man's meat, and in that degree better than ever he was. These reasons and circumstances considered, I am of the poet's opinion, that the ploughe of oxen is much more profitable than the ploughe of horses, to which the Holy Scriptures themselves condescend; for wheresoever it speaketh of husbandry, it entitled the ox to his yoke for labour.—*Boke of Husbandrye, quoted by C. W. Johnson, Esq., Quarterly Journal of Agriculture.*

A WATER-MILL ON THE DANUBE.—Now I see a water-mill, such a mill as you never saw—a floating one. The mill-wheel attached to a great barge, bears the wooden hut of the miller, and is turned in the middle of the river by means of the current. The miller and his man, dark long-haired fellows, step to their door, wave their broad hats, and hail our vessel with a cry which is not intelligible to me. A third is coming in a tiny boat from the shore towards the mill. In this confined space they live day and night while there is work, and that there almost always is. The flour is said to become of excellent quality on board these floating mills.—*Countess Hahnhahn's Letters.*

BRIDGE ACROSS THE TWEED.—The bridge which it will be necessary to erect over the Tweed, for the connection of the North British and the intended Newcastle and Berwick railways, should the latter obtain the sanction of Parliament, will be 726 yards in length, and 100 feet above high water mark. It will consist of thirteen arches, (the present bridge has fifteen), each of seventy feet span, nine or ten abutments being in the river. The expense of this undertaking, inclusive of the viaduct which must be formed on the south of the bridge, will be £65,000, while south again of the viaduct it will be necessary to construct an embankment fifty-six feet high, and half a mile long, the expense of which will amount to £30,200. —*Berwick Warder.*

MORTALITY IN THE COLONIES.—At a late meeting of the Statistical Society, an interesting paper was read by Assistant-Surgeon Balfour, on the mortality of the army, in the course of which the following tabular result was given in regard to the colonial establishments:—Annual mortality per 1,000—New South Wales, 14.1; Cape of Good Hope, 15.5; Nova Scotia and New Brunswick, 18; Malta, 18.7; Canada (Upper and Lower) 20; Gibraltar, 22.1; Ionian Islands, 28.3; Mauritius, 30.5; Bermuda, 32.3; St. Helena, 35; Tennaserim Provinces, 50; Madras Presidency, 52; Bombay Presidency, 55; Ceylon, 57.2; Bengal Presidency, 63; Windward and Leeward command, 85; Jamaica, 143; Bahamas, 200; Sierra Leone, 483.—*Globe.*

Nutritive matter in 1000 parts of the following fruits:—Plums, 290; Grapes, 270; Apricots, 260; Cherries, 250; Peaches, 200; Gooseberries, 190; Apples, 170; Pears, 160; Strawberries, 100; Melon, 30.

Lord Brougham's bill to amend the law of marriage will extinguish Gretna Green, at least as a refuge for English lovers. It provides that no marriage in Scotland shall be valid unless both the parties were born in Scotland, or reside there, or have lived in Scotland for three weeks preceding the marriage.

From the annual post-office returns just published, it appears that the number of letters delivered in the United Kingdom in the year 1844 was 243 millions, an increase of about 22 millions compared with the previous year, and of 167 millions compared with the number before the reduction of the postage.

INDUSTRY ANOTHER WORD FOR HAPPINESS.—The old man near the Hague, that served my house from his dairy, grew so rich that he gave it over, bought a horse, and furnished a house at the Hague, resolving to live at ease the rest of his life; grew so weary of being idle, he sold it, and *returned again to his dairy.*"—*Sir Wm. Temple.*

Mons. Courbebaisi has discovered a mode of blasting

rock, &c., much more effectual and economical than the present plan. It is by forming a chamber for the powder with hydrochloric acid and water.

Mr. Thomas Bowles, aged 83, one of the persons who was on board the Royal George at the time she sank, and escaped, was on the Yarmouth suspension-bridge when it broke, and fell into the water, and was again providentially rescued.

Time is like a creditor who allows an ample space to make up accounts, but is inexorable at the last.

Reaping Wheat.—Important to Farmers.—It is asserted by Mr. Hannam, a clever and experienced farmer, of North Deighton, near Wetherby, Yorkshire, that a considerable loss arises from the mistaken practice of reaping wheat when dead ripe; and this assertion he proves by the following experiments. In 1840 he reaped three large sample parcels of wheat as follows:—No. 1. Green-cut, August 4th; No. 2. Raw-cut, August 18th; No. 3. Ripe-cut, September 1st. When thrashed and carried to market, they commanded the following prices: No. 1. 61s. per qr.; No. 2. 64s. per qr.; No. 3. 52s. per qr. In 1841 he cut five half-roods of wheat, as follows:—No. 1. Very green, August 12th; No. 2. Green-cut, August 19th; No. 3. Raw, August 26th; No. 4. Raw, August 30th; No. 5. Ripe, September 9th. These samples were first shown at the Wetherby Agricultural Society's Show on September 22d, 1841, when an extra premium was awarded to No. 3. The wheat from which the last three samples were taken, was then ground and dressed by Mr. John Hardcastle, miller, of Wetherby, when the following results, omitting fractions, came out:

No.	Grain.	Flour.	Pollard.	Bran.	Cut.
	lbs.	lbs.	lbs.	lbs.	
3	100	80	5	13	Raw, - August 26
4	100	77	7	14	Do. - - Do. 30
5	100	72	11	15	Ripe, - Sept. 9

IMPROVEMENTS IN AGRICULTURE.

"The great truth that animal manures are nothing else than the ashes of the food produced from our fields, consumed or burned in the bodies of men and animals, has given the chief direction to all modern improvements in agriculture."—*Liebig.*

The above remark deserves the profound consideration of every practical farmer. After an animal has attained his maturity, and adds nothing to his weight in the course of a year, it is obvious that the matter which escapes from the body must be the same in quantity as that which enters it. A very notable portion of the food of all warm-blooded animals passes out of the lungs in the form of air and vapor, during their ceaseless respiration night and day, just as wood passes out of a chimney when burnt in a fire-place. The combustion of grass, hay, and grain, in the system of the cow, horse, or sheep, is not so complete as that of fire applied to the same substances in the open air. In the latter case, nearly all the combustible ingredients—carbon and hydrogen united with oxygen and nitrogen—are expelled into the atmosphere. In animal combustion, a larger portion of carbon, hydrogen, oxygen, and nitrogen remain with the ashes contained in the food taken into the stomach, and voided with the solid and liquid excretions.

That portion of cultivated plants which escapes into the air through the lungs of man and his domestic animals, growing plants can regain by their roots and leaves, and thus reorganize into animal food. But the case is different with the ashes or earthy portion of all plants. If these minerals are taken from the soil in crops, and not faithfully restored, by replacing on our cultivated fields all the *salts* contained in the excretions of the human family and of domestic animals, the injury will be great.

Nearly one-third of all the wheat grown on the globe is raised by the Chinese. For thousands of years this wonderful people have cultivated most successfully this bread-forming plant. For a long period their wheat-fields have been fertilized almost exclusively with the ingredients of wheat, derived from its combustion in the human system. In other words, they manure their fields with *night-soil alone.*

The manufacture of corn, wheat, barley, oats, hay, potatoes, pork, beef, butter, cheese, wool, can be reduced to an exact science. The laws of chemical affinity, of vegetable and animal vitality, are uniform and easy to be understood, so far as successful agriculture is concerned. One of these laws is, that no man nor vegetable can possibly make *anything* out of *nothing.* Another is, that one simple substance, like carbon, cannot be transformed into another simple element, like nitrogen. Clay cannot supply the place of sand, nor sand of clay.

Suppose you have the materials to produce fifty good crops in your now fertile soil: when those materials are worked up and sent to distant parts, where will the largely increased population of the State go for food and clothing? Do you say, to the West? But what right has the present generation to consume and destroy the natural fertility of God's bountiful earth, to the serious injury of those who are to succeed them?

By every principle of common justice and philanthropy, we should augment the natural productiveness of the soil at least 4 per cent. per annum, or double its fruit in 25 years.—*Dr. Lee, in Genesee Farmer.*

TO IMPROVE THE SOIL.

To improve a soil, is as much as to say that we seek to modify its constitution, its physical properties, in order to bring them into harmony with the climate and the nature of the crops that are grown. In a district where the soil is too clayey, our endeavour ought to be, to make it acquire, to a certain extent, the qualities of light soils. Theory indicates the means to be followed to effect such a change: it suffices to introduce sand into soils that are too stiff, and to mix clay with those that are too sandy. But these recommendations of science, which, indeed, the common sense of mankind had already pointed out, are seldom realized in practice, and only appear feasible to those who are entirely unacquainted with rural economy. The digging up and transport of the various kinds of soil, according to the necessities of the case, are very costly operations, and I can quote a particular instance in illustration of the fact. My land at Bechelbronn is generally strong, (clay). Experiments on a small scale showed that an addition of sand improved it considerably. In the middle of the farm there is a manufactory which accumulates such a quantity of sand that it becomes troublesome. Nevertheless, I am satisfied that the improvement by means of sand would be too costly. A piece of sandy soil, purchased at a very low price, after having been suitably improved by means of clay, cost its proprietor much more than the price of the best land in the country. Great caution is necessary in undertaking any improvement of the soil in changing suddenly its nature. Improvement ought to take place gradually and by a course of husbandry the necessary tendency of which is to improve the soil. Upon stiff clayey land we put dressings and manures which tend to divide it; to lessen its cohesion, such as ashes, turf, long manure, &c. But the husbandman has not always suitable materials at his command, and in this case, which is perhaps the usual one, he must endeavour to select such crops as are best suited to his soil, Autumn plowing of clayey lands is highly advantageous to them, by reason of the disintegrating effects of the ensuing winter frosts.—*Boussingault.*

☞ Boussingault is both a distinguished chemist and a practical farmer; yet no farmer, we are assured, who has a clayey or a sandy soil, will be deterred, by the above remarks, from attempting to improve his sandy soil by the admixture of clay, if it be at hand, nor from improving his clayey soil by the admixture of sand, if it can be easily procured. In either case, we do not believe the operation would be *too costly*, as Boussingault asserts—and much experience in this country could be adduced in disproof of the assertion.—*N. E. Far.*

ADVANTAGE OF CRUSHING THE FOOD OF HORSES.

As I have just concluded the experiments you wished, I hasten to forward you the results, which are as follows:

Two horses in good health, in daily work and as nearly as possible equal in size and age, were selected for the experiment. They were each allowed 5 lbs. of oats and a sufficiency of good hay, of which they consumed about 17 lbs. per day each. The only difference in feeding consisted in one horse having the oats thoroughly crushed, and the other without crushing. On the fourth day of this mode of feeding, the solid excrements of each horse were examined. 100 parts of the dung of the horse fed on crushed oats were found to be deprived of all the nutritious matter contained in the food, and to consist of woody fibre, mixed with the animal secretions and some salts; while 100 parts of the dung from the horse fed on uncrushed oats, were found to contain 1-4 per cent. of nutritive matter, consisting of starch and gluten, which had not been acted on by the stomach, mixed with the ordinary constituents of the solid excrements of the animal—this arising from the inability of the horse to perform perfect mastication, and must vary with circumstances, such as age and rapidity of feeding. The same horses were then fed with hay, cut and uncut. At the expiration of the third day, the excrements were examined, but no chemical difference in their composition was detected; the food in both instances was found to be equally exhausted of its nutritive matter. But the shorter period occupied by the horse in filling its stomach, and consequently greater amount of rest obtained, and the prevention of waste, by cutting it into chaff, are advantages which require no illustration from me.—*A. Gyde, London Agricul. Gaz.*

A THING THAT OUGHT TO BE KNOWN.—The beech tree is said to be a non-conductor of lightning. So notorious is the fact, that the Indians, whenever the sky wears the appearance of a thunder storm, leave their pursuits and take refuge under the nearest beech tree. In Tennessee the people consider it a complete protection. Dr. Becton in a letter to Dr. Mitchell, states that the beech tree is never known to be struck by atmospheric electricity, while other trees are often shattered into splinters. May not a knowledge of this afford protection to many when exposed? —*American Paper.*

ICE-LAND TRANSFORMED INTO SUN-LAND.—M. Gaymard read to the French Academy of Sciences, at one of their recent meetings, a letter which he had received from Roykiavk, in Iceland, informing him that for an entire year there had been beautiful weather in that island, and scarcely any winter. The summer, of 1844, and as much of the present summer as had passed, have been delightful. The meadows are in the finest possible state, and the fisheries highly productive.—*Mechanics' Magazine.*

Poetry.

THE KINGS OF THE SOIL.

BY E. H. BURRINGTON

Black sin will nestle below a crest,
And crime below a crown,
As good hearts beat 'neath a fustain vest,
As under a golden crown.
Shall tales be told of the chiefs who sold
Their sinews to crush and kill,
And never a word be sung or heard
Of the men who reap and till?
I bow in thanks to the sturdy throng
Who greet the young morn with toil,
And the burden I give my earnest song
Shall be this—the Kings of the soil!
Then sing for the kings who have no crown,
But the blue sky o'er their head;
Never sultan or dey had such power as they
To withhold or to offer bread!

Proud ships may hold both silver and gold
The wealth of a distant strand,
But ships would rot and be valued not
Were there none to till the land:
The wildest heath, the wildest brake,
Are as rich as the richest fleet,
For they feed the glad birds when they wake,
And give the beasts to eat.
And with willing hand, and spade, and plough,
The gladdening hour shall come
When that which is called the "waste land" now
Shall ring with the "Harvest home."
Then sing for the kings who have no crown,
But the blue sky o'er their head;
Never sultan or dey had such power as they
To withhold or to offer bread!

I envy him whose feet can tread
By the corn his hand hath sown;
When he hears the stir of the yellow reed,
It is *more* than music's tone.
There are prophet sounds that stir the grain
When its golden stalks shoot up,
Voices that tell how a world of men
Shall daily dine and sup.
Then shame, oh shame, on the miser creed,
That *doles* out praise or pay
To the men whose hand makes rich the land,
For who earn it more than they?
Then sing for the kings who have no crown
But the blue sky o'er their head;
Never sultan or dey had such power as they
To withhold or to offer bread!

The poet had gladdened with song the past
And still doth he strike the string,
But a brighter light on him is cast
Who can plough as well as sing.
The wand of Burns had a double power
To soften the common heart;
Since with harp and spade, in a double trade,
He shared a common part.
Rome lavished fame on the yeoman's name
Who banished her deep distress,
But had he ne'er quitted the field or plough,
His mission had not been less.
Then sing for the kings who are missioned all
To a toil that is rife with good;
Never sultan or dey had such power as they
To withhold or to offer food!

Critic.

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