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THE

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YORK TOWNSHIP FARMERS' CLUB.

At a meeting of this Club on 10th May, Mr. James McIlveen read a paper on the "Rotation of Crops," a portion of which we give, as below :—

Soil affords to plants a fixed abode and medium of nourishmen.. Earths exclusively of organized matter and water, are allowed by most physiologists to be of no other use to plants than that of supporting them, or furnishing a medium by which they may fix themselves to the globe. But earths and organic matter, that is, soils, afford at once support and food. The true nourishment of plants is water, and decomposing organic matter; both these exist only in soils, not in pure earths, but the earthy parts of the soils are useful in retaining water, so as to supply it in the proper proportions to the roots of the vegetables, and they are likewise efficacious in producing the proper distribution of the animal or vegetable matter. When equally mixed with it they prevent it from decomposing too rapidly; and by this means the soluble parts are supplied in proper proportions. The soil is necessary to the existence of plants, both as affording them nourishment, and enabling them to fix themselves in such a manner as to obey those laws by which their radicles are kept below the surface, and their leaves exposed to the free atmosphere. As the system of roots, branches, and leaves, are very different in different vegetables, so they flourish most in different soils, the plants that have bulbous roots require a looser and lighter soil than such as have fibrous roots; and the plants possessing only short fibrous radicles demand a firmer soil than such as have tap-roots, or extensive lateral roots. The constituent parts of the soil which give tenacity and coherence are the finely divided matters, and they possess the power of giving those qualities in the highest degree when they contain alumina. A small quantity of finely divided matter is sufficient to fit a soil for the production of turnips and barley, and a tolerable crop of turnips has been produced on a soil containing 11 parts out of 15 sand. A much greater proportion of sand, however, always produces absolute sterility. Pure alumina, or silica, pure carbonate of lime, or carbonate of magnesia, are incapable of supporting vegetation, and no soil is fertile that contains as much as 19 out of 20 parts of any of these constituents.

Now as plants derive their nourishment principally from the soil, it will be quite evident that, in order to raise a large crop from a given quantity of land, the soil must contain in requisite abundance, every element required by the plant. It is also plain, that the same kind of crop will require the same elements or principles from the soil in order to their growth and maturity. Hence a succession of the same kind of crops on the same soil, must of necessity exhaust that soil of those elements required by that kind of crop, and as a matter of course, in a few years the crops will become a complete failure. But that same soil may produce a different kind of crop, which requires different elements in its growth, advantageously. Every practical farmer knows this to be the case by experience; but may not always know the cause. This fact being established, is one grand argument in favour of a rotation of crops. But there is another which I will very briefly notice in this place, because I think it necessary in order to carry conviction on this or any other point, that the *why* and the *wherefore* should be given. The Second argument in favor of a rotation of crops is this: Plants as well as animals, take in more food than they can assimilate; and hence the parts not required are secreted. This theory, which seems plausible enough, has been given by Decandolle, and received and supported by others. The above author gives it as his opinion that plants, like animals, have the power of selecting from their food, as it passes through their vascular system, such portions as are likely to nourish them and of rejecting by their roots, during the descent of the sap, such as are unfit to contribute to their support, or would be hurtful to them if not rejected from their system. He also supposes that after

time the soil in which a certain kind of plant grows becomes so loaded with this rejected matter that the same plant refuses any longer to flourish in it. And thirdly, that though injurious to the plant from which it has been derived, this rejected matter may be wholesome food to a different order of plants, and hence the advantage to be derived from a rotation of crops. Nietner, another of the observers of this excreting power of the roots of plants, says that the prolific rye crop obtained without manure from the land which had been three successive years in clover, was owing to a large quantity of this excreted matter contained in the soil, and which he considered to be highly nutritive to the rye. He also states that turnips or beets raised on the same ground which had previously grown tobacco, were possessed of a remarkably bitter and unpleasant taste and scarcely eatable; this he says was owing to the excretions of the tobacco plant, which were absorbed and assimilated by the turnip and beet. Meyen also ascribes the effect of the clover on the rye crop, to the green manure supplied by its roots and stubble, and that of tobacco to the undecomposed organic substances contained in the sap and substance of the stem and roots, of which so large a quantity is left behind in the field. If the opinions of these authors are correct it is certainly a strong argument in favour of a rotation of crops.

Some writers, however, on this subject, do not quite coincide in the opinions of those first quoted, or at least, do not go so far as to agree with their excretory theory in the detail; yet all admit, so far as I am aware, that such a thing really does take place in all plants at some period of their growth, but they do not think that the vegetable excrement is exuded in such abundance as to prove so injurious to the species as has been stated by those already referred to. But even admitting the opinions of these last, of whom Johnson and Macaire may be mentioned as among the number, that plants do not secrete excrementitious matter in such abundance as stated by the others, yet if they secrete any, and if it be hurtful even in a small degree, the validity of the argument still remains in favor of a rotation of crops. We might reason from analogies like the following which tend to give weight to some of the opinions given above. Animals abhor the verdure, however luxuriant, that is caused by a decomposition of their own excrement, while a different species of animal will eat the same with avidity, and no doubt consider it a dainty morsel. This almost every person of observation must have noticed. Again it is said by some that our forests are, in like manner, subject to a change of wood, and that if cleared of the kind of timber now gowing in one part, as for instance pine, and allowed to remain uncultivated, it would in time be replaced by trees of a different kind. If this be the case, it is certainly, a very striking proof from nature, of the necessity of a rotation of crops.

Sir Humphrey Davy was the first to introduce a theoretical rotation of crops into England.—The following is his *rationale of rotation:* "It is a great advantage in the convertible system of cultivation, that the whole of the manure employed; and that those parts of it which a not fitted for one crop, remain as nourishment f another. Thus if the turnip is the first in th order of succession, this crop manured wi recent dung, immediately finds sufficient soluble matter for its nourishment, and the heat produced in fermentation assists the germination of th seed and the growth of the plant. If after tur nips, barley with grass-seeds be sown, then th land having been little exhausted by the turnip crop, affords the soluble parts of the decomposing manure to the grain. The grasses and clove remain, which derive a small part only of their organized matter from the soil, and probably consume the gypsum in the manure which would be useless to other crops; these plants likewise by their large systems of leaves, absorb a considerable quantity of nourishment from the atmosphere; and when ploughed in at the end of two years the decay of their roots and leaves affords manure for the wheat crop; and at this period of the course, the woody fibre of the farmyard manure, which contains the phosphate of lime, and the other difficult soluble parts, is broken down; and as soon as the most exhausting crop is taken, recent manure is again applied. Peas and beans, in all instances, seem well adapted to prepare ground for wheat; and in some rich lands they are raised in alternate crops for years together. Peas and beans contain a small quantity of a matter analogous to albumen, but it seems that the azote, which forms a constituent part of this matter, is derived from the atmosphere. The dry bean leaf, when burnt, yields a smell approaching to that of decomposing animal matter; and in its decay in the soil, may furnish principles capable of becoming a part of the gluten of wheat. Though the general composition of plants is very analogous, yet the specific difference, in the products of many of them, prove that they must derive different materials from the soil; and though the vegetables having the smallest system of leaves will proportionably most exhaust the soil of common nutritive matter, yet particular vegetables, when their produce is carried off, will require peculiar principles to be supplied to the land on which they grow. Strawberries and potatoes at first produce luxuriantly in virgin mould, recently turned up from pasture; but in a few years they degenerate, and require a fresh soil. Lands in a course of years often cease to afford good cultivated grasses; they become (as it is properly said) tired of them; and one of the probable reasons for this is, the exhaustion of the gypsum contained in the soil." The principles of rotations of crops are thus laid down by Yoart & Ch. Pictet: The first principle or fundamental point is, that every plant exhausts the soil. The second, that all plants do not exhaust the soil equally. The third, that plants of different kinds do not exhaust the soil in the same manner.—The fourth, that all plants do not restore to the soil the same quantity nor quality of manure.—The fifth, that all plants are not equally favorable to the growth of weeds.

The following consequences may naturally be

drawn from the fundamental principles:

First, however well a soil may be prepared, it cannot long nourish crops of the same kind in succession.

Second, every crop impoverishes a soil more or less, according as more or less is restored to the soil by the plant cultivated.

Third, perpendicular rooting plants, and such as root horizontally ought to succeed each other.

Fourth, plants of the same kind should not return too frequently in a rotation.

Fifth,—Two plants favorable to the growth of weeds ought not to succeed each other.

Sixth,—Such plants as eminently exhaust the soil, as the grains and oil plants, should only be sown when the land is in good condition, and

Seventh,—In proportion as a soil is found to be exhausted by successive crops, those which are least exhausting ought to be cultivated.—Again, it might be properly added in this place, rotations of crops are found to be beneficial in destroying insects. Olivier, member of the Institute of France, has described all the insects, chiefly tipulæ and muscæ, which live upon the collar or crown of cereal grasses, and he has shown that they multiply themselves without end, when the same soil presents the same crop for several years in succession, or even crops of analogous species. But when a crop intervenes on which these insects cannot live, as beans or turnips, after wheat or oats, then the whole race of these insects perish from the field for want of proper nourishment for their larvæ.—Without trespassing longer on your time, permit me Sir, to say that the system of rotation is adapted to every soil, though no particular rotation can be given for any one soil which will answer in all cases, as something depends on climate, and something also on the kind of produce for which there is the greatest market demand. But wherever the system of rotation is followed, and the several processes of labor which belong to it properly executed, land will rarely get into a foul and exeausted state; or, at least, if foul and exhausted under a judicious rotation, matters would be much worse were any other system followed. Having thus briefly and imperfectly endeavored to lay before you a few reasons that would seem to favor a rotation of crops, I will now in conclusion adduce a few examples of rotations suited to different soils, as given by Brown in his treatise on Rural Affairs.

The basis of every rotation, he says, "we hold to be either a bare summer fallow, or a fallow on which drilled turnips are cultivated, and its conclusion to be with the crops taken in the year preceding a return to fallow or drilled turnips, when of course a new rotation commences. First, rotation for loams and clays: 1st. Fallow with dung. 2nd. Wheat. 3rd. Beans drilled, but perhaps peas would answer if beans are not cultivated. 4th. Barley. 5th. Clover and grass.—6th. Oats or wheat. 7th. Beans. 8th. Wheat. This rotation, he says, is excellently calculated to insure an abundant crop, through the whole of it, provided dung is administered on the clover stubble. Rotation for clays or loams of an inferior description: 1st. Fallow with dung. 2nd. Wheat. 3rd. Clover and grass. 4th. Oats.—5th. Beans. 6th. Wheat. According to this rotation the rules of good husbandry are studiously practised, while it is obviously calculated to keep the land in good order, and in such a condition as to ensure crops of the greatest value. If manure is bestowed, either on the clover stubble, or before the beans are sown, the rotation is one of the best that can be devised for the soils mentioned.

Rotation for thin clays: On thin clays, gentle husbandry is indispensably necessary, otherwise the soils may be exhausted, and the produce unequal to the expense of cultivation. Soils of this description will not improve much while under grass; but unless an additional stock of manure can be procured, there is a necessity of refreshing them in that way, even though the produce should, in the meantime, be comparatively of small value. The following rotation is recommended: 1st. Fallow with dung. 2nd. Wheat. 3rd. Grass pastured. 4th. Grass. 5th. Grass. 6th. Oats. Rotation for light soils:—These are easily managed, though to procure a full return of the profit which they are capable of yielding, requires generally as much attention as is necessary in the manageme-t of those of a stronger description. Upon light soils a bare summer fallow is seldom called for, as cleanliness may be preserved by sowing turnips, and other drilled or legumipous crops. Grass also is of eminent advantage upon such soils, often yielding a greater profit than what is afforded by culmiferous crops: 1st. Turnips. 2nd. Spring wheat or barley. 3rd. Clover and grass. 4th. Oats or wheat. Perhaps the rotation would be greatly improved were it extended to 8 years, whilst the ground by such an extension would be kept fresh and in good condition. As for instance, were seeds for pasture sown the second year, the ground kept three years under grass, broken up for oats the sixth year, sown with peas in the seventh, and sown with wheat in the eighth, the rotation would then be complete, and prevent the too frequent recurrence of the same kind of crop. Rotation for sandy soils: These when properly manured are well adapted for turnips, though it rarely happens that wheat can be cultivated on them with advantage, unless they are dressed with alluvial compost, marl, clay, or some such substance as will give a body or strength to them, which they do not naturally possess. Barley, oats, and rye, the latter especially, are, however, sure crops on sandy soils, and in favorable seasons will return greater profit than can be obtained from wheat: 1st. Turnips. 2nd. Barley. 3rd. Grass. 4th. Rye and oats.

TOWNSHIP OF PERCY FARMERS' CLUB.

(From the Cobourg Star.)

The first meeting of the Farmers' Club, of the Township of Percy, was held on the 1st February at Percy Village. The President, Mr. Clark, addressed the meeting on the system of Agriculture at present pursued in the Township, as follows.

I am sure all of you will agree with me when I say that no Agricultural Society can be complete until it has a Farmers' Club in connection with it. Scotland owes her present high position in Agricultural matters, to her Agricultural Societies and Farmers' Clubs, and the first Farmers' Club that perhaps the world ever saw was established in that country more than a hundred years ago.

It is almost needless for me to say that the proper cultivation of our farms is much neglected, our system is simple and limited in the extreme, we plough our surface, sow our seed, and such a crop as nature gives us we contentedly reap, while it cannot be said that more is done than merely to take advantage of the natural fertility of our soil. It is true that some of us have certain maxims as to the weather and seasons, certain times of the Moon for sowing our peas, and for killing our hogs, and many other such foolish notions. But how many of us, have but little idea of the value of manure, and the rotation of crops, for we often see manure lying on our field for a whole winter unploughed in, we often see wheat sown after wheat, oats after oats, and pease after pease, and the farmer, instead of procuring at whatever cost the seed most suitable for any particular field, just sowing the kind he can get the easiest or the kind he has most of.

On looking over an Agricultural book a few evenings ago, I could not help contrasting the system pursued by many of us to that pursued in Scotland more than a hundred years ago. In that country a farmer who farmed 100 acres of land mostly kept the whole of it in some kind of cultivation, at all events, what he tilled had been tilled for years, and what was in grass had been so long in grass that to mow it was next to an impossibility; he had no pasture for his cows and cattle, but they were sent to the neighbouring moors, with some ragged urchin to keep them out of their fields. Their summer fallowing was scratching over a piece of land twice or three times during a summer with a pair of light horses altogether unfit for their work, and those ploughings or scratchings were so few and far between, that a crop of weeds and thistles had time perhaps to come to maturity. Well what was the consequence of such a state of things? It was just this, that the land did not bring ¼ of a crop, the cattle were starved, the horses were unfit for their work, the farmer could not pay his rent, he had not a dollar to pay to an Agricultural Society, nor a half dollar to pay for an Agricultural Book. Now does not that look pretty much like our system here? If our cattle have no moors they have woods to run in, causing a great loss in manure, here many of us keep ploughing and ploughing the same fields year after year, whereas if we would only seed those fields down and plough our old meadows, our crops of hay and grain would both be doubled, many of us also scratch our land instead of ploughing it, and I have often seen our summer fallows with such crops of thistles and weeds on them that they actually looked as if they had been cultivated. Look at our cattle, every year we see them starving and shivering round barns or fences, without any shelter, and if we have a dollar to pay to an Agricultural Society we have to thank our fruitful soil more than any scientific principle we have ever introduced to increase its natural productiveness.

It is obvious then that something is wanting to improve this state of affairs, and it is of the utmost importance *now*, as respects our present position, and future progress, that we ought to know more of Agricultural science than we do. It is of importance also that we ought to know more of the breeds and forms of different animals and the characteristic qualities of each, the different modes of feeding and rearing them, the economical advantages of each, the most approved rotation of crops, the different machine for abridging labour, and how to apply Mechanical power to the greatest advantage, and how is that to be effected—why just by our Farmers Clubs where we can meet and discuss such matters, and bring such knowledge from books and practical experience as will tend to improve us in our Agriculture.

Clubs or Societies such as this, may be said to put each member in possession of the knowledge of all the rest, and to those who have no taste for reading they must prove useful in the extreme; we have resources amongst us we know not of, and resources unknown is money lost.

Look what has been effected in Scotland, look now on that farm which 100 years ago had nothing on it but poor crops, poor cattle, poor horses, poor tenant and poor landlord, look at it now and what do we find? a rich tenant paying perhaps £400 a year rent, a rich landlord encouraging his tenant, and that same farm which formerly could keep nothing but starving stock, sends now hundreds of pounds worth of fat cattle every year to market; on half the land or on 50 acres the farmer now raises double what was formerly raised on the whole 100, while on the other 50 he raises nearly 600 tons of turnips and hay to be converted not only into beef but into manure also, and so highly do they value manure there that it is considered that it alone pays for all the trouble and expense, and that they have the beef for nothing. Let us look nearer home, let us look what has been effected in the neighbourhood of Cobourg, on the same farms where the people who formerly owned them starved and got into debt, we now find tenant farmers paying a heavy rent and getting rich.

I have no doubt that in making these remarks on our system of Agriculture, that many of you have perhaps thought that I was alluding to some of you, but I can assure you that such is not the case, I have seen and can see enough of bad farming on my own farm without bringing up before you anything I have seen wrong in the management of yours; my cows have run in the woods, I have had manure lying all winter in heaps on the field. I once sowed wheat after wheat, and I have committed the most egregious folly of summer fallowing a fine clean piece of sod land, one of the most foolish systems that ever farmers adopted. I also on my summer fallows have seen weeds and thistles large enough to hide a house. I also have had cattle

shivering round the barn, and although I have had the cows stabled for a good many winters it is only this winter that I can say, all are stabled, and when I look back to the time when they were all exposed, when I would go out on a stormy winter's night and see the poor shivering animals huddled up with backs like bows, looking so piteous and helpless; I cannot help contrasting that time with the satisfaction I feel now when I go out and see them all comfortably stabled, with their well filled manger and their comfortable bed; if the night happens to be dark and showery, if the winds are driving the sleet or the drift—I often think on the lines of a favourite Poet.

"The storm without may rair and risde,
Tam didna mind the storm a whistle."

TOWNSHIP OF HAMILLON FARMERS CLUB.

At a meeting of the Township of Hamilton Farmers' Club, held at Baltimore, on 29th April, 1854, the subject for discussion, viz: "the effect of Railway communication upon the Agricultural Interests of the country, was introduced by D. E. Boulton, Esq., in the following remarks:

The effect of the railway system upon the Agriculturist is a theme at the present period highly interesting to the Canadian farmer, and deserves his best consideration now that in Canada the railway is only becoming a fact and is indeed a novelty. The subject may be considered under four heads, as follows:—

1st. Increased value of Real Estate.
2nd. Increased production.
3rd. Reduced prices of articles of consumption.
4th. Facility of communication.

I have adopted the first head as the basis, because the first and most immediate effect is the enhanced value of land, the homestead forming the foundation of the farmer's prosperity. It will be admitted by all present that land in this Township is now worth 33 per cent. more than before the construction of railways commenced; this rise from 100 to 133 of material wealth in the short space of twelve months has enabled the man of large family to sell promptly and move where land is attainable at less cost, and he can procure additional acres for his children; or if suffering from want of means to drain, fence, build or stock his farm with improved breeds of cattle, loans can be effected upon favorable terms in proportion to the increased value of the estate; where there is no desire to sell, lease, or borrow money, it is a comfort and satisfaction to the farmer to know that he has accumulated a property, at all times convertible and available for his children after him. Again if the Municipality in which he resides desires to effect local improvements of a substantial character, the presence of the railway, a sure indication of enterprise, prosperity and wealth, establishes a credit at once available for the purposes of the commonwealth. Assuming the lands of the Township of Hamilton to have been worth £300,000 in 1852, they are now increased to £100,000, accumulated through the introduction of railways, without labour or risk to the population, and this increase is permanent. In proportion to the value of one township over another so will property change hands, adjacent towns and villages increase in size, and a monied population is induced to establish at the seat of enterprise a foundation for new fortunes and prospects, thus creating additional customers, ready to purchase and enjoy the fruits of the farmer's toil.

Under the second head let us consider the consequent increased production: By the dull observer of events the several deductions which I assume to follow the introduction of railways are not credited; positive individual experience by the producer, of actual increased receipts, is the first convincing proof; the cause of such increase is after all but a natural result patent to the enterprising projector of improvements tho' obscure to the otherwise busy multitude.

From the period when the first call is made upon shareholders of railway stocks, the vivifying influence of a newly created money circulation commences, an influx of labour follows, a local consumptive demand increases for every article of produce, especially for those portions previously commanding no sure market, raw and manufactured material requires transport, the product of the forest, of the mines, iron and coal, of the loom, workshop and forge, is all in requisition; increased population requiring food, clothing and shelter, draws from the farmer first or last the produce of the soil. Thus is created a distribution of floating circulating wealth, and a capital altogether new yet systematical to the means wherewith to supply the rapidily increasing consumptive demand. Now the farmer feels his oats! In the agriculturist more than the artizan, new life is engrafted, and a wealth is established so real in itself, and permanent, that it finds rest in the strong box, or renumerative investment, not liable to the bankers calls at 90 days, or the lawyer at the heel of an execution for debt increased by various fees and sorrowful litigation, as in the past early years of the Colony almost of necessity oppressed the people.

The next natural effect agreeable to the farmer and which his wife and family participate in more largely and rejoice over, is the cheapness of all articles of consumption induced by the newly acquired facilities of railroad communication; so much is the reality of the third position dependent upon the last that I shall consider them in connection. The facility afforded by railway communication enables the merchant to reduce the per centage upon his goods, as continued unbroken communication with the sea-board which in winter Canadians will enjoy at Portland, will render the old system of supplying half yearly spring and fall goods unnecessary, with this change of system will cease long injurious (because expensive) credit; the importer will purchase for cash, the farmer will purchase for

cash, the interest portion of the account is saved, the necessity no longer exists for heavy stocks laying upon the shelves for months, money will be turned over monthly, instead of yearly, 2 per cent. profit upon goods turned monthly is better to the merchant than 25 per cent. heretofore turned annually, it is obvious the farmer saves the money; but the merchant is an actual gainer; in like manner the tables being turned, does the farmer save in sale of his produce, and the merchant gain. Again, wheat sold to-day will be in Portland four or five days after; upon being shipped the sterling bill on England is drawn, the risk is promptly transferred from the Canadian to the English merchant, the profit is certain, interest account is again merged, thus the annihilation of time and space In these several places of purchase and sale the farmer pays his substantial part with cheerfulness and profit, and the merchant effects the changes with an increased realizing profit and certainty to which heretofore he was quite unaccustomed. The only conclusion I can arrive at is, that every interest benefits by the railway system of communication, and the agriculturists being the strength of Canada, the bearing of this subject upon them is more beneficial than upon others as a class, because more extended, and as a matter of course in like proportion should railways receive the countenance and support of the country.

It must be borne in mind that this mode of communication, because artificial, never ceases, is never disturbed, its existence as a communication for all practical purposes is more easy and certain of control than the bounty of nature can give by her navigable streams and rivers; in winter the waters are closed with ice, in summer often exhausted by drought for a limited period; the railroad is neither locked up by cold, or dried up by heat, nor confined by rivers, lakes or mountains For example, the course of our own railway to Peterboro': By what possible means could the timber of the everlasting forest be brought out, or the supplies carried back so cheaply and with such facility without change of bulk, over hills, across various rivers and waters as by railway?

By what other means could we bring into active use every foot of water power on the route, to make profitable forests of timber, quantities of which would otherwise form but ashes for the fallow? Instead of carrying timber to the road, the Engineer overcomes nature's obstacles and carries the road to the timber. The maple will no longer yield to the axe of the destroyer for waste on the mountains or valley, but will become a cheaper comfort to the distant fireside.

I can come to no other conclusion than that the system of railway communication is indispensable to the prosperity of the Canadian farmer; without its convenience a continued disparity would prevail when comparing his position with those of his profession living in countries where the locomotive speeds its course, such disparity would ever cause a well grounded discontent that would sooner or later lead to agitation for changes, political or otherwise subversive of happiness, prosperity, and contentment, the very reverse of the picture that now shadows forth the position of Canada as favored, prospering and contended.

Mr. SUTHERLAND said, that in a town on the other side of the lake, when it was proposed to build a second railroad through it, people said it would never pay; now four railroads pass through the same town and they have all as much as they can do, in fact the merchants of the place told him that they had sometimes to wait weeks for their goods, from the inability of the railroad to forward them. In the neighbourhood he spoke of farming land had risen in value from $20 and $40 an acre to $80 and $100 per acre. he had no doubt that railroads laid out with judgment and in proper localities in this country would pay well.

Mr. MASSON said, this railway agitation had done him £500 worth of damage; he (Mr. Masson) was about buying a farm for £1500 but since the railroad began they would take no less than £2000 for the same farm, therefore he was not satisfied with the railroads; he thought them good for the country generally, though they had not been good for him in this instance, as he could have bought a farm before much cheaper than he could do now.

Mr. PHILLIPS thought that railroads were the greatest improvement that we had ever in the country, though he did not think that our present high prices were altogether caused by them. He thought that they had a tendency to raise the prices of all kinds of farm produce, as they placed the producer in the country almost on a level with those in the neighbourhood of large cities, and they would enable us to reach the seaports at all seasons of the year. He thought farmers had been already more benefited by the making of the railroad in this Township than all the taxes they would have to pay in ten years would counterbalance.

Mr. ALCORN, had no doubt that the completion of the main trunk railway would greatly improve the farmers' position, as it would enable him at any time to reach any market he chose; besides, it would place our merchants and millers in a much better position than they were in before; now they had often to buy wheat and wait three or even six months before they could get it to market, thus running a great risk of prices, besides the interest of their money.

VALUE OF LIVE STOCK IN THE UNITED STATES.

Taking the last census as the basis of calculation, there are at this time about six hundred million dollars worth of live stock in the United States. Their value exceeds that of all the manufacturing establishments in the country, and also exceeds the capital employed in commerce, both inland and foreign.—*Farm Journal.*

There will never be peace in the palace while there is distress in the cottage.

Communications.

A FEW USEFUL HINTS.

For the Agriculturist.

The late Benjamin Bell, Esq., of Hunthill, Scotland, made various expriments to ascertain whether light or imperfect seed would vegetate and produce a crop equal to what might be obtained from seed perfectly ripened and safely harvested. The result of these experiments strongly confirms what has been urged with respect to the use of mildewed or diseased grain for seed.

We may only mention that Dr. Bell, in October, 1783, sowed a field of fifteen acres with thirty-six bushels of wheat, of which eight bushels was the best that could be provided in the London market of crop 1782. Twenty bushels of the produce of East Lothian crop, 1783, was also used, and four bushels of the best wheat in the London market, of crop 1782, and four bushels of the produce near Edinburgh in the same year, made out the total quantity. Here it must be remarked, that 1782 was a season generally unfavorable to raising wheat in perfection, but that in 1783, that grain was sound and of excellent quality. The field upon which the above parcel of wheat was sown was well fallowed and equally manured with dung, and the whole seeds were sown in the beginning of October, after each of them had been washed in strong brine, and afterwards dried with new slaked lime. The English seed of crop 1783, was sown on one side of the field, and two bushels of Mid Lothian seed of crop 1782, on three ridges next to it. To this succeeded the English wheat, and next to it the other two bushels of Mid Lothian wheat of 1782. The field being all in good condition, the wheat appeared early above the surface, and the shoots were every where strong, excepting on those ridges sown with Mid Lothian wheat of crop 1782, on which the plants were weak, and not very numerous. Neither did they spread or tiller like the others; so that during the winter and spring month, the wheat on those ridges made a weak appearance, and in harvest the straw was not only thin and of little length, but the ears were short and small, and the grain on this part of the field was not so large or heavy as on other parts.

It was also found on being thrashed and measured, that the produce of the wheat of crop 1782 was only forty-four bushels, or twenty bushels for four; whereas, the produce of the rest of the field was fully sixty bushels for every four of seed sown. The difference in value was also considerable, the produce of the Mid Lothian wheat selling one shilling and three pence per bushel lower than the others.

From the above statement a powerful motive occurs for using only the best grain for seed—the truth of which cannot be too strongly inculcated. That light or imperfect seed will vegetate and send forth a stalk or plant, may easily be admitted, but that the produce of that stalk or plant will not be so healthy or good as what may be obtained from plants of well filled seed, will scarcely be questioned by any one who is not a slave to system.

Very great pains have been used by British breeders to procreate animals from the best and most approved kinds of cattle and sheep; but were it admitted that light, diseased and imperfect grain was capable of making an equal return to the grower, quantity and quality being taken into consideration, it is plain that the breeders of live stock are demonstrably wrong in selecting the strongest and best proportioned animals as the basis of their breeding stock. In making these selections, however, every man will acknowledge that they acted with judgment; therefore it necessarily follows, that the growers of grain who make use of defective seed for sowing their fields, neither consult their own interest nor act with that degree of judgment and understanding which ought to influence and govern every good husbandman.

The farmer who practises husbandry upon proper principles should not only have his fields under all kinds of grain, but likewise a sufficient quantity of grass and grain crops for maintaining his stock of cattle and sheep through all the different seasons of the year. By laying out land in this style, the economy of a farm is so regulated, that while improvements progressively go forward, too much work does not occur at one time, nor occasion for idleness at another.

Suppose two farmers of the same substance, and living upon similar farms; one manages his land with judgment and spirit, makes all the manure he can; sells no hay or straw; does not injudiciously crop his land; drains his fields, and keeps his live stock and fences in good order.—This man grows rich; the other, a sloven in these particulars, dwindles into poverty. These are the circumstances which make the one man rich and the other poor.

Another consideration of great importance is, not to take a farm that may require more money to purchase and stock it well than the farmer is in possession of. Farmers are usually very eager after quantity; the certain consequence of which is a slovenly system of management. Let any one consider the difference between good and bad farming in all its branches: the one is certain loss and the other certain gain. A profitable and proper use of manure, let the farmer now hold in remembrance, is the life and soul of husbandry; therefore those who know the best how to prepare it, and afterwards how to apply it, can scarcely fail of being successful in any situation. Quality of manure is to be considered above quantity—much depends upon how live stock are fed in winter—the better they are fed, the better the manure. With regard to lime, guano, bone dust and plaster, that can only be obtained by those who have money at command.

The advantage of changing seed. In the same field, all equally dressed, one and a half bushels of oats from a different soil and situation; and one and a half bushels of oats grown on the farm not changed for some years, twenty-five bushels were the produce of the former, and twenty bushels the produce of the latter. The produce of the changed seed weighing most and a greater weight of straw.

B.

GALLOWAY CATTLE.

To the Editor of the Agriculturist.

Sir,—In looking over the Prize List of the Provincial Agricultural Association for the present year, which has just come to hand, I observe that no premiums are offered for Galloway Cattle—though the same premiums were offered for them last year as were offered for the Devons, Ayrshires and Herefords. This may partly have arisen from this breed being so little known in the Province, as previous to the past year I am not aware that there was any pure bred Galloway cattle in the country. As different importations of this celebrated breed have been made lately, a brief account of it, collected from various sources, may not be unacceptable to your readers.

The true Galloways are without horns; their color is generally black, though sometimes red and dun; they are the most highly prized of all the polled breeds for their many excellencies.—They are a hardy and docile race and are admirably adapted to the grazier, as they fatten easily, and their beef commands a high price in the English markets; it being fine in the gram, and the fat well mixed with the muscular parts.—The cows do not yield a large quantity of milk, but it is rich and affords comparatively a large proportion of butter, which is of the best quality; the average annual yield per cow, where all the milk is devoted to butter, is about 150 lbs., though larger returns are often obtained.

Jackson, in his excellent treatise on Agriculture and Dairy Husbandry, describes the Galloway cattle thus: "The Galloway breed of cattle is well known for various valuable qualities, and easily distinguished by the want of horns.—It is broad across the back, with a very slight curve between the head and quarters, broad at the loins, the whole body having a fine round appearance. The head is of a moderate size, with large rough ears, chest deep, legs short, and clean in the neck; the prevailing color is black; those of this color being thought the most hardy, although this varies.

This breed is highly esteemed, as there is no other breed which arrives at maturity so soon, and their flesh is of the finest quality; the milk is very fine, but is not obtained in very large quantities."

The points of the Galloway ox are thus given by Martin: "A well bred Galloway ox is of admirable form; all is close and compact; the barrel is rounded and ribbed home to the hip bones; the chest is deep, the shoulders thick and broad: the neck short and thick; the head clean; the back straight and broad; the limbs short, but extremely muscular; the skin moderate, but mellow, and well covered with long and soft hair.—that on the ears, which are large, is peculiarly rough and long.

In the bull the head is heavy; the neck thick, and boldly erected above; the frontal crest or ridge is elevated and covered with long hair, and the general form is robust, with great depth of chest and roundness of barrel." Youatt, in his work on Cattle, speaks in favorable terms of this breed, but as you are publishing the greater part of his work on Cattle in your present volume, I need not quote any of his remarks, only that he says that "there is perhaps no breed of cattle which can more truly be said to be indigenous to the country, and incapable of improvement by any foreign cross, than the Galloways," and the intelligent Galloway breeder is now perfectly satisfied that his stock can only be improved by adherence to the pure breed, and by care in selection.

Though it is stated that the Galloways cannot be improved by any foreign breed, they have been resorted to for the improvement of other breeds. It is said that the Short Horns owe part of their fine form, and perhaps a so part of their early fattening propensities, to this breed.

In the absence of any statistical returns, it is impossible to estimate the numbers of the different breeds of Cattle in Britain, or it might be of use to show what breeds are increasing and what are not. I am of opinion that the Galloway breed is considerably on the increase. The trade in stock cattle from Galloway has been very extensive for 150 years, large numbers of cattle being annually sent to the English market. Professor Low says, "It is computed that upwards of 20,000 head are annually exported from the district—from 16,000 to 18,000 of which are sold in Smithfield. Their average weight at three years old may be reckoned at 630 lbs., and those sent to London weigh from 770 to 840 lbs.

From some returns now before me, it appears that the total number of cows and oxen sold in Smithfield market in 1848, was 218,306, and if we take Professor Low's estimate that 18,000 Galloways are sold annually in that market, it would make them fully one-twelfth of all the cattle sold at Smithfield.

The home of the Galloways is the Counties of Wigton, Kirkcudbright and Dumfries, in Scotland, and a large portion of West Cumberland, in England.

I have thus briefly called your attention to this breed of cattle, which I am glad to see introduced into the Province, as I have no doubt that they will be found a valuable addition to our other breeds of cattle; and it is very desirable that all good breeds should have a fair trial in this country.

Yours truly,

A. TENANT FARMER.

Township of Hamilton,
June 17th, 1854.

PROGRESS OF THE COUNIY OF PERTH'

To the Editor of the Agriculturist:

Mitchell, April 10th, 1854.

Dear Sir,—Thinking it might prove interesting to some of your readers, I send a few particulars in connection with the position and prospects of the Fullarton, Logan and Hibbert Agricultural Society.

These townships form the western part of the new County of Perth, and are, upon the whole, well adapted for agricultural purposes. The soil consists of a rich clay loam, containing limestone gravel on a clay subsoil. The land is generally rolling, with the exception of a strip along the Huron road, and part of the Township of Logan, which are level, and in some places wet, and on this account a good part of the Township of Logan is still unsettled, though there are blocks of land in the centre and towards the rear of the Township equal to any in the County, and even a great part of the wet land might be brought into cultivation by a proper system of draining, and would thus become the most valuable, and this might be done without any great expense, as there are but few swamps (properly so called), being merely narrow black ash swamps.

Besides the north branch of the river Thames, which rises in the north part of Logan, and the Avon and Whirl Creek, which join it in Fullarton, there are numerous small streams in the three townships.

Most of the inhabitants came in without much capital, taking the land on lease from the Canada Company. Many have since purchased their farms and are now doing well, but there are others who, from various causes, are yet behind, but no doubt many of them will be able, from the improved state of the markets, to meet the demands of the Canada Company, and those who cannot do this will now have ample opportunity to sell out to some of the moneyed men who are now attracted to this part of the County, by the local improvements now in progress.

Owing to the recent settlement there is scarcely any fruit raised here at present, but judging from the number and thriving appearance of young orchards, it will not be long before we shall have a plentiful supply. All kinds of vegetables grow well. Although very little care is taken in sowing oats, they are always looked upon as a sure crop; there is scarcely any corn grown, as owing to the late spring frosts, it can seldom be brought to maturity; though barley and rye do well, yet, from want of a market, very little comparatively has been raised, and, with a Maine Law in view, it is probable there never will be a great demand, unless for some other purposes than that for which they are commonly used. With the exception of the wet pieces formerly mentioned, the land is all well capable of raising fall wheat, which, since the year 1847, has become to be very much cultivated.

The village of Mitchell is situated on the Huron road, and is central to the three townships, having, from its position, such an extensive back country to support it; it is destined to become a place of importance; it has in its limits at present, 3 saw mills, 2 for a double run of saws, which, with the exception of one run of saws, are in active operation. At the time I write, there are also in the Township of Logan, 3 miles from the village, 2 saw mills and an oatmeal mill—all in active operation; there is a grist mill in the village with two run of stones, in which there is always plenty to do.

There will be a Depot of the Buffalo, Brantford and Goderich Railway within the limits, also a foundry is in course of erection.

The building Committees of three different religious bodies, have entered into contract with two companies of brick-makers, who are to supply them with brick to build churches, which, according to their plans, will at least cost on the average each £300. There are three pearl-asheries in the village, that manufactured last year 320 barrels; besides this there was exported from the three townships, by way of Mitchell, 200 barrels of potash; in this item the Township of Hibbert is the largest manufacturer—being settled principally by farmers from the old district of Dalhousie—all of whom had served a pretty good apprenticeship to the business.—There are also 3 tanneries in the village and neighborhood, doing a good business; 3 blacksmiths' shops, a waggon shop, and store, all of which do an extensive business; the number of shoemakers is legion, yet a great number of boots are imported; in regard to the number of tailors, I am not so well posted up. The grist mill above mentioned is by no means sufficient for the gristing of the country, and I know of no better opening, for a man of capital, than this; the water is deficient half the year, during which time the farmers have to take their grists at least 12½ miles to the nearest mill; there would be plenty of work for a good steam grist mill, and the people will not be backward in giving assistance to any party that will erect such a concern.

The road to London *via* St. Mary's, strikes the Huron road at the centre of the village, and immediately opposite another road leaves the village and passes through Logan to the Township of Elma; the whole of the road from Mitchell to Elma was let by contract last summer, and will be finished by the first of October next; four or five miles of the front of the Township to be graded and part of it gravelled, the remainder to be chopped and levelled. This will make an excellent road and will greatly enhance the value of the Canada Company's lands, through which it passes, and will likewise be of great benefit to the inhabitants of Elma—giving them a good road to a permanent and convenient market. Last year was the first of our Society's existence, the number of members was 106; this year we have about 150. Last year we bought a Devon bull from Mr. Tye, of Wilmot, price £40. This year we buy a Durham bull,—price any sum we can get him for. The Directors are determined to introduce male animals—cost what they may; consequently the premium list is small, being for this year £33. Almost all the members subscribe to your able journal. Hoping it will continue to give all requisite information on the subject of agriculture.

I remain
Your obedient servant,
THOMAS SMITH.

☞ Trying to farm without capital, is like trying to run a locomotive without fuel. Money and wood both must be consumed, if they are to move the machine of the farm or of the rail.

INTRODUCTION OF CAMELS INTO AMERICA.

In the last annual report of the United States Secretary of War, it is recommended that the experiment of employing camels and dromedaries in the transportation of military supplies among the regions of the West, be tried. The use of these animals for the object named, would, it is thought, be attended with less expense, and afford a more expeditious mode of conveyance than the means now employed. It seems from an article in the New York *Evening Post*, that an attempt is soon to be made to introduce these animals as beasts of burden into this country. That paper says:

"A company has been formed for this purpose, which has obtained from the New York Legislature a charter of incorporation, and is about to import from different parts of the old world such varieties of camel as are most serviceable, and most likely to bear the change of climate without degeneration.—They are to be employed to carry travellers and merchandise across the arid and barren deserts of which we have recently come in possession. This is the general object, besides which, the company, in a pamphlet which they have recently published, give us to understand that they have a specific object, the nature of which they do not communicate.

"Whether the employment of the camel for the conveyance of heavy burdens would stand any competition with the railways which are, at no distant time, to be made across the deserts separating our Atlantic possessions from the territories on the shores of the Pacific, is a point on which we will not enter. It seems to us, however, pretty certain that the camel may be naturalized in some parts of our country. We possess certain regions which seem as perfectly well adapted by climate and other circumstances to the constitution and habits of this animal, as certain other regions are to those of the horse.

"In the warmer districts of the United States, where rain rarely falls, and where the surface is rocky or sandy, the camel finds a soil, a temperature and state of the atmosphere like that of the countries which it inhabits in the old world. On a clayey or loamy soil, moistened by rain, the camel is wholly unserviceable. Its feet slip with every step, it falls frequently, and if loaded, suffers much from the fall. If urged to move at such times, it becomes frightened and unmanageable.

"At Alexandria, in Egypt, in a wet day, camels are never used. In sand, however deep, the camel walks with a firm and steady step, and climbs, without difficulty, the steepest practicable paths among the rocks. To this purpose its broad, elastic and yielding hoof is well suited.

"In the neighborhood of Pisa, in Tuscany, the camel has long been domesticated. It is employed on a large estate of the Grand Duke, lying west of the city, along the sea-shore. Here it finds mild winters, hot and dry summers, a sandy plain, and in the places where it browses, the same shrubs and plants which spring up in the soil of the Arabian deserts. We have seen files of these animals led by a Tuscan peasant, bringing into the city of Pisa the products of the Grand Duke's farm.

"The almost rainless deserts of Texas and New Mexico are even better suited to the habits of the camel than the seashore of Tuscany. If introduced into that country they would probably soon come to supply the place of horses in the wilderness of Mexico south of the Rio Grande."

WOMAN ON THE BONE QUESTION.

The question "What is the best way to dissolve bones?" has been greatly agitated amongst our agricultural exchanges. The *Country Gentleman* published an elaborate editorial on the subject. Mrs. Swisshelm—the universal precedent in her case, is our justification for quoting her by name—pitches into the *Country Gentleman's* article as follows:

"It is a fact, Mrs. Smith! You need not rub your eyes and look again, for there is no mistake about it. The *Country Gentleman* is right, and the agricultural papers are positively discussing the question, 'Will ashes dissolve bones?' Aye, and discussing it as gravely as if it was a profound mystery. One agricultural paper says ashes will dissolve bones, and another says they will not, which only proves that every agricultural paper should have *one* housekeeper in its editorial corps, to keep them from being ridiculous occasionally.

"Any Western farmer's wife or daughter could answer this mooted question on the instant, and would at once say, 'that depends upon the ashes.'

"Any ashes that will make soap will disolve bones, if you put enough on; but when so dissolved they are rather an expensive manure. We should as much think of sending to the chandler's for a dozen boxes of soap, and putting a quarter of a pound on each hill of corn, as putting all the bones of the kitchen into a hogshead, dissolving them with ashes, and using the mixture, as did the writer in the *Country Gentleman*.

"His was rather an expensive economy. His manure was simply very strong, unrefined *soap*, which, with a very little difference in the manner of preparing, would have done all the washing and cleaning in the family, when, in the form of refuse suds, it should have been poured on a bed of loam or clay, to make manure for the cornfield, or around the roots of the grape-vines and fruit-trees, as a liquid manure.

The only difference between the plans of making *clean soap* and the dirty mixture he did make, would be to empty the ashes into a hopper, put the water on them there, let it run off in the form of ley, pour this upon the bones, and either boil them in it, or let them stand in the sun. The bones would dissolve, the limy part settle to the bottom, and the animal fatty and glutinous matter unite with the ley to make the soap.

"One hogshead full of bones and good ashes would make a full hogshead of soap, leaving the leached ashes and phosphate of lime from the bones, into the bargain.

"But quick lime used in this same manner will dissolve bones until they are good food for plants, and this is cheaper than soap ashes."

Natural History.

THE OX.—HISTORY, MANAGEMENT, &c.

THE POLLED CATTLE.

THE GALLOWAYS.

The stewartry of Kircudbright and the shire of Wigton, with a part of Ayrshire and Dumfries, formed the ancient province of Galloway. The two first counties possess much interest with us as the native district of a breed of *polled*, or *dodded*, or *humble* cattle, highly valued for its grazing properties. So late as the middle of the last century, the greater part of the Galloway cattle were horned—they were middle-horns: but some were polled—they were either remnants of the native breed, or the characteristic of the aboriginal cattle would be occasionally displayed, although many a generation had passed.

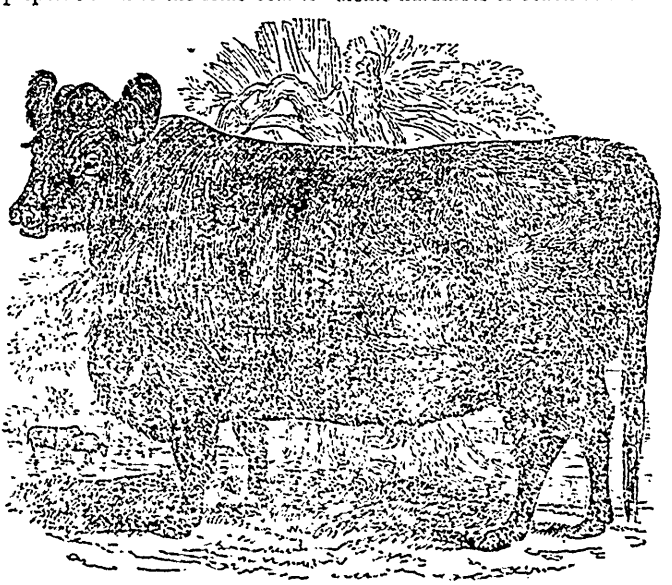
For more than 150 years the surplus cattle of Galloway had been sent far into England, and principally into the counties of Norfolk and Suffolk. The polled beasts were always favorites with the English farmers; they fattened as kindly as the others, they attained a larger size, their flesh lost none of its fineness of grain, and they exhibited no wildness and dangerous ferocity which are sometime serious objections to the Highland breed. Thence it happened that, in process of time, the horned breed decreased, and was at length quite superseded by the polled.

The Galloway cattle are straight and broad in the back, and nearly level from the head of the rump, are round in the ribs, and also between the shoulders and the ribs, and the ribs and the loins, and broad in the loin, without any large projecting hook bones. In roundness of barrel and fulness of ribs they will compare with any breed, and also in the proportion which the loins bear to the hook bones, or protuberances of the ribs.—When viewed from above, the whole body appears beautifully rounded, like the longitudinal section of a roller. They are long in the quarters and ribs, and deep in the chest, but not broad in the twist. There is less space between the hook or hip bones and the ribs than in most other breeds, a consideration of much importance, for the advantage of length of carcass consists in the animal being well ribbed home, or as little space as possible lost in the flank.

The Galloway is short in the leg, and moderately fine in the shank bones the happy medium preserved in the leg, which secures hardihood and disposition to fatten. With the same cleanness and shortness of shank, there is no breed so large and muscular above the knee, while there is more room for the deep, broad, and capacious chest. He is clean, not fine and slender, but well proportioned in the neck and chaps; a thin and delicate neck would not correspond with the broad shoulders, deep chest, and close, compact form of the breed. The neck of the Galloway bull is thick almost to a fault. The head is rather heavy; the eyes are not prominent, and the ears are large, rough, and full of long hairs on the inside.

The Galloway is covered with a loose mellow skin of medium thickness, which is clothed with long, soft, silky hair. The skin is thinner than that of the Leicestershire, but not so fine as the hide of the short-horn but it handles soft and kindly.

The prevailing and fashionable color is black—a few are of a dark brindle brown, and still fewer speckled with white spots, and some of them are of a dun or drab color. Dark colors are uniformly preferred, from the belief that they indicate hardiness of constitution.



GALLOWAY OX IN GOOD CONDITION.

The breeding of cattle has been, from time almost immemorial, the principal object of pursuit with the Galloway farmer. The soil and face of the country are admirably adapted for this.—The soil, although rich, is dry and healthy.—There are many large tracks of old grass land, that have not been ploughed during any one's recollection, and which still maintain their superior fertility; while the finer pastures are thickly covered with natural white clover, and other valuable grasses. The surface of the ground is irregular, sometimes rising into small globular hills, and at other times into abrupt banks, and thus forming small fertile glens, and producing shelter for cattle in the winter and early vegetation in the spring. In the low districts there is little frost and snow, but the climate is mild and rather moist; and thus a languid vegetation is supported during the winter, and pastures constantly retain their verdure.

The young cattle are chiefly bred and reared to a certain age upon the higher districts, or upon the inferior lands in the lower grounds. A few cows are kept in the richer soils to produce milk, butter, and cheese for the families; but it is found more profitable to breed and rear the cattle upon inferior lands, and afterwards to feed them upon the finer ground and the rich old pastures. There would be no objection to this if the Galloway farmers would afford their young stock a little shelter from the driving blasts of winter.

The regular Galloway breeders rarely sell any of their calves for veal; which is obtained only from those who keep cows for supplying the villagers with milk, and from the few dairy farms where cows are kept for making cheese.

The best heifers are retained as breeders, in order to supply the place of those whose progeny is not valuable, or who are turned off on account of their age. The other female calves are spayed during the first year. The spayed heifers are usually smaller than the bullocks, but they arrive sooner at maturity; they fatten readily; their meat is considered more delicate, and, in proportion to their size, they sell at higher prices than the bullocks.

The young cattle are rarely housed after the first winter; they are on their pastures day and night, but in cold weather, they receive hay and straw in the fields, supporting themselves otherwise on the *foggage* left unconsumed after the summer grass. Many of the farmers are beginning to learn their true interest, and the pastures are not so much overstocked in summer as they used to be, and a portion of herbage is left for the cattle in the winter; therefore, although the beasts are not in high condition in the spring, they have materially increased in size, and are in a proper state to be transferred to the rich pastures of the lower district.

The Galloway cows are not good milkers; but although the quantity of the milk is not great, it is rich in quality, and yields a large proportion of butter. A cow that gives from twelve to sixteen quarts per day is considered very superior, and that quantity produces more than a pound and a half of butter. The average, however, of a Galloway cow cannot be reckoned at more than six or eight quarts per day, during the five summer months after feeding her calf. During the next four months she does not give more than half that quantity, and for two or three months she is dry.

It has been said that the young Galloway cattle are more exposed than others to *Redwater*, particularly on grass lands wanting lime. *Quarter Evil* is also a frequent and fatal disease among these young cattle. When the Galloways become two years old, they will yield in hardiness to none, and are comparatively exempt from every complaint.

It has been remarked in this, as in some other breeding districts, that cows and heifers of good quality are to be met with everywhere, but that it is difficult to find a Galloway bull free from defect. Too many breeders have become careless from this circumstance. They have been contented with a bull of moderate pretensions, and the form and value of their cattle have been depreciated; yet not to the extent that might be feared, for the imperfections of the sire do not always appear in the progeny, but the sterling characteristics of the Galloway cattle break out again, although obscured in one generation.

A bullock well fattened will weigh from 40 to 60 stones at 3 or 3½ years old, and some have been fed to more than 100 stones imperial weight, at 5 years old.

It has often and truly been remarked, with regard to the Galloway cattle, that while in most other breeds of Scotland there may be some good beasts, but mingled with others of a different and very inferior kind, there is a uniform character, and that of excellence, here; one bullock selected at haphazard may generally be considered a fair sample of the lot. The breeders know, from long experience, what kind of cattle will please the farmers in Norfolk, by whom they are chiefly prepared for the London market, and to that kind they most carefully adhere. The drover likewise becomes, by his profession, an excellent judge of cattle, which he often purchases in large lots.—He is unable to handle half of them, but long practice has taught him to determine at a glance whether they are of equal value and will prove good feeders.

There is, perhaps, no breed of cattle which can be more truly said to be indigenous to the county, and incapable of improvement by any foreign cross, than the Galloways. The short-horns almost everywhere else have improved the cattle of the districts to which they have travelled; at least in the first cross produced manifest improvement; but even in the first cross, the short-horns have done little good in Galloway, and, as a permanent mixture, the choicest southern bulls have manifestly failed. The intelligent Galloway breeder is now perfectly satisfied that his stock can only be improved by adherence to the pure breed, and by care in the selection.

The Galloway cattle are generally very docile. This is a most valuable point about them in every respect. It is rare to find even a bull furious or troublesome.

During the last fifty years a very great improvement has taken place in the rearing and grazing of cattle in Galloway. Most of the great land-

holders farm a portion of their own estates, and breed and graze cattle, and some of them very extensively. Agricultural societies have been established in the counties of Kirkcudbright and Wigton, and all the land proprietors, and the greater part of the tenants, have become members of them. These societies have been enabled to grant numerous premiums for the best management and rearing of stock, and the consequence has been considerable improvement in the breed of cattle, on the undeviating principle, however, of selection and adherence to the pure breed.

COMPARATIVE FEEDING PROPERTIES OF THE SCOTS AND DEVONS.

Francis, Duke of Bedford, in 1795, commenced a series of experiments to test the feeding properties of the various breeds of cattle; and there were few breeds whose relative qualities and value were not put fairly to the test at his estate of Woburn Abbey, and one breed after another was abandoned, until at his death in 1802, he was balancing between the Devons and Herefords.

His brother, who succeeded him, gave preference to the Herefords for feeding, and the West Highlanders for grazing. He abandoned the Devons only as not suiting the soil of Woburn.

The following are experiments made between Devons and West Highlanders and Galloways:

"Twenty Devons and twenty Scots were bought in October, 1822, and wintered.

"Ten of each sort were fed in a warm straw-yard upon straw alone, but with liberty to run out upon the moor.

"Ten were fed in a meadow, having hay twice every day until Christmas.

"They afterwards lay in the farm-yard, and had oat-straw and hay, cut together into chaff. They were then grazed in different fields, equal proportions of each sort being put into the same field.

"Those that lay in the warm straw-yard with straw only, were ready as soon as the others, although the others had an allowance of hay during the winter.

"Sixteen of each were sold at different times; March 24th, 1824, being the last sale. The Scots were ready first, and disposed of before the Devons.

The Scots cost £7 12s 10d each, amounting to £122 5s 4d; they sold for £235 18s 6d. Gain by grazing	£113	13	2
The Devons cost £7 6d 6d each, amounting to £117 4s and they sold for £250; but not being ready, on the average, until between six and seven weeks after the Scots, and estimating their keep at 3s 6d per week each, amounting to £18 14s 6d, and this being subtracted from £250, there will remain as the sum actually obtained for them £231 5s 6d. Gain	114	1	6
Making a balance in favor of Devons of	8	4	

The remaining four of each breed were kept and stall-fed on turnips and hay. The Scots sold at £75, and the Devons at £84, the account of which will be as follows.

Four Devons at £7 6s 6d, cost £29 6d; they sold for £84; leaving gain by stall-feeding	54	14	0
Four Scots at £7 12s 10d, cost £30 11s 4d; they sold for £75; leaving gain by stall-feeding	44	8	8
Making balance in favor of Devons	10	5	4
Or total balance, adding the above 8s 4d in favor of Devons	10	13	8

This experiment seemed to establish the superiority of the Devons for both grazing and for stall-feeding. But as the gain by the four stall-fed Devons was half as much as that by the sixteen Scots at straw-yard, it was determined that another experiment should be made, in which the whole should be fed alike, both at grass and in the stall.

Twenty Scots and twenty Devons were again bought in October, and sold at different times, but always in equal number of each at each time, the last sale taking place in March.

The twenty Devons cost £189 9s; they sold for £370 17s 10d; leaving for feeding	£181	8	10
The twenty Scots cost £212 3s; they sold for £374 5s 1d; leaving for feeding	162	1	1
Balance in favor of the Devons	£19	9	9

There have always been some polled cattle in Angus; the country people call them *humlies* or *dodded* cattle. Their origin is so remote, that no account of their introduction into this country can be obtained from the oldest farmers or breeders. The attention of some enterprising agriculturists appears to have been first directed to them about sixty years ago, and particularly on the eastern coast, and on the borders of Kincardineshire. Some of the first qualities which seem to have attracted the attention of these breeders, were the peculiar quietness and docility of the doddies, the easiness with which they were managed, the few losses that were incurred from their injuring each other in their stalls, and the power of disposing of a greater number of them in the same space.

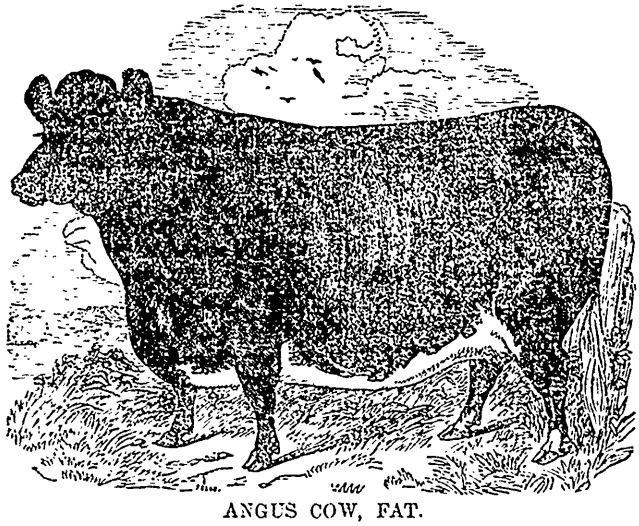
A few experiments upon them developed another valuable quality—their natural fitness for stall-feeding, and the rapidity with which they fattened. This brought them into much repute.

They have much of the Galloway form, and by those unaccustomed to cattle would be often mistaken for the Galloways. A good judge, however, would perceive that they are larger, somewhat longer in the leg, thinner in the shoulder, and flatter in the side.

Climate and management have caused another difference between the Angus doddies and the Galloways. The Galloways have a moist climate; they have a more robust appearance, a much thicker skin, and a rougher coat of hair than the Angus oxen. The Angus cattle are regularly kept in straw-yards during six months of the year, receiving turnips with their fodder every day, and in summer are grazed on dry and warm pastures. By this mode of treatment they look and feel more kindly than the Galloways.

The greater part of them are black, or with a

few white spots. The next general color is yellow, comprehending the brindled, dark red, and silver-colored yellow. They are a valuable breed, and have rapidly gained ground on the horned cattle, and become far more numerous, particularly in the Lowlands; and when the agriculturist now speaks of the Angus breed, he refers to the polled species.



ANGUS COW, FAT.

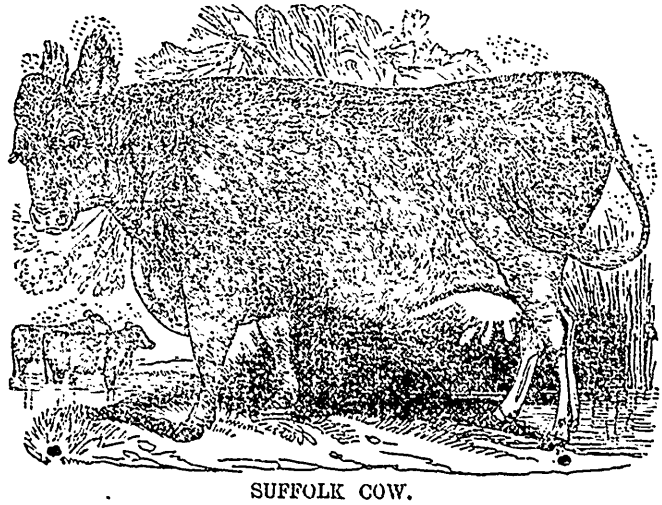
The quantity of milk yielded by the dairy cows is various. In the hilly districts from two to three gallons are given per day, but that is very rich. In the lowlands the cows will give five gallons during the best of the season. The cows of this district were formerly regarded as some of the best dairy-cows in Scotland, but since the breed has been more improved, and greater attention paid to the fattening qualities, they have fallen off in their character for the pail. About half of the milk is consumed at home, the rest is made into butter and cheese. The butter, as is generally the case in this part of Scotland, is good, but the cheese poor and ill-flavored. No oxen are used on the road, and few for the plough.

The Angus polled cattle, like many other breeds, are exceedingly valuable in their own climate and on their own soil, but they do not answer the expectations of their purchasers when driven south. They yield a good remunerating price, but they are not quite equal to their ancestors the Galloways in quickness of feeding, or fineness of grain. They attain a larger size, but do not pay the grazier or butcher so well.

SUFFOLK.

The Suffolk Dun used to be celebrated in almost every part of the kingdom, on account of the extraordinary quantity of milk that she yielded. The dun color is now, however, rarely seen in Suffolk, and rejected as an almost certain indication of inferiority. The breed is *polled*

The Suffolk, like the Norfolk beast, undoubtedly sprung from the Galloway; but it is shorter in the leg, broader and rounder than the Norfolk, with a greater propensity to fatten, and reaching to greater weights.



SUFFOLK COW.

The prevailing and best colors are red, red and white, brindled, and a yellowish cream color.—The bull is valued if he is of a pure unmingled red color.

Exaggerated accounts have been given of the milking of the Suffolk cow, and she is not inferior to any other breed in the quantity of milk that she yields. In the height of the season some of these cows will give as much as 8 gallons of milk in the day; and 6 gallons is not an unusual quantity. The produce of butter, however, is not in proportion to the quantity of milk.

The bulls are rarely suffered to live after they are three years old, however excellent they may be, for the farmer believes that if they are kept longer they do not get a stock equally good, and particularly that their calves are not so large after that period. Nothing can be more erroneous or mischievous. A bull is never in finer condition than from four to seven years old.

Having obtained by accident or by exertion, a good breed of milkers, the Suffolk people have preserved them almost by mere chance, and without any of the care and attention which their value demanded.

Editorial, &c.

G. Buckland, Esq., Editor.
H. Thomson, Esq., Assistant Editor.

HINTS FOR THE MONTH.

During this month, the eradication of weeds and the hoeing and cultivation of drill crops will claim the particular attention of the farmer. Weeds grow rapidly in this country, especially at this season of the year, and if suffered to get in advance of the crops among which they appear, the latter will have but a poor chance. Such troublesome weeds as Canada thistles may be considerably checked, and some have affirmed, even entirely killed by mowing close to the ground at a particular season in July, when in full flower and vigour of growth. This operation should not be delayed so long that there may be any chance of any of the seed being matured and blowing to other fields. On naked summer fallows, during this month, a thorough ploughing, with the irons of the plough well sharpened, so as not to leave any of the ground unturned will go a great way towards destroying the Canada thistle.

Farmers who have fields or patches of ground where the crop sown has failed from any cause, may still sow some kinds of crops with advantage. On suitable land, buckwheat is a safe and profitable crop, and can always be disposed of readily at a good price in this market. The land should be of a sandy or loamy nature and well ploughed before sowing. From the beginning to the middle of July is counted a good time to sow this crop. If sown too early the sun is apt to kill the blossoms, and if too late, the crop is liable to danger from frosts in Autumn—about three pecks of seed to the acre will be sufficent. The crop may be sown either to be ploughed in as green manure, preparatory to sowing fall wheat, and which will be an assistance to poor land, or it may be sown with a view of harvesting the grain. If sown to be ploughed down, a somewhat greater quantity of seed should be used.

White turnips may be sown as late as the middle or 20th of July. Although not equal in value to Swedes or mangel wurzel, or so easily kept in winter, they are still useful for sheep and cattle, or will sell readily in the market. The land should be fresh and rich and in mellow condition, and should have sufficient moisture to ensure rapid vegetation. Half a pound of seed to the acre will be sufficient if evenly distributed, and the crop will require little after, cultivation other than a timely thinning.

But the principal business of this month will be the securing of the hay and grain crops, and it is of the greatest importance that the farmer be fully prepared for this work when the season arrives at which it should be performed, and that no other indispensable work should be in the way to interfere with it.

Before this number of the *Agriculturist* reaches our subscribers, the hay harvest will probably have commenced over a considerable portion of Canada West, as clover cutting usually begins, west of Toronto, from the 20th to the 30th of June. The hay crop this year, from the considerable quantity of rain, which fell in the early part of the season, will probably be an abundant one, and most accounts agree in describing it as such. As to the season for cutting hay, although some contend that it should be well matured, or nearly ripe, before being cut, the best farmers generally agree in the opinion that it is better to cut it at an earlier stage: clover as the blossoms are fading, and timothly when in full flower. It is believed that what hay gains in weight, if left standing after that period, it will lose in quality.

As much care as possible should be taken to avoid exposing the hay to rain or heavy dews after being cut. Such exposure, although in bad weather it will sometimes unavoidably hap-

pen, causes a rapid loss of the nutritious elements, as well as greatly injuring it in colour and appearance. Too much drying in the usual hot sunny weather of July is also injurious to quality and appearance. By active management, with the use of a good horse-rake, to gather the hay into small winrows or cocks as soon as sufficiently wilted, and being careful not to cut too much at a time, injury from these causes can usually be avoided. It is prudent management, where there is sufficient barn or shed room, to draw in the hay as soon as it will admit of being done, and let it finish drying upon the mow, rather than run the risk of exposing a large quantity to bad weather. More of the natural juices and colour will thus be preserved. A sprinkling of salt will prevent heating, and will render the hay more palatable for cattle. The saving of good grass seed is an important matter, especially now when it usually sells at high prices, and very often can only be obtained of indifferent quality. Timothy seed ripens about the end of July, and it might be worth while to save an acre or two of good clean timothy for this purpose. The seed could be easily obtained by mowing or cradling, and afterwards thrashing out by the flail, or thrashing machine. Or the fence corners, where good timothy frequently grows, might be turned to advantage in this way.

Wheat harvest will probably commence pretty generally shortly after the middle of the month. We regret to learn from various parts of the province that the wheat crop has been rather seriously injured from winter killing and late spring frosts. It is to be hoped, however, that it may turn out better at harvest than has been anticipated. Most of our Canadian farmers know tolerably well how wheat *ought to be* harvested, but it must be confessed that an inspection of our stubble fields, would occasionally show a sad degree of slovenliness in regard to the way this knowledge is put into practice. The present high prices of grain will probably tempt farmers to be a little more careful in this respect.

A good deal of discussion has been expended upon the question as to the precise period at which wheat ought to be cut. In this climate, however, the time between the heading out, and the perfect ripening of the grain is usually so very short that there is not much time to deliberate. But numerous experiments have amply shown that when the kernel is just getting out of what is called the milkey state, the farmer may enter it with the cradle or reaping machine, without fear, and need not wait till it is sufficiently ripened to thrash and take to mill as soon as cut. By early cutting the wheat will be improved in quantity and quality, and two or three days gained in this way, may be of very great value in securing the crop, either from the effects of bad weather or from loss by over-ripening. It is not well to be too premature in drawing the wheat from the field, before the straw and grain are sufficiently dried. Dampness in the sample, with difficulty in thrashing and grinding, till late in the winter season, has sometimes resulted from overhaste in this respect. A slight shower of rain would be of less consequence than taking in the crop before sufficiently dry. But it is not advisable to lose an hour in drawing in a field as soon as it is really sufficiently dry. However, our seasons are usually so favourable for harvest operations that there is not often much danger to be apprehended from the weather. But it is well to be prepared for all emergencies, and being careful to bind small sheaves, and stook them up in a proper manner, will facilitate the housing of the crop.

It will be the best policy to have a good supply of hands, and to be rather in advance than behind hand with the work. Although hired labour will probably be more than usually expensive this season, it will still be found to pay better, in the long run, to be amply provided.

THE FLAX MARKET.

The *Scientific American* is publishing a series of articles on flax culture, and figures are made to show that the extensive cultivation of the plant would add largely to the income of the country. Great Britain has imported from Russia $26,000,000 worth of flax every year, and as the ports of that nation are now closed by the war, the demand will be greater than it has previously been.

The *Scientific American* says:—"There are millions of acres in our country, the soil of which has no superior for the cultivation of this plant, and which, we have no doubt, might be profitably applied to such a purpose; there is no mystery whatever about the cultivation; well-drained, ploughed, and pulverized loamy soil, the seed thickly sown, and the plants kept free from weeds, are the plain common sense rules for producing flax of a good fiber."

This subject is equally deserving of attention in Canada, as in the United States. We have frequently brought the matter before our readers.

OFFICERS AND DIRECTORS OF TOWNSHIP SOCIETIES.

City of Toronto, April 17, 1854.

To the Editor of the Canadian Agriculturist:—

DEAR SIR,—Misunderstanding having arisen in several of the Township Agricultural Societies as to whether the officers of the Societies have an equal right with the directors to vote at any meeting of the Board, or whether the directors only are entitled to vote at such meetings; your opinion on this subject, published in your most useful and instructive journal, would set the matter at rest throughout the Province, and much oblige

Your obedient servant,

AN OFFICER OF A TOWNSHIP SOCIETY.

We are rather surprised that the question alluded to by our Correspondent should have arisen, or occasioned any difficulty. We learn that the Boards of Directors in certain Township Societies, have held that the Officers were only authorised to vote at proceedings of the Board *by courtesy* of the Directors! If the Societies were incorporated Companies, in which the Directors themselves engaged the services of paid Officers, the case would be different.—But in the Agricultural Societies, the Officers, that is the President, Vice-Presidents, Secretaries and Treasurers, are elected by the same constituencies as the Directors, viz., the Members of the Society, and they are generally chosen as office-holders for the special reason that they are better acquainted with the affairs of the Society, take more interest in it, or are willing to devote more time and labour to its management than others. They perform their services in most cases gratuitously, or at best receive but a trifling compensation, for loss of time and expenses. It would therefore be rather ungracious to ask them to be mere servants, and do all the drudgery of the Society without having any voice in its management, and that too when they are in fact the best qualified to direct the affairs, or suggest improvements in the working of the Society. But independently of these considerations, we think it clear from the reading of the Act 16 Vic. Cap. XI., that it was the intention that Officers should have an equal voice with Directors in the affairs of the Society. We do not profess to be authorised exponents of the law, and there is no clause directly affirming the proposition, but it seems clear from the general tenor of the Act that the above is the correct view. In every clause of the Act, where the Societies are mentioned as being empowered to take any action, it is always provided that it be done by the "*Officers and Directors.*" The 27th clause provides for the election, by the County Societies, of Officers and Directors, viz: "A President, two Vice Presidents, a Secretary and Treasurer; and not more than seven Directors." The 28th clause says, "The said *Officers and Directors* shall and may, for the year next following the Annual Meeting, and until the election of their successors, *exercise all the powers* vested in the County Society by the Act." But the matter seems to be placed beyond a doubt by the 29th clause, which says, "The meetings of the *Officers and Directors* shall be held pursuant to adjournment," &c., &c.; "and at any meeting *five shall be a quorum.*" That is to say, five *Officers and Directors,* (and from the wording of the Act, they might be ALL officers, viz., the President, two Vice Presidents, the Secretary and Treasurer,) are legally a quorum, for the transaction of business, which of course could not be the case, unless the officers had an equal right of voting with the directors on any question. The above clauses are in reference to County Societies; but the 34th, 35th and following clauses provide for the election of officers and directors of township societies, and that they shall conduct the affairs of such societies in the same manner as before directed for county societies.

AGRICULTURAL ASSOCIATION OF LOWER CANADA.

The annual Exhibition of this important Association will take place this year at QUEBEC, on the 12th, 13th, 14th and 15th of September. We trust that a large number of visitors from Upper Canada will attend; and as, under the existing Agricultural Statute, the exhibitions of both Upper and Lower Canada are open to competitors from the whole Province, we subjoin the principal arrangements and regulations of the Quebec Show. Printed Prize Lists may be had by applying to the Secretary of the Board of Agriculture in Toronto.

Minister of Agriculture:
THE HON. DR ROLPH, M.P.P.
President of the Board of Agriculture:
MAJOR T. E. CAMPBELL.
President of the Association:
J. GIBB, ESQ.
Chairman of the Local Committee:
J. GIBB, ESQ.
J. R. ECKART, Esq., *Secretary of Local Committee.*
WM. EVANS, Esq., *Secretary-Treasurer of Board of Agriculture and of Agricultural Association.*

GENERAL ARRANGEMENTS.

Tuesday, 12th September.—Inspection of Implements and Industrial Productions.

Wednesday, 13th September.—Trial of Implements and Exhibition of Industrial Productions. Arrangement and Inspection of Stock.

Thursday, 14th September.—Exhibition of Stock, Implements, &c.

Friday, 15th September.—Exhibition of Prize Stock, Implements, &c. Auction of Stock, &c.

The Competition is open to Exhibitors from all parts of the Province. No Certificate of Entry can be received *after 10th August.*

The Members of Agricultural Societies of the County wherein the Annual Exhibition may be held shall also be Members of the Association for that year, provided the Agricultural Society of the said County shall devote its whole funds for the year, including the Government Grant, in aid of the Association.

The payment of 5s, and upwards, constitutes a person a Member of the Agricultural Association of Lower Canada for one year, and Two Pounds Ten Shillings for Life, when given for that specific object, and not as a contribution to the Local Fund.

Members of the Association are admitted to the Show-Yard without payment, *provided they make application to the Secretary for Tickets of Admission* BEFORE THE 8TH SEPTEMBER. All others to pay 1s. 3d. each time of entrance.—Children to pay half-price.

GENERAL REGULATIONS.

1. Members of the Association may exhibit free of entry-money two Lots, under any section.

2. Members shall pay on each lot exceeding two in one section, and non-Members on all lots, 1s. 3d.

3. Stock must be the property and in possession of the Exhibitor from the date of the Certificate. In all cases the pedigree of thorough bred Cattle or Horses must be stated in the Certificate.

4. Cows must have produced in 1854, and be in milk at the time of the Show.

5 Evidence may be required that Stallions and Bulls have had produce.

6. Aged Ewes must rear Lambs in 1854.

7. The Premiums awarded will be paid on and after the 1st October. Premiums not applied for by 31st December will be forfeited.

8. Any deception on the part of a Competitor will disqualify him.

9. An animal which has already gained a first Premium at a Provincial Exhibition, cannot again compete in the same class. No Competitor can take more than one Prize in each Section.

10. In all cases where any difficulty may arise in regard to Competition, Awarding Premiums, or upon any other subject connected with the Exhibition the Council and Officers of the Association shall decide, and their decision shall be final.

The Judges to meet at the Secretary's Office, on the ground, on Tuesday morning, to breakfast, at 9 o'clock precisely, to make arrangements for entering upon their duties.

Judges are expected to report themselves on arrival, at the Secretary's Office on the ground.

CERTIFICATES OF ENTRY.

1. Each lot must be intimated by a Certificate of Entry, printed forms of which may be had on application to the Secretary, at the Office of the Association, in Montreal, and to T. R Eckart, Esq., Secretary Local Committee, Quebec.

2. All Entries must be completed and lodged with the Secretary not later than Thursday, 10th August.

3. No Certificate of Entry will be received without the entrance money.

4. Admission Orders to the Show-Yard will be given when the Certificates of Entry are lodged.

PLACING AND JUDGING IMPLEMENTS AND INDUSTRIAL PRODUCTS.

1. The Show Ground will be open for the reception of Implements on Monday the 11th September, and all articles must be placed by 12 o'clock on Tuesday 12th. No article will be admitted without an Admission Order, and the different articles must be placed in their respective sections, according to the Classification in the Premium List.

2. A separate space will be reserved for Exhibitors who are desirous of shewing a general collection. A moderate charge will be made according to the ground required, the extent of which must be intimated to the Secretary on or before 10th August. No Exhibitor will be entitled to this privilege who is not a competitor.

3. The necessary articles for trying machines must be provided by Exhibitors.

4. The Judges will commence their inspection at 12 o'clock on the 12th of September (Tuesday), and they will resume it at 7, A.M., on the following morning.

5. A trial of implements will take place during the forenoon of Wednesday the 13th, and at one o'clock the yard will be open to the public.

6. All articles entered must remain on the ground till Friday, 15th.

PLACING AND JUDGING STOCK.

1. Stock must be brought to the Show Ground between 6 and 9 o'clock on Wednesday (13th) morning. No lot will be admitted without an admission order. At 10 o'clock the ground will be cleared of all persons except the Judges.

2 One Servant will be admitted with each lot, and he must remain strictly in charge of it during the Show.

3. No Neat Cattle will be allowed to enter the Show Ground without being secured in a proper manner by either chain, strap or cord.

4. Bulls must be secured by a ring or screw in the nose, with a chain or rope attached.

5. The competing Stock will be distinguished by numbers, and the owner's name must not be mentioned till the Premiums are awarded.

6. The Judges will commence their inspection at 12 o'clock. They will decide without inquiry as to names of parties or places, and with reference merely to the numbers which distinguish the animals. They will have regard to the Symmetry, Early maturity, Purity, Size and General Qualities characteristic of the different breeds.

7. In no case shall a Premium be awarded unless the Judges deem the animal to have sufficient merit, more especially if there be only one lot in the section.

8 A Member of the Committee will attend each Section of the Judges. It will be his duty to see that no obstruction is offered to them, to communicate between them and the Secretary, to complete their reports and to ticket the Prize Animals. None of the Tickets so placed shall be removed. The ground will be open to the public at 8 o'clock on Thursday morning 14th.

9. No Stock to be removed from the Ground till 6 o'clock on the evening of Thursday 14th.

EXHIBITION OF PRIZE STOCK AND IMPLEMENTS.

Prize Stock and Implements must be on the Ground by 9 o'clock on Friday 15th, under penalty of forfeiting Premiums.

AUCTION.

An Auction of Stocks and Implements will take place on the 15th at one o'clock. Exhibitors should state with their entries whether Stock is to be exposed to sale and furnish particulars of Pedigree to enable the Secretary to give the Auctioneer the information requisite for his Catalogue of Sale.

N B.—These Regulations will be strictly adhered to.

By Order of the Board,
WM. EVANS, *Secretary.*
Montreal, 24th May, 1854.

EXHIBITION OF THE AGRICULTURAL ASSOCIATION OF UPPER CANADA.

Our readers are already aware that the Provincial Show, for the present year, will be held at London, on September 26th, 27th, 28th and 29th, and we are happy to assure them that everything, at present, promises a successful result. A most convenient site on the Barrack Ground has been chosen, and the Local Committee are proceeding with the arrangements for erecting buildings, fences, &c., with energy and dispatch. The enterprise has been taken up by the citizens of London, and the United Counties of Middlesex and Elgin, with a zeal and liberality, which leave no doubt of its being satisfactorily and triumphantly carried through.

The Premium List has been considerably extended, and many of the Prizes, particularly for Live Stock, have been much increased. With a view of encouraging the introduction of improved Stock, the Board passed a regulation offering double the amount of the advertised Premiums to all male animals that shall obtain First Prizes, provided such animals have been imported into the Province, since the date of the last Exhibition.

We are authorized in stating that good specimens of all breeds of Stock, not enumerated in the Prize List, will receive liberal attention and encouragement; and this remark will apply to Implements and productions generally. "A Tenant Farmer" may, therefore, rest satisfied that Galloway Cattle will form no exception. It will continue to be the desire of the Board of Directors to conduct the affairs of the Association in as economical a manner as is compatible with convenience and general efficiency, that as large a sum as possible may be distributed in the form of Premiums.

The Directors of the Great Western Railway Company have, with a commendable liberality, engaged to carry all Stock and articles to and from the Exhibition, *free of charge;* and they will run additional trains to meet the convenience of visitors; so that with these advantages, it is confidently expected the public will experience no want of accommodation.

Prize Lists, containing full particulars, will be sent to the different Agricultural Societies and Post Offices in the Province, and may be obtained from the Secretary of the Local Committee, J. B. Smithy, Esq., London; or from the Board of Agriculture, Toronto.

The Office of the Board is situated on the corner of King and Simcoe Streets, close to the Old Government House, where all farmers feeling an interest in the promotion of Agriculture, &c., are respectfully invited, when in Toronto, to call. Hours of attendance from 10 *to* 4, *daily.*

The whole amount of the land in Canada West, owned by fugitive slaves, is stated at 55,000 acres. It is estimated that there are over 35,000 colored people now in Canada.

WILL THE HIGH PRICES CONTINUE?

Since the appearance of the June number of the *Agriculturist*, prices in Toronto, especially of wheat, have reached a higher point than for many years, some lots having sold as high as 9s. 6d. currency. Since later arrivals from Europe, prices have suffered a considerable decline, and at the time we write 7s. 10d. for wheat is the highest price in Toronto. Under the above heading, a late number of the *New York Tribune* has the following article, which will be read with some interest by farmers in Canada:—

A general appreciation of prices has been in progress for some five or six years past. Although its more immediate and visible impulse was the gold discoveries of California and Australia, yet it has roots which reach below these. For nearly 40 years, the civilized world has been substantially at peace, which have consequently made great progress within that period. The population at the civilized world has largely increased, causing a corresponding increase in the value of lands; for the greater the population to the square mile of any district, the higher (other things being equal) will be the price of lands within that district. Industrial progress has increased the efficiency of labor individually and in the aggregate, so that the annual product of human work throughout Christendom is at least double that of 1814. Luxury and extravagance have doubtless become more diffused within these forty years; yet every year of peace and prosperity sees some surplus of earnings over spendings accumulated and invested in buildings, canals, railroads, improvement of lands, &c., so that the aggregate value of property, the unconsumed product of labor, is probably at least double this day what it was on the 1st of June, 1814. Hence confidence, credit, currency, have all been expanded and diffused. Lands and buildings afford a perfect security for nearly their present valuation whenever it is morally certain that such valuation will not be diminished for years to come; hence loans or mortgages on the personal obligation of property-holders are negotiated with facility, and continued without reluctance or distrust. Thus trade expands and is accelerated; money becomes abundant; paper circulates freely, and coin is rarely demanded or needed.

Will the present high prices continue?

In so far as they are based on the increased efficiency of human labor, they will, of course. It is not likely that the implements of industry will ever be ruder or less effective than they now are. On the contrary, it is highly probable that Invention and Improvement will reiterate their successes, until one man's labor will produce as much as that of two does, just as one man's now produces as much as that of two did some years ago. On this head, therefore there is no prospect of a general reduction of prices.

Nor do we think it probable that a collapse will result from the exhaustion of the Gold Mines. California may gradually cease to produce the shining dust; we hope for her sake she may. Australia may follow, though probably at a late period; but the impulse they have given will not soon be arrested. Already Southern Africa; the vast South American region forming the sources of the Andes; Central America; Northern Mexico; Oregon and Washington Territories; and even a good portion of the Southern States, are haunted and harassed by gold-seekers. Most of the individual hunters will probably be disappointed; but some of them will open new fields or increase the product of old ones; and the general result of their operations will be a large and steady increase of the Gold-yield for many years to come—probably for at least a generation. And, so long as the aggregate amount of the precious metals in circulation or in bankers' vaults is increasing, the amount of paper currency in circulation will tend to increase, and prices consequently to rise still higher.

We regard the great war just commenced as the chief antagonist influence to threaten inflation. War is a terrible consumer of property at best; it abstracts men and capital from productive industry and devotes them to the work of destruction. Two fleets or two armies meet in battle, and, which ever may conquer, the remainder is worth a good deal less next day than they were the day before. A fleet bombards a fortified city, and the fleet and city together will probably have less cash value at the close than either had at the beginning of the fray. The British and French fleets are now consuming an immense quantity of coal which ought to be applied to smelting iron. Should this war continue five years, it will have devoured more property than Turkey in Europe would sell for if brought to the block, with George Robbins for auctioneer. And this, if we do not misread the laws of currency, will tend to depreciate prices generally. True, depreciation is seldom realized during the continuance of the war, because the factitious activity and prodigal expenditure incident to war fully counteracts for the time the effect of Property diminution on currency; but whenever peace is restored, and business resumes its natural and healthful channels, the chasm created by war become evident.

If the world has grown richer in precious metals since 1849, it must be plain that this wealth has been acquired at the expense of property in some other quarter. The men who have dug, say five hundred millions in gold, would, but for this employment, have cleared off more forest, broken up and fenced more prairie, mined more coal and ore, made more iron and cloth, grown more grain and reared more cattle, had they not been drawn into gold-mining. And this abstraction of labor from agriculture and manufactures, to mining, has doubly tended to enhance prices—1. by making money more abundant;—2. by making other products relatively scarce. Our readers, being familiar with the arguments in favor of protection to home industry, will not need further elucidations of this point.

Whether the world is actually richer this day for the modern gold-diggings—in other words, whether the gold actually obtained since 1849 is worth more to it than clearings, grain, cattle, iron, steel, cloth, pork, &c., which the labor devoted to mining would have produced in the absence of gold hunting, is a grave question. We do not doubt that this country would have been richer and more truly prosperous this day if the time and labor, outlay and capacity, devoted to California, had been expended in opening mines of iron, coal, copper, zinc, lead, &c., on this side of the Rio Grande, in wresting farms from the wilderness, and in covering them with stock and growing crops. But, since it is plain that, in the absence of an effective tariff, the labor and capital attracted to California would not all have been devoted to such pursuits in the States, but would, in good part, have stood unemployed or been expended to little purpose, we think the influence of California has, on the whole, been beneficial. Yet no one needs to be told that the seventy millions of gold annually received from California are worth no more to us, nor even to our currency, than would be seventy millions' worth of the coal, iron, steel, cloth, silks, &c., which we now import.

But will prices of food rise still higher? We think not in the average, though the prices of some products may. Breadstuffs especially have been carried up by an unfavorable season and a consequent short crop in Europe, which are not likely to be repeated this year. The war will abstract many hands from production and devote them to destruction; still, the deficiency of food on the Continent will probably be less than it has been. At present, France and Great Britain are drawing heavily upon us for specie, as they would not be if they were deficient in breadstuffs. We see that grain and flour sent here from Canada in bond for exportation to Europe, have been released by the payment of duties, so as to be thrown upon our market. In fact the prices of bread and meat are scarcely higher in Old than in New England, while vegetables in the average rule lower. We doubt that there is a city in Europe where potatoes are so high as in New York.—The backward spring contributes to make all descriptions of green vegetables much dearer than usual.

We think breadstuffs and beef will be cheaper soon, but not so much cheaper as our city population naturally wish them. Farming is shunned by the great majority of our more intelligent and enterprising native citizens; trade, manufactures, invention, shipping, mining, law, physic and gambling (witness the 'Gift' humbugs of all shapes and sizes) are more attractive; and, while this shall continue, we must eat dear bread and be glad to get it at any price. Agriculture, guided by science, and pursued with a noble ambition, is the only effectual remedy for the prevailing dearth; and this, like most effective remedies, is slow in its operation. Let us patiently do the best we can.

There is more fatigue in laziness than in labour.

IMPORTATION OF PURE BRED STOCK.

We are glad to perceive evidence of increasing enterprise among a number of Canadian farmers, more particularly in reference to that most important department of rural economy,—the improvement of live stock.

A short time since, Mr. Dickinson, of Port Hope, imported from England a Durham bull, two Yorkshire pigs, and forty Leicester sheep, all of which are described as being excellent specimens. The charges for freight from Liverpool to Portland, by the steamer *Sarah Sands*, are said to have been, for the bull, £20; pigs, £9 the pair; and £4 10s. sterling for each sheep.

Mr. Ralph Wade, Jr., near Cobourg, had some excellent sheep by the same vessel, and his celebrated young Durham bull, "Sir Charles Napier," sired by the world-renowned bull, "Belleville," the property of John Mason, Esq., of Yorkshire, England. Mr. Wade seems determined that neither trouble nor expense shall deter him from procuring the finest specimens of stock, which England can supply. The reader will find more particulars of Sir Charles in an advertisement at the end of the present number.

We have heard of several other instances of recent importations in different parts of the Province, but not having been made acquainted with the particulars, we are unable to do more than make this general allusion. Mr. George Miller, of Markham, has again imported some very fine Leicester sheep; and we hear that Mr. E. W. Thomson, the President of the Board of Agriculture, has just procured a very fine Durham bull, from the United States.

The farmers of Northumberland and Durham seem determined not to be outdone in this particular department of agricultural improvement, as we have just learnt that Mr. George Roddick, of the township of Hamilton, has recently arrived from Scotland, with three very fine Galloway cattle (a bull and two heifers), a Short Horn bull calf and heifer, with some Cheviot and improved Leicester sheep.

We are pleased to see the importation of new breeds that have not yet been tested as to their adaptation to the climate and pasturage of this country. It is to be hoped that the Provincial Association, and Agricultural Societies, and enterprising individuals generally, will extend a liberal degree of patronage to whatever promises to improve and diffuse the live stock of the country. Times are now vastly different with farmers

to what they were, and we hope and believe that the extremely low prices, to which they have so long been accustomed in Canada, are gone forever. Butchers' meat, like most other productions, commands a good remunerating price, and promises to continue so. It will therefore be much to the interest of the farmer to adopt and persevere in a systematic improvement of all kinds of domesticated animals, and we would warn him against a penny wise and pound-foolish system, which an ill-informed niggardliness is always so inclined to pursue. Such animals as are really qualified to improve the stock of the country, can neither be purchased nor reared without much care and pecuniary outlay. The risks of importing from the other side of the Atlantic are enough to damp the most ardent spirit. Several recent instances of heavy losses to Canadian breeders must be fresh in the recollection of most of our readers; and we have just been informed of a Society in the State of New York having lost at sea, twelve, out of twenty-four very costly animals!

With the almost unexampled high price of pure bred stock in Britain, and the great risk and expense incidental to importation, farmers must make up their minds to pay a corresponding charge for the use or ownership of such animals as have cost the enterprising breeders and importers such a heavy amount of money, anxiety and skill. It may be safely taken as an axiom in stock-breeding, *that a liberal outlay, made with judgment at first, is the shortest road to ultimate success, and the maximum of profit.**

TRADE OF CANADA.

The annual report of the Montreal Board of Trade recently published, and which is a document of considerable length, gives some interesting statistics in reference to the Trade of Canada.

The point started from is the year 1816, when the restrictions upon Free Trade were finally abolished, and the measures introduced by Sir Robert Peel, caused such a change in the commercial relations between ourselves and England. Since then, the amount of the trade between the British North American Provinces and the United States, has been rapidly increasing—the value of the exports and imports in 1852, having nearly doubled that of 1849. A like increase marks the trade between Canada and the United States for 1849. While the exports amounted to $1,481,082, and the imports to $1,243,724, in 1852 the value of the former had increased to $4,569,969, and the latter to $6,717,960. In 1849 the quantity of flour and wheat exported was equivalent to 24 936 barrels; in 1752 it had increased to 466,912, while in 1853, the exports to Oswego and Ogdensburg of flour and wheat alone, amounted to 587,380 barrels.

Since 1847, the increase in the general trade of Canada has been as marked as satisfactory. In that year the imports were valued at £2,966,876, and the exports at £2,203,954, while in 1751, they had increased the one to £5,071,573, and the other to £3,513,995.

GUANO.

This manure has not been introduced into Canada, except to a very limited extent. In the United States, it has been extensively employed in the neighbourhood of the large cities, but the enormous increase of price lately, in consequence of the measures of the Peruvian Government, will compel the substitution of other manures. The New York *Tribune* of a late date says:—

"The Peruvian Government has put up the wholesale price of this famous fertilizer to $60 per ton. The excuse for this is the prevalence of high charges for freight; though we believe the extension and eagerness of the demand has been quite as potent in the premises.

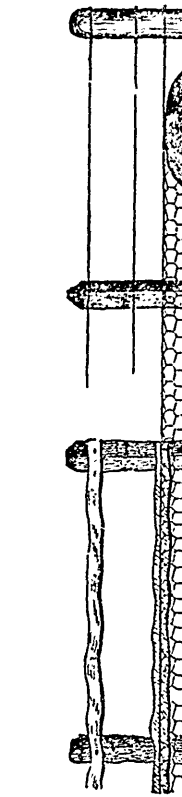
Well: we don't say that Guano won't pay even at $60 per ton; but we *do* say that most farmers can buy or make what is of at least equal value for $50. Phosphates and Super-Phosphates, Ground Bones, Poudrett, Lime, Plaster, Potash, Soda, Salt, and many other fertilizers, can be bought so as to do the farmer better service than Guano at $60 per ton. And any farmer who will set earnestly and intelligently to work to *make* or save fertilizing materials, can find in some convenient swamp, or marsh, or pond, or slough, what, by wise treatment with salt and lime, or by mingling with the contents of his barn-yard, will pay him better than buying Guano at $60 per ton.

Guano is a quick, heating, stimulating manure, and has rapidly won a wide reputation, not undeservedly. It suits those who want to *see* the benefical result of their application forthwith. But it were absurd to suppose that our farmers need send to the Pacific Ocean for the means of renovating their exhausted lands. There are ample fertilizers beside, and more will doubtless be developed by observation and the progress of science. If all would hold off from buying, the price of the Peruvian dust must come down, or, if not, we can learn to do quite as well without it.

*Several instances have lately come to our knowledge which show that Canadian farmers are beginning to comprehend this truth. The Hon. Adam Fergusson informs us that he sold all his bull calves this spring at satisfactory prices without any difficulty. An inferior animal would often prove dear as a gift while one of really superior excellence and inheriting from both sides, *pure blood*, would be safely purchased at almost any price.

WIRE NETTING.

This useful and elegant material, which is susceptible of so many applications to purposes of the farm, garden, domestic and ornamental buildings, &c., can be procured in Toronto, of Mrs McAndrews, who makes it by hand, at a reasonable price. Specimens have been used at the two last Provincial Exhibitions for securing poultry, &c., which have attracted much notice and approbation. It makes a safe and elegant fence,as shewn in the engraving, and different varieties and patterns are adopted to several purposes. Mrs. McAndrews also makes netting for sieves for fanning mills.



PRICES.

For Fencing 1 yd. wide mesh. 2 inh. per yard, 2s. 9d
" Fanning mills 1 yd. do do 1 inh. do 5s.
" do do 1 yd. do do ½ inh. do 6s. 6d

Direct to Mrs. McAndrews,Wire Worker, care of Mrs. Dunlop, Bay Street, Toronto, or to Mr. Haworth King Street, Toronto, where patterns of the work can be seen.

THE CURCULIO.

This insect is becoming so destructive to plums, &c., in Canada, that any method by which it can be destroyed should be made widely known. A correspondent of the *New England Farmer* suggests the following remedy, which is at least practical and simple, and if punctually adhered to would probably be efficacious:—

Take ten yards (and if your trees are very large, more will be required, and add another breadth,) of cheap sheeting, cut the same in three equal parts, and have them sewed together so as to form a mammoth sheet, cut half way through the middle, and have it hemmed; with this you can completely cover the ground under the trees. and with the aid of two or three children to assist in holding the corners and spreading the same, a vast number of curculios may be destroyed in one hour's time. The way to proceed is this: after your sheet is spread give the trees a sudden jar; if the trunks are not more than three inches in diameter, nothing more than the hand will be required; if trees are large, have at hand a large mallet, with the corners rounded off, and wound with cloth, under which there should be a little stuffing to prevent injury to the bark; strike with that square against the stem of the trees, then at once, with a pair of pincers made of the thumb and fore finger, dispatch the curculios, or they will soon be off. Be sure and pinch hard enough to break their shells. If you have help sufficient to hold the sheet up to the lower branches when the tree is shaken, more curculios will be secured, for I have noticed that in their descent from high trees they sometimes fly before striking the cloth. If the insects are numerous, visit your trees once a-day, say just before sunset, and you will thin them out fast.

If you have cherry trees in bearing, visit those with your sheet and mallet and pincers. Every dozen insects treated in this way, makes the number less to propagate the species; but most other plans only drive them to other places, if indeed they have any effect at all.

The other method is, pick the fallen fruit, and either burn or empty it in the water where the embryo curculio will drown. I think this insect propagates its species as fast in apples, as in any other fruit. If any one doubts this, let him visit a tree laden with fruit, when it is about the size of cranberries, or walnuts, and carefully examine the abortive specimens with which the earth is sometimes literally covered; observe the crescent marks, and the small worms in the fruit, and I trust he will be convinced.

Where these fallen specimens are exposed to the scorching rays of the sun, it usually bakes them, and their contents; but when shaded, the embryo curculios nearly all mature. Pick and boil or empty this infected fruit into the river. This may seem like too much labor, but you will surely receive a rich reward for care and labor thus bestowed.

MANURES.

The *Rural New Yorker*, in answer to a question as to whether land which now, by the use of plaster and clover, produces every other year 30 bushels of wheat per acre could be made, by the use of guano and leached ashes, to produce 30 bushels per acre *every* year? and if it will, what amount would it be necessary to apply each time, and how should it be applied? says:—

"On such land as you describe, there cannot be the least doubt but that by the aid of guano and ashes, from 30 to 40 bushels of wheat per acre may be raised every year. Some 500 lbs. of *good* Peruvian guano would be required per acre each year. We would sow half of it in the fall and the other half early in the spring. The great practical difficulty in the way of growing wheat every year is in *keeping the soil clean*. In Mr. Lawes' experiment, where he has grown wheat eleven years in succession, he drills in the wheat in rows a foot apart and hand hoes it twice or thrice in the spring. By such constant tillage the soil is apt to become too light for the wheat plant. But this may be avoided to some extent by sowing early and treading it with sheep in the fall, or by the use of a heavy roller, or Crosskill's Clod Crusher. But will such a system of cultivation pay? We answer it will pay well, if wheat sells for $2,00 per bushel. It certainly will not pay with wheat at $1,00 per bushel."

SALES OF ENGLISH STOCK.

The following particulars, taken from the *Farmer's Almanac* (London) for the present year, of a few of the sales of the most celebrated breeders of *Short Horn Cattle*, will be interesting to many of our readers. For the convenience merely of reference, the lists will always be valuable. They show the high value attached to that most distinguished breed by the highest possible authority:—

The two last years will be long remembered in the history of British Agriculture. They include the period of minimum prices, and of the greatest Agricultural difficulties. It will be noted too, perhaps, by the future historian, how well and how energetically the unconquered British farmers strove to meet the natural as well as Legislative difficulties with which they were surrounded—how ardently they labored to increase the productiveness of their soils—and how ably they directed their attention to the most profitable branch of Farming which presented itself—the increase of numbers, and the improved breeding and feeding of their live stock. Such an historian too will not forget to notice one or two of the results of that skill, that science: he will glance at the memorable sale of Lord Ducie's Short Horns at Tortworth, August 24, 1853, as one of those events which those who are apt to undervalue the efforts of the English breeder will do well to study. We subjoin the result of that sale, as well as those of the celebrated Charles Colling, of Ketton, near Darlington, October 11, 1810; of Robert Colling, at Barmpton, September 29, 1818; and of Mr. Thomas Bates, of Kirkleavington, May 9, 1850. The following Tables give the prices obtained at these memorable sales:—

Charles Colling's Sale.

Cows.	Age.	Gs.
Cherry	11..	83
Peerless	5..	170
Countess	9..	300
Celina	5..	200
Lady	14..	206
Lily	3..	410
Bulls.		
Comet	6..	1000
Major	9..	290
Petrarch	2..	365
Alfred	1..	110
Luke	1..	105
Bull calves under one year old.		
Young Favorite		110
Geerse		130
Sir Dimple		90
Cecil		170

Heifers.	Age.	Gs.
Phœbe	3..	165
Young Duchess	2 ..	180
Young Countess	2 ..	250
Lucy	2..	132
Charlotte	1..	132
Heifer calves und 1 yr.		
Lucilla		176
Calista		50
White Rose		75

Altogether it appears that—

	£	s.
17 cows sold for	2802	9
11 bulls	2361	9
7 bull calves	687	15
7 heifers	912	13
5 heifer calves	321	6
47 lots	7115	11

Robert Colling's Stock Sale.

	Gs.		Gs.
31 cows produced	4141	One 2 year old cow sold for	331
17 heifers	1287	One 4 do	220
6 bulls	1313	One 5 do	350
4 bull calves	712	One 1 do. bull calf	220
61 head of cattle	7181	One 4 do. bull	621

Thomas Bates's Sale.

The herd of Mr. Bates consisted of six distinct tribes or families; viz., the Duchess, the Oxford, the Waterloo, the Cambridge Rose, the Wild Eyes, and the Foggathrope.—*Newcastle Journal.*

Duchess	£	s.
4 cows sold for	322	7
3 heifers	441	0
1 heifer calf	162	15
4 bulls	625	16
2 bull calves	75	12
14 head	£1627	10

Oxford.		
4 cows sold for	288	15
2 heifers	95	11
4 heifer calves	303	9
3 bulls	206	17
13 head	£891	12

Wat Eloo.		
2 cows sold for	101	17
3 heifers	189	12
1 heifer calf	74	11
6 head	£367	0

Cambridge Rose.		
1 cow sold for	47	5
1 heifer	73	10
1 heifer calf	26	5
3 head	£147	0

Wild Eyes.		
9 cows sold for	328	13
7 heifers	410	10
2 heifer calves	61	1
4 bulls	251	2
3 bull calves	126	6
25 head	£1213	6

Foggathorpe.		
2 cows sold for	71	11
1 heifer calf	31	10
4 bulls	222	13
7 head	£325	15

The Sale consisted of	£	s.
22 cows which sold for	1163	5
16 heifers	1221	3
10 heifer calves	642	11
15 bulls	1339	7
6 bull calves	201	12
48 head	£4538	1

Referring to the Kirkleavington sale on the 9th of May, 1850, we find the Earl of Ducie to have been the purchaser of six head. The prices for which these animals severally sold at Kirkleavington and at Tortworth are as follows:

Prices at Kirkleavington, May 9, 1850.

	£	s.	d.
Duchess 55th	110	5	0
Oxford 6th	131	5	0
Duchess 59th	210	0	0
Duchess 64th	162	15	0
Oxford 11th	131	5	0
Fourth Duke of York	210	0	0
Total	£965	10	0

Prices at Tortworth. Aug. 24, 1853.

	£	s.	d.
Duchess 55th	52	10	0
Oxford 6t	215	0	0
Duchess 59th	367	0	0
Duchess 64th	630	0	0
Oxford 11th	262	10	0
Fourth Duke of York	525	0	0
Total	£2052	0	0

The produce of the foregoing, after becoming the property of his lordship were,—

	£	s.		£	s.
2 heifers sold for	935	0	1 bull calf	315	0
4 heifer calves	1219	10	—		
1 bull	682	10	8 head	3192	0

EARL DUCIE'S SALE.

Cows and Heifers.	yr	mo.	Gs
Bessy	13	6	41
Stella	12	6	35
Challenge	10	6	44
Duchess 55	9	0	50
Victoria	8	6	44
Princess Fairfax	8	0	77
Norwich	7	6	50
Pearl	7	6	42
Admiral	7	6	100
Oxford 6	6	6	205
Duchess 59	5	6	350
Camilla	5	6	110
Virginia	5	6	75
Lamp	5	6	65
Laura	5	0	75
Beauce	5	0	87
Cowslet	4	6	51
Victorine	4	0	46
Rosina	4	0	3
Duchess 64	4	0	690
Oxford 11	4	0	260
Reference	4	0	62
Fatima	3	6	70
Minstrel	3	6	00
Prudence	3	0	115
Flourish	3	0	7
Duchess 66	3	0	700
Victory	2	9	80
Fanny	2	7	70
Fiancee	2	5	90
Diana	1	8	90
Bolkan	1	6	56

Cows and Heifers.	yr.	mo.	Gs.
Lucy	1	5	40
Hornet	1	4	43
Duchess 67	1	3	350
Parliament	1	2	56
Oxford 15	1	2	260
Bibby	1	0	51
Pride	0	11½	165
Duchess 65	0	11	300
Chance	0	7	56
Violet	0	7	48
Snowdrop	0	6	120
Duchess 69	0	5	400
Lizzy	0	4	81
Oxford 16	0	3	180
Duchess 70	7 wks.		310
Parade	14 days.		73
Vanquish	13 days.		30
Bulls and Calves.			
D of Glocest r.	3	0	650
4th Duke of York	6	6	550
Cornwall	1	3	61
Uncle Tom	1	2	37
Vampire	1	1	120
Franklin	0	10	80
Cheltenham	0	8	125
Florian	0	8	58
5th D. of Oxford	0	5½	30
Gloucester	0	4½	10
Francisco	0	4	100
Norman	0	3½	100
Marquis	0	2	75

THE LATE CAPTAIN BARCLAY, OF URY, SCOTLAND.

This well-known character died recently at his residence at Ury. He was distinguished for his great success as a breeder and trainer of race horses and hunting horses, and sustained for a long series of years a first-rate herd of Short-horn Cattle. Indeed the immense improvements made in Britain during the present century in the breeding of horses and farm stock, were greatly aided by the Captain's good taste and judgment, and characteristic energy and perseverance. His exploits as a pedestrian are well known. He appears to have inherited most of his characteristic qualities from his father; who is said to have walked, in an age of bad roads, from London to Ury, 510 miles, in ten successive days, and his ordinary pace was six miles an hour. In thirty years he improved 2,000 acres of arable land, and planted 1,500 acres of wood, an example that produced the best effects in the North of Scotland.

The deceased descended from an ancient and honorable family,—going back as far as the eleventh century;—the celebrated Robert Barclay, author of the "Apology for the Quakers," was one of his ancestors. The following facts and incidents of his life, indicating his feats of extraordinary strength and endurance, abridged from the Montreal *Standard*, will be interesting to our readers:—

In June, 1801, he walked from Ury to Boroughbridge, in Yorkshire, a distance of 300 miles, in five oppressively hot days. The match for 5,000 guineas to perform 90 miles in 21½ hours excited great attention. In a preliminary trial he accomplished 110 miles at a rate equal to 135 miles in 24 hours, and he gained the 5,000 guinea match on 10th November, 1801, by an hour and eight minutes, without being excessively fatigued. His next feat was then one unprecedented, that of walking 1,000 miles in 1,000 successive hours. Believing that he could easily accomplish it, he did not go into regular training. Previous attempts had failed—the pedestrians giving in at the end of 15, 22, and 30 days, from over fatigue. Captain Barclay commenced his task at Newmarket on 1st June, at midnight, and finished it 42 days after, on 12th July, about three o'clock afternoon, amidst thousands of spectators. The pain he suffered during the journey was excessive; but, although he was so still that he had to be lifted after resting, his legs never swelled, and his appetite remained good during the whole period. About £100,000 depended on the match; but the most remarkable circumstance attending it was, that after a sleep of about seventeen hours when he had finished the journey, he was in perfect health and strength, and set off, five days after, for Walcheren. Only another pedestrian has surpassed Capt. Barclay's performance, but the report states that it well-nigh cost him his life. This was Richard Marks, a native of Warwickshire, who performed 1,000 miles in as many hours at Sheffield in 1850, commencing each mile at the commencement of each hour, whereas Captain Barclay's wager was to walk each mile within an hour, and permitted him to walk two miles consecutively, and to sleep about an hour and a half at a time. At the close of the performance, the Captain's rate of travelling was a mile in twenty minutes, while Marks required nearly the hour, fell asleep as he walked, or was only kept awake by bodily suffering.

More recently, Captain Barclay was connected with the well-known Defiance coach, on the box

of which he was frequently to be seen. Whatever he undertook he endeavored to accomplish in the best style; and this was evinced in the management of the Defiance, long the best appointed four-horse coach in Scotland.

In his declining years, his taste for agricultural pursuits revived—he devoted much time and money to the improvement of the breed of cattle and sheep—and the annual sale at Ury for many years drew together the most eminent agriculturists from all parts of the kingdom. By the proprietors and tenantry of Kincardineshire the deceased gentleman was held in high esteem. Sincere, humane, truthful and bold, he held in scorn everything that was dishonorable and oppressive; and his tongue or pen was not slow to express what his heart had conceived. With the exception of the paper on training to which we have referred, a small volume of travels in America, treating principally of Agriculture, and a few contributions to the newspapers, his literary talents were not much exercised; but his knowledge of books, and of the Greek and Latin classics, was considerable, and he had mixed too much with men of all classes not to possess an extensive knowledge of human nature.

OUNTRY FARMERS AND CITY TRADESMEN.

The following letter, addressed to the *New England Farmer*, is worth the serious consideration of those young folks in the country who feel tempted to forego the advantages of the really profitable and health-giving occupation of farming, for the apparent attractions of City or Town life:—

Mr. Editor—I am one of that great multitude of farmers' boys, who, early imbibing the notion that farming is less profitable than most other kinds of business, learn a trade, and finally find themselves city mechanics. A grand good position to look back from, and which I have long wished some one of our class, more competent than myself, would improve for the benefit of our successors; for it seems that farmers' boys, and girls too, are still looking to the shops and stores of the city, as a refuge from the poverty of the farm.

On looking back from this stand-point upon my past experience and observation, the first conviction which occurs to my mind is, that farming is *more*, and other business is *less* profitable than they *seem* to be. I have lately received a letter from a brother, who not "taking to a trade" now owns a small farm. Alluding to my old notions of the unprofitableness of farming, and to the high prices I now pay in the city for all kinds of provisions, he says, in the familiar style of family correspondence:

"On looking at the amount and variety of articles consumed and worn out by farmers; the interest most of us pay when we first begin in the world; our carriage and harness; our clothing, food, &c., for ourselves and little ones, I think, there must be profit somewhere in farming, greater than you used to allow. Look into our buttery, our clothes-press, our cellar, our barn, and pigpen,—nothing to brag of, as you know,—but yet enough if all were put into a bill to make quite a sum. If farmers were to give their farms credit for rent and everything you pay money for, which their farms produce, they would need something of an income to foot the yearly bill—and would find out, I believe, that farming is not quite such a poor and unprofitable business as some of us think it to be."

Farmers handle but little money, and hence are apt to look upon the weekly wages of mechanics as large, which will barely supply a family with the necessaries of life. I recollect my feelings, when a boy, on hearing of a mechanic who received ten dollars a week in the city. I could hardly imagine what one man could do with so much money; or, when it was possible for others to put themselves in the way of getting such wages, anybody should be willing to stay and "gee-haw" oxen on a farm at fifty cents a day! *Well, I left the farm, and have reached* the goal of my boyish ambition. I am in Boston, with ten dollars a week!

But how much better off am I, after all, than *most of my schoolmates are, who were compelled* to work for twelve to fifteen dollars per month, while I was receiving thirty to forty? Little if any; and why? Because 'circumstances alter cases." *Before I kept house I had twelve to fif*teen dollars per month to pay for board, washing, mending, and other unavoidable incidentals—a very important item that farmer-boys seem never to take into account,—and then, when sick, my patcher's, apothecary's, boarding-house keeper's and washerwoman's bills were all made out on the ten-dollars-a-week system, and took off the dollars almost as fast as my pulse beat in a high fever. While the farmer-boy who works by the month is boarded, washed and mended, "in the bargain," and, if sick, is taken care of at the lowest figure, or carried home to be nursed by mother and sisters.

If the editor thinks the foregoing remarks worth publishing, I may take time to say something upon the relative advantages and trials of supporting a family upon a farm in the country, and on ten dollars a week in the city.

A City Mechanic.

MARKETS, &c.

The high prices paid for flour and wheat at our last issue remains with but a very slight reduction. There appears to be but a small quantity of either in the country, but it will not be a great while before new wheat will make its appearance. There is no prospect of its reaching a much higher price, except a sudden speculative demand may for a few days increase the wants of the market. The crops generally are pretty good, and we think, on the whole better than was expected in the beginning of the spring. Laborers appear to be the great want. Machinery is however being brought to the aid of the farmer, and there will be more in use the present season in Canada, than ever there was before.

Literary and Miscellaneous.

FAMILIAR CHEMISTRY.

BY MRS. M. F. F. THOMAS.

CHAPTER IV.

Having now glanced briefly at the elements, and combination of elements, which compose the visible world, the process of *germination* will next occupy our attention.

Plants are of two kinds—Oviparous and Viviparous. The first reproduce their kind by seed; the second by offshoots, or bulbs. The seed, like the egg of animals, is composed of a microscopic structure, called the *embryo;* and its proper food stored up to nourish it, till it becomes sufficiently developed to elaborate its own sustenance. The amount of the last, determines the size of the seed—the embryo of the sturdy oak, differing, materially, in size, from the little mignonette. Folded up, in a point almost imperceptible to the naked eye, lies the vast foliage, and giant arms, of the sturdy oak.

"Each ravelled bud, fine hair and fibre line,
Traced with nice pencil on the small design."
——"And boundless forests slumber in a shell."

Warmth, moisture, and *oxygen,* are necessary to germination. The seed is composed mostly of carbon, and is dry and hard. The *pericarp* is sometimes succulent or juicy, as in the peach, pear, etc., in which case its early decay is usually necessary to free the seed, and enable it to receive the necessary conditions of germination.—The absence of fluids, in seeds,—and consequently of changes which, in both the vegetable and animal economy, take place only by their influence,—enables us to preserve seeds for an almost unlimited period, if secure from moisture. We have accounts of some of the cereal grains being preserved for thousands of years. Seeds, if exposed to moisture without heat and air, will not germinate, however, but decay. Neither can heat or air, or both, produce germination without moisture. The three, combined, can only wake into life principle from its lethargy. Fluids penetrate, soften, render its substance susceptible of change, while heat aids the union of the carbon with the oxygen of the air, thereby forming a new, starchy substance, which constitutes the first food of the embryo. Hence, seeds bedded deeply in the earth, remain, sometimes, inert for years and then, when exposed to the air by being thrown up in ditching and other excavations, germinate immediately. Seeds, therefore, plant-ed deeply, or in soils nearly impervious to air, germinate slowly, and uncertainly. They will germinate upon the surface of the soil, or even upon cotton floating upon water, or in any other position where exposed to heat, air, and moisture, but better a short distance below the surface of the soil, as an equality of moisture is better preserved, and light is excluded. Light, though it does not prevent, retards and stints germination,—for an obvious reason. Plants in the light are inclined to evolve oxygen, by decomposing carbonic acid, and retaining the carbon. The opposite process is necessary in germination. The carbon is thrown off, as carbonic acid, and oxygen is retained. Plants, unlike animals, can elaborate their pabulum from its primary elements. By a process, undoubtedly merely chemical, as it has its counterpart in inorganic chemistry, the mere presence of the germ, causes the unison of these elements into substances fitted for its nourishment. Therefore, if lime, or any other ingredient of vegetable structures, be lacking in the soil, they can be supplied in the elementary form. It is therefore a great aid in, if not absolutely necessary to, successful agriculture, to understand the chemical composition of the soil, and also of the various manures usually applied. Though heat is necessary to germination, a too high degree destroys the vitality of the germ. The malting of grains consist in first inducing germination, and then destroying the vitality of the germs by increased heat, at a certain period. Grains treated in this manner, when macerated or soaked in water, produce a sweet liquid which is subject to fermentation. The process of fermenting liquors, or raising bread with yeast, is a process of germination. Yeast is a plant of the simplest order, consisting of single cells, which never attain any higher degree of development; but placed in favorable circumstances, propagate their kind with astonishing rapidity. How rapidly a few spoonfuls of yeast pervades and assimulates a large quantity of dough. The puffiness of the dough is caused by the carbonic acid evolved, as I before said, by the union of the oxygen of the air, with the carbon of the yeast, being retained by the tough *gluten* of the wheat. It is the absence of this principle (gluten) in corn meal, which prevents its ever assuming the spongy form of wheat dough. Mould is also a vegetation. Its germs are so widely diffused that the condition of their germination, alone, is necessary to develop them.

But to proceed with the process of germination. The embryo gradually enlarges, and emerges from the seed coatings in two parts. First the

radicle, or root, shoots down into the earth, then the plume, or stem, rises through the crust, and seeks the pure air and bright sunshine. The root, by its minute fibres, draws sustenance from the moist earth, and conveys it in proper vessels along the stem to the leaves to be exposed to the air, and thus finish the process of digestion begun in the radicles. Whatever be the position of the seed in the earth, the radicle and plume each seek their appropriate sphere, even though by doing so, they are obliged to describe an angle. Plants are divided into two classes, called *monocotyledons* and *dicotyledons*. The seeds of the first have but one lobe. The grains, and grass-like plants, are examples of this class, and are known by the sheath-like envelopes in which they emerge from the ground. The second have two seed lobes, and two leaves appear simultaneously above the ground. These first leaves are the cotyledons or seed lobes, swollen and succulent. They become green by exposure to light, and take on a new function. Whereas they before elimenated carbonic acid, it now constitutes their food: which they digest, furnishing the still feeble embryo with the carbon necessary for its growth. By-and-by the embryo attains sufficient strength to obtain its own nourishment, and then the seed-leaves wither away, and the new plant stands forth perfected. Monocotyledon plants grow by depositions in their centre, which press outward the old structures, rendering them very dense and hard, as in canes. The outside of the stem is usually very dense, the internal parts more porous, the porosity increasing towards the centre, which is usually occupied by a spongy pith. This class of plants seldom attain a large size, though they sometimes grow to a great height, as the palms of torrid zones.

The Dicotyledons grow by successive layers, formed, annually, around the stem, under the bark, where the cambium or true sap circulates. The juices imbibed by the roots are carried up through the *body* of the plant to the leaves, where they undergo a change by contact with the air, and are then returned or descend between the bark and wood. This is the true blood of the plant. From it are formed, not only a new layer of both wood and bark, but the stems, leaves, and flowers, also. The age of plants can be pretty accurately determined by counting these layers near the root. Whenever, from any circumstance, this cambium is obstructed in its course, and accumulates, the buds are formed, most usually in the angles of the branches, or foot stalks of the leaves. At first, in early spring, the foliage puts forth rapidly. The first faint tinge of green upon the black forests is quickly succeeded by its full glory of many hued emerald. But in midsummer, Nature seems to rest: and maturity approaches slowly. Then are being formed the buds in which lies wrapped all the vast foliage and new groups, of the ensuing year, at the bottom of, or within the leaf stalks, of the present. So Nature,—

> "Ere one flowery season dies,
> Designs the blooming wonders of the next."

Then, too, the annual plants, having attained maturity, are engaged in perfecting the organs of fructification,—"each plant bearing seed after its kind."

BROOKLIN, June 13, 1854.

BAD AIR.

Bad air is a slow poison. That is the trouble. People go on taking it day after day into their lungs, and night after night. They grow pale, their lungs suffer, the circulation is languid, they take colds readily, the chest, the stomach, the skin, become disordered, and a host of chronic diseases attack them. A little carbonic acid taken every day does not kill a man. It is almost a pity it don't! If a red hot stove destroyed instantly one man in every town daily for a week, there might be some salvation for the nation. If, instead of fainting away in crowded and badly-ventilated public assemblies, people occasionally died outright in convulsions, the authorities would take the matter in hand, and make it penal for owners of such buildings to open them for public use without attending to the proper condition or the preservation of health. When a thing is only a slow poison, the age is too much in a hurry to attend to it.

In such cases we must wake up the public lethargy by facts. And here is one of them. We have before us the history of the Dublin Lying-in Hospital. Some years ago this building, erected in the common way, without the slightest regard to ventilation, was found to exhibit a great amount of mortality among the youngest children born there. In four successive years, healthy seasons too—out of 7,250 infants brought forth in the hospital, 2,544 died within the first night after birth, of convulsions, or what the nurses call nine-day fits. These children foamed at the mouth; the faces swelled and assumed a purplish hue, as though they were choked. These last circumstances suggested to the physician that a deficiency of wholesome air was connected with the great mortality. Air-pipes were immediately contrived; the rooms were ventilated. What was the result?—That in the three following years, out of 5,358 children born in that hospital, only 165 died; in the very same rooms too, where, according to the old ratio before the ventilation took place, the number of deaths to the number of children would have been 1,682. To save the lives of more than 1,000 human beings in three years, by putting in a few pipes! Can any one say there is nothing in ventilation, after such facts as these?

TREATMENT FOR CONSUMPTIVES.

The following valuable remarks on the treatment for Consumptives people are from the pen of Mr. N. P. Willis, the popular American writer. They show, in as far as his testimony goes, that those who live in the Country, lead an active and vigorous life and breathing plenty of fresh and pure air, have little to fear from this so much dreaded disease, while other similar testimony has shown that even those who were supposed to be far advanced in Consumption, have recovered their health by accustoming themselves gradually to out door exercise in the open country, together with observing regular hours, paying a proper regard to diet &c.

After premising, among other things, that "the patient who troubles himself the least about his disease, (or who leaves it entirely to his doctor,) but who perseveringly *out votes* it by the high condition of the other parts of his system, is the likeliest to recover"—that two persons are seldom the subjects for precisely the same medical treatment, or diseased in precisely the same locality—that our friends, the physicians, are better geographers than we, as to where the healing is wanted—though they too often take for granted that the patient keeps the rest his body in proper training for recovery—Mr. WILLIS continues: "I went to the Tropics, as a last hope, to cure a chronic cough and blood raising, which had brought me to the borders of the grave. I found a climate in which it is hard to be unhappy about anything—charming to live at and easy to die. (At least those who were sure dying, and did die, and in whose inseparable company I thought I was, were social and joyous to the last.) The atmosphere of that Eden-latitude, however is but a painstilling opiate, while the equator might be called a kitchen-range for Sardanapalus, and the Antilles are but tables loaded with luxuries. The Caribbean sea is the kingdom of the moment. The past and the future are its Arctic and Antarctic—unthought of except by desperate explorers. Hither are sent invalids, with weakened resolution, to make a pilgrimage with prescription and prudence. You may see in the book I have just published, (Health Trip to the Tropics,) with what complete forgetfulness of care or caution I made one of an invalid company for months.

"Was anybody going to shut me up in a bedroom with such nights out of doors? Was anybody going to be dull and abstinent with such merry people, and a French breakfast or tempting dinner on the table?

"I reached home in July, thoroughly prostrated, and in the opinion of one or two physicians, a hopeless case. Coughing almost the whole of every night, and raising blood as fast as my system could make it. I had no rest and no strength. I lingered through the summer, and as the autumn came on, and the winter was to be faced, I sat down and took a fair look at the probabilities. In the details of this troubled council of war I will not detain you; but, after an unflinching self-examination, I came to the conclusion that I was, myself the careless and indolent neutralizer of the medicines which had failed to cure me—that one wrong morsel of food, or one day's partially neglected exercise, might put back a week's healing—and that, by slight omissions of attention, occasional breaking of regimen, and much too effeminate habits; I was untrue to the trust which GRAY, my friend and physician, had made the ground of his prescriptions.—And to a minutely persevering change in the comparative trifles, I owe, I believe, my restoration to health. There was not a day of the succeeding winter, however cold or wet, in which I did not ride eight or ten miles on horseback. With five or six men, I was for most of the remaining hours of the day, out of doors, laboring at the roads and clearings of my present home, The cottage of Idlewild was then unbuilt, and the neighboring farm-house, where we boarded, was of course indifferently warmed; but by suffering no state of the thermometer to interrupt the morning cold bath, and the previous friction with flesh-brushes, which makes the water as agreeable as in summer, I soon became comparatively independent of the temperature *in* doors, as my horse and axe made me independent of it when *out* of doors. With proper clothing to resist cold or wet, I found, to my surprise, that there was no such thing as disagreeable weather to be felt in the saddle; and when a drive in a wagon or cariage would have intolerably irritated my cough, I could be all day in the woods with an axe, my lungs as quiet as a child's.

"There are so few invalids who are invariably and conscientiously *untemptable* by those deadly domestic enemies, *sweetmeats*, *pastry* and *gravies*, that the usual civilities at a meal are very like being politely assisted to the grave. The care and nuture of the *skin* is a matter worth some studying; for it is capable not only of being negatively healthy, but positively luxurious in its actions and sensations—as every well groomed horse knows better than most men. The American liver has a hard struggle against the greasy cookery of our happy country. The impoverished blood of the invalid sometimes requires a "glass of wine for one's stomach's sake," recommended by the Apostle. Just sleep enough, and just clothing enough, are important adjustments, requiring more thought and care than are usually given to them. For a little philosophy in your habitual posture as you sit in your chair, your lungs would be very much obliged to you. An analysis of the air we live and sleep in, would be well worth looking into occasionally. And there are two things that turn sour in a man without constant and sufficient occupation upon something besides the domestic circle—the temper and the ambition."

Mr. W. expresses the fear that he cannot sufficiently convey to his correspondent his own sense of the importance of a *horse* to an invalid. "In my well weighed opinion," says Mr. W., "ten miles a day in the saddle, would cure more desperate cases (particularly of consumption,) than all the changes of climate and all the medicine in the world."

Poetry.

☞ The following sweet and dainty poem is from the almost enchanted pen of BENJ. F. TAYLOR, the author of "January and June." We have rarely been the almoner of so delightful a gift, and we know that our readers—all of whom are his admirers—will join us in cordially thanking the pure-hearted Poet for his offering.—*Buffalo Express.*

BEAUTIFUL MAY.

Oh! have you not seen on some morning in June,
When the flowers were in tears and the forest in tune,
And the billows of dawn broke bright on the air,
On the breast of the brightest a star clinging there?
Some *Sentinel Star*, not ready to set,
Forgetting to wane and watching there yet?
How you gazed on that vision of beauty awhile!
How it wavered till won by the light of God's smile,
How it passed through the portals of pearl, like a bride,
How it paled as it passed, and the MORNING STAR died!
The sky was all blushes, the world was all bliss
And the prayer of your heart; "be my ending like this."

So my beautiful MAY passed away from Life's Even,
So the blush of her being was blended with Heaven!
So the *bird* of my *bosom* fluttered up to the dawn
Ah! a window was open, my darling was gone
A truant from time from tears and from sin
For the Angel on watch took the wanderer in!
When she warbles to me the "New Song" that she sings,
I shall know her again notwithstanding her wings
By those eyes full of Heaven—*by the light on her hair*
And the smile she wore here she will surely wear there

THE SEASONS.

FROM THE GERMAN.

Hay and corn and buds and flowers,
Snow and ice and rain and wine.—
Suns and Seasons sleet and showers,
Rung in turn, these gifts divine.
Spring blows, Summer glows,
Autumn reaps, Winter keeps;
Spring prepares, Summer provides,
Autumn hoards, and Winter hides
Come, then, friends, their praises sound:
Summer, Autumn Winter, Spring,
As they run their yearly round,
Each in turn with gladness sing!
Time drops blessings as he flies—
Time makes ripe and Time makes wise.

Reviews, &c.

The Canadian Journal and Record of the Proceedings of the Canadian Institute—Maclear & Co, Toronto: May 1854.

This monthly scientific Journal continues to be ably Edited and supported by numerous contributors; and affords substantial proof of the progress of the valuable society of which it is the exponent. The present number contains among its original papers, a very interesting description of Vesuvius and its neighbourhood, by the Rev Dr. Scadding of Toronto; on the establishment of simultaneous Meteororological observations throughout British America, by Major R. Lachlan, of Montreal; on the intrusion of the Germanic Races on the area of the older Keltic races of Europe, by Daniel Wilson, L.L. D., Professor of History, &c., in University College, Toronto; on some genera and species of Cystidea from the Trenton Limestone, by E. Billings, of Bytown; Sykes' Steam Hammer with an engraving, &c.

The Anglo-American Magazine—Toronto: Maclear & Co., June 1855.

An excellent number, embellished by four well executed engravings, containing several interesting articles in addition to the continuation of the more systematic and substantial papers which has given already to this purely Colonial production a respectable position among the periodical literature of the age. The Editor's Shanty, is as usual, full of interest and kindly humour, and by no means devoid of such matters of practical utility as belong to the utilitarian every day world The present number completes the 4th vol., affording a good opportunity for new subscribers to commence with the part for July. The work can be forwarded to subscribers at any distance by post, or by Messrs. Maclear's travelling agents. Price $3 per annum.

Norton's Literary Gazette.—Published fortnightly at $2 a year.—New York: C. B. Norton.

The recent numbers of this periodical fully sustain the high opinion we formerly expressed. It is a valuable and instructive paper to the general reader, which to the man of science or letters, the clergyman, schoolmaster, and indeed to all engaged *or interested in the purchase of books*, or the formation of libraries it is quite an essential. Besides a full list of all new works published in Europe and the United States. with sober and impartial critiques on many of them, it registers the proceedings of literature and scientific societies, and continues more written original papers, illustrated by *engravings when necessary*, on literary subjects. We are glad to find that this well conducted periodical is gaining a circulation in Canada, indicative thereby progress of taste and the difusion of literature among us.

Annual Report of the Normal, Model and Common Schools, in Upper Canada, for 1854. Quebec, printed by order of the Legislative Assembly by S. Lovell, Mountain Street, 1854.

This voluminous Report on the state and progress of Common Schools in Upper Canada by the Chief Superintendent of Education, affords most pleasing and satisfactory evidence of the rapid advance which a sound and unsectarian education is making throughout every part of this extensive Province. A good secular education, based upon the great moral principles of a common christianity, is the only system that can be brought into operation and sustained in a community, separated into different sects and parties, like our own; and the Report before us shews that much more has already been accomplished than a few years since, could have been reasonably anticipated. We shall probably refer again to some portions of this valuable and important document in a future number.

Chamber's Journal,—Part 4—May 1854. W. & R. Chambers, London & Edinburgh; A. H. Armour & Co., Toronto; P. Sinclair, Quebec; J. Armour, Montreal; John Duff, Kingston; A Bryson, Bytown; W. Allan Perth; J. Lesslie, Toronto and Dundas; R. R. Smiley, J. M. Graham, London, C. W.

We have received from A. H. Armour & Co., of this city the fourth part of this highly popular and instructive miscellany, which its talented and experienced conductors seem determined should continue, as heretofore, to hold the van in this important department of the world's litature. The present part fully sustains the high opinion we expressed of its predecessors. All classes of readers may find in every page of Chambers something to amuse or instruct The preparation of each number evinces the exercise of correct taste and sound judgment, combined with much deligence and labour.—We have, at present, no room for extracts; a circumstance less to be regretted as the original edition of the work itself can be so readily produced as it is published, from the Booksellers mentioned at the head of this notice, at the very low price of ten shillings per annum.—The present part contains no less than three of Mr. Chambers's excellent series of papers on "Things as they are in America." treating of Ningara, Toronto, Hamilton, London and the peninsula of Canada West. Although Mr. Chambers's stay in the Province was but short, he evidently made the most of his opportunities, and his paper will doubtless be read with equal interest on both sides of the Atlantic. We can safely recommend this Journal as among the very best publications of the kind, that should receive a welcome into every well ordered family; particularly in these days when trashy publications so much abound.

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