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THE

# Canadian Agriculturist,

OR

NAL AND TRANSACTIONS OF THE BOARD OF AGRICULTURE  
OF UPPER CANADA.

XII. TORONTO, SEPTEMBER 15, 1860.

No. 18.

## Editorial Correspondence.

[No. 6.]

RIDGORTH, SALOP, August 15, 1860.

EXHIBITION OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND AT DUMFRIES.

It till now, in one of the most picturesque parts of England, that I could find time and opportunity of putting some thoughts on paper to the great Scottish Agricultural Show, commenced in Dumfries on the 1st of August. The weather, (a most important element in these matters) fortunately proved favorable and dry piece of ground, consisting of about twenty acres, was fenced in, and in regard to the quantity and quality of stock, or the amount of visitors, the Exhibition may be regarded as a great success. Dumfries is situated in a fine agricultural district, in the south-west corner of Scotland, and is therefore not so favorably located for attracting large numbers as places more centrally situated, such as Edinburgh or Glasgow. The Society has held exhibitions in this ancient town; in 1830, when the entries of stock, and of various agricultural produce, &c., amounted to only 837, the number of entries was 851; in 1837 it rose to 1303; and in 1860 reached the number of 2,398! The reader will gain a full view of the extent of the show, and of the results of its different departments from the following analysis founded on the published reports of the Polled Galloway, there

were 80 entries; Polled Angus or Aberdeen, 26; Shorthorns, 71; Ayrshire, 76; Highland, 12; with about 20 specimens of fat cattle of different breeds. The class of Horses amounted to 158, chiefly for agricultural purposes. Cheviot sheep, 83; Black-faced, 15; Leicester, 76; Longwooled other than Leicester, 30; Southdown, 13; besides a few extras. Swine, 41; Poultry, 72; and Butter and Cheese, 195. The number of agricultural implements and machines for competition was 911; besides a large amount of duplicates on sale. By means of the catalogues, visitors could readily ascertain the exact age of the animals, the names and address of their breeders and owners; and in the case of implements to the name of the maker was added the price, and sometimes other particulars of interest to the public.

The show of stock was considered not below the average of former years either in point of number or quality. In every department were to be found a number of animals of superior excellence, and in some respects the exhibition was considered as superior even to any of its predecessors. Shorthorns were well represented, and if one missed such rare and finely bred animals as Col. Townley exhibited at the English Show at Canterbury, the general impression made by a careful examination of the class, could not be otherwise than favorable. In aged bulls the competition was restricted to ten animals, several of them decidedly good; but the animal which obtained the first premium was defective in the loins, but of large size and gen-

erally of good proportions, and was considered by some as having not many decided claims to the honor awarded him. Some two years old bulls possessed excellent points, and will no doubt get superior stock, but the yearlings appeared somewhat deficient in several characteristics of superior quality. The classes of cows and heifers contained some excellent animals, and Mr. Douglas was successful in obtaining the gold medal and several first prizes.

Of Herefords and Devons I did not observe a single specimen; these breeds so numerous and of such importance in the south, are but little, if at all cultivated in Scotland. The native Galloways formed a marked characteristic of the show, and to me were particularly interesting. The number was extensive, and although there were in this class several animals of inferior merit, and ought not perhaps to have been shown, the greater part were quite superior, fine and beautiful looking. Mr. Beattie, of Annan, had an aged bull that obtained the first prize, was universally admired, and many good judges considered him among the first, if not the first animal of his class ever before shown. The cows and heifers were generally good, with obvious tendency to thrive and fatten. This breed has now been fairly introduced into Canada, and from all I can learn of it in its native habitation, we have every inducement to persevere. The Galloways soon reach a medium size, are hardy, yield a good supply of milk, readily fatten, and afford meat of first rate quality. The show of Polled Angus or Aberdeen, was not extensive, but there were some very superior specimens. This breed is very similar in appearance to the Galloway, and considerable observation and experience is often required to distinguish between them. Their hair is generally finer, bone fine and heads elegantly formed. Like the Galloways, from which they have in great measure sprung, they are readily fattened, having soft and pliant skins, and make beef of the first quality. Indeed these classes of the Scottish breeds, so peculiarly adapted to hilly and exposed situations, will almost command an additional penny a pound in the London markets over the larger animals, such as the Durhams, Herefords, &c. In the Highland cattle there was a lack of competition in consequence, I presume, of the locality of the show being so far south, but what few specimens were present were considered

good representatives of their class. The shire cattle, considering the show was held in the native district of that celebrated breed, not so numerous nor so decidedly superior as one might have anticipated. I heard it said that this department was not equal to what was at Edinburgh last year. Many of the bulls and cows possessed great merit, and were in a high state of breeding; but the young generally did not appear to maintain the high standing. The extraordinarily severe winter and late spring experienced throughout the British Islands, with the consequent attack of scarce and dear provender, must have been particularly injurious to all kinds of stock; and this circumstance will account in part at least, for what I observed at the shows in the United Kingdom, and likewise in France; the comparatively inferior condition of all the younger branches of live stock.

In Horses the Exhibition occupied a high position, being chiefly confined to the purely agricultural class, and they were placed and arranged to admit of close inspection. The Clydesdale seem to be the popular breed, and embraced some specimens which for compactness and elegance of form I have never equalled. From the awards made, I should consider that quickness of motion combined with compactness of form, rather than mere speed, constituted the leading points in the estimation of the judges. Some of the mares were superior, and the colts generally excellent progeny derived from strong and large sires was decidedly superior to that from the inferior horses. A few Shetland and Iceland gave a striking and agreeable variety to the department of the exhibition. Some of the best as is always the case on similar occasions were decidedly inferior. I saw but one pure Shetland, a fair looking stallion; and the Iceland, I believe, was wholly unrepresented.

The display of sheep, especially of the character of the late winter and spring breeds, must be regarded as both excellent and good. The Leicesters were on the whole superior; and although this breed is only raised on the low rich lands of Scotland, and can only be far in search of food, they are now being advantageously used in crossing with the other breeds. There were a few good Cotswolds, but a small number of Southdowns, specimens of the latter being supplied

ke of Richmond's flock, in Aberdeenshire. It the Cheviots and Black-faced sheep that constituted the national characteristic of this department of the show, and presented to me the greatest novelty and interest, and it was in these breeds especially the falling off was most to be expected from the severity of the late seasons. But these noble races, as they appeared at the Dumfries show ground, the former occupying in practical management moderately sized ranges, and the latter covering the sides and tops of the highest ranges, evinced little if any indications of want of food, or that any desolating frosts and snow storms had impeded their growth or affected injuriously their plump and beautiful forms. I hope to say more respecting the mountain-sheep of Scotland in a future communication.

Swine at the show was similar to those of Wiltshire and Cork; some of the large breeds gave us prodigious specimens, and many of the smaller kind being particularly handsome. The produce, though not very varied or extensive, was, on the whole, particularly good; and the quantity of cheese and butter was very extensive as I was assured, of excellent quality.

Implements and Machines I have no space in this letter to say anything. I am not aware that the collection contained any thing particularly new or important, or what might not be seen at similar exhibitions in the United Kingdom.

Among the thousand articles entered for competition, however, there were many of superior construction and improved adaptation to the wants of the farmer, of which more here-

after I had long indulged the pleasing hope of some day being able to visit the show of the old Highland Society, and now that I have done so, I can say that my most sanguine expectations have been fully realised.

I am glad to hear such continued good accounts of the harvest in Canada, and trust that the farmers will reap remunerating crops, and a new epoch of prosperity has fairly commenced. The weather in the United Kingdom has been cold and wet to a degree almost unparalleled within living memory. A large portion of the hay has been damaged or actually spoiled, and most of the grain crops in the later stages are as green as they were a month ago. The fish farmer's prospects are truly gloomy,

and there are not as yet any indications of improved and settled weather.

G. B.

### The Highland and Agricultural Society.

We notice from the Dumfries and Galloway *Courier* that Professor Buckland was present at the Banquet given on the occasion of the late meeting of this distinguished Society at Dumfries, Scotland. We take the following extract from the report:—

Bailie Mundell proposed "The Strangers," coupled with the health of Professor Buckland from Canada.

Band—"Will ye no' come back again?"

Professor Buckland returned his most grateful thanks for the toast. He stated that he was the first who was appointed to the chair of agriculture in a colonial university; and that he had been actively engaged for the last thirteen years in originating and maturing an exhibition, however inferior, yet somewhat analogous in its general character to this remarkable society. He had, after an absence of thirteen years from the old country, resolved to employ what in collegiate phrase they termed the long vacation, to visit the principal national shows in the kingdom. He had attended the National Association in Paris, and after that the Royal Show at Canterbury, and then crossed the Channel to go to the Great Show at Cork; and last, though not least, he had now arrived to witness the proceedings of the Highland Society. (Applause.) His object of course was to pick up hints and to collect such information as might be serviceable to his adopted country; and he would carry home with him in a few weeks the intelligence that he had been at the festive board of the old Society of Scotland, the precursor, and the parent, he believed, of all agricultural societies in the United Kingdom. (Cheers.) Although he was personally a stranger to most of them, having never visited Scotland before, yet he assured them that the Highland Society and its proceedings, its elaborate reports and its experimental researches, were by no means strangers to him. These materials he had employed in Canada, not only in his lecture-rooms, but in his addresses throughout various sections of the country; and it afforded him the greatest pleasure to have an opportunity of visiting this meeting of this venerable Society. He could only say further that he hoped to have the honour of meeting the heir-presumptive of the crown of these realms, who would inaugurate the exhibition of the Agricultural Association in Upper Canada at the end of September, and he should tell the members of that Society—a goodly number of whom were Scotchmen—that the Highland Society, venerable in age, was as active and as useful as ever. He had witnessed

in the show yard to-day what would be of great advantage to him, especially in their arrangements, and the manner in which the machinery of the Association appeared to be conducted. (Cheers.)

### Progress: What is it? An Example.

"Bad farming is the rule, and good farming the exception."

Such is the bold, straightforward, and uncompromising language used by Mr. Mechi, with reference to British agriculture; and, however startling, by its very plainness, it may be so to some, and however much it may wound the vanity or sensitive feelings of others, we feel, "where'er we take our walks abroad," that its truth is indisputable. If, indeed, we give ourselves up to the guidance of some orators whose fervid eloquence has frequently enlivened the doings at certain rural re-unions, we might be inclined to question the truth of the principle laid down by the much abused owner of Tiptree Hall, and suspect that he could only look on such matters through the dim medium of a city fog. But when these are scanned by the practised eye, we are compelled to admit, in very bitterness of heart, that although the nineteenth century is fast advancing to a close, although we flatter ourselves that we are so much superior to our forefathers in point of knowledge, although we even possess advantages of which they never dreamt, yet, the words we have quoted are substantially correct, and that in very deed "bad farming is the rule, and good farming the exception."

If any one doubts the truth of this fact—for fact it is, let him, when he next travels fifty miles in any direction—let him endeavour to reckon up the numerous cases which come under his notice of undrained fields; of crops struggling for existence amongst a dense mass of weeds; of waste, from the occupation of the land by enormous, and in many cases useless, fences; of wasted labour from insufficient power; of wasted energy through insufficient skill, let him reckon up these and other things which will force themselves upon him, and against these set down the few and far between cases where the reverse of all this is to be seen; and before he has drawn to the end of his journey, if he is at all capable of forming an opinion on the subject, he will have undoubtedly become a convert to Mr. Mechi's doctrine.

There are many we know who look upon such opinions as being in the highest degree heterodox. They have got a parrot-like cry about "progress," which they harp upon, much to their own delight, and which tends in no slight degree to perpetuate what, in but too many cases, is a pure delusion; and not only does it do this, but it actually prevents that "progress" of which they talk in such resonant terms, but of the real nature of which they know as little

as they do of the domestic habits of the people of the moon. Were we to rely upon all that is said about the matter, we would frequently find on actual investigation, that "progress" is sometimes crab-like, and that "advancement" meant a retrogressive movement. We hear them shouting "Excelsior," whilst all the time they are slipping down hill with fearful rapidity and at last, when fairly brought to a stand, solely in consequence of their own doing, instead of putting their shoulder to the wheel, their cries to the Hercules of the government or some other power, for assistance to help them out of the slough of their own making are loud and long.

It is a pithy and true maxim that "Providence helps those who help themselves," its truth is, perhaps, as much exemplified in the prosecution of rural improvement as in any other case. We find real progress illustrated in certain cases, in a very unostentatious manner, and to an extent of which those whose talking is only in talk have no idea. These are, indeed, the bright spots, the exceptions, which, however small, are sufficient to induce a hope that ultimate success in similar state of matters may become the rule, and without which, indeed, even the most successful would despair. But yet their very existence tells only too plainly of the wide gulf that exists between them and all around. The contrast which they present is, indeed, too strong to permit us to regard them with unmixed feelings. We see in them what *might* be the result if right views were entertained by all who are concerned in the matter; but when we look beyond them we see what actually is the case which must inevitably remain so, so long as ignorance and prejudice unite to stop the way. We say ignorance and prejudice, and it is to give such things their right name. We know there are people who would endeavour to over these matters, and who would not care to hide their real nature under a mass of periphrastic verbiage, but who would, at the same time, ridicule those who are anxious that the state of the case should be thoroughly remedied in order that it may be the more speedily and more effectually remedied; but we are inclined to invest what we consider serious with a false glitter, which only serves to perpetuate the evil. Progress will be best ensured if we address ourselves with earnest determination to the rectification of existing errors, directing public opinion so as to result in a better course of action. In carrying out this course of action, much opposition is to be encountered—opposing arising not only from direct hostility, but from what is still harder to overcome, from party friends and from utter indifference.—*Farmer's Gazette.*

### Deep Tillage.

Mr. Pringle of Dublin, Ireland, read a paper before the Agricultural Society,

lage, and the use of the subsoil plough, from which we make the following extract:

"Deep cultivation is a comparative term, and at 25 so in one case may be the reverse in another. The common plough in ordinary tilling does not in most cases turn a furrow exceeding 7 inches in depth, and in many cases below 3 or 5 inches. Whatever may have been the depth which has hitherto been the rule in any particular instance, if we go deeper—say an inch or two—it is, to a certain extent, an example of deep culture, and as such will be more productive of certain results. But this is only comparative, and of a shallow and superficial kind, compared with a mowing and turning of the soil to the depth of 12, 15, 18, and even 24 inches. It is frequently astonishing, however, where circumstances are otherwise favorable, to those who are ignorant of the stores of plant food which a little deeper tilling renders available, in cases where the surface soil had for many years been only lightly turned, to witness the results of breaking into and bringing up that really virgin soil which is found in such cases under the thin layers of existing surface soil. In fact, it appears almost magical, and not a little difficult will sometimes be experienced in convincing such people of what is the real cause of the increased fertility which so much surprises them. Down to the recent period the use of the spade or fork considered the most efficient mode of deepening and mixing the soil, whenever it was thought proper to go beyond that depth which could be effected by the plough. During the last few years, and prior to that period, this mode of deepening the soil was strongly insisted upon as the most remunerative employment for labor on our rural districts. Since that period, however, it has fallen into disuse, chiefly in consequence, perhaps, of the scarcity of laborers, as well as other reasons to which it is not necessary to allude. At the time referred to I had considerable experience in this mode of improvement, and am perfectly satisfied as to its benefit, when properly carried out. We still, however, find cases where it is practiced, and in such the steel fork has generally superseded the spade, the former being lighter and together better adapted for the purpose. I do not enter into particulars—which my pen will not permit—I may be permitted, however, by way of illustration, to say that Mr. Niven, I believe, gradually increased the depth of his Merino from seven inches to at least 18 inches, chiefly by the use of the spade or fork. Mr. Niven also uses the fork rather exclusively in deep cultivation, trenching the land yet deeper by means of it, at a cost per Irish acre of £7 13s. (\$38.32); and the expense appears to be large, yet it is repaid in the first crop. The introduction, by the late Mr. Smith, of Deanston, of the subsoil plough, as a follower of the thorough

only from the effects produced by the use of this implement when employed in breaking up the indurated subsoil, but also from the enlarged and more correct views which it was the means of imparting to many on the subject of deep culture. Its application by some, as a substitute for, instead of a follower of the thorough drain militated against it in certain cases; but it is unquestionably a valuable implement when properly applied. Still, with all my predilections for the Deanston subsoil plough, arising from my rather extensive experience of its use, I do not consider it a perfect implement. It rips up the under soil, and gives additional depth; but it does not effect this in such a perfectly uniform and complete manner as all the requirements of deep culture demand. Some, indeed, allege that the effects of subsoiling are not lasting; but I am not of that opinion. I have, no doubt, met with cases where the results apparently favored such views; but in tracing the history of those cases—which are always in connection with stiff, cold clays—it was evident that the subsoil plough had followed the drain too closely and without giving the latter proper time to act. Where the latter point was attended to, however, I have seen, even on very obdurate clays, that the effect of subsoiling by the Deanston plough were perfectly visible at least fifteen or twenty years after the work had been done. Various forms of subsoilers have been introduced, and many of these possess great merit. The most perfect implement, however, or rather combination of implements, for effecting deep and uniform culture is to be found in the Tweeddale plough and the Tweeddale subsoil-trench-plough. These were invented by the Marquis of Tweeddale, and first used by him in the improvement of his farm on the Yester estate. The Tweeddale plough, at first sight, appears to be a heavy and cumbersome implement; but although it turns a furrow 15 to 16 ins. deep, and 14 inches wide, it is held by the ploughman with as much ease as any common swing plough turning a furrow six or seven inches in depth. This arises from the structure of the mould board, which to use Mr. Stephens' description, "instead of pressing against the furrow-slice along its entire length, gets quit of it at once by its convex breast, and causes it to slip along in a straight line till it reaches near its ear, when the furrow-slice assumes its proper position by its own gravitating. Friction of the furrow-slice is thus practically avoided." In another place he says, "The furrow-slice, in place of being turned over in an entire form, as by our fine working plough, is only so far turned, and at the same time broken, as serves to present the soil in the best possible state to the ameliorating effects of atmospheric influence. In this respect, the Tweeddale plough stands unequalled; and since the extinction of the old Scottish wooden plough, no implement has approached the point to which this has attained, for enlarging the extent of surface

exposed to the atmosphere." It is scarcely possible, without actual field demonstration, to convey a perfectly correct idea of the really beautiful manner in which those implements act in loosening and commixing the soil, to a depth of from 20 to 24 inches."

### Standard of Points in Shorthorns.

The contradictory judging which is frequently witnessed at our shows in the case of short-horns gives rise to considerable bewilderment, not only to those who are but slightly versant in such matters, but also to those who ought and do "know a thing or two." At one meeting we find a certain style of animals, or those possessing certain prominent points, exalted to the highest position; whilst at another show, and with another set of judges, a very different class of animals are the winners of honours; the successful on the one occasion being nowhere on the next. Judges, no doubt, have their predilections for a particular style, or for certain points, but this difference as to the value of such matters is, as we have said, not only the cause of great puzzlement to onlookers, but sufficiently decided at times to cause the latter to doubt whether there is anything more in judging than an almost random selection.

The past show season, to go no further back, has afforded numerous instances of the uncertainty which characterizes the awards frequently made, and that not only on our side of the Channel, but also in England and Scotland. Whatever, therefore, would tend to establish some definite criterion by which animals are to be judged would, we think, be of great utility, particularly as it appears either that societies are chary in establishing it as part of the duty of judges to give some reasons for their awards, or that judges are equally chary in volunteering such information. There are, no doubt, certain animals which possess such a perfect combination of points that there can be no mistake about the matter; but the case is different where the competition becomes closer.

At a recent meeting of the Newcastle-upon-Tyne Farmer's Club, a paper was read by Mr. Chrisp on shorthorns, in the course of which he gave a scale of points and their relative value. The following is an extract from his paper, as well as some of the opinions which were elicited from other members:—

"I must attempt to sketch out an ideal short-horn, possessing all those perfect points which breeders prize so much. Although most butchers like a large carcase, which brings down the scale, yet they also prize the greatest quantity of beef on the best joints. Where these are not to be had together, the latter is preferred, as of most value in the market. Therefore, great size is discarded, as leading to overgrown, ungainly animals, difficult to fatten. On the other

hand, little, dwarfed, stunted animals are equally to be avoided in breeding, these appearing to have lost that healthy constitutional standard which in the best short-horns is so highly prized. These should be weeded out, as they occasionally occur in herds from cross or close breeding as well as from food or climate, or even by causes. The short-horn bull must have a symmetrical form, of medium size; body (including quarters and neck) rather long than short; bones fine, legs short; all choice parts well covered with gelatinous flesh and fat not patchy; skin medium thickness, mellow touch; hair fine, silky, thick-set, long in winter, not wiry; head well set on to neck; scalp of face dishd a little, rather long than short; muzzle, open nostrils, horns medium size, fine clear, and waxy, free from black stains; eyes prominent, bright, but placid; the neck little elongated and arched, well set on to shoulders, which ought to slope backwards, broad and level, deep, with fine shoulder point; brisket deep, prominent and broad between fore legs; ribs round, back straight, quarters long, full-fleshed thighs, deep and full at the arms full above, fine at knee, flanks deep, full, tail well set on, at right angles with the body and not thick or coarse; colours, roan, white, or flecked—black, or shadings of black on skin, hair, horns, or hoofs objectionable. Altogether, the animal ought to have a gay, "stylish" appearance in gait as well as in form, which breeders consider betokening high blood and which most animals of the short-horn type have more or less. The same characters, with allowances for the more feminine appearance, answer for the cow, though I should not expect full development of udder, not fleshy, well teats, good milk veins, and perhaps hereditary character for good milking qualities. The following points are the work of a young farmer who has kindly helped me. Perhaps the best way to treat them is for a few of our members to take the pleasant labour of trying the animals by these rules at our local shows, reporting the result:—

	No. of points.	What constitutes good
Head .....	4	Moderate length, and rather deep with clear horns, flesh-coloured, not black.
Neck .....	1	Being well sprung, shoulders, and slightly arched.
Neck vein .....	2	Prominent and full.
Shoulder and crops .....	6	Former being thrown back and at top, "points" covered, and prominent. Crops very full.
Breast .....	2	Coming well forward, wide and full.
Back .....	3	Breadth, and level

in.....	4	Breadth, and being well covered, not low.
cks.....	2	Breadth, and being at right angles with back bone.
ps.....	2	Not being drooped.
arter.....	2	Length, levelness, and being well filled up.
gh.....	2	Length and fineness, and being well beefed inwards.
sts.....	3	Coming well down.
ck.....	1	Being well bent, and not turned in.
nk.....	3	Full and coming well forward.
k ribs.....	3	Well sprung from back and round.
e ribs.....	3	Round, and coming well down.
lity and hair.....	4	Skin not being too thin but soft and mellow, hair long and silky.
our.....	1	Roans and reds.
er and milk vessel	3	Well formed teats and udder, large milk veins.

Mr. Atkinson said he agreed with most of the points which Mr. Chrisp had named in the report, but thought too much stress was laid on the girth. Nor was he in favour of a very high breast; for it indicated a deficiency of height.

Mr. Hedley suggested that Mr. Chrisp should give a few points to elegance and style. After how well an animal might be formed, and a lowering gait it never looked well.

Mr. Chrisp thought the shape should give weight but had no objection to voting a few points for that. He did not advocate a long neck for a short head was also objectionable. The discussion then ended, to be resumed at a future day, when the matter has been more fully considered.

It will be observed that Mr. Chrisp merely gave his scale as a suggestion, and whilst we are given that sufficient comparative prominence has been given to certain of the points enumerated, still it brings out the matter in such a manner as to deserve attention. We, therefore, think that some of our readers who are well qualified to give an opinion on the subject will be able to give us their views, and thus, perhaps, assist in the reduction of short-horns may be reduced to something like a correct standard of estimation. It is mainly an interesting, as well as an important subject.—*Irish Farmer's Gazette.*

### Pleuro Pneumonia.

Transactions of New York State Agricultural Society.]

The appearance of this alarming disease, in a virulent form, in this country, has excited much interest among our farmers; and it is de-

sirable that all the information which may tend to furnish facts in relation to the disease, its origin, and treatment, should be given to the public. This disease has prevailed in Europe for many years, often causing immense losses—and although various remedies have been resorted to, some apparently successful in one locality, yet failing in another—there has, as yet, been found no certain remedy for the disease, so far as we have information. Destruction of the animals affected, as soon as the disease makes its appearance, has generally, we believe, arrested its progress. Few, however, are familiar with the symptoms of the disease, and when it has made much progress, it is very difficult to arrest it.

The annexed article, read before an Agricultural Society in England, giving, in a plain and familiar manner, a brief history of the disease there, from 1842 to the present time, we have thought would be useful to our farmers, and would lead them to take measures to guard against the spread of the disease, should it make its appearance in their vicinity. It contains many interesting facts, of the origin and progress of the disease—the symptoms which usually accompany it, and the various remedies which have been resorted to. Much interest is manifested in England and upon the Continent, in relation to the best means of arresting this disease. It is to be hoped, that investigations which are being made abroad as well as in this country, may lead to some discoveries which may prove advantageous. J.

#### PLEURO-PNEUMONIA.

By Mr. PALLIN, of Tarvin, Cheshire, England.

The "Pleuro-pneumonia" made its appearance in this county, in its formidable character, about the year 1842, and at that time carried off the greatest portion of many valuable stocks of dairy cows. In consequence of such a serious visitation, cattle clubs were formed in different parts of the country, for the protection of farmers from that disease alone; and two other societies were established in London for the same object. So alarming did it become, in a very few years, that the Royal Agricultural Society of England, in 1847, offered a prize of £50 for the best essay on "Pleuro-pneumonia." Several essays were sent in, and the prize was awarded, in 1848, to the author of an apparently clever, well-written essay; but, it is much to be regretted, it threw very little light upon the subject, and I greatly fear that the country, after an experience of eighteen years, is quite as ignorant of the cause or the cure as it was at that time. If the disease usually made its appearance at any particular time of the year, or under any visible peculiar circumstances, we might possibly form some idea at least as to the cause; but we hear of its presenting itself at every period of the year, without exception, and under almost every circumstance, in all kinds of seasons and situations, where cattle are in high condition, and where they are in low condition; where they



are well managed, and where they are badly managed; in fine, dry weather, in very hot weather, in cold frosty weather, in mild wet weather; upon every description of land, from the driest sand to the wettest clay, (and I believe if there is an exception, it is in the hilly districts of Wales, Scotland, Derbyshire, &c.,) and this, too, where farmers have been most cautious in introducing fresh cattle into their stock.

The symptoms, too, vary considerably; an altered gait in walking, as if from stiffness of the limbs, is frequently one of the first indications of the disease; sometimes a peculiar and unmistakable grunt, at others a failing of the milk, soreness of the udder, and tenderness of the spine, quickness of breathing, short cough, horns alternately hot and cold, suspension of rumination, costiveness, partial loss of appetite, which gradually diminishes until it is entirely gone (and yet I have known instances where the appetite has continued until the end, when the animal has dropped down dead whilst eating.) It is a much more serious business when the disease enters a dairy stock than a feeding one, especially if, as is generally supposed, the flesh of the animal is not unwholesome, but fit for human food, for although a milking cow may be of great value to her owner for dairy purposes, she might be worth little or nothing for the slaughter-houses; and there is also the danger, if not the certainty, of abortion during six or eight months of the year, i. e., in every decided case of "Pleuro," either from the effects of medicine or the disease itself; but as regards feeding animals, assuming that the flesh is not unwholesome, the loss would be trifling, as compared with dairy cows, provided the animals were slaughtered immediately on being taken.

I believe the "Pleuro" made its appearance in England previous to the year 1842; for, to the best of my recollection, it broke out in Yorkshire, and some few distant counties, before it found its way into Cheshire, and from a memorandum in my own possession, I find that previously to forming a cattle club in the parish of Tarvin, for protection against that disease, two stocks of dairy cows in the neighborhood having then been attacked, a preliminary meeting was held at the "Bull's Head Inn," Tarvin, on the 24th December, 1842, for the purpose of taking into consideration the propriety of establishing such a club; and on the 10th of January, 1843, the club was actually formed, and it continued to work remarkably well until a few of the principal members became dissatisfied because it did not protect them against all losses, but confined itself solely to the "Pleuro"; and in consequence, the club broke up, and many of its members then joined the "Mutual," or the "Agriculturist," two London offices, the latter a proprietary one, which, from want of experience and good management, soon broke up also; several other clubs and insurance companies were soon formed, and from increased experience and a better system of management,

are undoubtedly working better than formerly.

As regards veterinary or medical treatment during a period of eighteen years, we can expect much success until one uniform system of treatment is adopted, based upon scientific principles and a thorough knowledge of the disease from its commencement; but here we are at a loss. No one appears to know for certain whether the attack and one or more of the symptoms are simultaneous, or whether the disease generally lurks in the system for some time previously to the symptoms manifesting themselves; nor is it generally agreed where the disease commences, some contending that it commences in the pleura, and then spreads to the lungs; others, that it has its origin in the blood itself. There are also others, of considerable professional experience, who are of opinion that the disease originates in the blood, that the first steps should be to endeavor to purify the blood in the very earliest stage of the complaint. These are points which I do not pretend to determine; but having examined a great number of cattle after death, I find myself justified in stating that I have generally found the pleura much inflamed, and one division of the lung in a highly gangrenous state, the other comparatively healthy; but in some cases the appearance was such as to lead me to believe that the affected lung could not possibly be restored to a healthy state by any medical treatment. At the present day there are remedies for severe bleeding, as the "Sheet anchor," and from a combination of powerful medicines down to homoeopathy, in which the use of blood-letting is strictly forbidden; and, according to my own observation, about an equal number have recovered under each kind of treatment, and where they have not been treated at all, probably one in every seven or eight. I am of opinion that the disease arises from the use of bone and our several new manures; their opinions will also appear fallacious. I state the fact that on many farms where the disease first appeared, neither bone or any manure had been used; and on one farm, which was visited by it, in its most malignant form, in 1847, at least two-thirds (50 acres of dairy pasture had been bone-manured in about nine years previously,) without a case of "Pleuro" having manifested itself between these two periods, although the stock carried off about half the dairy stock of the adjoining farm early in 1843 (nearly five years before,) on which bone manure had not been applied at all. Many persons doubt its infectious or contagious, but the circumstances of its spreading through a stock, when it makes its appearance, to the annihilation of one-half or two-thirds of its number, leads to the inference that it is infectious, though it frequently happens that where the stock are kept in close contact with diseased stock, one-third or more escape. It generally makes its appearance as an epidemic or epizootic.

several stocks in the neighborhood about the same time, and this, I think, may be attributed to some atmospheric agency. Can anything be done to arrest its progress? There will not, I think, be a question in your minds as to its effect upon the price of animal food, and dairy produce, especially when you are informed that on an area of less than three square miles, within a short distance of Chester, upwards of one hundred and twenty dairy cows have fallen a sacrifice to the disease in the short space of about six months; and if it progresses in this ratio a few years, or even a few months, it must be a fearful tale upon the stock of this country.

I think that a searching investigation should be commenced at once; but this important step should not be taken by any private individuals, or by a public body less than the government itself, or under its direction and support. It would require the greatest amount of talent and experience that could be brought to bear upon the matter, and there must be a very considerable pecuniary inducement offered, to bring out men of ability, eminence, and integrity, to devote so much of their valuable time as would be required for such an undertaking; stocks of cattle would have to be visited, in different parts of the kingdom, subjects would have to be purchased from diseased stocks, diseased ones in their different stages of the complaint, apparently healthy ones from the same stocks—some for the purpose of being slaughtered for examination, others for experimenting upon. Perfect illustrations of the whole of the internal organs, connected in the highest degree with the disease, showing the interior of the different vessels, as well as the condition of the blood, both in diseased and apparently healthy subjects in diseased stocks, and also of apparently healthy cattle, from districts where the disease had never appeared, would have to be procured upon, and the services of some of the most eminent professional men would have to be secured to assist in adjudicating upon the important question, Can anything be done by a public agency, to arrest in its progress the much-bred scourge "Pleuro-pneumonia" in this country? How is this to be accomplished? Not by private individuals, not by public companies, but by the Royal Agricultural Society of England, or by the government of the country, who should call in the aid of the Royal Society to assist, if necessary, in arranging and carrying out the plan. As I have before said, considerable pecuniary aid would be required, to carry out the plan satisfactorily; therefore the plan I suggest, that government, being the bearer of the public purse, should offer three prizes for the best essays on the "Pleuro-pneumonia" in this country, one of two thousand pounds, one of one thousand, and one of five hundred—of course under certain conditions and regulations; I fully believe that the Royal Agricultural Society would render all the assistance in its power to further the objects of the inquiry. To

show the view government took of a disease amongst cattle, called the "Malignant Epidemic Murrain," about the year 1745, I quote the following passages from a valuable work upon cattle, and their diseases. After speaking of its devastation in the neighborhood of London, and some of the midland counties, it says:

"For more than two years it continued to lay waste the country. The number of beasts that were actually destroyed by it was not, and perhaps could not, be ascertained; but in the third year of the plague, when the government had so seriously taken up the matter as to order that every beast that exhibited the slightest marks of infection should be destroyed, a remuneration being made to the owner, no fewer than 80,000 cattle were slaughtered, besides those which died of the disease, and which were formed, according to the narration of one of the commissioners, nearly double that number. In the fourth year of the plague, they were destroyed at the rate of 7,000 per month, until, from the numerous impositions that were practiced, this portion of the preventive regulations was suspended. In the year 1747, more than 40,000 cattle died in Nottinghamshire and Leicestershire, and in Cheshire 30,000 died in about half a year."

Surely, after such an example by government, upwards of a century ago, our present government cannot well refuse its aid, by the advancement of a few thousand pounds, in endeavoring to ascertain the cause and cure of a disease, not so dreadful perhaps in its character as the murrain, but fatal in its effects to a fearful extent, almost ruinous to individuals, and seriously affecting the whole community. It appears that England is not the only place where the disease exists at the present time, and I quote the following passages from a London paper of the 10th inst: "A communication was received by the Royal Agricultural Society, at its last meeting, from the Central Society of Agriculture in Belgium, requesting information on 'Pleuro-pneumonia,' and the means adopted to combat the disease, having particular regard to inoculation. A reply was ordered to be made, that inoculation was not found, in this country, to rest on any scientific basis, and as such, it has not received the sanction or support of the Society." In this country, no statistics of the number of cases of "Pleuro-pneumonia" have been kept, and consequently little is known of the number of those of inoculation. Some time ago, experiments were made upon cattle by inoculation, but I never heard of any very favorable results; and I think if the experiments had been tolerably successful, the public would not have been kept in comparative ignorance on such an important matter; and it certainly appears strange, that such a mode of treatment should have been resorted to, i. e., to introduce so malignant a disease into the system of a healthy animal, which might possibly escape the disease altogether; for I think it will bear no analogy to

the system of vaccination in the human subject, for a mild kind of disease was in the first instance introduced into the system from the cow, with admirable effect, for the purpose of arresting that dreadful disease, the small pox. Formerly, the small pox itself (until the discovery of vaccination, by Dr. Jenner,) was introduced into the system of human subjects by inoculation, and frequently lamentable consequences ensued, which I fear would be the case if inoculation was resorted to in "Pleuro." And now the question again presents itself: Can anything be done to arrest the progress of "Pleuro-pneumonia," carrying away, as it does every year, some thousands of valuable dairy and other cows? It appears to me to be worth the experiment I have presumed to suggest, and if successful, the public would be well repaid for any pecuniary assistance government may think proper to advance in the undertaking; and, if, on the contrary, it should prove unsuccessful, the country will, I think, be satisfied that everything that can be done has been done, and that we must in future look to an All-wise Creator for that comfort and support, under the infliction, which He alone is able to give.

### Harvests Prospects in Britain.

*From the Mark Lane Express of August 27.*

LONDON, Monday, Aug. 27, 1860.

The harvest prospects only become yet more serious and discouraging the nearer we approach to what should be so joyous a season. There has been another wet week, and we write on the third Saturday in succession under the dispiriting influence of "a regular rainy day." There has scarcely been a gleam of sunshine, and the corn for the last fortnight has no appearance of having ripened in any degree whatever. Still some has already been cut; but this, in many cases, has been more to stay the spread of disease than from the ear being really ready for the sickle. A crop gathered in such condition will of course require a deal of time to make and harden, either in the rick or the barn; and, however late harvest may be, anything like a general return of new wheat in the market will be later still. The yield, moreover, is now in almost every direction anticipated to be indifferent, while the sample, even with the most careful housing, can scarcely turn out well. Such a combination of circumstances must tell against those who cannot afford to wait, and we fear that many small farmers will be placed for some time to come in a very trying position.

Our reports from different parts of the country only go the more and more to confirm the unfavorable impression we have for some time past continued to gather. There is, too, hardly a local journal we open, but which has something like a positive despair of the harvest.

Even such as still live in hope wrote before experience of the last two days; and these in and about town have been with the pointing to the too palpable fact of "rain." In a season almost if not altogether unprecedented for the continuance of untoward weather, and the absolute injury effected, it is extraordinary to remark the common tone of the country. Dispirited as we may be, there is as yet nothing like it apparent. The country markets yet not a little change; while Mark Lane, though some time gradually advancing, has nothing like that leap which many people so long been prepared for. But to-day's market does at last show some sign of the unseasonable influence, and a rise of four shillings a quarter is recorded on wheat, and £3 per ton on potatoes. Had the morning opened less probably there is little question, but this advance would have been yet greater. Still, the comparative quiet here, and the ready supplying in, would go to argue that we have more wheat in store than was imagined would, however, be idle to assume that we upon any such a prop as this. England long ceased to think of any such self-dependence, and the reports of her own prospects now read with hardly more interest and attention than those of other kingdoms. It that we must solve the enigma as to the state of the market and the continued confidence of the country. There is a comparison drawn between the broken promise here that held out to us elsewhere. We are to offer the material for such a review of paper of to-day. Almost side by side will other stand the facts and opinions of our various authorities both in England and America. The contrast is striking enough. Proverbially as the look-out of one is bad is the good. It is rarely there has been so generally unfavorable a return in England, and as a better one in America. We turn our State and statement to another with the gratifying and welcome intelligence. It is of as late a date as August the 6th; and it nearly all echoes the abundance of opportunity for the in-gathering. "I can get all, and more than all, she was the United States—if she has a very she we have a very large one—average price rule;" while a duly appointed Commissioner Wisconsin writes "that without exception crops were better in quality than was expected, and the quantity of the area; astonishing!" There is to be a third crop the crop of 1859, and a fifth more than 1858 or 1857. There must be many quarters to spare, and all ready for shipment in England so soon as we only announce require them. Such a declaration, would seem to be already pretty freely as a rumor of some repute goes to corn for this country has been lately:

erica at a higher rate than that it is now being for on Mark Lane. In any case, what may be the actual result, an all-wise evidence directs us at once to the remedy for evil which may afflict us; and inculcates at the same time the blessings of Peace, and how man should learn to aid his brother. A harvest in England, and a bountiful one in America, must be attended with commercial relations that will conduce much to the mutual renunciation and advantage of either. The means we are enabled to offer on the prospect of peace are generally more favorable than we hitherto been led to anticipate. But these are accompanied by the suggestive commentary of the Emperor himself, who has just opened his ears to his people.

Within thirty miles of London the barley is seen as grass, and in almost every direction the heats are more and more laid, with the rains coming through. Still there is much of a good color, and though the rains have been heavy, the temperature has been rarely or "muggy." The strong wind, indeed, has commonly attended or followed the rain, must have done much to retard the spread of mildew; though, as we wrote last week, this in some districts is already lamentable prevalent. A few days more of such weather we have had for the last month would breathe a fearful increase of disease; and this dread before them, some few have hurried into making a beginning. Labor fortunately, by no means scarce. The high price of last season have attracted a number of hands, especially from Ireland, and these are anxious to get to work as even the farmer himself can be. With a view of facilitating the business of what may most probably be "catching" time, we have provided an opportunity on the best means of encountering a wet season. This will be found to give the practical farmer of Scotland and the north of England, such difficulties are of more common occurrence than in the south. Many a useful crop we take it, may be gathered from a perhaps somewhat slovenly in its details, but is founded on the principle of making the most of bad weather. If markets are still at an average with the supply that other crops can send us, it behoves the English farmer yet more to do the best by his own hands. A high price has ere now compensated for a short crop, but in these times of difficulty of communication and ready access to the loss of the steam-engine will strike the difference between plenty and scarcity. It is so, that it should be so. Panic and its like evil spirits from the presence of power.

### Ploughs on Trial at Canterbury.

Some time ago a match for £50. was made between two well-known plough manu-

facturers, Messrs. Ransome Sims, and Messrs. Page & Co., to be given to the one whose plough should be adjudged to have done its work best; the trial, it was also decided, to come off at Canterbury during the agricultural week. On Friday, accordingly, the ploughs made their appearance. The judges of the show were the umpires. Both the ploughs were iron, and both of improved manufacture—the champions of their respective owners. The ground to be turned up was, of course, at first a subject of discussion; but with the confidence of inexperience, the competitors were resolved that they would try on the pasture-land that had been the scene, only two days before, of the Kentish men's lamentable defeat. In vain were words of prudence whispered in the ears of these ardent competitors, and the extraordinary nature of the land pointed out to them. They would not hear of delay, or admit of doubt. That the Kent ploughs had failed, they said, was very likely, and only what everybody expected; but these improved iron implements were made of very different stuff, and, in fact, just suited the stiff, difficult soil; and the makers of them felt overjoyed at having at last got an opportunity of showing the miserable figure that poor Kent would cut, when her wretched, old-fashioned, ill-constructed plough was brought into competition with the ploughs of a more modern kind. Accordingly they got to work. Messrs. Ransome's plough was behind-hand at starting; but Messrs. Page's plough began in good time; and its skilful, intelligent driver smiled contempt at the bare idea of its failure. All he wanted was, to find the land that he could not plough. He had four horses, however—no doubt out of a desire to flatter the prejudices of the Kentish spectators, and not but that he could do perfectly well with two. He chose a broad space between the work of the Kent ploughs, and began by turning a furrow each way in the centre, to the depth of two or three inches, leaving a piece of uncut turf in the centre, of the breadth of nine inches and a half. As he began his work, our attention was called away for five minutes; and we dared scarcely turn our sight again on the field, for fear of witnessing such splendid ploughing as would finally and for ever consign to ridicule the merits of our Kentish implement. At last we screw our courage to take a survey of the field; but what do we see? The sward unburied; the furrow not five inches deep; the earth that had been turned up constantly falling back into the furrow; the coulter of this invaluable plough actually bent; and, lastly, the ploughman, uttering very emphatic but highly improper observations on the land, the plough, his horses, and himself. And this was the result of all his grand expectations. So far was he from beating the work of the Kent plough, that he fell very far behind it, and instead of proving, by comparison, its defects, showed only that, if it had failed, its failure was, at least, much less signal than that of Messrs. Page's modern, improved implement. Meanwhile, the other plough—that of Messrs. Ran-

somes and Sims—started off. Instead of four, the driver of this implement would only have two horses; but before long he altered his tone, and harnessed on the complete team. The result was precisely the same as in the case of his competitors. The depth never exceeded five inches; the earth returned to the furrow; the coulter was bent, and the ploughman disgusted. He and his friend retired from the field with blushing faces instead of blushing honours, and with their mouths full of complaints about the Kentish soil, rather than against the Kentish ploughs, which they had before been so ready to ridicule.—*Kentish Observer*.

The *Maidstone Journal* adds: "The iron ploughs also 'came to grief,' and cut quite as deplorable a figure as their more ponderous progenitor. Great was the exultation of the iron plough makers at the alleged failure of the old Kent plough; but it may turn out, after all, that failure was more apparent than real. The Kent farmers attribute what took place to the fact that the plough tackle was not suited to the nature of the work to be done; and not to the inefficiency of their implement. This view of the case is borne out by the fact that Simmonds' plough actually did turn the soil. The advocates of the iron ploughs at the Canterbury Show, however, would hear neither argument nor explanation, and the Kent plough had to put up with jeers and contumely. Hereupon a few spirited men of Kent determined if possible to bring the question to a fair issue, and we are glad to hear that a friendly challenge has been sent to Mr. Hornsby to try his plough upon a piece of stiff land in Mid-Kent against the old Kent plough and Spencer's improved. If Mr. Hornsby accept the challenge, public announcement will be made of the time and place of this important trial."

[Mr. Hornsby told us himself, on the hill at Canterbury, that he should like nothing better than to go to work where the Kentish ploughs were then doing so badly.—*Ed. M. L. E.*]—*Mark Lane, July 23, 1860.*

### Liquid Manure.

Many gardeners near the large cities of Europe use all their manures in the liquid form. The manure house is a close, long building, and after being filled is closed tightly up. The floor inclines toward a cistern at the lower end outside the building, to receive the excrement which is pumped back on top the manures daily. When manures are required, the liquid from the cistern is used, and if more is required than the cistern will furnish, water is permitted to run into the cistern, and this is pumped up again on the manure heap to filter through, and to dissolve new portions of the fertilizing materials rendered soluble by age and fermentation. The following article from the *Rural Cyclopadia*, shows a different method, used in Holland, Switzerland, and Germany.—[*Ed.*

GULLE.—A peculiar liquid manure, in some parts of Holland, in several districts of Switzerland, and in the south-west of Germany. It is a dilution of the solid and fluid excrements of cattle in winter, sometimes chemically affected by a foreign admixture, and afterwards subjected, for a considerable time, to the factive fermentation.

Gulle has been longest in use in Switzerland, particularly around the lake of Zurich; there prepared in trenches and tanks immediately connected with the cattle-houses. The floor on which the cattle stand is covered with planks, bricks or tiles, and has a slight inclination toward their heels. A horizontal trench for receiving their excrements, extends from end to end of the floor, and is formed of boards, or waling, 18 inches wide and 24 inches deep; and is connected at its lower end to a covered tank of six or eight feet in depth. The trench is half filled with water; the urine falls naturally into it; part of the solid excrement falls naturally into it, and the rest is washed into it several times a day; the litter, which has become foul with excrement, is collected twice a week, and well riddled into the trench, with the dung-rake, and then sufficiently long at the side of it to drip and saturate the liquid; and when the trench is nearly full, its contents are first roughly stirred up, and then let out by a sluice at the end of it into the tank. The trench is again and again, or many times filled and emptied in the same way, till the tank becomes full; and in large establishments the contents of the full tank, now in a state of considerable fermentation, are run off or pumped into a larger reservoir, and there kept for four to six weeks, till they have become thoroughly fermented. The washed litter, having been allowed completely to drip, the edge of the trench, is carried out of the end built up in regular quadrangular piles, and it soon decomposes into a dark-brown manure; but, in consequence of having been cleansed from nearly all the saline and gaseous principles of the dung and urine, manure possesses, comparatively, little fertilizing power.

In the south-west of Germany, the tanks and gulle are constructed in the fields, and supplied with water from adjacent springs. Both the urine and the dung are carried from the cattle-houses. The advantage of this method over the Swiss one, are the less labor in carting the gulle to the fields, and, in some instances, the lessening of labor in conveying water to the farmery; and the advantages of it, are the increase of labor in collecting the excrements, and the dissipation of some portion of the ammoniacal gas before the excrements can be conveyed to the tank. A practice throughout the south of Germany, too, is to dissolve some of the contents of the tank; and, the

damage ferruginous soils, by adding to proportion of iron, it delivers up its sulphuric acid into combination with the ammonia of the urine, and, in consequence, very generously gives a perceptible increase to the fertilizing power of the manure.

Gulle is generally applied as a top-dressing, and is found to be peculiarly suitable for grass; but, on account of the labor of carriage, it seldom can be economically applied to fields at any considerable distance from the manure. A grand requisite for it is an adequate quantity of water; and this requisite becomes a matter of material enrichment, when the water is mixed with a considerable quantity of matters in solution; or, in popular phrase, is "very strong." Gulle is conveyed from the tank to the field in liquid-manure carts; but it falls most copiously and beneficially upon the soil, when it flows from an aperture in the centre of the lower side of the barrel, and to splash upon a persing-board, suspended below the aperture.

In pumping it out of the tank into the field, care ought to be used to leave behind an undecomposed vegetable fibre laying as a mat at the bottom of the tank; for, when mixed with gulle used as top-dressing, it is a great injury to the leaves of the young plants, and occasions an injurious incrustation. And it is always to be applied either in a state of comparatively great dilution, or when the soil is moistened with rain; for, if used upon dry grass land in the concentrated form in which it is prepared, it will act in a somewhat injurious manner, and probably do more harm than good.

Sprengel, to whose treatise on manures we are indebted for the facts we have just mentioned, speaks very highly of gulle, and strongly recommends it to the attention of farmers. "Enough," says he, "arrangements of the stalls as well as the numerous tanks, required in the preparation of the gulle, in order to serve it for the proper period, occasion expense, and likewise its distribution over the field much labor, these outlays are richly repaid in the advantages derived from this substance, as will be more clearly shown under following heads:—1. The water, which is usually kept in the trench, absorbs much of the carbonic acid given out by the cow in the stable, and, consequently, the ammonia arising from the urine is not only neutralized and rendered less volatile, but the carbonic acid also in itself a strong manuring substance. The water in the trench serves to keep the air cool during the heat of summer, and upon occasions a dampness in the atmosphere which is much better for the health of the cow than a hot and dry air. Little, or perhaps none, of the ammonia, developed by the cow is lost; its escape being prevented, as my experiments on the putrefaction of urine have proved, by the large quantity of water present. The absolute gain of manur-

ing elements from this circumstance is, indeed, very considerable, and fully confirms the statement of the Swiss, that, since the time of the introduction of gulle, agriculture has been considerably improved. 4. By means of the gulle, a sickly plant derives almost immediate relief, in consequence of all the nutriment being already dissolved by the water, and in a fit state to enter at once into the plant. 5. It is a point of particular importance that, in adopting the use of gulle, a quicker return on outlay of capital is obtained than in the case of common yard manure. 6. From the gulle little or none of the manuring matter is carried off by the rain, while from yard-manure it frequently happens that much is so lost; the practice of spreading it on the field, in heavy dressings, causing its action to continue during three or four years, or even longer. 7. By means of the gulle, plants may be brought with most certainty to the exact degree of luxuriance which will yield the most abundant produce. 8. The growth of forage plants, particularly of clover and the meadow grasses, is greatly secured by the application of gulle, particularly when (as they do in the Black Forest) we add green coppers to the putrefying gulle, and the stall-feeding of cattle in summer is made more practicable. 9. In adopting the preparation of gulle, less litter will be required. When cattle are not properly bedded, much of the manure escapes in the form of gas, while, by mixing the excrement with a large quantity of water, little or none of it is lost: it is, consequently, evident, that, in the preparation of gulle, a greater quantity of manure is gained than in that of common yard dung; and what the most important point is, that the gulle has retained a larger proportion than that very substance which has the most important influence in the nourishment of plants—namely, ammonia. In fact, all the advantages derived from the preparation of gulle are so important, that we cannot but wish comparative experiments may be made, in order to ascertain with more certainty what is the real amount of gain in its adoption. It might, perhaps, be useful also to prepare gulle from horse and sheep dung; as, under the present management of these manures, far more ammonia is lost by evaporation than in the case of cattle dung.

### Top-dressing Meadows and Pastures.

We have repeatedly called the attention of our readers to the favorable results usually following the surface manuring of grass lands, and believing, as we do, that good crops of grass lie at the very foundation of good farming, we keep a careful watch for facts which shall help to carry the conviction to the minds of farmers in general. A few such are condensed below:—

The last "Journal" of our State Agricultural Society contains among other interesting matter,

some notes of a "trip to Westchester," by Secretary Johnson. Near E. G. Faile's "the grass crop was light, owing to the severe drouth prevailing in that section of the State." But "Mr. Faile's grass land had been top-dressed, and his yield this year was larger than usual, averaging, we think, three tons to the acre, his meadow-fields showing a fine healthy, green aftermath," while those around were generally scorched by the sur Col. J. adds: "Mr. F's practice is undoubtedly the true one, and every farmer in that region will consult his own best interest by enriching his meadow land by a thorough top-dressing of manure."

The Genesee Farmer for August has an account of a visit by the editor to the farm of Jos. Wright of Waterloo, Seneca county, and among other items mentions Mr. W's practice of composting his barn manure with swamp muck—"the compost, when well rotted, making an admirable dressing for grass—or indeed any other crop; but Mr. Wright values it especially for the former purpose." Mr. Harris saw a 28-acre field of timothy, (four years from seeding,) that was top-dressed with this compost the early part of last winter. The crop is remarkably even all over the field, and, he remarks, "we never saw anything handsomer." Two and a half acres of compost-dressed timothy had been cut, and yielded seven large loads of hay that it was thought would weigh 25 cwt. each. This would be three and a half tons per acre." Four acres of top-dressed clover had produced eleven large loads of hay. On another 8-acre field of timothy, Mr. W. had applied 40 loads of raw muck per acre, with decided benefit, though not as great as where the muck was first composted with manure.

The same paper speaks of Jas. O. Sheldon's farm, near Geneva, N. Y. "Mr. S. is much in favor of top-dressing his grass lands. One field of timothy of 30 acres, was top-dressed with from ten to fifteen loads of rather strawy manure, the early part of March. The manure has all disappeared in the dense sward, and the crop of timothy is very fine." Mr. Sheldon has made some experiments in sowing salt on the land at the time of seeding to grass in the spring—and finds the effect quite marked. The Farmer says—"he sows ten quarts of timothy and three quarts of clover seed per acre. In a 30-acre field, seeded down about the 10th of May, 1859, fifteen acres received a bushel and a half of salt per acre, sown broadcast at the time of seeding; and on this portion of the field the seeds took well, and the crop this year, is much larger on the salted than on the unsalted portion."

Speaking of manuring at the time of seeding, we have this year tested the advantage of several applications for that purpose. On a sandy loam field, where grass seed was almost a total failure last year, it has this year succeeded well—partly from being top-dressed with plaster, and somewhat from the more favorable season. Where we top-dressed with composted muck and barn

manure the clover is large and thick, and the same is true of a small plot dressed with horse ashes. On another plot sown with salt, we think the clover is more uniformly successful, though the growth is not large, than where no fertilizer, save plaster, was applied. The more clayey portion, however promises the best clover—*it may not stand as well the "heaving out" of next spring's trying weather.*—*Country Gentleman.*

### Artificial Manures.

The following is the report of a lecture delivered by Dr. Anderson, Professor of Chemistry in the University of Glasgow, at the recent meeting of the Highland and Agricultural Society, Scotland. There was a large and attentive audience, consisting of a good many of the influential gentlemen connected with the Society. The chair was occupied by Provost Leighton Dumfries, who briefly introduced the learned lecturer.

Professor Anderson then addressed his audience as follows:—Gentlemen,—The subject I propose bringing under your notice on the present occasion is one which necessarily recommends itself to the notice of the farmer. The success of his cultivation and consequently his pecuniary interests are mainly dependent on the care and judgment he exercises in the selection of a manure capable of affording proper nutriment to his crops, and adapted to the soil in which it is used. It may be safely asserted that no department of agriculture has of late years undergone greater changes or offers more important problems for consideration than the use of manures. A very few years ago the farmer relied exclusively, or at least almost exclusively, on farm-yard manure, and so long as he did so the matters he had to consider were comparatively simple. He employed a manure containing all the elements required for the plant, and supposing it to have been selected and preserved with reasonable care it did not differ very widely in composition and quality and such differences as did exist were under his own control. He conducted for his own benefit a manufacture which, when properly exercised gives a nearly uniform product; and by thus the advantage of using always the same substance, he was enabled to concentrate his attention upon it, to watch all the different phases of its action, and to acquire an extensive and minute knowledge of all the circumstances affecting its use. Long experience has taught the best method of preparing and applying farm-yard manure. In fact almost all the cautions required for this purpose were known from a remote period, and the skillful farmer based his practice on the knowledge his predecessors had accumulated during a long series of years, a knowledge which the theories of science has confirmed and extended.

not be admitted, however, that although these precautions were well known to the good and skillful farmer, they were often but little attended to in practice, and over large districts of the country carelessness and waste were the rule, and the proper management of manure the exception; and the reason of this was no doubt to be found in the fact that farm-yard manure is accumulated on the farm in such a manner that there is no proper standard of value to which it can easily be referred. The last 15 or 20 years, however, has produced a change in this respect which amounts almost to a revolution, and the consumption of foreign and manufactured manures which during that period has risen from nothing until it has attained its present extraordinary magnitude, has brought home the farmer with a force which it never before possessed, the question of the money value of manures. It may be of some interest if I endeavor now to form some kind of estimate of the sum which is at present expended in this country on the purchase of artificial manures. It is not possible to do this with absolute accuracy, but an approximation may be made which cannot be far from the truth. I find, on referring to the Board of Trade returns for 1858, that the value of the guano imported and aimed for home consumption amounted to £57,424. This sum, however, appears to be only the average of 1859, which was much above this; but, on the whole, it appears that we were consuming every year somewhere about £500,000 in value of guano. Every year we are imported nearly 26,000 tons of nitrate of soda, and making a liberal allowance for the quantity consumed for other purposes, we will find that 15,000 tons are consumed for agricultural purposes, which will make an annual value of £225,000. Of bones there are imported every year 81,000 tons, besides the quantity produced in this country. Of these, 80,000 tons are employed for agricultural purposes, one-half of these are bones, and the other half is converted into super-phosphate. We find that the value of 10,000 tons of bones at £6 a ton is £240,000, that the value of 10,000 tons of super-phosphate at £7 a ton is £120,000. The consumption of coprolites annually cannot be very accurately estimated, but I understand it is about 100 tons, which yield 75,000 tons of super-phosphate; this at £5 per ton makes £375,000.

The value of the consumption of sulphate of ammonia is £150,000 a year; and allowing for other articles a sum of £100,000, we have for the total value of artificial and imported manures annually consumed in this country a sum of £1,010,000. It would be very interesting if it were possible to ascertain what relation this sum bears to the value of the farm-yard manure annually consumed throughout the country, but on this point it is impossible to obtain reliable information. A kind of vague estimate might perhaps be obtained from the number of acres of land under cultivation. It is

said that the land under tillage on the British Islands exceeds 24,000,000 acres, and though this is probably above the mark, it may be adopted without much error. If now we assume that one-fourth of this is annually manured to the extent of 10 tons per acre with farm-yard manure the annual consumption must be 60,000,000 tons, worth about £20,000,000. It is probable that this estimate is too high, but it shows that at least one-fifth of all the manures now used is artificial, and chiefly derived from foreign sources. The introduction of these new and important elements of fertility has not only altered the whole system of cultivation, but has placed the farmer in an entirely new position. Not only has the field of enquiry into the use of manures been greatly widened, but he is compelled to exercise much vigilance in order to make sure that the substances he buys really possess the qualities he anticipates. Most of the artificial manures in use have a composition which is very small and altogether beyond his control; and even when the farmer has found that any particular substance has given him a satisfactory result, he is compelled before he uses it again to satisfy himself that the substance he buys under the same name really is identical with that from which his experience was derived. Farm-yard manure can always be recognised, and its quality and condition be tolerably well ascertained by ocular inspection; but with all other manures the external appearance is no criterion of their quality, and it is possible to imitate their character so nicely that the worst appears equal to the best. To avoid the difficulties by which he is thus beset, the farmer is compelled to invoke the assistance of the chemist in order to ascertain that the manure he purchases really is what it is represented to be. But then arises the difficulty that results must be expressed in the language of chemistry, which the farmer cannot be expected to understand minutely, and numerous differences are to be found in the mode of stating the results of their experiments, used by different chemists, which he is quite unable to comprehend. The existence of those differences is greatly to be deplored, and it is most desirable that some general and uniform system should be adopted, and as far as possible the best chemists adhere to the same plan, but many circumstances have prevented it becoming universal. Some individuals consider one system preferable to another, and many manufacturers seeking to support the individualizing of their own manures are favorable to a form of analysis which distinguishes them from those of other makers. Another cause of difference is to be found in the gradual progress of our knowledge regarding the analysis of manures. Chemists are constantly at work verifying the methods of analysis and introducing such improvements as really make them more plain and afford a more definite idea of their commercial value. In point of fact the methods now in use for this purpose are of quite



recent introduction. And it is only necessary to contrast the minute and elaborate analyses made at the first introduction of guano with those now in use, to be convinced that the former though scientifically accurate are valueless as a means of establishing its commercial value, while the latter, just because they are less elaborate, afford a ready means of doing so. Every careful analyst finds it necessary occasionally to make alterations in the mode of analysis either because new facts are discovered or because changes occur in the method of manufacture, but he never does this until it is actually forced upon him, because he is well aware of the difficulties and inconveniences it carries with it. Hence changes in the mode of expressing the analyses of manures must be expected to occur from time to time; but as a general rule it will be found that those persons who have the largest experience of the analysis of manures have arrived at methods which are practically identical, and such differences as do exist can be easily explained. On the other hand, it must be admitted that many analyses are made and stated according to systems which are most unsatisfactory, and so as occasionally to puzzle even an experienced chemist. In general, however, the chemist can readily form an opinion as to the degree of reliance to be placed on an analysis, and he can give some rules which in most cases may enable the farmer to judge for himself, at least under ordinary circumstances. The object of my address is to point out what the farmer can do for himself, and to teach him how to read the analysis of manure, and to arrive at a reasonably accurate estimate of its commercial value. At the outset it must be laid down as a rule that the more simply the analysis of a manure can be expressed the better. The object of the analysis being to enable the farmer to effect a comparison between different samples and ascertain which is the best, it ought to be framed with this view. It is not only unnecessary but undesirable that extreme scientific minuteness should be aimed at. On the contrary, the different constituents should, as far as consistent with chemical accuracy, be arranged under several great heads. Thus, for example, a guano generally contains phosphate of lime, phosphate of magnesia, and sometimes a small quantity of phosphate of iron; but it would serve no good purpose to state the quantity of those substances separately, because as they have all precisely the same value, the first step taken by any person anxious to estimate the proper price of the manure would be to add them all together. Accordingly they are all stated under the general head of phosphates and a similar plan is adopted with the other substances. In this way the different constituents are reduced to a small number of easily comparable heads, which will be easily rendered intelligible when we speak of individual manures. The analyst endeavours as far as possible to avoid adding to the number of those heads un-

necessarily, although of course cases occur which this is indispensable, but he is then careful to explain the causes of his doing so, discussing those points to which the farmer attends, it is necessary to divide manures into two great classes of guano and superphosphate to which nine tenths of those now in use may be referred. Guanos are all substances of natural origin, and almost all manufactured manures though sometimes called artificial guanos designated by other names, are substances superphosphates. It is to these two classes if our attention will be chiefly directed, although a short reference will also be made to nitrate of ammonia, nitrate of soda, &c. Directing attention then, in the first instance, to Peruvian guano, the most extensively used variety of the class, we find that in its analysis the results expressed in the following manner:—

Water.....	13.71
Organic matter and ammoniacal salts	52.11
Phosphates.....	23.41
Alkaline salts.....	7.91
Sand.....	1.61
	100.00
Ammonia.....	17.00
Phosphoric acid in alkaline salts equal to 5.42 phosphate of lime..	2.20

It is to be noticed, in the first place, that guano, like any other manure, is a mixture of valuable and worthless matters. Water and sand, of course, have no value, and they merit consideration in those cases in which they are so abundant as to reduce the proportion of other matters. The quantity of water is so of importance that it indicates the condition of the manure, shows that it has not been damaged, and enables us to see that it is sufficiently verdant to admit of its easy application. Provided, however, the valuable matters are below the average, the quantity of water and sand is a matter of comparatively little moment. Looking to the valuable matters, we see that a genuine Peruvian guano, more than half its weight consists of organic matter and ammoniacal salts containing 17 per cent. of ammonia somewhat less than  $\frac{1}{4}$  is composed of phosphates insoluble in water, and in a form similar to that in which they exist in bones. One-tenth of the weight consists of soluble phosphates, containing 2.5 per cent. of phosphoric acid, which is water, and in a form analogous to that in which it is found in soluble phosphates of a superphosphate. In any other constituents appear in the analysis besides those just enumerated, and if the sand is larger, the guano is certainly not genuine. As regards the individual constituents of a guano, it is to be observed, as we have afterwards pointed out, that their value varies very greatly, and hence variations in the proportion of some are of much greater importance than others. It must be borne in mind that the value of a Peruvian guano are divided into  $\frac{1}{2}$  to phosphates,  $\frac{1}{2}$  to phospho-

in the alkaline salts, 1-50th to organic matter, and only about 1-130th to alkaline salts. It will be obvious, therefore, that the latter are of little moment in judging of the value of any sample, and that they may for rough estimates be entirely disregarded. In making the analysis of a Peruvian guano, attention must be mainly directed to the quantity of ammonia, even a small diminution that substance having a marked influence on the price of the manure. The reduction in price caused by the ammonia being one per cent. under the average could only be counteracted by an excess of 8 per cent. of phosphates, and by a proportionate quantity of other constituents. Of course, Peruvian guanos are somewhat from the average given above, though it is commonly supposed that the variations are so slight that, provided it be retained to be genuine, its analysis is unimportant. No doubt the importers encourage this view by charging the same price for all kinds of guano altogether irrespective of analysis; but nevertheless there are very marked differences, especially in the amount of ammonia, and I have known samples containing as little as 15, and others as much as 19 per cent. of that element, involving a difference in price amounting to nearly £2 10s. per ton.

(To be continued.)

## Correspondence.

### Prizes for the Horse.

EDITOR OF THE AGRICULTURIST,—I find by the last *Agriculturist* from Lower Canada that the Board intend to hold a Provincial fair at Quebec on the 26th, 27th, 28th of this month, and at they offer the following sums in prizes, thus divided:—

Cattle.....	\$3,047
[4 gold medals, 12 silver and 8 bronze.]	
Sheep.....	424
Swine.....	320
Horses.....	878
Poultry.....	110
Sugar.....	24
Field Productions.....	364
Agricultural Implements.....	732
Foreign Stock.....	734
Poultry.....	71
Horticulture.....	120
Fruit.....	132
Total.....	\$6,356

of six thousand three hundred and fifty-six dollars and twenty-four medals. Half this amount all the medals, being given to cattle and sheep, while to horses they give only eight hundred and seventy-eight dollars and no medals.

Mr. Editor, to those who breed and raise that noble animal, the horse, seems undervalued more especially so, when in reference

to Lower Canada, so celebrated for that excellent specimen, "the Canadian horse."

It may be said that we in Upper Canada have nothing to do with this matter, and probably we have not, but I assure you that I am not writing to find fault with my neighbours, but simply to awaken a greater interest in my favorite the horse, which seems to be in every way degraded by the prize list that I refer to.

In the first place his prizes are small, and no gold medals are to grace his neck, or his master's parlour, and secondly, and still more degrading, he is placed not only after cattle and sheep, but below the hogs.

When you have gone down the prize list sufficiently low to find him, what then is the fact? Why, the heavy draught stallion, valued for his weight, (for his great qualification must be that he is over thirteen hundred pounds) stands before his royal blood relative, which is placed the very last in the scale, enough to make his blood boil, and to disgust his admirers. From reading the prize list for horses alone, one might imagine that the post of honor was in the rear, but when the Durhams stand first in cattle, and the large amount offered comes before them, that is dispelled, and any one can perceive the intention to place them in an inferior position.

I trust that these remarks may fall into the hands of some horse breeder of Lower Canada who will go into the Society, if for nothing else but to look after the interests of their favorite stock, and to obtain justice to the animals themselves.

With us it is different,—horses get justice by our prize list, which is as follows, and stands first in the list:

1st. Blood Horses.....	\$371
2nd. Agricultural Horses.....	421
3rd. Roadsters ".....	475
4th. Heavy Draught ".....	419
Any blood.....	100

Total.....\$1,786

And four gold medals; and with the view of further stimulating breeders to improve blood stock, a few gentlemen joined and obtained from our Gracious Queen a fifty guinea plate, to be ran for every spring by young bloods, a boon they have long enjoyed in Lower Canada.

It is to be hoped with this handsome plate, and the premium offered by the Agricultural Association, that the thorough-bred may be increased in the country, and now the Province being full of large mares, we may be enabled to compete with any other country for useful horses, if we cross them with the through-bred stallions.

R. L. DENISON.

Dovercourt, Toronto, Sept. 1860.

### Grape Culture in the Niagara District.

EDITOR AGRICULTURIST,—I have read with much interest several communications in your valuable journal on the subject of grape culture

in Canada, and beg leave to offer a few remarks illustrative of my own experience, during a residence of several years on the southern side of Lake Ontario in the old Niagara District. From a careful examination of various reports of the grape growers at Cincinnati, I feel confident that grapes are a more certain crop in the Lake Townships of this District than they are there. A black rot which proves very destructive in southern Ohio after warm rains, is unknown here. One gentleman who has an extensive vineyard, states that they do not expect a good crop oftener than once in three years. Here during the space of nine years I have never failed in securing a well ripened crop of the Isabella, and though left on the trellises all winter, I have never known the vines to be injured by frost. The Isabella is the favorite grape amongst the farmers and others here, and when well ripened, few of the hardy grapes surpass it in flavour. Last fall, though the season was rather unfavourable, I saw some Catawba vines in St. Catharines covered with well ripened fruit.

In October of the past year, having a large quantity of Isabella grapes, my wife determined to make wine of them according to a simple receipt she had obtained. I confess I thought it rather a visionary experiment, and she being unwell, some five gallons of it lay neglected in a large stone jar for three or four months. At length I examined it, and, to my surprise, it came frothing out of the jar, quite clear, and of a delicate pinkish white. I bottled it, and many judges who have drunk it, prefer it to the costly champagne ordinarily used. Many of the German farmers in this neighbourhood make large quantities of wine for their own consumption; some I have tasted made at Fort Hill, Welland Co., resembled in flavour a good Madeira. I have no doubt whatever, but that this District alone could, on its sunny hills, produce good and wholesome wine sufficient for the whole Province. This fall I purpose trying the Diana grape—a young vine of this fine species in my possession having a heavy crop. I may mention here that its grapes are entirely exempt from mildew, while an Isabella, a Canadian Chief, and a Sweet Water close to it, are injured by that pest, which I attribute to their being over shaded by some fruit trees.

But I should strongly recommend any one who is desirous to learn what can be done in grape culture in this district, to pay a visit to the farm of Mr. Wm. H. Read near Port Dalhousie, and three miles from St. Catharines. There can be seen the Golden Chapelas, Black Hamburg, and several other foreign grapes growing in great luxuriance in the open air. But Mr. Read has especially devoted himself to the culture of seedlings, of which he has now nearly 2000, some of them very promising. On one of them especially, the berries, when I visited him about a fortnight since, measured  $3\frac{1}{4}$  inches in circumference. Another which was then ripening, he thinks destined to be the great wine grape of Canada.

Enclosed, I forward a letter received from Mr. Read on the subject of his experiments, which I think will prove of interest to your readers.  
Truly yours,  
A.

Port Dalhousie, Sept. 1.

PORT DALHOUSIE, Aug. 18, 1841

EDITOR AGRICULTURIST,—For the last five years the culture of the grape has been my favorite hobby; but it is only during the last ten years that I have entered systematically the business during the intervals I could spare from attending to my farm. I have long been of opinion that none of our native American grapes were exactly suited for general use in the Province. In this neighbourhood the Isabella, that fine old variety, can be grown successfully, but in other parts and through a portion of New York and Pennsylvania, it frequently winter kills and does not ripen its fruit. I have nearly all the leading varieties of European origin now bearing fruit on my grounds. My impression is that for general use in the Province none of them are exactly what we require. So likewise the different European grapes will not succeed well here or in any other part of America. They are killed by frosts if not covered, and very liable to rot. We have a better climate than many parts of Europe where they succeed well, still it is some peculiarity in the American atmosphere which does not agree with them. I raise successfully many fine varieties in the open air; they require more care than our people are willing to give anything of the kind generally speaking, with respect to pruning, guarding against mildew, and protecting them in winter.

What we really require is an early ripening, hardy as an oak, of vigorous growth, free from mildew, and to possess these qualities the vines should possess, as it were, the blood constitution of our indigenous stock. I have procured at great trouble, and with much expense, half a dozen wild grape vines of various fruit is of tolerable size and quality, and I think are destined to be the parents of a new set of precisely the kind we require. My object has been to procure vines with the blood constitution of these natives, and good qualities as far as possible of the European varieties. To produce these I have been for years various experiments in cross-fertilization with Chapelas, Black Hamburg, and other choice grapes, and I now possess near a thousand seedlings produced by these means, several of which are of the most promising character. Many of them are fruiting, and the fruit so far as the appearance of the fruit and the quantity go, they far exceed my expectations. Four of them at this date are really well fruited, the berries measuring from 3 to  $3\frac{1}{4}$  inches in circumference, and not a speck of mildew on them, while old varieties beside them are ruined by that disease; and this too is a

Under inferior culture in an open exposed position on the banks of the lake, exposed to weeping winds of the north-west. On two successive seedlings the fruit began to colour on the 8th and 11th of August, earlier than the Concord, Delaware or Hartford Prolific. It is a great point gained, and they promise to be twice as large as the Isabella in berry and color.

A native wild grape I procured from the Java Creek is the only real August grape yet seen. Its fruit is now quite black, about the size of the Isabella. I have made hybrids from this and the black Ham which will probably give fruit next year. Judging from the foliage, will prove of high grade. From the important results obtained, I feel confident that my efforts in introducing a new and vigorous family of class grapes will eventually be crowned with success.

WM. H. REED.

### e Cultivation of White Mustard.

FOR CANADIAN AGRICULTURIST.—The result I make, and which I trust will be granted, is the medium of your monthly issue, is a description of the growth of white mustard as can be given—what soil most suitable quantity of seed per acre—what a average crop would be, considered per whether any manufactories for purchase raw material, or if not, whether it would erect one, and what power would it require. In England it was a most paying crop, and its cultivation it would oblige.

EDWARD C. GRENSIDE.

on, County Halton, Sept. 1860.

shall be obliged to any of our correspondents who will give an answer to the above. Failing this, we shall endeavor to do ourselves when time will permit.]

### Agricultural Intelligence.

FOR SANDY SOILS.—“Clay,” said the author of the Elements of Scientific Agriculture, should be the most valuable application for sandy soils; it consolidates them and helps them to retain water and manure, and for the purpose of permanent improvement is worth more for land, than manure.”

A correspondent of the *Boston Cultivator* has several facts going to illustrate the above, and some of which we condense for our readers. Four years since he carted several loads of clay on a bank of light sandy loam, upon which it was impossible to obtain a sward, from its blowing character and situation. It was carted and plowed under, and a light coating of manure given on the surface, and then the land

was sown to barley and seeded down. Now the clayed bank gives better crops than any portion of the field. A neighbor put on a piece of clear sandy land, a load of clay and a load of muck to each rod, and sowed to carrots. The product was five bushels per rod.

The application of clay at the rate of fifty loads per acre has been known to so change the character of light friable sands, that the productiveness was kept far above that of similar land not clayed, for twenty years, and no doubt much longer, both bearing the same crops and receiving the same treatment. It was the opinion of Mr. More, who took the first premium on farms offered by our State Agricultural Society some years since, that tough, blue clay was of more value for sandy soils than the best stable manure, ton for ton, as he had proved by the application of both in large quantities. “Still,” adds Mr. Howard of the *Cultivator*, “there is much difference in clay in regard to its composition, and it would be advisable to ascertain its qualities by a small trial, before incurring great expense in its application.” But no farmer who can conveniently obtain clay for his sandy lands should neglect such an obvious and valuable means of improvement.—*Country Gentleman*.

FARM NOTES—IMPROVEMENTS ON THE MOLE PLOUGH.—S. A. Clements, of Chicago, writes us that he has made an improvement on the mole plough, by which he can lay down simultaneously with the passage of the plough through the ground, a tubing of water lime cement that sets and forms a permanent drain tile in the ground at any suitable depth. Provisions are also made for having the grade perfect. Water has access to the pipe through fissures or perforations in the bottom of the pipe. He puts in this kind of drain, where stones or roots are not too frequent, at the rate of twenty-five to thirty cents per rod.—*Michigan Farmer*, May 26, 1860.

BARNY UPON SIDE HILLS.—Constructing barns upon side hills is a practice which is gaining favor among the best farmers in this country. Having once become acquainted with the advantages of such a location, we are sure no farmer would be willing to construct his barns in any other manner, if this were practicable. The testimony of the *Valley Farmer* on this subject, is as follows:—“The most convenient arrangement for a stock barn is upon a side hill where the hay and grain may be carted in upon the upper story and pitched into the bays below. This arrangement saves a great amount of labor in hauling the feed for the stock. Another advantage of a side hill barn is, the manure may be deposited in a cellar below, where the whole of the liquid portion can be saved, and where the whole can undergo a degree of fermentation before it is exposed to the washing rains and the weather outside. Upon the lower side, too, the cellar can be approached with the team and carts, and material added to the

manure heap to absorb the urine and add to the general stock, or to render the whole easy of access for hauling away. A barn thus arranged not only saves a great amount of labor in hauling the hay, &c., in stacking and feeding, but the quality is greatly preserved by being housed at once after it is cured. Add to these advantages the still more important consideration—the comfort and thrift secured to the animals in consequence of the protection afforded from the storms of winter, and it will be found that no more profitable investment can be made connected with the farm than in *the construction of a suitable barn.*—*Rural New Yorker, July 28.*

### Buckwheat for Fattening Stock.

EDS. RURAL NEW-YORKER.—J. E. D. wants information regarding buckwheat as food for cattle, sheep, and hogs, and to know if it makes as solid flesh as other grain. I can tell him. I have fattened many cattle, and far more sheep, on all, or part buckwheat for the last twenty years, and it will fat stock as well, for the same amount of pounds, as any other grain. Both sheep and cattle can stand higher feeding with it than any other grain, perhaps oats excepted; and I would much rather have half buckwheat meal than all corn meal to feed to three year old steers that have not been fed grain. As for the solidity of the flesh, I neither know nor care as long as it makes them fat.

A friend of mine last fall had about 350 head of sheep, and some cattle, which he must fat; oil meal not to be got, and corn high. He consulted me, and I advised him to buy buckwheat. He hesitated; said a gentleman once told him he fed buckwheat to his sheep and their wool came all off, and they got poorer. I told him what I knew; I was as sure I was right as any other man, having made as fat sheep with buckwheat as I ever did with anything else, and never had any disease among them, and was confident it would be the same with him if he *managed* right otherwise. Well, he bought buckwheat, fed three bushels to the 100 sheep, daily, with straw for fodder and plenty for litter, and he made prime fat sheep, although many of them were lean when he commenced feeding. I have probably as fat a heifer as is in the State. Her feed was buckwheat bran, last winter and spring, and pasture only since the 6th of May.

Buckwheat is said to be poison to hogs. It may or may not be, for anything I know, but I do know it is good to fat either cattle, sheep, or horses, and I further sayeth not.

Yours truly, JOHN JOHNSON.

THE GRAIN BINDER.—The editor of the *Rural New Yorker*, lately taking an excursion in the country, says:—

Improvements stop only with man's necessity. The reaper was followed by the *Self-Raker*, and

now we have the *Binder*. *Sherwood's Gr Binder* we had seen at several State Fairs; never at work in the field, and we were glad to have an opportunity to see it in operation. We wended our way to the farm of Mr. Neal, the town of Chili. Here we found many practical farmers, who were somewhat incredulous, thinking it almost impossible to bind grain on the platform of the reaper, and reaper it as fast as cut. And yet, we believe all satisfied on the trial that this, too, can be done. As fast as the grain is delivered by the reaper is bound by a fine wire and removed from the platform in the very best condition for handling and pitching; as by this system the grain does not pass to the ground until bound, very little scattered, and the binder has plenty of time to bind and remove the sheaf before another is ready for binding. A fair day's work of a good reaper is about ten acres, and it requires at least four-binders to follow the machine with this binder one man does the work, making of course, a great saving of labor.

### White Clover in Pastures.

The growth of white clover on soils adapted to its production, may be encouraged and promoted by a topdressing of plaster and lime. Its chief value is for pasture, as it is a dwarf a growth to give much of a hay crop. A writer in the *Boston Cultivator* says:—“It is an advantage in pasturing white clover, does not strike every farmer. Each joint produces a fresh root, (and of course a fresh root) whenever such joint comes in close contact with the soil, consequently the more it is trodden the thicker it will spring up. Hence, one reason why it grows most luxuriantly near the gateways of our pastures, where the cattle congregate.” Many farmers have observed the last mentioned fact, without getting hold of the reason thereof. The natural growth of grasses, self-sown upon all our soils, is a matter of curious interest to the naturalist, and a matter of great interest to the farmer and the more observant of nature.—*Maine Farmer.*

### Horticultural.

#### Gathering and Packing Fruit.

Now that many of the farmers in this part of the country grow more fruit than is required for home consumption, and some are directing their attention to the production of fruit as a staple crop, a few hints on *Gathering, Packing, &c.*, we know will not be unprofitable. As a general thing, this work is done in a slovenly manner, the main object seeming to be to save time. This might have been well when the country was new, fruit cheap and labor scarce and dear; but now, when good fruit, if properly packed for shipping, will sell at a high rate, and when farmers can obtain much

an acre in fruit than for five acres in any crop, it is the very worst kind of economy. A barrel of apples of superior specimens, carefully hand-picked, and packed so as to receive injury by shipment, will sell for more than a barrel tumbled into barrels without selection or care. A very good article, by a correspondent, we will give in the next number, and ask any of our friends who have had experience in packing and marketing fruits, to give us the benefit of their experience. Mr. Barry, in his *Fruit Book*, gives a very useful chapter on this subject a part of which we copy:

This is a branch of the general subject of culture and management that requires the careful attention; for it is quite useless to gain in producing fine fruits, without taking equal pains in gathering, preserving, and bringing them to the table or the market in a neat, healthy, and proper condition. Very few growers seem to appreciate this part of business. Fruit dealers at home and abroad are guilty of the careless and slovenly manner in which our fruits are gathered, packed, and presented in the market, and would gladly pay a high price for them in a better condition. The consideration is:

**Period of maturity at which fruits should be gathered.**—The stone fruits generally are allowed to reach perfect maturity, or within five days of it, on the tree. In moist seasons particularly, they are benefited by being gathered a few days before maturity, and allowed to ripen in a dry, warm room; they with the water contained in their juices, thus become better elaborated and more juicy and high flavored.

**Summer Pears**, too, on the same principle, should be gathered, as a general thing, from the tree a fortnight before their maturity. Some varieties, and such as are inclined to become mealy, are entirely worthless when ripened on the tree, and many very excellent varieties are ruined on this account. Such as these should be gathered the moment the skin begins to change color in the least degree.

**Summer Apples**, too, and especially those inclined to meanness, should be picked early—as soon as the skin begins to change color, otherwise they part with their juices, and become mealy. Ripeness is indicated by the seeds becoming dark colored, and by the stem parting from the tree when it is lifted upward.

**Winter Apples and Pears** should be allowed to remain on the trees as long as vegetation is green, or until frosts are apprehended.

**Pears, Bercies, &c.**, are allowed to attain perfect maturity before being gathered.

**Mode of Gathering.**—Unless it be a few bushels wanted for immediate use, which may be done with some of the contrivances mentioned under the head of implements, all fruits should be gathered by the hand. The branch should be gathered from should be taken in one hand and the fruits carefully taken off, one by

one, with the other, with their stems attached. (For fruits neither keep so well, nor look so well, without the stems. They are then laid carefully in single layers, in broad shallow baskets, the bottom of which should be covered with paper or moss, to prevent bruises. Peaches and other soft fruits should be pressed as lightly as possible, for anything like a squeeze is certainly followed by decay in the form of a brown spot, and this is the reason why it is so exceedingly difficult to find a perfectly sound, and at the same time ripe, peach in our markets.

When more than one layer of fruit is laid in the same basket, some soft paper, dry moss, hay, or other material, ought to separate them, for it is difficult to place one layer immediately upon another, and especially if the fruits are approaching maturity, without bruising them more or less. Fruit should only be gathered in dry weather, and in the dry time of the day.

**Disposition of the Fruits after Gathering.**—When they are thus in the baskets, if summer fruits, they are either carried into the fruit room and arranged on shelves or tables in thin layers, or they are carefully transferred care by one into market baskets, and carried to market on an easy spring wagon, if not by steamboat or railroad, by which jarring or jolting will be avoided. Treated in this manner, they will be in a marketable condition, and one basket will sell for as much as four, carelessly picked, thrown into baskets, and tumbled out of them into a barrel or wagon-box.

Ripe fruits may be kept in good condition for a considerable period of time, in an ice-house, or in some of the recently-invented fruit preservers, and even in very cool dry cellars. The vessels in which they are deposited, should be perfectly clean, that no unpleasant flavor may be imparted to them. Peaches have been sent to the East Indies, by being properly packed in ice; and it may be that methods of packing and preserving will, before long, be discovered, that will give us access to the markets of other countries, even for our perishable summer fruits. We have seen Seckel pears in a very good state of preservation in January, exhibited in the Horticultural Society's rooms in Boston. The science of ripening and preserving fruits is but in its infancy, and Horticultural Societies that have the means will be doing a great public service by offering liberal premiums that will incite to experiment on the subject.

Want of space compels us to omit many things that we designed to say, but the subject will be resumed next week.—*Rural New Yorker*.

### The Cranberry.

We condense the following remarks on the cranberry from an article read before the Farmers' Club, of New York, and published in the *Homestead*, by J. C. Young of Long Island:—

Mr. Young states that his operations with the cranberry since 1856, have demonstrated.

1. That cranberries will grow and do well though the vines are taken directly from the marshes where they grow wild.

2. That they will grow upon upland, and immediately after it has been broken up.

3. That they will grow without manure, and without a wet sub-soil.

4. That they do as well without any artificial irrigation.

5. That they need a moderate amount of labor, to keep them clean and free from weeds and grass.

The vines when first planted were not thicker than a broom straw, and were taken from the edges and driest places of marshes adjoining, where they were growing wild. They are now as thick as a pipe-stem, and the rows are a compact mass from ten to twelve inches in width. It is not yet determined whether it is best to leave a space between the rows or to allow them to cover the whole ground. The use of the scuffle hoe in cleaning the spaces between the drills, whilst it loosened the roots of many vines, seemed to give a new impetus to their growth. The land itself is a sandy, yellow loam, in which wells have to be sunk 57 feet to procure water, and there is no running stream within a mile and a half, so that all the watering and irrigation afforded depended entirely upon the rains. From the plot there was gathered last year 24 bushels. Another cultivator set out about an eighth of an acre in the spring of 1855, from which in 1856 he had half a bushel, in 1857, three bushels; in 1858, six bushels; and in 1859, sixteen bushels. Mr. Young himself set out another plot of about a fourth of an acre in 1855, from which in 1859, he gathered between twenty and thirty bushels, thus showing that his system gave certain returns of about the same amount at the end of three years. As a general rule it takes three years before a full crop can be realized from the setting out, and during this time the lot wants a certain amount of attendance.

Who among our Western correspondents can tell us their experience in cranberry cultivation, either upon high or low lands? It is a subject on which there begins to be some enquiry, and on which we would like to elicit all important information. The wild cranberry crop of the present season is said to be large and very promising; and among the speculations of the day we would mention an enterprise put on foot by some of our citizens.

Col. Fairchild, and others associated with him, have purchased some thousands of acres of the cranberry marshes of Juneau county, and are busily engaged at present in erecting the needful buildings, and making the racks and other requisite fixtures for securing the growing crop, which they represent as promising very large. They are intending to make a permanent business of it, and count on large results. We certainly hope they may realize them, and we see no reason why they should not.—*Wisconsin Farmer, Aug. 1.*

## The Cultivation of Native Grapes.

The following is Mr. E. A. Brackett's report to the Fruit Committee of the Massachusetts Horticultural Society, in relation to the cultivation of our native grapes. Mr. Brackett is one of the most successful growers of the grape in this vicinity:

"To your request that I would communicate to you my method of cultivating our native grapes, particularly the Diana, the nature of soil, system of training, &c., I cheerfully respond, not that I expect to throw any new light on the subject, or that my mode will be found to be very materially from that of others. The great interest felt in this department, the certainty that it must continue to occupy a prominent position in the horticultural art, assures me that the experience of any one, however simple, will be of service.

My little vineyard is situated on a side facing the west, and protected on the north by a belt of pine woods. I should have preferred more southern or eastern aspect. The soil is no means what would be called a strong one; it consists of from four to six inches of turf mixed with a reddish subsoil about two feet deep, lying upon a bed of blue gravel. In preparing the vines the ground was trenched two feet deep, and the top soil put at the bottom. Six or eight feet long were then set at the distance of seven feet apart each way; one vine was planted to each stake, and immediately cut down to two eyes.

And here let me say a word as to the time of setting the vines. My experience is greatly in favour of fall planting. A vine set in the autumn (and it should be done as soon as the fall) will in three years be as strong as a vine capable of bearing a crop of fruit, as a five years old set in the spring. The training of my vines is at once simple and ornamental. The first year two shoots are allowed to grow, and as they elongate, are carried spirally, in the same direction, about five inches around the stake, and this is continued until they reach the top. The laterals are allowed to grow at random. In the fall they should be pruned back to within eighteen inches of the ground, and the laterals to one eye.

Second year, continue the two canes from the two uppermost eyes, as directed in the first year. The laterals will require summer pruning, and the fall cut back the canes to within eight inches of last year's wood. Continue this until the vine is established the whole length of the post—whatever surmounts it, is to be cut back. The fruit is borne upon the side shoots, and the pruning is on the short spur system. The form of the vine may be shaped to the taste of the cultivator; that of the pyramid is considered the best.

Those who understand the nature of the soil will readily perceive the advantage this system offers. The vine is thus kept at home.

and air circulate freely through it. The buds break evenly; there is no tendency in one to rob the other of its due proportion of sap, and when once established, requires less care than any other mode of training.

Some of my vines, the first year after planting, were watered with sink-drain water, and being injured that it injured them, I have discontinued the practice, and have since root pruned them, in order to check too free a growth of wood. Many of my neighbours injured their vines by giving them large quantities of stimulating manures, such as fresh stable manure, horse or other animal manure, thereby inducing them to make an increased growth of jointed wood. I grow my vines for the fruit, and am satisfied if they make a few feet of jointed wood, and the only manure (if we may so call it) which I now give them is a top-dressing of anthracite coal ashes.

My Diana, with me, has proved a great bearer and free bearer; the bunches of good berries large, some of them measuring seven-eighths of an inch in diameter. It is a matter of surprise that this, the most desirable of our native grapes, should have received so little attention, while new varieties, inferior to it in point of flavor, have been heralded as the greatest acquisition to our list of hardy vines.

The past season has not been favourable to ripening of out-door grapes."—*Maine Farmer*.

pruning at the time of the latest frosts and when the upper buds or those at the ends of the branches have begun to leave out, and have even been injured by frost, whilst the inferior buds in the lower part of the branches are as yet dormant and undeveloped. The cutting-in of the long vine shoots, whilst in full growth, is evidently mutilation of the vine, which is sensibly felt, but we have, by this operation, succeeded in retarding the growth of the buds of the vine for a time, and rendered them safe from the effects of the late frosts, and consequently they are developed with great rapidity, at a time when the cold is not feared. But, you will probably ask, why this operation so simple, so old, and so efficacious is not employed everywhere and always? That is easily comprehended, when you bear in mind that it is materially impossible in a country exclusively vine-growing thus to prune all the vines in a few days, which must be the case, if the remedy is to be generally applied. Our mechanical appliances have not yet enabled us to lessen this difficulty. It results from this state of things that the vine-growers, the most convinced of the excellence of late pruning, are obliged to reserve for it only the vineyards of the highest value, and those most exposed to the effects of the late frosts; and this method succeeds perfectly. Reduced even to these modest proportions, the services rendered by this simple method are so great, that it is desirable it should be known and put in practice wherever it is as yet unused."

### How to Prevent the Effects of Late Frosts on Grape Vines.

M. Delanque, the proprietor of a vineyard in the Department of Dordogne, France, writes in the following letter to the *Journal of Practical Agriculture* at Paris, which we translate for our readers:—

I write conformably to your request, relative to the practice adopted at the Southwest, to prevent the effects of late frosts on the grape vine. You must note, however, that the vines of this region are less injured by late frosts than those of other portions of France that are elevated, and farther from the influence of the sea, and consequently more exposed to the effects of temperature. If we could so manage it that the vines would only vegetate to the late frosts, it would be evident that the problem of saving the crop would be solved. To attain this end, if we select (not the late varieties) but only the branches or shoots which are the latest in pushing forth their buds in the spring. This plan, however, can only be used with a risk of losing the best qualities of the wine made from the part, and cannot be generally applied. The influence of pruning, in this respect, on the contrary, is constant and general. It has been found that we can retard very considerably the vegetation of the whole vine, by

### Curiosities of Gardening.

A writer in the *Quarterly Review* says that gardening, as well as literature, has its curiosities, and a volume might be filled with them. How wonderful, for instance, is the sensitive plant which shrinks from the hand of man—the ice-plant, that almost cools by looking at it—the pitcher-plant, with its welcome draught—the air trigger of the stylidium—and the carnivorous Venus' fly-trap (*Dionæa Muscipula*) which is said to bait its prickles with something that attracts the flies, and then closes on and destroys them, and their decay is supposed to afford food for the plant. Disease is turned into beauty in the common and crested moss rose and a *lusus nature* re-produced in the hen-and-chicken daisy. There are phosphorescent plants, the fire flies and glow-worms of the vegetable kingdom. There are the microscopic lichens and mosses; and there is the *Rafflesia Arnoldi*, each of whose petals is a foot long, its nectary a foot in diameter, and deep enough to contain three gallons, and weighing fifteen pounds! What mimicry is there in the orchises, and the hare's foot fern, and the Tartarian lamb (*Polypodium Baronetz*). What monsters (such at least they are called by botanists) has art produced by doubling flowers, dwarfing and hybridizing



—“painting the lily”—for there are pink lilies of the valley, and pink violets and roses, and blue hydrangias; and “many others are now busy in seeking that philosopher’s stone of gardening” the blue dahlia—a useless search, if it be true that there is no instance of a yellow and blue variety of the same species. Strange things have been attempted too, in gardening ornaments. There are waterworks like copper trees to drench the unwary, and the Chinese have in the middle of their lawns ponds covered with some water weed that looks like grass, so that a stranger is plunged in over head and ears, while he thinks he is setting his feet on firm ground. In the ducal gardens of Saxe Gotha is a ruined castle which was built complete, and then ruined *express* by a few sharp rounds of artillery! Stanislaus, in the grounds of Iazienki, had a broad walk planted by pedestals, upon which living figures, dressed or undressed, after the manner of the ancients, were placed on great occasions. The floating gardens or chinampas of Mexico are mentioned both by Clavigero and Humboldt. They are formed on wicker work, and when a proprietor wishes for a little change or to rid himself of a troublesome neighbor, he has only to set his paddles at work or to lug out his towing rope and partake himself to some more agreeable part of the lake. We wonder that the barbaric magnificence which piled up mimic pyramids and Chinese watch towers and mock Stonehenges, never bethought itself of imitating these poetical Chinampas. It was one of Napoleon’s bubble schemes to cover in the gardens of the Tuilleries with glass—those gardens which were turned into potato-fields during the first revolution, though the agent afterwards complained that the Directory never paid him for the sets! One of the most successful pieces of magnificent gardening is the conservatory at Chatsworth with a carriage drive through the centre, infinitely more perfect, though not so extensive as the covered winter gardens at Potemkin’s palace at Tauridia, near St. Petersburg, which is a semi-circular conservatory attached to the palace, wherein the walks wander amid flowery hedges and fruit bearing shrubs winding over little hills, in fact, a complete garden artificially heated, and adorned with busts, statues and vases. When this mighty man halted in his travels, if only for a day, his travelling pavillion was erected and surrounded by a garden composed of trees, seats and statues, and divided by gravel walks. The gardens of the Czar are well described by Bayard Taylor, who was amazed to find on the banks of the Neva, amid the horrors of a Hyperborean winter, gardens glowing with all the luxuriance of a tropical climate.—*Detroit Tribune*.

**CATAWBA GRAPES.**—George Hustman, well known as one of the most intelligent grape growers in Missouri, thinks the Catawba should be struck from the list as unworthy of cultivation, because it is superseded by better sorts.

## Veterinary.

**CATTLE PLAGUE, OR RINDER-PEST.**—In the past century the cattle plague or rinder-pest has made fearful havoc; in Germany alone 600,000 head of cattle were carried off by it in the whole of Europe, including Russia, exclusive of Siberia and Tartary, upwards of 1,000,000 have died of this pest. The symptoms of this disease, in its early stage said to be a husky cough, which is increased particularly after the cattle have been water-moved about; less inclination for food, increase as to chewing the cud, dullness of the eyes and its rough appearance in particular, and fever after these symptoms have ceased for some time.

**CURE FOR COLIC IN HORSES.**—E. H. of Houston county, Ga., advises (*in the Eastern Field*) simply to pour cold water on the neck of the animal for fifteen or twenty minutes, and then to run the water on from the withers to the loins, and to run profusely over the sides and stomach has seen it tried in fifty instances. It will afford almost entire relief in one hour.

**THE TREATMENT AND CURABILITY OF PLEURO-PNEUMONIA.**—Dr. Geo. H. Dadd in the August number of the *American Stock Journal* makes the following remarks relative to this disease which has been subdued in Massachusetts, and very largely through his instrumentality as one of the commissioners:

As regards the curability of this malady, we agree with our principal authorities, that it is no uniform, nor reliable mode of treatment known to science, and almost all surgeons have treated, or experimented on the treatment of the contagious or infectious pleuropneumonia, consider it an incurable disease. A well known fact that many of the subjects of this malady are apparently cured, then they fatten, and their carcasses are sold in Eastern markets; yet their lungs are seldom found sound; because, in the majority of cases, is found either altered structures, or less substance of the same. As but few patients can be restored to entire usefulness, it seems the isolation of infected and exposed animals, the inoculation of those not diseased yet near infected regions; and extirpation, in cases of emergency, are the best means of curing this pest.

Because in ordinary pleuro-pneumonia, medicinal remedies, hygienic means, and supportive efforts of nature, conjointly or separately, are said to cure the malady, it is inferred by some that the contagious pleuropneumonia can also be successfully treated, but facts are the contrary.

Should the disease, however, assume the form in this country, than it has in Europe, the curable cases may be benefited by the contagious system of medication; yet in the event of the malady will have its “run,” as the

a like ship fever, typhoid fever, or the pox, will defy our attempts to "cut them

that I should attempt to do in the treatment of this contagious malady would be to try to keep the patient alive while the disease was in its course; and the remedies are, pure saline medicines and good nursing.

## Inquiries and Notes.

### SPRINGHALT—COLDS IN HORSES.

FROM RURAL NEW-YORKER.—I would like to hear of you, or of some of your experienced readers, if there is any cure for the spalt in horses,—if so, I should like to know what it is. Also, the best treatment for which has settled on the lungs of a Subscriber, Rice Co., Minn., 1860.

SPRINGHALT is an affection of the muscles in the great majority of cases, has given occasion a large amount of trouble. In early days it was looked upon as a disease of the brain, and affecting only the organs of the head, but it is now considered as arising in the nervous system, and practitioners acknowledge their inability to treat it medicinally. Much will take in and digest remedial means but to make them reach the brain, and break up the filaments, is quite another matter. Usually, however, this disease is induced by a minor derangement, and then we may usually treat it by removing the morbid cause, promoting it, which will be accomplished by restoring the general health of the animal. When a springhalt exhibits itself suddenly, Dr. Williams recommends that the horse be permitted to rest in such case it is natural to suspect some injury, resulting from a blow or contusion, as been done to the nerves of voluntary motion.

When this is the condition, cold water should be poured around the body, rest, light diet, and saline medicines, with an occasional light cathartic, to clear out the bowels, will be beneficial. Fomentations and light friction with a spasmodic liniment may be found of great assistance. In chronic cases of long standing all hopes of recovery may as well be abandoned. Should the patient, however, be able to get up, the general health may be restored, and the spine should be daily rubbed with a stimulating embrocation calculated to restore the system. For this latter purpose, take one pint; spirits of harts-horn, two ounces; mustard, half an ounce. As a cathartic take powdered golden seed, powdered cream of tartar, and charcoal, one ounce each, and one-half ounce of assafœtida, divide into eight parts, and give one part three or four times a day, morning and evening.

A simple cough the following compound is recommended:—Slippery elm, Indian turnip, skunk cabbage and caraway seeds,

(all powdered,) four ounces of each. The dose is half an ounce, twice daily, given in gruel. If the cough is one that remains after the disappearance of some pulmonary disease, such, for instance, as catarrh, influenza, &c., take balsam of fir, one ounce; sweet spirits of nitre, two ounces; sirup of garlic, four ounces. Dissolve the balsam in the nitre, then add the garlic. Dose, one ounce, night and morning; given in mucilage or thin gruel.—*Rural New Yorker.*

## Medical Qualities of the Carrot.

Stewart, in his excellent work on Stable Economy, says, "Not only do carrots give strength and endurance to sound horses, but also give recovery and health to such as are sick. There is nothing better, perhaps none so good. When first given, they are strictly diuretic and laxative, but as the horses become accustomed to them, these effects cease to be produced. They also improve the state of the skin. They form a good substitute for grass, and an excellent alternative for horses out of condition. To sick and idle horses they render corn unnecessary. They are beneficial in all chronic diseases connected with breathing, and have a marked influence on chronic cough and broken wind. They are serviceable in diseases of the skin; and in combination with oats, restore a worn horse much sooner than oats alone.

## Domestic.

### Receipts.

YOUNG CORN OMELET.—To a dozen ears of fine young Indian corn, allow five eggs; boil the corn a quarter of an hour, and then, with a grater, grate it down from the cob; beat the eggs very light, and then stir gradually the grated corn into the pan of eggs; add a small salt-spoonful of salt and a very little Cayenne; put into a hot frying pan equal quantities of lard and fresh butter, and stir them well together over the fire; when they boil, put in the mixture thick, and fry it, afterwards browning the top with a red-hot shovel or a salamander; transfer it when done, to a heated dish, but do not fold it over. It will be found excellent. This is a good way of using boiled corn that has been left from dinner the preceding day.—*Maine Farmer.*

TO MAKE SOFT GINGER BREAD.—6 teacups of sugar, 1 of cream, 1 of butter, 2 of molasses, 3 eggs, 3 tablespoonfuls of ginger, 1 teaspoonful of soda, 2 of cream of tartar and 5 cups of flour. Stir it well and bake in a shallow tin pan.

TO MAKE GINGER POUND CAKE.—Cut up in a pan three-fourths lbs. of butter, and a tea cup of brown sugar, mix with a pint of West India molasses; then stir them well together. Sift into a pan a pound of flour; in another pan beat five eggs; add gradually the eggs and flour to the mixture of butter, sugar and molasses, with two large table-spoonfuls of ground ginger and flour of ground cinnamon. Then stir in a glass of brandy, and a small teaspoonful of saleratus melted in a very little milk. Stir the whole for some time. Then add a pound of raisins dredged with flour. Transfer the mixture to a buttered tin pan and bake from two to three hours.

### Miscellaneous.

#### Mr. Mechi and the Hounds.

For the last two months nothing has been heard in the agricultural world but a perfect storm of abuse against Mr. Mechi. Go where you like, you hear the foulest aspersions made upon his motives and his character, and our agricultural papers fill column after column with sarcasm levelled at his statements. We have Mr. Bond, for instance, shrewd enough, we imagine, to know that Mr. Mechi's self-respect forbids him to accept his insulting challenge, making a gratuitous show of his philanthropic generosity. I think by this time the public are sufficiently aware that Mr. Bond has £300 to devote to charitable purposes. Any one not acquainted with the true nature of this tempest would naturally think that poor Mr. Mechi has singularly disgraced himself, and rendered himself guilty of a very heinous offence. But, after all, what is Mr. Mechi's crime? He has merely directed the extraordinary gifts of his mind and his devotedness to the cause of progress towards agricultural improvements. He has waged a war to the knife with the most inveterate of prejudices—those of the agricultural classes. He has shown that by a judicious application of capital employed in removing old uses and abuses, and establishing means suggested and corroborated by the discoveries of modern science, twice as much profit could be realised by agricultural enterprise as the upholders of routine are wont to get. For many years he opened to all comers the treasures of his hospitality, he showed his crops to all, opened his books for their inspection, published his balance sheets, did, in fact, everything that the most inquisitive can demand short of impertinence, to prove the soundness of his views. The fact that his detractors came smiling to his hall with fore-sworn but concealed enmity, quaffed his wines and drank his health, and then skulked back to their abodes to forge shafts of abuse, leads to this inevitable conclusion—that all the opposition raised professedly against Mr. Mechi's agricultural theories is intended against the man.

He, forsooth, a city merchant, a "razor graver," has dared to intrude into the time-hallowed and venerable precincts of the agricultural interest, and not content with spending his money as he lists, he has been so bold as to tell the Mistresses Gamp of agriculture that their farms were not what they ought to be, that they had too many wooded hedges on their farms, too much water in their clays, too many weeds in their stubbles, too much waste in their ditch-heaps, too much foulness in their byres, too little brains in their skull, and, consequently, too little money in their pockets. And for all these wholesome truths, certainly not discovered by him, he is placed upon the list of those who have become a marked man for that species of bitter persecution and abuse which is the result of bigotry. Are we, then, to conclude that money cannot be gained by agricultural suits? Have no fortunes been realised by agriculture? Are the tenant farmers of this country such a state of poverty and want as to warrant the assertion that when Mr. Mechi says that he has realised in his two-fold position of landlord and tenant a net return of a little more than ten per acre, the statement is incredible? Mr. Mechi the only man that has ever obtained it? Really, Mr. Editor, I have no objection to continue the consideration of this truly difficult subject and I venture to express the hope that this ungenerous persecution of an amiable and estimable man will at last come to an end, and remove from the character of our agriculturalists that stain of bitterness and animosity which certain busy bodies would fain afflict her hitherto glorious and honourable face.

LOVER OF FAIR PLAY, in *Gardener's Chronicle*.

#### Can't Cook.

It is a sad defect when young ladies, capable of directing their own servants, without soles, or wristbands without a seam, are not more useless than one of these. A young lady shortly after his marriage, a young man went home, and seeing no dinner ready, his wife appearing anxious and confused, asked,

"What's the matter?"

"Nancy went off at ten o'clock this morning," replied his wife, "and the chambermaid has no more about cooking a dinner than I have in the moon."

"Couldn't she have done it under your direction?" inquired the husband, very coolly.

"Under my direction? I should like to see you cook under my direction."

"Why so?" asked the husband in surprise. "You certainly do not mean that you can't cook a dinner?"

"I certainly do, then," replied the young man.

"How should I know anything about it?" the husband was silent, but his astonishment perplexed and worried his wife.

"You look very much surprised," said the young man, after a moment or two had elapsed.

And so I am," he answered, "as much surprised as I should be at finding the captain of one of my ships unacquainted with navigation. I don't know how to cook, and the mistress of the family! Jane, if there is a cooking-school where in the city, go to it, and complete education, for it is deficient in a very important particular."

15.—The principal constituents of milk are either oily matter, casein or cheese, sugar, matters and water. The proportion of each is variable in different milks, but it may be taken as a general rule, that milk which preponderates more than 87 per cent of water is of inequality; on taking the average proportion of each ingredient according to the different analyses it is found to be 86.8 per cent. If 87 per cent can be assumed as the standard, a very simple process will, in many cases, be sufficient to detect the degree of dilution to which the milk has been subjected by fraudulent persons. Weigh 100 grains to dryness; ascertain the amount on which deduct 87; the difference, then, multiplied by 100, and divided by 13, will give the percentage of added water, thus:—Suppose 100 grains to lose, on evaporation, 89.6 grains;  $100 - 89.6 = 10.4$ , and 260 divided by 13 gives 20 per cent of added water.—*Scientific American*.

16.—HENS.—We observe a recent notice in a paper, of the practice of making wooden shoes (or rather boots) to prevent hens from scratching. A flock of fifty fowls, like our own, require considerable labor in the manufacture of a hundred woollen boots, which might be made through in a short time and need repair. It is much better we think, to procure shoes that will not scratch. There is another method of importance—that is to keep the animals well fed, during the season when scratching is most feared. We keep from thirty to fifty the White Shanghai, —a very quiet, well bred, and profitable fowl, —and adopt the economical mode, namely, regular feeding in the morning, —and although there is no barrier between their ordinary range and the kitchen they do not scratch yearly enough to do us any great damage.—*Country Gentleman*.

17.—LADIES.—I think it is not natural which makes me believe that a high-bred lady is the most complete of all subjects in this world. In whom else do we see so much grace, and so much virtue; so much faith, and so much tenderness; with so much respect refinement and chastity? And when we speak of high-bred ladies I don't mean duchesses and countesses. Be they ever so high in station, they are but ladies, and no more. But any man who lives in the world has the opportunity to let us hope, of counting a few such subjects amongst his circle of acquaintance—whose angelic natures there is some-

thing awful, as well as beautiful, to contemplate; at whose feet the wildest and fiercest of us must fall down and humble ourselves, in admiration of that adorable purity which never seems to do wrong or to think wrong.—*Literary Magazine*.

ROLLED IN MONEY.—Czechitzky, celebrated at Berlin as an actor and billiard-player, when he could not any longer find persons to play with him, he took to card playing, in which he got equally skilled and won enormous sums of money. It is related of him by Varnhagen that in order to revise the expression, "Sich im Golde walzen" (rolling in money,) he covered his floor with gold pieces, and, in the presence of witnesses, absolutely rolled about upon them in a state of nudity. Fortune forsook him at length, and he used to beg persons to spit in his face; for though he had rolled in money, he had lost it all.—*Humboldt's Letters to Varnhagen Von Ense*.

MAKING-UP APPEARANCES.—Among other items of key-hole knowledge, we discovered that every day, about dinner time, our neighbours had a table set out in their parlour, with clean damask cloth and napkins, pieces of bread, silver-forks, spoons, castors, &c., handsome wine-glasses and goblets, and all the paraphernalia of a very genteel dinner equipage. The table stood thus during an hour or more; so that if visitors came in they might suppose that the family were preparing to sit down in style *comme il faut*. But to this table they never did sit down; for when the time of exhibition had elapsed, all the fine things were taken off and carefully put away for a similar show the next day, and the next. Meanwhile (as we found by reconnoitring through the kitchen key-hole,) the Portuguese family all assembled in the place where their food was cooked; seated themselves on the floor round a large earthen pan filled with some sort of stew; and each dipped in a pewter spoon, and fed out of the same pan.—*Autobiographical Recollections; by the late Charles Robert Leslie, R. A.*

SIR MATTHEW AND SAINT MATTHEW.—Sir John Germain was a mere soldier of fortune, who came to England from the Low Countries, and made his fortune by wives. He first married the Duchess of Norfolk, and after her death (1705) he married the celebrated Lady Betty Berkeley, sister of Earl Berkeley. He was so extremely ignorant that he thought St. Matthew's Gospel was written by Sir Matthew Decker. Lord Orford once asked Lady Viscountess Fitzwilliam, who was Sir Matthew's daughter, whether this strange story was true. She was a very cautious, prudent woman, spoke very slow, and not without a good deal of deliberation. She assured him it was, and mentioned as a confirmation of it, that Sir John at his death left Sir Matthew £200 to be disposed of among his poor countrymen in London, having the greatest confidence in his honest execution of the trust, as he had already given the world such a proof

of his piety in having written St. Matthew's Gospel.—*Prior's Life of Malone.*

### Home's Harmony.

The lark may sing her sweetest song,  
As rising from the waving corn,  
On soaring wings, she skims along  
To welcome in the rising morn;  
Her sweetest song is nought to me,  
Compared to home's sweet harmony.

Deep in the woods, the nightingale,  
At midnight hour, may tune her lay,  
May pour upon the list'ning vale  
Her loveliest streams of melody;  
Lovely her midnight lay may be,  
But lovelier home's sweet harmony.

Sweet are the songsters of the spring,  
And of the summer's sunny days,  
And autumn's feathered warblers sing  
In rapturous strains their sweetest lays;  
Lovely the songs of bower and tree,  
But lovelier home's sweet harmony.

But O, what cheers the winter's night,  
When all around is dark and gloom,  
When feathered songsters take their flight,  
Or fill a gloomy little tomb?  
'Tis at such hours as these that we  
Prize most our home's sweet harmony.

O, when dark clouds above us lower,  
And life's drear winter o'er us comes,  
'Tis then we feel your magic power  
Ye songsters of our hearts and homes;  
For soon the lowering clouds do flee  
From our dear home's sweet harmony.

**THE FIRST ROBERT PEEL.**—When Robert Peel, then a youth, began business as a cotton-printer, near Bury, he lodged with his partner, William Yates, paying eight and sixpence per week for board and lodging. "William Yates' eldest child," says our author, "was a girl named Ellen, and she soon became an especial favorite with the young lodger. On returning from his hard day's work at "The Ground," he would take the little girl upon his knee, and say to her, "Nelly, thou bonny little dear, wilt be my wife?" to which the child would readily answer, "Yes," as any child would do. "Then I'll wait for thee, Nelly; I'll wed thee, and none else." And Robert did wait. As the girl grew in beauty towards womanhood, his determination to wait for her was strengthened; and after a lapse of ten years—years of close application to business and rapidly increasing prosperity—Robert Peel married Ellen Yates when she had completed her seventeenth year: and the pretty child, whom her mother's lodger and her father's partner had nursed upon his knee, became Mrs. Peel, and eventually Lady Peel, the mother of

the future prime minister of England. Peel was a noble and beautiful woman, of grace any station in life. She possessed powers of mind, and was on every occasion the high-souled and faithful counsellor of her husband. For many years after their marriage she acted as his amanuensis, conducting the principal part of his business correspondence for Mr. Peel himself was an indifferently almost unintelligible writer. She died only three years after the baronetcy had been conferred upon her husband. It is said that she had been accustomed to at home—proved a great blessing to her health; and old Mr. Yates was afterwards accustomed to say, "if Robert hadn't married Nelly a Lady, she might ha' been living

**CHINESE SALUTATIONS.**—The salutation between two Chinamen when they meet, is each clasping and shaking his own arm instead of each others, and bowing profoundly, almost to the ground, several times. A question more common than "How do you do?"—is "Have you eaten rice?" The great article of food throughout the empire, and forming the chief and indispensable part of every meal—it is taken for granted that you have "eaten rice" you are well. It requires that in conversation each should compliment the other and everything beloved, in a most laudatory style; and do himself with all pertaining to him, to the possible point. The following is no exception, though not the precise words:

"What is your honorable name?"  
"My insignificant appellation is Wu."  
"Where is your magnificent palace?"  
"My contemptible hut is at Suchan."  
"How many are your illustrious children?"  
"My vile worthless brats are five."  
"How is the health of your distinguished spouse?"  
"My mean, good-for-nothing old wife."

**THE SEVENTEEN YEAR LOCUSTS.**—It has been said about the harmlessness of locusts, which we were disposed to put in doubt. Their history, undoubtedly, is a wonderful one, the most striking, indeed, in the whole of insect life; but recent observation has shown us to put them in the same category with the cut worm, the wheat fly, the cut worm, and other destructive pests, to be destroyed with the same care. The woods in some portions of New Jersey as if a fire had passed over them. The ravages of the Locust is not confined to the present year, as is generally supposed, we have seen innumerable instances of locusts wood two, three, and four years old also seen hundreds of young pears, apple trees, shrubs, &c., completely destroyed, them, the incisions, in many of the young trees being carried down the body of the locust within a foot of the ground. Many a

dead others were dying, and the probability that young trees will be entirely destroyed. So soon to speak confidently of the extent of injury sustained, but it will no doubt be preferable.—*Horticulturist*.

### My Coat.

BY BERANGER, THE FRENCH POET.

ugh hardly worth one paltry groat,  
 'rt dear to me, my poor old coat;  
 full ten years my friend thou'st been—  
 full ten years I've brushed thee clean:  
 now, like me, thou'rt old and wan;  
 both the glow of youth is gone;  
 worn and shabby as thou art,  
 and the poet shall not part,  
 Poor coat.

not forgot the birthday eve  
 n first I donned thy glossy sleeve;  
 n jovial friends in mantling wine  
 k joy and health to me and mine.  
 indigence let some despise,  
 e dear as ever in their eyes:  
 for their sakes, old as thou art,  
 and the poet shall not part,  
 Poor coat.

evening, I remember yet,  
 yping, feigned to fly Lisette;  
 rove her lover to retain,  
 thy frail skirt was rent in twain.  
 girl, she did her best endeavour,  
 atched thee up as well as ever.  
 er sweet sake, old as thou art,  
 and the poet shall not part,  
 Poor coat.

, my coat, hast thou been found  
 ug thy shoulder to the ground,  
 any upstart "Lord" or "Grace"  
 g a pension or a place.  
 orest flowers—no monarch's dole—  
 thy modest button-hole;  
 for that, old as thou art,  
 and the poet shall not part,  
 Poor coat.

hough we be, my good old friend,  
 ld shall bribe our backs to bend:  
 t amid temptations past,  
 ll be honest to the last;  
 ore I prize thy virtuous rags  
 ll the lace a courtier brags;  
 hile I live and have a heart,  
 nd the poet shall not part,  
 My coat.

ixx.—Take some leaf-gold and white  
 d grind them together upon a marble  
 the gold is reduced to an impalpable  
 The paste now formed is agitated in  
 lass tumbler with soft water, which  
 the honey while the gold falls down to

the bottom. The water is now poured off and the gold washed until all the honey is removed, after which the gold is dried and then suspended in a mucilage of gum arabic. It is now used for writing upon paper, and when it becomes dry it may be burnished and rendered brilliant. Silver ink is prepared in the same manner, by substituting silver leaf for the gold. Gold is also obtained in powder by dissolving nitrohydro-chloric acid (*aqua regia*), which is called the perchloride of gold. When crystallized, this is soluble in water, alcohol and ether, and may be used for gold ink by adding a gum mucilage to the water or alcohol in which it is dissolved. Metallic writing fluids of different colors can be made by mixing bronze powders in gum mucilage.—*Scientific American*.

In the Gulf of Manear (Ceylon) turtle are frequently found of such a size as to measure five feet in length. Sir Emerson Tennant states that, in riding along the sea-shore one day, he saw a man in charge of some sheep, who was resting under the shade of a turtle shell which he had erected on sticks to shield him from the rays of the sun.

Great quantities of what is called "patent fuel" are manufactured and employed in England, principally on steamships. It consists of the small or fine bituminous coal pressed into square blocks, and rendered adhesive by bitumen. It can be stowed away in less space than the shapeless lumps of common coal, and it is therefore preferable for long voyages.

LARGE TILE OPERATIONS.—Messrs. C. & W. McCammon, of Albany, N. Y., sold in nine months from the first of April, 1859, 1,000,000 of drain tiles. They are now preparing to make 2,000,000 in the present year. They will use a new machine, of their own invention, which will greatly facilitate the process of manufacture; it will first crush all the clay, rendering it of equal fineness and consistence, and then discharge it directly into the tile mill.—They can burn 150,000 tiles at once, in one kiln. All the tiles used in the New York Central Park are made by Messrs. McC.

A PIG STORY.—A farmer out west, was last summer, much annoyed by one of his sows breaking into the corn field, and as he could find no hole in the rail fence he was at a loss to imagine the mode of her entrance. By concealing himself in the field however, one night, he discovered that it was effected by means of a hollow log, through which she would crawl, one end opening on the inside, and the other on the outside of the enclosure. Accordingly after having driven her out once more, the gentleman so arranged the log (it being very crooked) that both ends opened on the outside of the field. When the animal entered the accustomed place the next day and upon emerging found herself in the same field, her astonishment was ludicrous to behold. She again entered the log and again emerging on the wrong side evinced even more

surprise than before. At length finding all her efforts in vain she uttered a short angry grunt of disappointment or fear, turned short around and started off on a brisk run, nor could either coaxing or driving ever induce her to visit that part of the field again.

**MAPLE SUGAR.**—The *Scientific Artisan* contains the following brief, but excellent suggestions, relative to sugar-making:—"It is impossible to make good maple sugar unless the sap is boiled soon after it runs. If it is allowed to sour in the least the iron vessel in which it is boiled will darken the color of the sugar, giving it a disagreeable taste, and very injurious to the health of those who use it. Never allow the sap to burn on the top of the kettle, and every time you fill it up wash it off. You can remedy this by setting your kettle in an arch, leaving a part of your kettle down as low as the line of division between fire and no fire. Never allow your syrup to stand over night. Make your syrup so thick that one quart will make one pound of sugar, and let it get perfectly cool before you sugar off. Stir in a little milk; then keep it over a moderate fire until it is skimmed, and be careful not to burn it afterwards. Stir the sugar while it is cooling, or until perfectly dry. Never pour hot sugar into wooden vessels."

**TARRING POTATO SETS.**—At a recent meeting of the New York State Agricultural Society, Hon. A. B. Dickinson said he had not sown or planted anything for ten years without a coating of tar, and in planting his potatoes he dissolved one pint of tar in three pails of boiling water, and added four pails of water afterward. This solution he poured over his seed and mixed it with them, and covered with plaster.

**THE TWIST OF TREES IN THE DIRECTION OF THE SUN.**—A correspondent of the *Scientific American* says:—"It seems to be a new idea to you that the twist of trees generally turns in the same direction as the sun. My observation has been more particularly upon pines. Chip a pine at the stump height, and if it twists or winds with the sun, leave it, for it will not do for shingles; the higher up you try it, the more you will find it to wind. On the contrary, if it winds against the course of the sun, the twist will run out in some ten feet, and the grain then either continues straight to the remainder of the length, or, perhaps, even turns and winds with the sun, near the top of the tree. This is a fact which is no less true than curious."

**THE UNIVERSAL METAMORPHOSIS.**—If a wafer be laid on a surface of polished metal, which is then breathed upon, and if, when the moisture of the breath has evaporated, the wafer be shaken off, we shall find that the whole polished surface is not as it was before, although our senses can detect no difference; for if we breathe again upon it the surface will be moist everywhere except on the spot previously sheltered

by the wafer, which will now appear as a central image on the surface. Again and again breathe, and the moisture evaporates, but the spectral wafer reappears. This experiment succeeds after a lapse of many months; the metal be carefully put aside where its face cannot be disturbed. If a sheet of paper on which a key has been laid be exposed some minutes to the sunshine, and then simultaneously viewed in the dark, the key being moved, a fading spectre of the key will be visible. Let this paper be put aside for some months where nothing can disturb it, and in darkness be laid on a plate of hot metal; the spectre of the key will again appear. In the case of bodies more phosphorescent than paper, the spectres of many different objects which have been laid on it in succession, on being warming, emerge in their proper order. This is equally true of our bodies and of our spirits. We are involved in the universal metamorphosis. Nothing leaves us wholly as it falls. Every man we meet, every book we read, every picture or landscape we see, every word we hear, mingles with our being and modifies it. There are cases on record of ignorant men in states of insanity, uttering Greek and Latin phrases, which in past years they had heard their masters utter, without, of course, comprehending them. These tones, which are so forgotten; the traces were so faint under ordinary conditions, they were inaudible, but these traces were there, and in the light of cerebral excitement they star forth with prominence, just as the spectral image of a key started into sight on the application of heat. It is thus with all the influences to which we are subjected.—*Cornhill Magazine.*

**DRUNKENNESS IN WINE CROWING COUNTRIES.**—In Europe you see many things which are strange to an American. Take the use of wine. If I am right, the Europeans consume 6,500,000 gallons of wine. In France, out of account the pasture land which is ploughed, and the forests, of the actual land one-third is devoted to the culture of the grape. Yet there are immense districts where no wine can be raised at all. I see that the government returns make it appear that the people of France drink 850,000,000 gallons of wine, and the calculation is that there is not much less than 1,000,000,000 gallons of wine which is drunk in France. I believe, in the year 1859, there was drunkenness among the 39,000,000 of France as among the 3,000,000 of New England! I have been four times to Rome; there are wine shops everywhere, and out doors from three to six hours a day I have never yet seen a man drunk: not one is merry, never intoxicated. The Italians, French, &c., are quite temperate; they drink their weak wine with water, and take liquors, it is only a little glass (which does not make a spoonful.) I believe there's a bar in all Italy where

and drink rum and water, gin and water, &c. Excessive drinking is not to the taste of the people in the north of Europe, and even in France, it is not so. The English, without exception from the Irish and Scotch, drink about 600,000,000 gallons of beer every year, not to speak of the wine, spirits, &c., they take to it down withal. There is drunkenness. So is it in Scandinavia, in Holland, in North America. How do you think the Americans will solve the question? Certainly not by taking recourse to water, tea, coffee, &c. We shall have more beer, perhaps, return to the making of it, and certainly plant vines where they grow. Drunkenness is such a monstrous and so hastily evil, I would do almost anything to get rid of it. But I sometimes think we have taken the wrong track. I am glad to see the temperance law introduced to the New York Legislature, and think it will do more good than our English scheme of prohibition by force.—  
*from an American in Europe.*

Y.—A popular preacher tells a good deal about a bit at those kind of preachers who are indolent to pursue the duties required of them by their faith. He says that one pious man composed a very fervent prayer to Almighty God, wrote it very legibly, and affixed his name to his bed post. Then, on cold weather, he merely pointed to the document, and, in the words, 'O Lord! them's my sentiments,' blew out the light and nestled amid the covers.

ERIC OF THE PAST.—An English paper reports that James Cooper, who was coachman and attendant of the first Napoleon in St. Helena, is yet alive, and, in his eightieth year, is at Plumstead. He has no pension, and struggles hard "to keep the wolf from the door."

Dolson, Esq., of Raleigh, County of North Carolina, has threshed 583 bushels of wheat off 13 acres; which is an average of forty-five bushels.

WAY OF TYING HORSES.—Travellers on the western prairies, who can find no trees or posts to hold their horses, may, perhaps, learn something from the ingenuity of the Icelanders in a peculiar emergency:—The Icelanders have a curious custom, and a most effectual one, of tying horses from straying, which is entirely peculiar to this island. Two men, for instance, are riding together with attendants; and wishing to alight for the purpose of visiting some object at a distance on the road, they tied the head of one horse to the tail of the other, and the head of this to the tail of the former. In this state it is utterly impossible that they can move on, either backward or forward, the one pulling the one way and the other the other; and, therefore, if disengaged, they can move at all, it will be only in a circle, and, then, there must be an agreement to move their heads the same way.

LETTER FROM THE LATE SIR R. PEELE TO CHEVALIER BUNSEN.—The following letter, which was addressed twenty years ago by Sir Robert Peel to Chevalier Bunsen, is published in a biography of the great statesman, written by Herr Kunzel:—"My dear Herr Bunsen,—The only purpose of this is to invite you to dine with me and Herr Cornelius on Friday next. I assure you that whatever attention I may have paid to this distinguished artist, I am abundantly rewarded by the satisfaction which I derive from his personal acquaintance. He is one of a noble people, distinguished alike in every art of war and peace. The ultimate union and the patriotism of this people, spread as it is over the centre of Europe, will offer the best guarantee for the peace of the world, and the most powerful check for the propagation of doctrines, pernicious alike to the cause of religion and order, and to that freedom which respects the rights of others. It is my earnest hope that every member of the illustrious race, while he loves the country of his birth, will extend his devotion beyond its frontiers, and pride himself upon the name of a German, acknowledging the common fatherland to be entitled to the love, affection, and patriotic exertion of all its sons. The sentiments of every German are, I hope, correctly estimated by me, when judged from those awakened in my breast—the breast of a stranger and a foreigner—by a simple song, which seems to concentrate within itself the will of a powerful nation—a song which proclaims in enthusiastic words—

'That they shall have it,  
The free German Rhine!'

No, they shall not have it, and the Rhine will be protected by a song so long as the feelings inspired by that song are glowing in every Teutonic heart. But you will believe me a regular German if I go on in this way. If cordial wishes for the union and welfare of the race can give me a title to that name, I am one. Believe me, my dear Herr Bunsen, &c.—ROBERT PEELE."

## Editorial Notices.

OUR LAST NUMBER.—We regret the delay which occurred in the issuing of our last number. It was owing to the paper maker having, by an oversight which we had no reason to anticipate, failed to supply the proper quantity of paper. The delay in issuing the last number, together with the intervening of the Provincial Exhibition, has also caused some delay in the appearance of the present number.

ADDINGTON AGRICULTURAL SOCIETY.—The annual exhibition of the County of Addington Agricultural Society for 1860, will be held in the village of Newburgh, on Tuesday, October 9th. J. B. Aylsworth, Secretary.



## Markets.

## TORONTO MARKETS.

THURSDAY, Sept. 15, 1860.

To-day the Wheat market still showed signs of decline, and upwards of 4,000 bushels changed hands at \$1 20, that being the current figure of the day—the range extending from that to \$1 16. The average price for the day was \$1 19 per bushel. There has not been much buoyancy on the market. Barley—was very active although a little easier at 6s to 71c, the current rate being 70c per bushel. Spring Wheat—was hardly so brisk, and \$1 was the prevalent figure for the ordinary sample. Peas—in good request at 60 to 63c, sometimes 65c per bush. Oats—are steady at 2s to 30c per bush. Other things are unchanged.

## NEW YORK MARKETS.

NEW YORK, Sept 15.

FLOUR—Heavy and 5 to 10c lower; sales, 19,000 bbls at \$5 12½ to \$5 20 for superfine State; \$5 35 to \$5 56 for extra State, \$5 12 to \$5 20 for superfine Western; \$5 40 to \$5 65 for common to medium extra Western; \$5 50 to \$5 70 for inferior to good shipping brands extra round hoop Ohio.

CANADIAN FLOUR—Dull and drooping; sales 350 bbls at \$5 40 to \$7 50 for extra.

RYE FLOUR—Steady at \$3 50 to \$4 40.

WHEAT—A shade firmer with a moderate export demand, chiefly, to complete freight engagements and to fill old orders previous to the arrival of the Europa's mails; sales 50,000 bushels at \$1 17 to \$1 19 for Chicago Spring; \$1 23 for Milwaukee Club; \$1 27 to \$1 30 for Winter red Western; \$1 30 for red State; \$1 32 to \$1 40 for white Ohio and Indiana.

RYE—Quiet at 73 to 80c.

BARLEY—Scarce and firm; sales 1500 bushels of Canada East at 85c.

CORN—Better with very limited offerings; sales 21,000 bushels at 67 to 68c.

OATS—Heavy and lower; sales at 37 to 39c for Western, Canadian and State

PORK—Firmer for mess; sales 1,100 bbls at \$19 for old mess; \$19 10 to 19 30 for new mess; \$3 25 for old prime; \$14 to \$14 30 for new.

BEEF—Steady; sales 250 bbls.

LARD—Dull; sales 300 bbls at 12 to 13¼c.

BUTTER—In fair request at 12½ to 16c for Ohio; 10 to 20c for State.

## BUFFALO MARKETS.

BUFFALO, Sept. 15.

WHEAT—Closed firm and no sales after Eastern patch; sales 12,000 bushels of new Chicago Spring at \$1; 11,000 bushels choice do \$1 01; 13,000 bushels red Winter at \$1 12

CORN—Quiet and no sales.

OATS—Steady.

BARLEY—Firm; sales 2,000 bushels at 75c.

## PROVINCIAL EXHIBITION

TO BE HELD AT

HAMILTON,

ON THE

18th, 19th, 20th & 21  
SEPTEMBER, 1860.

Entries of articles for Exhibition, except Horticultural Products, Ladies' Work and Foreign Products, must be forwarded to the Secretary's Office, Toronto, on or before September 1st.

Horticultural Products, &c., may be entered till the evening of Monday, 17th, when books will be closed.

Entries, as above stated, will be received in Toronto, till the evening of Friday, September 14th, and afterwards at Hamilton.

Prize Lists and Printed forms of Entry, containing full information, may be obtained of Secretaries of Agricultural Societies, or Mechanics' Institutes, throughout the Province.

Articles for Exhibition must be placed in the Crystal Palace, or on the Grounds, on Monday 17th, except Live Stock, which must be not later than Tuesday, at noon.

Exhibitors must themselves provide for forwarding of their articles, and placing them in the grounds.

HUGH C. THOMSON

Secretary Board of Agriculture

BOARD OF AGRICULTURE OFFICE,  
Toronto, August 24, 1860.

AYRSHIRE CATTLE—Patrick R. Wright, Cobourg, C. W., breeder of Ayrshire & Sheep, &c., has several young Bulls and Ewes for sale. His herd is well known as one of the best in Canada West, and his terms of sale liberal.

Full Pedigree of all animals—U. C. Register.

## The Agriculturist,

OR JOURNAL AND TRANSACTIONS OF THE  
BOARD OF AGRICULTURE OF UPPER CANADA,IS published in Toronto on the 1st and 16th of  
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For the half year commencing 1st July the price is 15 cents. Nine copies for \$2.