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THE
CANADIAN AGRICULTURIST,

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No. 8.

Reports, Discussions, &c.

TOWNSHIP OF HAMILTON FARMERS' CLUB.

At a meeting of the Township of Hamilton Farmers' Club held at Cobourg, on May 27th, the subject for discussion was the preparation of Summer Fallows, which Mr. Phillips introduced by the following remarks:—

He said Summer fallow might be divided into two classes, namely—a naked summer fallow, and a green crop summer fallow. Some thought that naked summer fallows were unprofitable and might be done away with altogether, and perhaps so they might on low lying land that was not adapted to the growth of fall wheat, but where that was grown extensively he believed they could not be dispensed with. In making a naked summer fallow he would plough the land the first time whenever he found it most convenient in the fall, or in the spring, but be sure to have it done the first time before the end of May; he would always prefer to plough his fallows four times, and if the land was dirty, five times; he would plough rather light for the first and second times, but when he came to plough his fallow the third time in August he would put in the plough as deep as he could, the deeper the better; between the ploughing he would use the cultivator so that every green weed might be kept down; he thought the oftener a fallow was ploughed and cultivated the better; he believed that fall wheat could not be grown successfully without a bare fallow. The other and perhaps the more profitable one for this neighborhood was a green crop fallow: under this he included Potatoes, Turnips, Carrots, Indian Corn, and perhaps he might also include Peas.

In preparing land for green crops he would always plough as soon after harvest as possible, say in September; when land was manured in the fall (which was best for such roots as Carrots that you could not manure in the drill in the

spring) he would plough down the stubble, and manure as deep as his team would admit; when the land was ploughed early in the fall with a deep furrow it tended to make the land work up fine in the spring, which it always ought to do for green crops, as when fine it greatly lessened the labour of harrowing and facilitated the cleaning of the land and increased your chance for a good crop of roots and likewise left the land in fine condition for a crop of spring Wheat or Barley after the roots were taken off. Some green crops, such as turnips, might be profitably manured with fresh manure in the spring; but he did not think it necessary to speak particularly about manure, as every farmer ought to make and apply as much of it as possible. Where the land was clean and rich, Peas might answer very well for a preparation for fall wheat (especially the early varieties); he had seen sometimes excellent crops of wheat after peas, but he saw all our most successful wheat growers place their greatest dependence on their summer fallows, and on all flat lying land he would prefer sowing spring wheat, as there was time in the fall to prepare the land properly for it. With these remarks he would sit down knowing that those present could correct him in anything he had omitted or said amiss.

Mr. BORN thought if we could do away with naked summer fallows altogether it would be best, though he believed that on stiff clay land they could be dispensed with, but on light land he would prefer sowing wheat after a green crop, or peas, or best of all after a crop of clover. When he could get a good catch of clover he would take one crop of hay and the next spring he would allow the clover to grow till it was pretty rank, then when ready to plough he would turn in all the beasts of the farm to tread it so that he could flatten it well down, and he would think himself pretty sure of a good crop of wheat.

Mr. WM. BROWN, JR., thought we could not clean the land properly without summer fallows, as green crops would be found very expensive to cultivate on a large scale, besides should there be any stones or roots on the land you had a

chance when summer fallowing it to clean them off, and that on the whole the most profitable way for fall wheat was to summer fallow.

Mr. Masson said, he did not like naked summer fallow at all; he thought that on stony and stumpy land they must summer fallow so that they could get them cleared up, but that might be called *making land*, but on land that was once fairly cleared up, he thought here should not be a summer fallow in twenty years; he thought that early peas sown in June made a fine summer fallow as they would be off the ground in about six weeks, so that you could plough the land once in the fall and then in the spring before the peas were sown and then once after the peas, and the land was ready for wheat; but should the land be flat he would rather sow spring wheat as he believed that taking one year with another and making allowance for the seasons, that fall wheat was killed out in winter and rusted, that spring wheat was as profitable as it; he thought that to plough land for peas as he had described would kill thistles as well as a fallow; he thought that a bare fallow scourged the soil very severely during the excessive heats of July and August.

Mr. Dixon said, he thought that for fall wheat summer fallows were best—but if he could get a crop of wheat after peas he would prefer them as the two crops would be more profitable than one.

Mr. R. Brown said, that it depended a great deal on the soil as some land did best with a bare summer fallow, and where you had large quantities of land to work it was hardly possible to keep it clean without fallows unless that land was well kept in clever.

Mr. Wm. Rondick said, that he agreed pretty much with what Mr. Phillips had said, that rather new and rough or stoney land could not be cleared up without naked summer fallow, but that as soon as land was once fairly cleared up fallows might be dispensed with and green crops take their place, and that land could be kept clean by following up the green crop with clover; he would plough his land in the fall for green crops and the deeper the better, he had used the subsoil plough a good deal in the fall with very beneficial results; where land was very dirty it was best to summer fallow as it could be easier and better cleared that way than with a green crop.

Mr. Ball said, that if land was clear he would put on some green crop, but where the land was dirty summer fallowing it was the easiest and most effectual method of cleaning it.

Mr. Alcorn said, that after the many excellent practical remarks they had heard from Mr. Phillips and others, he would not say much in the way of summing up. On land that was well adapted to the growth of fall wheat, he thought on the whole that naked summer fallows were the most profitable for the farmer, and kept the land in the best order; he saw that our most successful growers of fall wheat put most dependence upon their summer fallows though he did occasionally see a good crop of fall wheat after peas, yet with him wheat never came away well after peas. As such level low land as he farmed was not suitable for fall wheat he generally grew spring wheat; he grew as many roots as he could

and always sowed wheat after them, he likewise grew it after peas but as he could not grow as many roots and peas, as he wanted ground for wheat, he had been in the habit of sowing spring wheat rather extensively after hay, he ploughed the land with a rather light furrow as soon as he got off his hay, then he cross ploughed the land as soon after harvest as he found convenient applying manure then if he had any, he then ridged up the land well before the frost set in, taking care to open up all the water furrows where required, and keep the land dry as possible, he then sowed the wheat in the spring without further preparation, but should the ground be baked he would go over it with a cultivator before sowing, following this method he had excellent crops of spring wheat, and he had seen some of his neighbors follow the same plan very successfully. In this neighborhood there is not one farmer in twenty that can cultivate as much land in roots as he wants for spring wheat so that we are under the necessity of trying it after other crops, and he had always had better success with it after hay than after any other crop.

MACHINERY IN FARMING—ITS ABSOLUTE NECESSITY.

It is not enough that farmers avail themselves of all the advantages which chemistry affords in its application to their art; it is not enough that they learn how to save as much as possible of the manures made on their premises, and the best methods of applying these and also purchased specific manures; it is not enough that they know at what seasons and to what depths their soils should be cultivated. They must perform as many of the operations of farming by machinery as machinery can be made to perform to advantage.

There is no other way in which agriculture can keep pace in respectability, pleasure and profit, with other arts. Without this expedient it will be outstripped by them, and sink steadily in comparative rank.

By machinery, as we use the word here, we mean all mechanical contrivances which can be substituted for manual labor, and combined with manual labor so as greatly to increase its productiveness.

And the policy which we recommend includes also animal labor, and as a more powerful co-operator with it.

So far as a horse or an ox can be made to do the work of five men, the horse or the ox earns the net product of five men's labor for the employer. If one man cultivates as much corn, and cultivates it well, with one horse, attached to a cultivator, as his neighbor cultivates with ten hoes in the hands of ten men, it is easy to see which of the two is travelling the fastest on the road to wealth.

So in cutting grass, in planting and harvesting grain, in shelling corn, and in various other operations of the farm, machines can do the work for a small percentage of the cost of manual labor.—*M. Makin's Courier.*

Communications.

CORRECTION RELATIVE TO IMPORTED CATTLE.

PORT HOPE, July 14, 1854.

SIR.—I shall feel obliged by your correcting in the next number of the *Agriculturist* a mistake made in the July publication under the head of "Importation of Pure Breed Stock." You state that the "Sarah Sands" brought out to Portland forty sheep, two pigs, and one Durham bull, for Mr. Dickinson, of Port Hope. Of the number you mention, twenty of the sheep and pigs belonged to me, while the bull was one I purchased for Mr. R. Wade, jr., at the same time. I purchased a bull and two heifers for Messrs. Hungerford and Brodie, N. Y., the whole of whose stock of sheep and Durham cattle have been imported by me.

I remain, sir,

Your obt. servant,

C. A. JORDISON.

PROPERTIES OF CHARCOAL.

[The following is from an interesting article, by J. Stenhouse, F. R. S., in the *Journal of the Society of Arts*, London:]

My attention was particularly drawn to the importance of charcoal as a disinfecting agent, by my friend, John Turnbull, Esq., of Glasgow, Scotland, the well-known extensive chemical manufacturer. Mr. Turnbull, about nine months ago, placed the bodies of two dogs in a wooden box, on a layer of charcoal powder a few inches in depth, and covered them over with a quantity of the same material. Though the box was quite open and kept in his laboratory, no effluvia was ever perceptible; and on examining the bodies of the animals, at the end of six months, scarcely anything remained of them except the bones. Mr. Turnbull sent me a portion of the charcoal powder which had been most closely in contact with the bodies of the dogs. I submitted it for examination to one of my pupils, Mr. Turner, who found it contained comparatively little ammonia, not a trace of sulphurated hydrogen, but very appreciable quantities of nitric sulphuric acids, with acid phosphate of lime.

Mr. Turner subsequently, about three months ago, buried two rats in about two inches of charcoal powder, and a few days afterward the body of a full grown cat was similarly treated. Though the bodies of these animals are now in a highly putrid state, not the slightest odor is perceptible in the laboratory.

From this short statement of facts, the utility of charcoal powder as a means of preventing noxious effluvia from church yards, and from dead bodies in other situations, such as on board a ship, is sufficiently evident. Covering a church-yard to the depth of from two or three inches, with coarsely powdered charcoal, would prevent any putrid exhalations ever finding

their way into the atmosphere. Charcoal powder, also, greatly favors the rapid decomposition of the dead bodies with which it is in contact, so that in the course of six or eight months, little is left except the bones.

In all the modern systems of chemistry, such, for instance, as the last edition of Turner's "Elements," charcoal is described as possessing anti-septic properties, while the very reverse is the fact. Common salt, nitre, corrosive sublimate, arsenious acid, alcohol, camphor, creosote, and most essential oils, are certainly antiseptic substances, and therefore retard the decay of animal and vegetable matters. Charcoal, on the contrary, as we have just seen, greatly facilitates the oxydation, and consequently the decomposition, of any organic substances with which it is in contact. It is, therefore, the very opposite of an antiseptic.

DISINFECTING OF PUTRID, NOXIOUS GASES.

A simple, cheap, and easy way of disinfecting putrid, noxious, foetid and mephitic gases, and putrid animal matter, may be accomplished by the free use of soda ash and quick lime. Dissolve twenty-five pounds of soda ash in five buckets of boiling hot water, and while hot shake twenty-five pounds of quick lime, and as soon as slaked, (which if the lime is good, will not exceed five minutes,) mix the fresh slaked lime while hot with the solution of soda ash, stirring it thoroughly for five minutes, by which time the lime will have taken up the carbonic acid of the soda ash; then pour the hot mixture into the privy vault, and it will in a few hours convert the impure and foetid gases into ammonia, and entirely divest the premises of any unpleasant effluvia, and render the atmosphere perfectly salubrious and healthy. Soda ash of eighty per cent free alkali is sold at the soap houses at three dollars per hundred pounds, and Athens lime can be bought by the barrel at seventy-five cents the cask.

Every practical chemist knows that putrid animal matter can be converted into ammonia by the mixture (in a heated state) with caustic alkali. Such is the process, and such the result in the case.

In large vaults a greater quantity than twenty-five pounds is required; the quantity should be increased in proportion to the size of the vault.

The use of one hundred pounds of soda ash per annum, in a vault prepared and used as directed above, will prevent accumulation, and render the services of a scavenger wholly unnecessary.

Bilge water may be purified by the same process.

This preparation is more economical than chlorine of lime—is fifty times more efficacious, and ten thousand times more healthful.

I have used this preparation for more than twenty years, with the most complete success.—*New York Courier.*

Horticulture.

LATE SOWN VEGETABLES.

Some of the greatest delicacies for table use may be obtained from quite late sowings. We can speak most positively in regard to turnips. Both the round and the flat turnip may be sown at any time in July or August, and we have known it come to considerable maturity in a season in which there were no early frosts, when sown in the first week of September. Special pains should be taken to enrich the soil, for in this way we secure two objects—the more rapid growth of the plant, and a sweeter and more tender vegetable. We suppose it is generally known that the more rapid the growth of this and several other vegetables, the more mild and tender they are to the taste. Cabbages, onions, radishes, squashes, cauliflower, are all much more delicate in flavour, and agreeable to the palate when grown freely and rapidly, than when their growth is stunted or slow. Cucumbers and celery may also be added to the above named, as being much milder when grown rapidly than when of slow growth. Some of these may be raised late in the season, as well as turnips, so as to supply the table with the delicacies of spring and summer until quite late in the fall and winter.

By the end of July and in the course of August, there will be vacant places in the garden and field, which it would be good economy to sow with turnips. There will be at all events, the pea and early potato ground; there and other such patches may be sown with round or even flat turnip, and thereby, we will be making provision both for our family and our stock. What we do not use for the table will be well relished by our cattle; and cows which have a tolerable supply, will not dry up so early as cows that have no green feed.—*Country Gentleman.*

DISEASE AMONG CUCUMBERS AND MELONS.

Disease appears to be very common again this year amongst Cucumbers and Melons, assuming rather different forms, but ending equally in the distortion and decay of the fruit, and ultimately, in many cases, in the destruction of the plants themselves. In some instances, indeed, the plants show symptoms of disease from their earliest stage of growth. One of the most serious cases which has yet fallen within our notice has just been communicated from the garden of Lord Delaware, in which the greater part of the tissues present a peculiar transparent aspect, accompanied for the most part by chlorosis. Little elevated specks gradually become distinguished from the rest of the tissue, and at length burst; gum is poured out, the superficial tissues die, and the taint is soon communicated to the whole plant.—As regards the cause, it is as obscure as ever.—The atmospheric conditions of the present year have indeed been very unfavorable for such plants, and might well induce a gouty state, espe-

cially where there was a previous tendency to disease, but it is impossible to assert with any degree of certainty that the disease has been produced under such influences. The fact is that where disease has once been generated the taint remains through many generations. It is very generally admitted that as regards the malady to which the human frame is subject, disease has been greatly modified since the invasion of the influenza of 1837, and the subsequent cholera of 1842: and those whose experience reaches beyond those dates, for the most part readily admit that the treatment of disease has in consequence of this modification undergone great alterations. If this notice be applied to the vegetable world, we may perhaps learn a useful lesson.—The most probable method of combatting the malady in question, which appears to admit of little relief when it is once established, will be to fall back upon seed which has produced before its first general invasion, which it is often possible to do, as the seeds of such plants are amongst those which retain their vitality the longest, and it is the practice of many gardeners to retain the seeds of good varieties for years. But if this is to be done with any chance of success, all recent seed must be strictly excluded, for there is no knowing what a powerful influence the slightest cross of a diseased stalk may have. The pollen of a Pea will affect the color of the seeds, even in the first year, so as to make it impossible to recognize the variety from the seed, and in like manner very powerful modifications of the tissue may be effected, even before the hybridising power has given rise to a new form. In the absence of all knowledge as to any other material relief, the hint above given may possibly prove useful, and there are many other cases to which the principle may be applied.—*Gardeners' Chronicle.*

JAPANESE GARDENS.

The gardeners of Japan display the most astonishing art. The plum tree, which is a great favorite, is so trained and cultivated that the blossoms are as big as those of dahlias. Their great triumph, however, is to bring both plants and trees into the compass of the little garden attached to the houses in the cities. With this view, they have gradually succeeded in dwarfing the fig, plum and cherry trees, and the vine, to a stature so diminutive as scarcely to be credited by an European; and yet these dwarf trees are covered with blossoms and leaves. Some of the gardens resemble pictures in which nature is skillfully modelled in miniature—but it is living nature! Meylon, whose work on Japan was published at Amsterdam, in 1830, states that in 1828, the Dutch agent of commerce at Nagasaki, was offered “a snuff-box, one inch in thickness, and three inches high, in which grew a fig tree, a bamboo, and a plum tree in bloom.”

Cedar chests are best to keep flannels, for cloth moths are never found in them. Red cedar chips are good to keep in drawers, wardrobes, closets, trunks, &c., to keep out moths.

Agriculture, &c.

AN INTERESTING VISIT TO A GUANO ISLAND.

Amongst all the new-fangled manures introduced by experimentalizing agriculturists, during the last twenty years, not one has been so rapidly and universally adopted as guano. Its astonishing fertilizing qualities, and easy mode of application have rendered it a general favorite with the farmers, though the immense distance of the places from which it is chiefly obtained, and its consequent high price, must limit its use, even if the supplies were inexhaustible.

The island of Ichaboe, on the west coast of Africa, from whence guano was first obtained in large quantities, is perhaps the most remarkable instance of a desolate rock becoming suddenly the port of destination for hundreds of large ships, and the source of immense wealth to numerous individuals. But Ichaboe was soon exhausted, and the dusty treasure that had for many centuries been accumulating on its rocky bosom, was literally swept away. The once busy island has now returned to its former loneliness, and the fleet of ships that gathered round it, seek on still more distant coasts, the fertilizing powder that will fatten the impoverished fields of Old World countries.

More than half the guano imported during the last ten years, has been obtained from a small group of islands called the Chincas, that lie off the port of Pisco, on the Peruvian coast. Of these islands, the largest, Sangallan, has very little guano upon it, the principal deposits being found in three smaller ones, the most northern of the group. These are distinguished as the North, Middle, and South Islands. The North island has been constantly worked ever since the introduction of guano. The middle one has also been occasionally invaded; but the South island, on which we believe the accumulation to be greatest, remains untouched.

Every ship bound to the Chincas is compelled to anchor at Pisco, in order to pass the necessary custom-house formalities, before proceeding to the loading ground. A couple of hours are then sufficient to carry her across the few miles of water that intervene, and she soon drops her anchor amongst the numerous fleet that is ever lying off the island, waiting their turn to load. The odorous scent of the guano is distinctly perceptible at several miles distance, and is far from pleasant, when thus mingled with the pure sea air.

The first duty of the crew after the ship's arrival is to discharge the extra ballast, and as the captains have no dread of port officers, or harbor masters, the sand or stone is quietly tossed overboard, until there is barely sufficient left in the hold to keep the vessel on an even keel. In the meantime the long boat is hoisted out of her berth alongside, and a part of her crew are busily employed in bringing off boat-loads of guano from the island, to replace the discharged ballast.—

The peculiar odour pervades the whole ship—the carefully tarred rigging becomes a dirty brown, while the snow white decks and closely furled sails, assume the same dark hue.

On the side next the mainland, the islands rise precipitately from the sea to a considerable height, presenting only a bare, dark wall of rock. From the upper edge of the precipice, the huge mound of guano slopes rapidly upwards for a short distance, and then spreads into a level surface that gradually descends on every other side to within a few yards of the water. Here and there, huge craggy points thrust their white heads through the brown crust of guano, which has completely filled up the deep hollows that have originally existed in the island, and would soon, had it not been disturbed, have covered even the crests of what were once tall pinnacles. The only safe landing place is on a narrow strip of beach, the remainder of the island being surrounded by low rock, and small detached reefs; but the irregular formation has greatly facilitated the loading of ships, enabling the crews to accomplish that in a few days, which, under other circumstances, must have cost them studious weeks of labor. Close to the face of the rock the water is deep enough to float the largest merchantman; and the steady constancy of the trade-wind, which rarely increases here beyond a pleasant breeze, enables the ship to lie in perfect safety in close contact with her two most dangerous enemies—a rocky island, and a dead lee shore.

Having taken aboard by her boats sufficient guano to ballast her, the ship is hauled in close to the steep reef, to which she is securely bound with warps and chains, two anchors being dropped to seaward, to enable her to haul off again when loaded.

Down to the very edge of the precipice, on its summit, comes the point of a triangular enclosure, open at its base, and made of strong stakes driven into the solid guano, and closely knit together with iron chains. At the point resting upon the edge of the cliff, there is a small opening, to which there is firmly attached a wide canvass pipe, which hangs down the face of the precipice, and passes into the hold of the vessel beneath. The enclosure, which will contain several hundred tons, is filled with guano by the Indian laborers, and a small line that encloses the mouth of the pipe being slacked, the whole mass is poured into the ship at a rate which very soon completes her cargo. From different parts of the pipe, bow-lines lead to the mast-heads of the vessel, and from thence on deck, where they are tended by the crew, who alternately haul upon and slack them, so as to keep the long pipe in motion, and prevent its choking. But however well they may succeed in that effort, the men have considerable difficulty in avoiding some such catastrophe in their own persons; for the guano, after falling from so great an elevation, rises through the hatchways in one immense cloud, that completely envelopes the ship, and renders the inhaling of anything else but dust almost a matter of impossibility. The men

wear patent respirators, in the shape of bunches of tarry oakum, tied across their mouths and nostrils; but the guano mocks at such weak defences, and a brisk continued fusillade of sneezes celebrates the opening of the pipe, and accompanies, in repeated volleys, and unwilling tears, the unremitting shower of pungent dust. In the meantime, a gang of Indians are at work in the hold, trimming and levelling the guano as it pours from above. How they contrive to exist at all in such an atmosphere is a matter of astonishment; but even they are unable to remain below longer than twenty minutes at any one time. They are then relieved by another party, and return on deck perfectly naked, streaming with perspiration, and with their brown skins thickly coated with guano. The two parties thus alternately relieving each other, a ship of seven or eight hundred tons is loaded in two or three days—the Indians working during the night, and filling up the enclosure, ready for shipment the following day. A smaller enclosure and pipe supply the boats of the vessel anchored off the island.

The guano is dug out with pick and shovel down to the level of the rock, and on the North island, the cutting thus formed, is in some places from 60 to 80 feet in depth—in others it is only a few inches; but these shallow spots are comparatively rare, and usually border on some deep valley, firmly packed with the prevailing substance. From the pressure of the superincumbent mass, the lower strata have become almost as hard and compact as the rock itself, and the color deepens from a light brown, or sometimes white, at the surface, to nearly black at the bottom of the cutting.

The guano of the Chinca Islands is said to surpass all other deposits in its strength and fertilizing qualities, and this is chiefly attributed to the fact that rain never falls on the islands.—Owing to this extreme aridity of the climate, the saline particles of the manure are never held in solution, and are therefore less liable to be lost by evaporation, than where the surface of the mass is frequently washed by heavy rains.—Large lumps of very strong and pure ammonia are, in fact, frequently turned up by the diggers. The thick fogs that at certain seasons are of nightly occurrence on the coast, convert the outer layer into a greasy paste, which is immediately baked by the sun into a hard crust, that prevents even the fogs from penetrating into the interior. This crust is completely undermined by the birds that still frequent the island in vast numbers, though they are said to bear no comparison to the myriads that formerly held sole and undisturbed possession of them. These are *micos*, *gamets*, *penguins*, *pelicans*, *divers*, *sheer-beaks*, and many other sorts of sea-fowl, but the most common is the *guano bird*, a very handsome creature, beautifully variegated, and decorated with two pendant ear-drops. Naturalists, delighting in hard words, call him, I believe, *sulicta variegata*. These web-footed colonists form regular towns beneath the crust of the guano, and various settlements, communicating with each other by galleries, running in all directions,

so that it is deemed almost impossible to set foot upon the untouched surface of the island, without sinking to the knee in some feathered lady's nursery, and either smashing her eggs, or mutilating her half-fledged progeny. The egg-shells, and the remains of fish brought to feed the young birds, or to be devoured at leisure by the old ones, must form a considerable item in the deposits.

Thickly tenanted as are the islands, and the air above, the waters beneath are no less full of life. Shoals of small fish are continually passing through the channels. Whales are frequently seen, rolling their huge bodies in the offing; and the numerous caves that perforate the islands on every side, are inhabited by colonies of seals and sea-lions, that wage an unceasing predatory war upon the sparkling shoals that pass, unconscious of all danger, off their gloomy surf-bound territories.

The islands themselves, are perfectly barren. Not a blade of grass, nor even a particle of moss, exists upon them. They present only one brown arid expanse, incapable of furnishing food for the tiniest nibbler that ever gnawed a grain of corn; and yet they possess sufficient fertilizing power to transform a barren desert into a fruitful garden; and they annually furnish food in other lands, for thousands of hungry mortals, who never even heard of their existence! They are a so completely destitute of water—the Indians who live upon them, being supplied with this necessary of life by the shipping, in turns. Every article of food is brought from Pisco, to which port the guano diggers occasionally resort to spend in extravagance and dissipation their hard earned wages. The Commandant resides on the North island in a miserable cottage; four poles stuck in the guano, with grass mats or a few reeds stretched between them, and covered in with a flat roof, of the same material, form specimens of a high order of Chinca architecture. Furniture is of course unknown, and clothes are as nearly so as possible; but the high wages given to the laborers appear to balance the *desagremens* of their position; for several Englishmen are amongst their number. Some of these are employed in mooring the ships alongside of the rock.

Guano has been used for agricultural purposes in Peru, ever since the invasion of the Spaniards, and there are good grounds for believing that its use was known to the Indians long anterior to that period. It is now chiefly applied there in the cultivation of maize and potatoes, and large quantities of it are consumed in the haciendas that skirt the banks of the rivers which flow from the mountains through the desert, raising in their passage through the arid sand-ocean, long green islands, of extraordinary fertility. The mode of applying the manure differs considerably from that adopted with us. It is never used with the seed; but when the plants are a few inches above the surface, a long shallow trench is made close to the roots, and in this a small quantity of guano is placed, the white being always preferred.—The trench being laid completely under water by dams and sluices, erected for the purpose, or where no such system of irrigation exists, other

means are adopted for thoroughly saturating the soil. The potatoes produced by this mode of culture, are perhaps the finest, both for size and quality, in the world, and the extraordinary rapidity of their growth, after the application of the manure, is most astonishing.

FACTS ABOUT GUANO.

It is scarcely fifteen years since guano was first recommended to the notice of farmers in England and Scotland, as a substitute for farm-yard manure, or an auxiliary. Notwithstanding the incredulity and caution with which its claims were at first received, there is now an importation annually of about 150,000 tons into the different ports of Great Britain, which at an average of £10 per ton would amount to an expenditure of one million five hundred thousand pounds sterling, or about 7,500,000 dollars, on one foreign manure alone. In one county Scotland—that of East Lothian—it is estimated that from 12 to 18 shillings stg. are expended for guano and other portable manures, for every acre of the cultivated land. Indeed, sometimes as much as forty shillings' worth of guano, nearly ten dollars' worth, is applied to one acre. A case of this kind is mentioned in the last No. of the Journal of the Royal Agricultural Society. On a very inferior piece of land, which only twenty shillings was paid as rent, much as forty-six shillings' worth of guano was applied to every acre, the crop abundantly defying this very liberal expenditure.

The beneficial results from the use of guano, are not always the greatest, are at last always the most observable, when applied to poor, or worn-out soils—such as cannot be made to produce a remunerating crop by ordinary means. On such soils it will often be found to pay to apply 200 or 300 lbs. of guano, at an expense of \$5 or \$6, when it would cost \$50 per ton. When applied to soils in good condition, the increase in the crop is not observable; but the increase of crop is generally very striking indeed when the fertilizer is applied to lands greatly exhausted of their fertili-

ties. As the fertilizing properties of guano are in too concentrated a condition to be applied in an undiluted state to seeds or plants, it must be diluted by being compounded with some innocuous inert substance. Dry leached ashes, or sawdust, or pulverized peat from ditches, will answer the purpose. One part or bulk of guano may be mixed with five or six parts or bulks of either of these. Of this compound a tablespoonful is sufficient for a hill of corn or other vegetable.—*Courtesy of a Gentleman.*

CHEESE MAKING.

Good cheese, though differing in some respects in the tastes of the individual making or curing it, has yet some general qualities, which are common everywhere. Its flavor ought to be pleasant and pleasant, but not lacking in strength; its texture should be light without being spongy,

and it ought to be tender, and not without a certain buttery quality which tests its richness. The outside should be firm and smooth. The size of the cheese should in all cases be rather medium, being more convenient to handle, more easy to sell, and as a general rule they are better cured than large cheeses, and not so liable to spoil.

No one need attempt to make good cheese, any more than they need attempt to make good butter, without having a due regard to cleanliness and the most scrupulous kind of it too: for the slightest neglect in the scalding of the utensils, or the least remains of old curd or sour milk, may and will spoil the good flavor of the most valuable cheese, though it may not be perceptible when the article first comes from the press.

Among the important processes in cheese-making, there is none which deserves more attention than the temperature of the milk when it is sought to separate the curd from the whey. Every one has become familiar with the fact, that the butter is not readily separated from the milk only at certain temperatures, and that if above or below them, the quality of the butter is deteriorated. It is the same with the making of cheese, in the separation of the curd; if the temperature is too high and the milk too warm, the curd will be tough, and the cheese tough and waxy in quality. If the milk be too cold when the rennet is added, it will be too long in separating, the curd will be tender, and it will be found difficult to get all the whey out of it. The right temperature for the complete separation of the curd, has been found by experiment to be about 84 to 86 degrees of Fahrenheit's thermometer. This is about 12 degrees lower than the milk is when it first comes from the cow. This is the temperature recommended by the best practical cheese-makers in both England and the United States. They nearly all recommend that the curd should be cut fine either by a machine or with the hand, so that the whey may be thoroughly separated from it. This practice is not followed by all who make cheese. There are some who recommend and follow the practice of putting their cheese to press without ever having broken the curd, trusting solely to the power of the press to squeeze out the whey thoroughly and efficiently, the cheese being pierced with skewers on different sides when first put under the press, which is very heavy. Very few, however, practice that method of preparing the curd for the press, nearly all the best manufacturers cutting it up with wooden knives, or some kind of machinery, where the business is carried on extensively.

Another very important part of cheese manufacture for market is that of curing the cheese after it is taken from the press. In the process of curing if there be any failure, the whole previous labor of the cheese-maker is lost, and some of the best and most experienced makers assert that more well made cheese is spoiled by neglect of frequent turning, and exposure to damp and bad air, than by any other process, though it would seem that after the cheese is taken from the press the danger is over.—*Michigan Farmer.*

REV. DR. DUFF ON CANADA.

The visits of eminent persons to this country and their subsequent descriptions of it, are tending latterly to diffuse a much more accurate idea in the minds of the labouring and middle classes of Great Britain, of what are the real capabilities and resources of Canada, than they have hitherto possessed. The valuable papers written by Mr. Wm. Chambers of Edinburgh after his late visit, and now publishing in Chamber's *Journal*, must have a most beneficial effect in this respect. The late visit of the distinguished Missionary, the Rev. Dr. Duff, will be recollected by most of our readers. After his return to Scotland he delivered an eloquent speech at a public meeting in Edinburgh which would fill a page of an ordinary newspaper. We extract a portion of it relating to Canada:—

"I must now, however, pass into Canada; and, late as is the hour, must say a word on two upon it, however brief. I confess, before going there, I did not adequately understand the nature of the country, though I had heard a good deal about it. When passing from Detroit, for instance, eastward, to West Canada, and coming suddenly upon a city called London, I thought I had certainly awoke from a dream? What! is this Canada West? It was associated far more in my mind with untilled forests, and all kinds of wild beasts. Passing along there burst upon me one of those noble views which, in the course of the journey, are to be seen of this city. I said, What is this? London was the reply! It is certainly not so big as the old London; but really it is a striking and noble looking city, with 10,000 inhabitants. It is really most extraordinary to find such a city in the midst of what was the bush; and what is better still, I subsequently found its inhabitants a noble Christian people; but this is not all, for there are others which come upon you. For example, Hamilton, on Lake Ontario, with a population equal to that of Perth, though only about twenty years ago it had only a few huts. It is as fine a city as the Fair City itself, and is surrounded with noble hills and lakes. Then you come to Toronto, Cobourg, Kingston, Montreal, and other cities—in short, you are completely taken by surprise by the magnificent succession of growing cities, with their fine public edifices, and bustling commercial activities, that burst upon the view on all sides.

After paying a high compliment to a work published by Mr. Lillie, on the growth and prosperity of Canada, as throwing more light upon Canada than a thousand other volumes which had been written on the subject, and earnestly recommending that it should be republished here, for the instruction of our countrymen, the Rev. Doctor said, that there was not a nobler territory than this out of Great Britain and the United States, and that Canada West was one of the most promising parts of the British do-

minions in every respect, with reference to capabilities and resources, as well as the social comforts, Christian character and rapidly expanding intelligence and energies of its inhabitants. It is colonized mainly by British people with free institutions, of which they have profited themselves in every way worthy. Its growth every aspect, has been proportionably as rapid as that of the United States, and that is unprecedented in the previous history of the world. Education, as well as agriculture, commerce and everything else bearing on the improvement of man, are making vast progress.

MR. SHERIFF TREADWELL'S PREMIUMS.

Conditions on which the Premiums offered by C. L. Treadwell, Esq., President of the Agricultural Association of Upper Canada, are to be awarded: one Farm and one Garden in each of the Township Societies of the County of Prescott—being £5 upon the Farm and £1 5s. upon the Garden:

1st—The Farm to contain not less than one hundred acres, and to raise the greatest amount of Agricultural produce and Farm stock without least paid labor.

[MR. TREADWELL would here remark that every Farmer should provide himself with the Fair Account Book recommended by the National Board of Education of Ireland, which can be obtained from Hew Ramsay, Esq., of Montreal provided a sufficient inducement is held out: him to re-print it.

In reference to the Garden, the area to be about thirty-two square rods, and it is preferred that should be in a rectangular form, but its location otherwise either in form or extent, does not include the parties from competition.

He would mention the rotation of Crops, which he hopes the *Experts* will find has been adopted.

2nd—The ground should be well ploughed and prepared for the Root Crop, Indian Corn or Pea. For light soil the Belgian Carrot and York Globe Turnip are preferable; for heavy soil Mangel Wurtzel.

3rd—For the second crop sow Wheat or Barley.

4th—Third crop grass, either for meadow or pasture. Timothy and Clover, with Gypsum are decidedly preferable for consumption on the farm. The former is best for hay for the market.

5th—Fourth year, continue the land in grass.

6th—Fifth, the same.

7th—Sixth, plough and sow Oats on light land; but in heavy soils it may be continued longer in hay.

8th—The implements of husbandry should form a prominent feature in the competition. A Farm not possessing the Scotch Plough is excluded. Farms raising Stock of the most improved kinds of Horses, Cattle, Sheep, Swine and Poultry should be most favorably considered by the *Experts*.

9th—Surface draining should be next considered. This is, in fact, included under the preparation of the land, but it is necessary to draw the attention of the Farmer to it as a separate point, as it is one far too much neglected. It

soil draining is beginning to agitate the public mind in the Western part of the Province, as well as the introduction of draining tiles, and he feels confident of their success. When they are fully tested he hopes they may be introduced by our Farmers.

10th—Fences. Wherever the land is stony, stone walls should be erected to clear it of them, as well as for their durability. On other lands the cedar rails, either round or split, laid upon blocks, and well capped and staked, should be duly considered by the *Experts*.

11th—The Farm Yard, Gut Buildings, and Farmer's House should be carefully examined. The Farm Yard should be well provided with water, as well as all the pastures.

12—Every Farm should have a certain number of fruit trees,—say, not less than fifty,—upon it. Their choiceness to be an object of consideration.

13th—The part of the Farm reserved for fuel should be particularly attended to. That selected should be least exposed to be blown down by violent winds. Where it is convenient, the wood on the Farms of several individuals should be left contiguous. It should be cleared of all living wood, and seeded to grass as early as possible, and would furnish excellent food for horses and shade for cattle.

For the prizes on Gardens, he adopts the rules laid down by the Rev. Andrew Bell, in a letter published in the June number of the *Agriculturist*, viz: "The one which, 1st. contains such kind of Vegetables, in such quantity, in such variety, and of such excellence, as would minister most to the support, the comfort, the enjoyment, and the pleasure of a family all the year round. 2ndly. Contains the best crops of their kind. 3rdly. Shews the greatest freedom from weeds, and the greatest neatness and care. And 4thly. Displays the greatest amount of good taste in laying out and ornamenting with flowers.

The successful competitors shall be those who comply with the greatest number of important points in the foregoing statement and are members of either the County or Township Society. L'Original, 14th June, 1854.

STATE AND PROVINCIAL FAIRS, 1854.

Michigan, at Detroit.....	Sept. 26 to 29.
N. J., at Newark.....	" 19, 20, 21, 22
Mont., at Brattleborough....	" 12, 14, 15
Mo., at Springfield.....	" 12, 13, 14, 15
Pennsylvania.....	" 27, 28, 29
New York, at New York.....	Oct. 3, 4, 5, 6
Connecticut, at New Haven....	" 10, 11, 12, 13
Ill., at Madison.....	" 4, 5, 6, 7
Wis., at Fairfield.....	" 3, 4, 5, 6, 7, 25
Wisconsin, at Watertown.....	" 4, 5, 6, 7
New Hampshire.....	" 3, 4, 5, 6
Maryland, at Baltimore.....	" 3, 4, 5, 6
Georgia, at Augusta.....	" 23, 24, 25, 26, 27, 28
Springfield Cattle Show, Ohio....	" 25, 26, 27
Missouri, at Buonville.....	" 2 to 6.
Lower Canada, at Quebec.....	Sept. 12, 13, 14, 15
Upper Canada, at London.....	" 26, 27, 28, 29

REPORT OF THE COMPARATIVE ADVANTAGES OF SOILING AND PASTURING CATTLE.

BY WILLIAM ADAM, ESQ., OF RANNA, ABERDEEN.

The cattle experimented upon were twelve two-year old heys, crosses between the Aberdeen and Short-horned breeds. They were brought in about the middle of June, 1851, and having been kept on the same pasture till the 10th of July, were divided into three lots (four in each lot) of as nearly the same value as possible, by the reporter's farm-overseer and an experienced butcher, both considered good judges.

The first lot of four were pastured out of doors, in a field of excellent first year's grass, consisting of rye, grass, and clover, but principally of red clover. The part of the field railed off for this lot consisted of 3 acres, 2 roods, 5 poles. It was well sheltered on the north and north-east by a belt of thriving wood, and had in it an abundant supply of good spring water. It had been well laid down after turnips, and afforded a good supply of food for the lot put upon it up to the 12th of October, 1851, when they were removed, and very soon after sold, along with two other lots, to the same butcher.

The second lot of four were tied up in stalls, [two-and-two in a stall,] and received daily as much of the same description of green cut rye-grass and clover as they could eat during the same period, [from the 10th day of July to the 12th of October, 1851.] They were regularly fed at stated intervals during the day, and had abundant supply of litter. They were also curried once a day. The extent of the ground required to supply this lot with grass, part of which was cut twice and part three times, was 1 acre, 2 roods, 35 1-2 poles.

The third lot of four were also tied up [two-and-two] in stalls, and received as much of the same description of rye and clover grass cut green as they could eat, with a like supply of water and litter. They were also curried once a day, and, in addition to the cut grass, each of the cattle composing this lot received daily a small allowance, by measure, of bruised oil-cake, and of bruised linseed and light oats. The extent of ground required to supply this lot with provender during the period of the experiment, was 1 acre, 2 roods, 35 1-2 poles.

All the three lots thrived exceedingly well, but it soon became apparent that the lot receiving the oil cake and bruised linseed and oats, was advancing before the other two lots, although it was doubtful so much as to justify the expense of this food. The progress of the first and second lots seemed so equal during the period of the experiment, that no two judges who saw them could agree as to which lot had the advantage of the other; but the third lot continued to maintain its superiority during the whole period of the experiment.

The four animals composing the first lot, which were pastured out of doors, were estimated at the commencement of the experiment, at £47.

Those composing the second lot, fed in stalls in the house on green cut rye grass and clover, were also estimated at £47.

And the value of the four animals composing the third lot, fed in the house in stalls on green rye grass and clover, with oil-cake and crushed linseed and light oats, were estimated at £52.

At the termination of the experiment, lot first was computed by competent judges to be worth £55 15s.; thus giving an increase of value on the lot of - - - - £ 8 15 3

From this deduct the value of the grass, 3 acres, 2 roods, 6 poles, consumed by them, estimated at £3 per acre for the season 10 12 3

And the balance exhibits a loss of £1 17 3

As the ground, however, was pastured by cattle for some weeks before being railed off for this experiment, it seems fair, on comparing it with the ground from which the grass was cut, to allow a corresponding deduction from the rent, which may be about equal to this apparent loss 1 17 3

Lot second, at the close of the experiment, was by the same judges estimated at £55 15s.; but the butcher who bought the whole cattle found that this lot turned out to be worth £1 more than lot first, or £56 15s., thus giving an increase of value of - - - - £9 15 0

Deduct the value of the grass consum'd, 1 acre 2 roods, 35 1-2 poles, at £3 per acre - - £5 3 4

Price of 1 1-2 cwt. of guano put upon the ground after the first cutting of grass - - 0 15 0

Price of 1 1-2 cwt. to be put upon the ground in spring 1852, to compensate for its deterioration in consequence of the grass having been cut in place of pastured - - - - 0 15 0

Proportion of expense of attendance on the cattle, say - - - - 1 5 0

7 18 4

Showing a profit of - - - - £1 16 8

To which add the value of the manure produced by this lot, estimated at - - - - 2 0 0

£3 16 8

Lot third, which got the oil-cake and bruised linseed and light oats, in addition to green provender, was valued at the close of the experiment, by the same judges, at £77, and the butcher who bought them at that sum sent them to London, and it is understood he was safe with them, but he said he realized no profit. The increase of value on this lot was accordingly - - - - £25 0 0

From which deduct the value of the grass consumed, 1 acre, 2 roods 35 1-2 poles, at £3 per acre - - - - £ 5 3 4

The value of linseed and oil-cake, £7 19s. 6d. and crushed light oats £3 4s. consumed - 11 3 6

Proportion of expense of attendance - - - - 1 5 0

Price of 1 1-2 cwt. of guano put on the ground after the first cutting - - - - 0 15 0

Price of 1 1-2 cwt. ditto, to the ground in spring 1852, to compensate for its deterioration, in consequence of the grass having been cut in place of pastured - 0 15 0

19 11 8

Leaving for outlay and profit on the lot - - - - £ 5 18 8

To which add the value of the manure increased at least to the extent of 10s. over that of lot second, by the use of oil-cake and bruised oats 2 10 0

£S 8 8

It thus appears that there was a gain on the lot fed in the house on cut grass alone, over the lot pastured in the fields of £3 16s. 8d., and the lot which received the addition of oil-cake and crushed linseed and light oats, there was gain over those pastured in the field of no less a sum than £S 8s. 2d., and over the lot fed in the house, on cut grass alone, of £4 11s. 6d. proving beyond a doubt that high house-feeding is the most remunerative to the farmer.

It may be proper to add, that as the whole grass on the farm had been pastured by sheep during the winter, and till far into spring, and very closely eaten, it was later in the season before it could be either pastured by cattle or cut for soiling than otherwise it would have been.—*Scottish Journal of Agriculture*.

VALUABLE DISCOVERY.—A very superior article of Spanish Brown has been lately found near Elly: Ala, which has been tested by competent persons and pronounced to be better than the imported article. The quantity is said to be inexhaustible as "there is a whole mountain of it."

RICE.—There is no more healthy food, particularly at a season when bowel complaints are prevalent than rice; that is, if properly cooked. We need to say not one cook in ten can perform the simple operation of boiling rice. Take two measures of water to one of rice; soak the rice an hour or two previously and then boil until it absorbs all the water which will be about eight or ten minutes, and it is done. If the boiling is continued longer, it will come like paste—clammy and indigestible.

Natural History.

THE OX.—HISTORY, MANAGEMENT, &c.

THE IRISH CATTLE.

Before we enter on the consideration of the two remaining breeds of English cattle, the long and the short-horns, we will take a very rapid glance at the Irish cattle.

They are evidently composed of two distinct breeds; the middle and the long-horns.

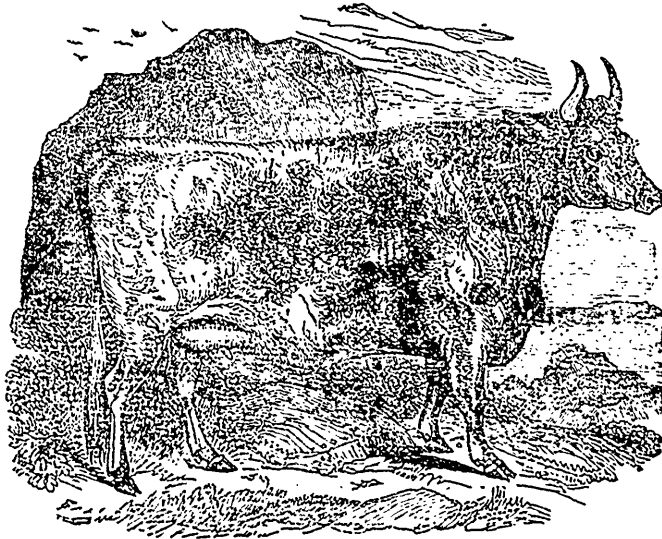
The middle-horns are plainly an aboriginal breed. They are found on the mountains and wide parts of the country, in almost every district. They are small, light, active, and wild. The head is small, although there are exceptions to this in various parts; and so numerous, indeed, are those exceptions, that some describe the native Irish cattle as having thick heads and necks; the horns are short compared with the other breed, all of them fine, some of them rather upright, and frequently, after projecting forward, then turning backward. Although somewhat deficient in the hind-quarters, they are high-boned, and wide over the hips, yet the bone generally is not heavy. The hair is coarse and long; they are black, brindled, and black or

brindled, with white faces. Some are finer in the bone, and finer in the neck, with a good eye, and sharp muzzle, and great activity.

They are exceedingly hardy; they live through the winter, and sometimes fatten on their native mountains and moors; and when removed to a better climate and soil, they fatten with all the rapidity of the aboriginal cattle of the Highlands and Wales. They are generally very good milkers, and many of them excellent. The cow of Kerry, a portrait of which is here presented, is a favorable specimen of them.

The cow of Kerry is truly a poor man's cow, living everywhere hardy, yielding, for her size, abundance of milk of a good quality, and fattening rapidly when required. The slightest inspection of the cut will convince the reader of the difference between this breed and both the larger and the smaller long-horned Irish one.

These cattle usually are small, and are confined to the hilly and moor grounds. Some are of considerable size, elsewhere, and are improved in form as well as in weight. The horns, usually of middle length, turn up; as do the horns of those on the mountains; they are shorter in the leg, shorter in the body; their loins and haunches are heavy and wide; although the hair is thick, the hide is mellow, and they thrive with rapidity.



KERRY COW.

This breed is now not to be met with pure, except inland on the mountains; being nearly gone out elsewhere by the repeated crosses with the Leicester, Hereford, and Devon; but for the rest, all the farmers still prefer these cows with most of the native Irish blood.

The other breed is of a larger size. It is the North or partially improved Craven or Lancashire beast. It is the true long-horn; the horns first taking a direction outward, then forming a curve, and returning toward the face, sometimes reaching to pierce the bones of the nose, at

other times so to cross before the muzzle that the animal is unable to graze.

There are at the present two kinds of these cattle in Ireland, in character essentially different; the larger, which we have described, and a smaller, prevailing principally in the north of the island. At first view, perhaps, these would appear to be the same cattle, only smaller from poor keep and bad management; but their horns, long out of all proportion, clumsy heads, large bones and thick hides, bulkiness of dewlap contrasted with their lightness of carcass, in fine, an

accumulation of defects about them, clearly mark them as being of far inferior value.

In process of time, the English long-horns, although of the improved Bakewell breed, began to lose ground even in their native country; or rather a rival with higher merits appeared in the field. The short-horns began to attract the attention of the breeder; and their propensity to fatten, and earlier maturity, soon became evident. There were not wanting spirited agriculturists in Ireland, who quickly availed themselves of this new mode of improving the Hibernian cattle. Sir Henry Vane Tempest was one of the first who introduced the short-horn bull. The improvement effected by the first cross was immediately evident in the early maturity of the progeny. The pure short-horn, or this cross with the long-horn, weighed as much at three years old as the pure long-horn used to do at five. But the first experiment in a great degree failed.

The reputation of the short-horn, however, becoming more spread in England, other attempts were made to introduce him into Ireland, and the experiments were more systematically conducted. And great improvement has been effected in the Irish cattle of late years, by the importation of the Durham breed. They have displaced a cross of the long-horn Leicester on the Irish cow, and the farmers of the country now prefer a cross of the Durham bull on the Irish cow, to the pure breed, as being less delicate, and giving a richer and greater quantity of milk.

THE LONG-HORNS.

In the district of Craven, a fertile corner of the West Riding of Yorkshire, there has been, from the earliest records of the British agriculture, a peculiar and valuable breed of cattle. They were distinguished from the home breeds of other counties by a disproportionate and frequently unbecoming length of horn. In the old breed this horn frequently projected nearly horizontally on either side, but as the cattle were improved the horn assumed other directions; it hung down so that the animal could scarcely graze, or it curved so as to threaten to meet before the muzzle, and so long as to prevent the beast from grazing; or immediately under the jaw, and so to lock the lower jaw; or the points presented themselves against the bones of the nose and face, threatening to perforate them. In proportion as the breed became improved, the horns lengthened, and they are characteristically distinguished by the name of "the Long-Horns." Cattle of a similar description were found in the district of Lancashire bordering on Craven, and also in the south-eastern parts of Westmoreland; but tradition in both of these districts pointed to Craven as the original habitation of the long-horn breed. If there gradually arose any difference between them, it was that the Craven beasts were the broadest in the chine, the shortest, the handsomest, and the quickest feeders; the Lancashire ones were larger, longer in the quarters, but with a fall behind the shoulders, and not so level on the chine.

Whence these cattle were derived was at still is a disputed point.

The long horns seem to have first appeared in Craven, and gradually to have spread along the western coast, and to have occupied almost exclusively the midland counties.

There are two distinct breeds; the smaller Cravens inhabiting the mountains and moorlands, hardy, useful, valued by the cottager and little farmer on account of the cheapness with which they are kept, the superior quantity and excellent quality of the milk which they yield, and the aptitude with which they fatten when removed to better pasture. The larger Cravens, occupying a more level and richer pasture, are fair milkers, although in proportion to their size not equal to the others; but possess a tendency to fatten and acquire extraordinary bulk, scarcely inferior to that of short-horns.

As either of these found their way to other districts, they mingled to a greater or less degree with the native cattle, or they felt the influence of change of climate and soil, and gradually adapted themselves to their new situation; and each assumed a peculiarity of form which characterized it as belonging to a certain district and rendered it valuable and almost perfect there.

It was not until about the year 1720 that an agriculturist possessed sufficient science and spirit to attempt improvement in good earnest. A blacksmith and farrier, of Licton, in Derbyshire, on the very borders of Leicestershire, who rented a little farm, has the honor of standing first on the list. His name was Welby. He had a valuable breed of cows, which came from Drake's house, a seat of Sir Thomas Gresley, on the banks of the Trent, about a mile from Burton. He prided himself much in them, and they deserved the care which he took in improving them and keeping the breed pure; but disease, which defied all remedial measures, carried off the greater part of them, thus he ruined Welby, and putting a stop to his speculations.

Soon after this Mr. Webster, of Canley, near Coventry, distinguished himself as a breeder. He too worked upon Sir Thomas Gresley's stock, some of whose cows he brought with him when he first settled at Canley. He procured bulls from Lancashire and Westmoreland, and is said to have had the best stock of cattle then known.

The bull, Bloxedge, (the Hubback of the long horns,) indebted to accident for the discovery of his value, was out of a three-year old heifer of Mr. Webster's, by a Lancashire bull, belonging to a neighbor. When a yearling, he was so promising that he was discarded and sold to a person of the name of Bloxedge, (hence the name of the beast,) but turning out a remarkably good stock-getter, Mr. Webster re-purchased him, and used him for several seasons.

Now appeared the chief improver of the long horns, to whom his contemporaries and posterity have adjudged the merit of creating as it were a new breed of cattle. It is a disgrace to the agriculture of the times that Bakewell should have

been suffered to pass away without some authentic record of the principles that guided him, and the means by which his objects were accomplished.

The only memoir we have of Robert Bakewell is a fugitive paper in the Gentleman's Magazine, from which every writer has borrowed. Robert Bakewell was born at Dishley, in Leicestershire, about 1725. Having remarked that domestic animals in general produced others possessing qualities nearly similar to their own, he conceived that he had only to select from the most valuable breeds such as promised to return the greatest possible emolument, and that he should then be able, by careful attention to progressive improvement, to produce a breed whence he could derive a maximum of advantage. He made excursions into different parts of England, in order to inspect the different breeds, and to select those that were best adapted to his purpose, and the most valuable of their kind; and his residence and his early habits disposed him to give the preference to the long-horn cattle.

We have no account of the precise principles which guided him in the various selections which he made; but Mr. Marshall, who says that he "was repeatedly favored with opportunities of making ample observations on Mr. Bakewell's practice, and with liberal communications from him on all rural subjects," gives us some clue. He speaks of the general principles of breeding, and when he does this in connection with the name of Bakewell, we shall not be very wrong in concluding that these were the principles by which that great agriculturist was influenced.

"The most general principle is beauty of form. It is observable, however, that this principle was more closely attended to at the outset of improvement (under an idea, in some degree falsely grounded, that the beauty of form and utility are inseparable) than at present, when men, who have long been conversant in practice, make a distinction between a "useful sort" and a sort which is merely "handsome."

"The next principle attended to is a proportion of parts, or what may be called *utility* of form, in distinction from *beauty* of form; thus the parts which are deemed *offul*, or which bear an inferior price at market, should be small in proportion to the better parts.

"A third principle of improvement is the texture of the muscular parts, or what is termed *lesh*, a quality of live stock which, familiar as it may long have been to the butcher and the consumer, had not been sufficiently attended to by breeders, whatever it might have been by graziers. This principle involved the fact that the grain of the meat depended wholly on the breed, and not, as had been before considered, on the size of the animal. But the principle which engrossed the greatest share of attention, and which, above all others, is entitled to the grazier's attention, is *fattening quality*, or a natural propensity to acquire a state of fatness at an early age, when in full keep, and in a short

space of time; a quality which is clearly found to be hereditary."

Therefore, in Bakewell's opinion, everything depended on breed; and the beauty and utility of form, the quality of the flesh, and the propensity to fatness, were, in the offspring, the natural consequence of similar qualities in the parents. His whole attention was centered in these four points; and he never forgot that they were compatible with each other, and might be occasionally found united in the same individual.

Improvement had hitherto been attempted by selecting females from the native stock of the country, and crossing them with males of an alien breed. Mr. Bakewell's good sense led him to imagine that the object might better be accomplished by uniting the superior branches of the same breed, than by any mixture of foreign ones.

On this new and judicious principle he started. He purchased two long-horn heifers from Mr. Webster, and he procured a promising long-horn bull from Westmoreland. To these and their progeny, he confined himself; coupling them as he thought he could best increase or establish some excellent point, or speedily remove a faulty one.

As his stock increased, he was enabled to avoid the injurious and enervating consequence of breeding *too closely* "in and in." The breed was the same, but he could interpose a remove or two between the members of the same family. He could preserve all the excellences of the breed, without the danger of deterioration; and the rapidity of the improvement which he effected was only equaled by its extent.

Many years did not pass before his stock was unrivaled for the roundness of its form, and the smallness of its bone, and its aptitude to acquire external fat; while they were small consumers of food in proportion to their size; but, at the same time, their qualities as milkers were very considerably lessened. The *grazier* could not too highly value the Dishley, or new Leicester long-horn, but the *dairyman*, and the *little farmer*, clung to the old breed, as most useful for their purpose.

It was his grand maxim, that the bones of an animal intended for food could not be too small, and that the fat, being the most valuable part of the carcass, could, consequently, not be too abundant. In pursuance of this leading theory, by inducing a preternatural smallness of bone, and rotundity of carcass, he sought to cover the bones of all his animals, externally, with masses of fat. Thus, the entirely new Leicester breed, from their excessive tendency to fatten, produce too small a quantity of eatable meat, and that, too, necessarily of inferior flavor and quality. They are in general found defective in weight, proportionably to their bulk, and, if not thoroughly fattened, their flesh is crude and without flavor; while, if they be so, their carcasses produce little else but fat, a very considerable part of which must be sold at an inferior price, to make candles instead of food, not to forget the very great waste that must ever attend the consumption of over-fattened meat.

This great and sagacious improver, very justly disgusted at the sight of those huge, gaunt, leggy, and misshapen animals with which his vicinity abounded, and which scarcely any length of time or quantity of food would thoroughly fatten, determined upon raising a more sightly and a more profitable breed; yet, rather unfortunately, his zeal impelled him to the opposite extreme. Having carefully, and at much cost, raised a variety of cattle, the chief merit of which is to make fat, he has apparently laid his disciples and successors under the necessity of substituting another that will make lean.

Mr. Bakewell had many prejudices opposed to him, and many difficulties to surmount, and it is not therefore to be wondered at if he was more than once involved in considerable embarrassment; but he lived to see the perfect success of his undertaking.

He died when verging on his seventieth year. His countenance bespoke activity and a high degree of benevolence. His manners were frugal and pleasing, and well calculated to maintain the extensive popularity he had acquired. His hospitality to strangers was bounded only by his means.

Many anecdotes are related of his humanity towards the various tribes of animals under his management. He would not suffer the slightest act of cruelty to be perpetrated by any of his servants, and he sternly deprecated the barbarities practised by butchers and drovers: showing, by examples on his own farm, the most pleasing instances of docility in every animal.

Mr. Bakewell's celebrated bull Twopenny was the producer of the Westmoreland bull, out of old Comely, one of the two heifers purchased from Mr. Webster; therefore he was, by the side of his dam, a direct descendent of the Canley blood.

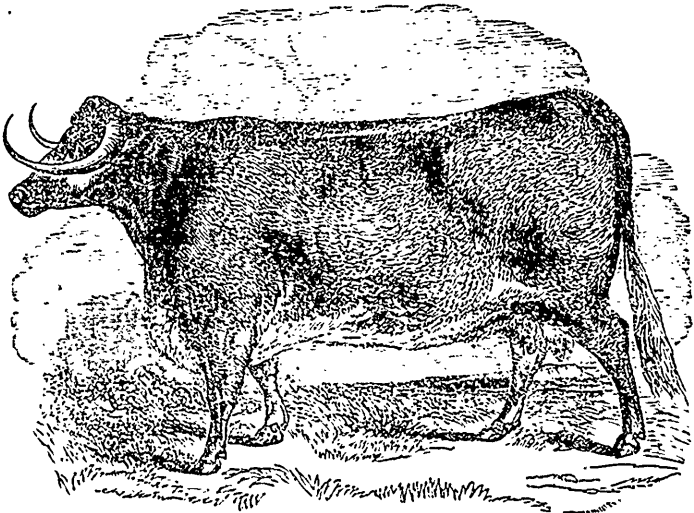
Mr. Bakewell had afterwards a more valuable bull than this, named D. He retained him principally for his own use, except that he was let

for part of a season to Mr. Fowler, and that a few cows were brought to him at five guineas a cow. He was got by a son of Twopenny, out of a daughter and sister of the same bull, she being the produce of his own dam.

Starting a few years afterward, and rivaling Mr. Bakewell in the value of his cattle, was Mr. Fowler of Rollwright, in Oxfordshire. His cows were of the Canley breed; most of them having been purchased from Mr. Bakewell; and his bull Shakspeare, the best stock-getter that the long-horn breed possessed, was got by D., out of a daughter of Twopenny, and therefore of pure Canley blood.

THE LEICESTER LONG-HORN BULL.

What is now become of this improved long-horn breed? Where is it to be found? It was a bold and a successful experiment. It seemed for a while to answer the most sanguine expectation of these scientific and spirited breeders. In the districts in which the experiments were carried on, it established a breed of cattle equalled by few, and excelled by none but the Herefords. It enabled the long-horns to contend, and often successfully, with the heaviest and best of the middle-horns. It did more; it improved, and that to a material degree, the whole breed of long-horns. The Lancashire, the Derbyshire, the Staffordshire cattle became, and still are, an improved race; they got rid of a portion of their coarse bone. They began to gain their flesh and fat on the more profitable points, they acquired a somewhat earlier maturity, and, the process of improvement not being carried too far, the very dairy-cattle obtained a disposition to convert their aliment into milk while milk was wanted, and, after that, to use the same nutriment for the accumulation of flesh and fat. The midland counties will always have occasion to associate a feeling of respect and gratitude with the name of Bakewell.



NEW LEICESTER LONG-HORN COW.

Mr. Marshall thus describes the improved Leicesters in his own time, which was that of Bakewell, Princep, and Fowler.

"The *forend* long; but light to a degree of elegance. The neck thin, the chap clean, the head fine, but long and tapering.

"The *eye* large, bright and prominent.

"The *horns* vary with the sex, &c. Those of bulls are comparatively short, from fifteen inches to two feet; those of the few oxen that have been reared of this breed are extremely large, being from two and a half to three and a half feet long; those of the cows nearly as long, but much finer, tapering to delicately fine points. Most of them hang downward by the side of the cheeks, and then, if well turned, as many of the cows are, shoot forward at the points.

"The *shoulders* remarkably fine and thin, in bone; but thickly covered with flesh—not the smallest protuberance of bone.

"The *girth* small. compared with the short-horn and middle-horn breeds.

The *chine* remarkably full when fat, but hollow when low in condition."

This is considered by accurate judges to be a criterion of good mellow flesh. The large hard ligament, (the continuation of the ligaments of the neck, united with those of the vertebrae of the spine itself,) which in some individuals, when in low condition, stretch tightly along the chine, from the setting on of the neck to the fore part of the loins, is said to be a mark of the flesh being of a bad quality. They are only proofs of great strength in the spine, and probably, in the animal generally; and indicating that the meat will be sinewy and tough.

"The *loin* broad, and the *hip* remarkably wide and protuberant."

A wide loin, with projections of fat on the hips, may be desirable; but there can be neither beauty or use in the protuberance of the tuberosities of the bone. A full hip may be of advantage, but scarcely a protuberant one.

"The *quarters* long and level; the *nache* of a middle width, and the *tail* set on variously, even in individuals of the highest repute.

"The *round-bones* small, but the *thighs* in general fleshy; tapering, however, when in the best form toward the gambrels.

"The *legs* small and clean, but comparatively long. The *feet* in general neat, and of the middle size.

"The *carcass* as nearly a cylinder as the natural form will allow. The *ribs* standing out full from the spine. The *belly* small.

"The *flesh* seldom falls of being of the first quality.

"The *hide* of a middle thickness.

"The *color* various; the *bundle*, the *snub-back*, and the *pye*, are common. The *lighter*, the better they are esteemed.

"The *fattening* quality of this improved breed, in a state of maturity, is indisputably good.

"As *grazier's stock*, they undoubtedly rank high. The principle of the *utility of form* has been strictly attended to. The bone and offal are small, and the forend light; while the chine,

the loin, the rump and the ribs are heavily loaded, and with flesh of the finest quality. In point of early maturity, they have also materially gained. In general, they have gained a year in preparation for the butcher; and although perhaps not weighing so heavy as they did before, the little diminution of weight is abundantly compensated, by the superior excellence of the meat, its earlier readiness and the smaller quantity of food consumed.

"As *dairy-stock*, it does not admit of doubt that their milking qualities have been very much impaired.

"As *beasts of draught*, their general form renders them unfit; yet many of them are sufficiently powerful, and they are more active than some other breeds used for the plough, or on the road; but the horns generally form an insuperable objection to this use of them."

THE LONG-HORN FEEDING OX.

But what is become of Bakewell's improved long-horn breed? A veil of mystery was thrown over most of his proceedings, which not even his friend Mr. Marshall was disposed to raise. The principle on which he seemed to act, breeding so completely "in and in" was a novel, a bold, and a successful one. Some of the cattle to which we have referred were very extraordinary illustrations, not only of the harmlessness, but the manifest advantage of such a system; but he had a large stock on which to work; and no one knew his occasional deviations from this rule, nor his skillful interposition of remoter affinities, when he saw or apprehended danger.

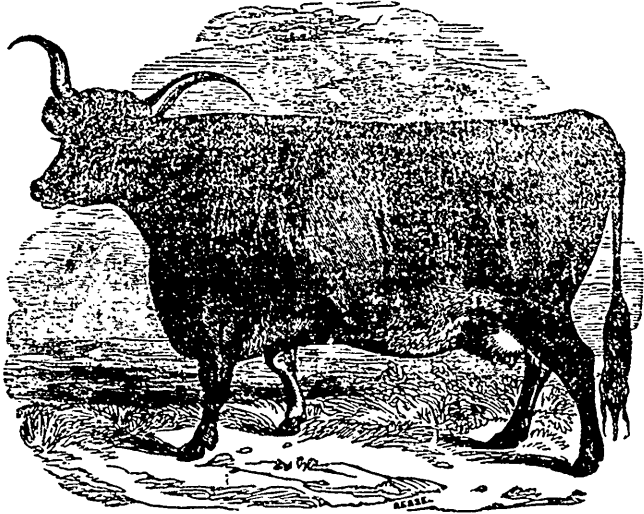
The truth of the matter is, that the master spirits of that day had no sooner disappeared, than the character of this breed began imperceptibly to change. It had acquired a delicacy of constitution, inconsistent with common management and keep; and it began slowly, but undeniably, to deteriorate. Many of them had been bred to that degree of refinement, that the propagation of the species was not always certain.

In addition to this, a powerful rival appeared in the field, the short-horns of the Tees. They presented equal aptitude to fatten, and greater bulk and earlier maturity.

Westmoreland was the native land of the long-horns. Webster brought thence the father of the Canley stock; and Bakewell sought the father of his breed there: but even in Westmoreland the short-horns appeared; they spread; they established themselves; in a manner superseded the long-horns. They found their way to southern districts; they mingled with the native breeds; a cross from them generally bestowed increase of milk, aptitude to fatten, and early maturity. It is true, that a frequent recourse to the short-horn was generally necessary in order to retain these advantages, but these advantages were bestowed, and might be retained, except in a few districts, and for some particular purposes. Thus they gradually established themselves everywhere; they were the grazing cattle of the large farmer and the gentleman, and another variety of them occupied the dairy. The

benefits conferred by the improved long-horns remained, but the breed itself gradually diminished; in some places it almost disappeared; and

at the present moment, and even in Leicestershire, the short-horns are fast driving the long-horns from the field.



DERBY COW.

The preceding cut is a faithful portrait of one of the best of them. The horns are altogether characteristic.

The Derbyshire cows were originally long-horns; and although of a somewhat inferior breed, they were very useful animals, and especially in the dairies of this country, the cheese of which has long been admired. What cross gave them their peculiar character, and especial-

ly their singular horns, it is now impossible to determine. The head was frequently thick and heavy, the chops and neck foul, the bone too large, the hide heavy, and the hair long; even the bag was overgrown and covered with hair—a circumstance very objectionable to the dairyman; they were little disposed to take on flesh and fat, yet they were excellent dairy cows.

ARE SMALL OR LARGE SHEEP THE MOST PROFITABLE?

Ever since the days of the far-famed Mr. Bakewell, of Dishley, Leicestershire, there have been two opinions, whether large or small sheep are the most profitable. The breeders of small sheep, say that an animal may be good and not great, and great and not good, and that size has nothing to do with profit. It is not what an animal makes, so much as what it costs making; and that a larger number of small sheep can be kept upon a given number of acres than larger sheep, the lesser sheep not consuming so much food per head as the larger.

The breeders of large sheep say that they can produce more wool and mutton per acre by breeding large sheep than small; and that Mr. Blake-well lived when fat flesh or tallow made as much per lb. as lean flesh. Since that time, through the gas, one pound of lean flesh has made as much as two pounds of fat when pared off as tallow, and that there is more lean flesh in proportion upon large sheep, such as Lincolns and Cotswolds, than upon the true bred Leicesters, that are now, and have been famous for fat flesh, small bone, and a great propensity to

fatten at early maturity. Many people have an idea that the sheep are all small that are bred in Leicestershire, which is erroneous. Last year I travelled through several counties, to find wool, mutton, and size combined. I found at Drayton on the Welland, in Leicestershire, four miles from Rockingham Castle, 140 rams belonging to Mr. Byran Ward, an eminent grazer, who feeds yearly upon grass from 500 to 600 oxen, and shears two thousand sheep. Mr. Ward's rams have plenty of wool, size and lean flesh, clipped all through their backs, with small, fine thin heads, which denote a well bred animal, and a propensity to fatten at an early age. Mr. Ward's sheep are styled, by many, Old Leicesters, because they have more wool and size than the pure bred New Leicesters, and have a great semblance to the best long woolled Lincolns. There are now many flocks in the county of Leicestershire that have been crossed with Lincolns and Cotswolds, to increase size and wool; and there are many flocks left of what they style pure bred New Leicesters. By the ram sales at Peterborough fair, last year, the Lincolnshire sheep seem to be gaining ground, as they made more money than any other kind of long-wooled white-faced sheep.—M. L. Express.

 Editorial, &c.

G. BUCKLAND, ESQ., EDITOR.

H. THOMSON, ESQ., ASSISTANT EDITOR.

 HINTS FOR THE MONTH.

The principal business of August consists rather in gathering in the fruits of the earth than in preparing the soil for new crops, though a few varieties of plants, such as late turnips, and some garden vegetables may still be sown with advantage.

Wheat harvest in Upper Canada, appears now to generally take place somewhat earlier than in former years, and before these remarks reach our readers, the greater portion of that crop throughout this Province will probably be secured. The reports of the general yield of the crop throughout the Country are somewhat contradictory, being described as abundant in some portions, and inferior in others. We are led to infer that the general return will be at least an average one. In the beginning of August the farmer will have abundant employment, under the present scarcity and high rates of hired labor, to get his remaining field crops, such as oats, peas &c, secured before it becomes necessary for him to devote his chief attention to the sowing of his fall wheat. The mode of harvesting grain scarcely requires any further remarks than those already given in previous numbers of this Journal. Harvest it soon as the crop is sufficiently ripened, and before it is over-ripe, cut and rake cleanly, tie in moderately sized sheaves, stook up neatly—it is advisable to place cap sheaves over oats, especially if the straw be rather green—and as soon as the straw and grain are sufficiently dry, but not before that, draw in the crop with all expedition, and avoid the risk of further exposure to bad weather. By the energetic practice of such simple rules little danger is generally to be apprehended of loss from bad harvest weather in this country. In case of storms, it is of course necessary to go through the fields at once and set up any sheaves that may be blown down, and if the rain has been heavy and long continued, it may be neces-

sary to open out the sheaves to prevent growing.

During these operations something will also be occasionally done in the preparation of the wheat fallows; either drawing out the manure, ploughing, or harrowing. In order to ensure getting fall wheat sown in sufficiently early time, the fallows ought to be ready to receive the final or seed furrow, at latest, as early as about the 20th of August. Much discussion has taken place, among theoretical farmers, on the question of the real necessity for making a naked summer fallow as a preparation for fall wheat, many contending that to sow after peas, barley or clover lea would answer equally well. But general observation and experience have taught farmers in this country, especially those who farm heavy clay soils, that there is no course of treatment so much to be depended upon for obtaining a good crop of fall wheat as that of a well worked summer fallow. Its uses are four fold: it affords the best opportunity of thoroughly destroying noxious weeds; of breaking up the soil to a sufficient depth, and bringing up a portion of the subsoil to the surface so that the whole becomes well incorporated; of getting the surface of the field into that mechanical condition which is most suitable for the reception of the seed; and lastly, by the thorough exposure to the sun and weather, the salts or inorganic substances in the soil, are disintegrated and rendered available for use by the plant. The fallow also offers a convenient opportunity of applying the farm yard manure to the field. In the present condition of farming in this country the naked summer fallow is generally found on clay soils to be the best preparation for wheat. When a judicious system of rotation of crops becomes more common naked fallows will not be so often required. It is very true that good crops are sometimes even now obtained after peas, barley or clover, but in these cases regard must be had to the condition of the land before those crops were sown. If foul, or in a poor condition, to attempt sowing wheat after them will generally, as a natural consequence, be attended by failure.

But although the naked summer fallow may

be the best preparation for wheat, on clays or strong loams, it does not follow that it is the best course to adopt on light loams and sandy soils. In such soils, as they admit the air readily, there is not usually a great amount of inert inorganic matter, capable of ready decomposition by exposure to sun and weather; and consequently, in the absence of the main causes which render fallows so efficacious on strong clays, they are not, on sandy soils, usually followed by the abundant crops obtained on strong clay loams, which require frequent working to admit the action of the atmosphere. On light loams, when first cleared and brought into cultivation, fallows have a good effect, because then there is a quantity of crude vegetable matter, which requires to be subjected to decomposition, but after one or two crops they are found not to have the same effect as on strong clays, on which the result continues to be as favorable as ever. Sandy soils are usually poor in organic matter, and other elements of crops, while clay soils have a large supply. Summer fallowing accelerates the decomposition of these elements without increasing the supply, consequently sandy soils, from their permeability and poverty, must soon be exhausted by frequent summer fallowing. The wiser course is therefore to husband these aids to production by avoiding naked fallows, and substitute clover, peas, veches, or other green crop, which may either be eaten off the ground by sheep or cattle, ploughed in, or fed to cattle in the stables and the manure returned to the field.

Wheat may be sown successfully on sandy soils after such crops, provided the land be clean, and in good heart and tilth. On medium clay loams also, a kind of land very common in Upper Canada, experience has proved that in this climate, where the frosts of winter and heat and rains of summer, have so favorable an influence in pulverizing the soil, long fallows are not so necessary as on stiff clays, and where these influences do not prevail. By the growth of clover, to be eaten off or mown in the first months of summer, and ploughed up the last of June or in July, and then cultivated sufficiently till sowing time to keep down the weeds and

grass, very good crops of wheat are obtained, while there is an economy of time and labor, and a greater gross amount of produce. This practice is becoming more common every year. Clover lea is sometimes even ploughed a very short time before sowing wheat, and good crops obtained, but this method is often found difficult of execution, and cannot always be depended upon for a satisfactory result.

The obtaining of pure clean seed, and of the best variety, in view of the approaching seed time, is, of course, one of the most important matters demanding the farmer's attention.

August is one of the busiest, and most important months, and the farmer has frequently as much as he can do to get the bulk of his field crops out of the way before wheat sowing begins—root crops, corn, &c., must receive attention at a later date.

HORTICULTURAL SOCIETIES OF UPPER CANADA.

It is pleasing to observe the spread of organizations of this sort for promoting the various branches of that highly important and civilising pursuit,—horticulture. Several societies of this kind now exist in both sections of Canada, and as a consequence a taste for gardening, and for embellishing country as well as suburban residences, is being diffused among us. We are glad to observe that a promising Horticultural ^{and} Society has recently been established at Brockville; the first exhibition of which took place the other week, and was highly creditable to the town and neighborhood. A beginning so successful cannot fail to stimulate the friends of the society to still greater exertions. We take this opportunity of thanking the worthy Secretary for his polite invitation, which we regret we could not accept, and wish the society a long and uninterrupted career of prosperity. We regret having mislaid the paper containing the particulars of the Show, or we should have in this notice gone a little more into detail.

The second exhibition of the *Toronto Horticultural Society* was well attended, and con-

tained several specimens of flowers, fruits and vegetables of superior merit. Professor Croft exhibited some very fine strawberries of excellent flavor, and the display of roses belonging to the Hon. Judge Harrison was much admired. Other amateurs exhibited productions of very decided excellence, and our nurserymen, Messrs. Fleming, Leslie, and Grey, had each a number of articles that elicited much admiration. We are glad to find the Toronto Horticultural Society making steady progress, and trust our citizens will extend to it the patronage which it so richly deserves.

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**RECENT IMPORTATION OF IMPROVED STOCK.**

William Ashton, Esq., of Cruikshank Park, near Galt, informs us that he had just received from England, in excellent condition, the following Durham cattle:—*Rattler*, bull, 5 months old, by *Gilliver*, 11,529, dam *Rosbud*, by the *Earl of Durham*, 5,965.

*Melody*, heifer, rising three years, by *Valliant*, 10,989, dam *Mi*, by *Tom O'Lincoln*, 8,714.

*Lady Evelyn*, heifer, one year, by *Valliant*, dam *Etiquette*, by *Robin Hood*, 8,492.

*The Ocean*, heifer, calved on the passage, June 1, 1854, by *Rivington*, dam *Melody*; a fine handsome calf, and doing well. We are in possession of full pedigrees.

Mr. Ashton likewise imported with the above, six ewes and two rams of pure Leicesters, from the celebrated stock of William Sanday, Esq., of Nottingham. We wish him, and all others similarly engaged, every success in the important undertaking.

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IMPORTATION OF SOUTHDOWN SHEEP.

We learn that Mr. John Spencer, of Dorset Farm, Brooklin, Whitby, has recently imported some excellent specimens of Southdowns, carefully selected from the best flocks in the counties of Surrey, Hants and Dorset. We are glad to find Mr. Spencer persevering in his valuable undertaking.

THE HARVEST, MARKETS, &c.

The wheat harvest in forward sections of the country is now fast drawing to a conclusion. From all we can learn the crop will prove upon the whole an average, but in some exposed situations the plant was much killed out by the severe spring frosts. All kinds of spring grain will prove abundant. Hay is not so heavy as was anticipated from the copious showers which fell in Spring. The heavy storms which occurred last month in many parts of the Province injured more or less the wheat, twisting it about and causing it to fall where stout. This has rendered harvest operations tedious and expensive. Farmers experience great difficulty in obtaining hands, even at exorbitant wages; two and even two and a-half dollars per day, being frequently given. Hops, we are told, are looking well, and potatoes and root crops generally are the same. The accounts from the States and Europe are, upon the whole, favorable, and notwithstanding the continuance of the war, prices have commenced declining in the principal markets of the world. Much however, will depend so far as the United Kingdom is concerned, on the state of the weather during the present and succeeding months.

August 1st. 1854.

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**WATERING TROUGH LAW.**

A Law at present exists in the State of Maine, that country so celebrated for its admiration of pure unadulterated cold water—which is really deserving of commendation and imitation, and if adopted by some of our municipalities in Canada, might be the means of affording comfort and refreshment to many a weary traveller or animal. By this law, passed April 9, 1852, any person, in any city, town or plantation in the State, who shall construct and maintain, and keep in good repair, a watering trough beside the highway, and well supplied with water, the surface of which shall be at least two feet and a half above the ground, and made easily accessible for horses and carriages, shall be allowed a reduction of three dollars from the annual amount of his taxes.

## PROVINCIAL EXHIBITION,

TO BE HELD AT LONDON, SEPT. 26, 27, 28 &amp; 29, 1854.

Preparations for holding the next Provincial Show are in active progress, with every prospect of a successful result.

Exhibitors must become members, by paying one dollar, which entitles them to a Badge, by which they can have free access to the Show during its continuance, and can enter for competition whatever they choose, without any further charge. A badge admits the *wearer only* to the Exhibition. Those who are not members have to pay 7½d. each admission. Ladies, Indians, and Foreigners can exhibit without paying members' fees.

Blood Horses and Thorough-bred Cattle must be entered, and have their pedigrees properly attested, and sent to the Secretary, in Toronto, *not later than Wednesday, Sept. 20th.* After the 21st entries will be taken at London. Competitors are recommended to make their entries as early as practicable. *Entries will positively close on Wednesday morning, Sept. 27th at 9 o'clock; all entries made after Tuesday Sept. 26th will be charged one dollar each.*

Agricultural Societies are urgently requested to forward lists of Delegates and Judges to the Secretary of the Board of Agriculture, Toronto, without delay. Competitors have the privilege of recommending Judges, and are requested to do so.

Premium Lists, containing regulations &c., may be obtained by applying to the Society at the Office of the Board of Agriculture, Toronto; or to J. B. Strathy, Esq, Secretary and Treasurer of the Local Committee, London.

## THRESHING GRAIN.

A Correspondent of the *Southern Planter* says:—

“For the comfort of those who feed Threshing Machines where there is much dust in the wheat, I will say, it is the experience of my feeder (who has suffered much from the dust in his throat) that one swallow of oil, (which should be the best lamp oil,) when he stops at night, will relieve one from all the unpleasant effects of the dust. This is his experience after ten years experience, and as it may give relief to many a fatigued and suffering poor fellow, I communicate it to the Planter.”

## NEW YORK STATE FAIR.

We have received a copy of the Prize List for the New York State Fair, to be held this Autumn, from which we make the following abstract of the intended proceedings:—

This, being the Fourteenth Annual Fair and Cattle Exhibition of the New York State Agricultural Society, will be held in the City of New York, October 3rd, 4th, 5th and 6th, 1854. The American Institute having omitted their Annual Show, and united in this Exhibition, it is believed that it will be one of the most interesting and important Exhibitions ever held in the State.

Hamilton Square comprises eighteen acres of ground, which has been tendered by the corporation for the use of the Society, all of which will be enclosed and arranged in the most convenient manner for the satisfactory exhibition of Stock and articles. Erections and enclosures will be prepared for each department, so that articles and Stock will be entirely protected. The Premium List, in addition to New York State, embraces a very large class of premiums to persons out of the State, and it is believed a large competition will be secured in that direction.

The amount of premiums embraced in the list exceeds Eight Thousand Dollars; and it is believed a more attractive list has never been offered to the farmers, mechanics and manufacturers of the State.

Hamilton Square is bounded by the Third and Fourth Avenues on two sides. The Third Avenue cars pass it on one side, and the Harlem on the other; and stock and articles sent by the Harlem and New Haven roads can be deposited very near the grounds, and those by the Hudson River railroad not far distant.

Breeders of Stock, Implement makers and manufacturers, from all parts of the country and the British Provinces, are invited to attend and exhibit their Stock, Implements and Manufactures.

THE ORDER OF ARRANGEMENTS IS AS FOLLOWS:

On Tuesday, October 3.—Stock and articles will be arranged, and Judges called, at 3 P.M.: vacancies filled and Grounds open to visitors, at 12 o'clock.

On Wednesday, October 4.—Judges will commence the discharge of their duties, and the public admitted at 9 o'clock. Tickets 25 cents, single admission; Members' and Exhibitors' tickets and badges, \$1, to be obtained at the Treasurers' office.

On Thursday, October 5.—Plowing and Spading Match at 10 A.M., and exercise of Horses in the Ring.

On Friday, October 6.—The Exhibition and Trial of Horses in the Ring will take place during the day, and Prize Animals exhibited at 12 o'clock.

Address on the Show Grounds, under the Society's large Tent, at 1 P.M., after which premiums will be awarded.

Members of the Society, and all who may become such at the Fair, by the payment of one dollar, will be furnished with badges and five tickets, labelled "admit a member," which will admit them and members of their family, on presenting the badge and delivering up a ticket for each person admitted. Single tickets 25 cents, admitting one person, will be issued on Tuesday at 12 o'clock, October 3rd, at the Treasurer's office on the Show Grounds.

Exhibitors are reminded that the days selected for the Fair are Tuesday, Wednesday, Thursday and Friday, 3rd, 4th, 5th and 6th of October.

Exhibitors must become members of the Society.

Life Members will be furnished with badges, admitting them at all times, on exhibiting their badge.

Carriages will be allowed to enter the Grounds—\$1 for two horse carriages, fifty cents for single carriages, and twenty-five cents for each person in carriages—under the direction of the committee of arrangements.

Persons intending to become Exhibitors are desired to forward to B. P. Johnson, Corresponding Secretary, State Agricultural Rooms, Albany, a list of their entries up to the 23d of September.

Stock and articles for Exhibition should be on the grounds the week previous to the Fair—as it is intended to have everything arranged ready for opening the Exhibition, on Tuesday morning, October 3d.

The fixtures will be in readiness by the 25th September, and person will be in attendance, after that time, to receive articles and arrange them in their proper places, and suitable guards provided for their security.

The office at the Show Grounds, Hamilton Square, will be opened September 25th, in addition to the other places in the city. The Corresponding Secretary will be at the Astor House the week previous to the Fair, where he will be happy to meet gentlemen interested in the Exhibition, and desirous of information in reference to it; and the Treasurer, at James, Beebe & Co.'s, 356 Broadway, where every necessary information will be given.

The Premiums for Essays and Experiments, Plowing, Agricultural Implements, Manufactures, other than domestic, Vegetables, Foreign Fruit, Machinery, Miscellaneous and Discretion-

ary articles, as well as Stock, will be open to competition out of the State.

The American Institute having resolved to hold their annual Agricultural Fair in connexion with the Society, and the New York Horticultural Society having united their Exhibition with that of the Society, it is believed that the united exhibition will be one of the best ever held in this country, and specially deserving the attention of breeders, farmers, horticulturists, manufacturers and mechanics, in every section of our country.

GREAT CATTLE SALE AT GUELPH.

Mr. Parsons' great sale of Durham stock, came off duly, as advertised for some time in the *Agriculturist* and other papers, on Tuesday, 26th June last, at Mr. Parsons' residence, Culdaffe Farm, near Guelph. The sale was probably the largest of the kind, and the prices realized on the whole the highest that have yet been obtained in Canada West. The sheep and hogs, also advertised, were not sold, as the sale commenced too late in the day. Refreshments for the purchasers and visitors were provided by Mr. Parsons, in the most hospitable and elegant style. We have been favored with a list of the animals sold, and the prices obtained, and which will be found below. The total proceeds of the sale, it will be seen, amount to about \$4,300, being an average of over \$100 each. The list of prices will no doubt be interesting to farmers generally. It is as follows:—

THOROUGHBRED COWS.

|                                     |       |
|-------------------------------------|-------|
| Young Lady Day—James Wright, Guelph | \$140 |
| Red Lily—Mr. Davis, County York     | 140   |
| White Rose—W. J. Brown, Guelph      | 90    |
| Laura—William Whitlow, do           | 180   |
| Lady Ann—Wm. Applegarth, Hamilton   | 195   |
| Lily 2nd—Capt. Beresford, Newmarket | 300   |
| Lily 3rd—Jacob Hespeler, Preston    | 340   |
| Red Rose 2nd—John Brockie, Nichol   | 100   |

THOROUGHBRED TWO-YEAR-OLD HEIFERS.

|                                      |     |
|--------------------------------------|-----|
| Red Rose 3rd—Wm. Cooley, Ancaster    | 235 |
| Lady Day 2nd—W. Applegarth, Hamilton | 235 |

THOROUGHBRED ONE-YEAR-OLD HEIFER.

|                              |     |
|------------------------------|-----|
| Lily 4th—F. W. Stone, Guelph | 150 |
|------------------------------|-----|

THOROUGHBRED HEIFER CALVES.

|                                    |     |
|------------------------------------|-----|
| Lady Ann 2nd—W. J. Brown, Guelph   | 155 |
| Lily 5th—do do                     | 150 |
| Laura 4th—J. W. Armstrong, Eramosa | 100 |

THOROUGHBRED BULLS.

|                                  |     |
|----------------------------------|-----|
| Adam—Capt. Beresford, Newmarket  | 240 |
| Culdaffe—Jacob Hespeler, Preston | 275 |

THOROUGH-BRED BULL CALVES.

|                                   |       |       |
|-----------------------------------|-------|-------|
| Don—Henry Stewart, Woodstock      | - - - | 155   |
| Oscar—W. J. Brown, Guelph         | - - - | 155   |
| Dan—Archibald F. Sherratt, Nichol | - - - | 80    |
| 11 Grade Cows brought             | - - - | \$518 |
| 2 Two-year-old Heifers            | - - - | 113   |
| 8 Calves                          | - - - | 167   |

Terms—nine months credit.

The result of the sale, being the most important of the kind, we believe, that has taken place in the country, is highly encouraging and will no doubt stimulate stock breeders to renewed exertions. The Guelph Herald says:—

“It is worthy of remark, that Mr Parsons’ stock was collected and raised, not merely for the purpose of sale, but specially for Dairy purposes—a pursuit in which he has obtained no small celebrity and success, and from which he has only been induced to retire, in the meantime, in consequence of domestic arrangements. With the increased facilities that will soon be obtained, from the introduction of Railways, we are persuaded that Dairy farming might be profitably cultivated in the vicinity to a much greater extent than at present obtains.”

In reference to the above sale, we have to congratulate our friend Mr. Parsons on its results, and we hope others may be induced with the like skill, energy, and perseverance to follow in his steps. Considering it is the first sale of the kind that has taken place in the Province, we cannot but remark that such prices augur well for the future, and we earnestly hope that those whose circumstances and taste will allow of it, will use their utmost endeavours to encourage the importation and breeding of all kinds of improved stock: the good rendered thereby to the country would be incalculable. The dispersion of such a famed herd for its milking properties, must be very beneficial to the Province at large; and we hope its former owner is well repaid for the pains he has taken, and for the outlay which the raising of such a herd must have cost him. And if the eight head of thorough-bred cattle which we remember hearing Mr. Parsons speak of as having sold last year, had also appeared on the ground, the collection would indeed have been still more gratifying.



WEIGHT OF EGGS.—The average weight of a newly-laid egg is about 3½ oz.; the white generally weighs 1½ oz.; the yolk 1¼ oz.; and the shell and skin ½ oz.

SALE OF SHORT-HORNS.

Mr. Stafford conducted the sale of the herd of pure short-horn cattle, the property of J. C. Grant Duff, Esq., of Eden, Aberdeenshire, on the 24th of May last. The following were among the sums realised, together with the names of the purchasers:—

|                                                                                                                                                                  |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Jenny Lind, red, calved 17th March, 1847—Mr. Tanqueray, Brent Lodge, Hendon, Middlesex                                                                           | 100 |
| Miss Bates the Second, red and white calved 21st January, 1849—Mr J. G. Wood, Castlegrave, Strabane, Ireland                                                     | 70  |
| Pure Gold, roan, calved 25th January, 1849—Mr. Cruickshank, Sittyton                                                                                             | 91  |
| Manganese, red, bred by Sir Thomas Cartwright, calved 14th February, 1849—Mr. Longmoir, Rettie                                                                   | 90  |
| Monika, red, calved 17th March, 1849—Mr. Lyall, Kincaraig Brechin                                                                                                | 95  |
| Iris, roan, calved 8th June, 1850—Mr. Tanqueray, Brent Lodge, Hendon, Middlesex                                                                                  | 95  |
| Flora Fourth roan, bred by Mr. Trotter, calved 6th December, 1850—Mr. Wilson, Cumledge, Berwickshire                                                             | 50  |
| Rosewood, roan, bred by Mr. Cruickshank, Sittyton, calved in February, 1852—the Duke of Richmond, Gordon Castle                                                  | 65  |
| Pallas, red and white, calved the 28th April, 1852—Mr. Scott, Byres near Fochabers                                                                               | 30  |
| Astrea, light roan, calved 4th May, 1854—Mr. Tanqueray, Hendon, Middlesex                                                                                        | 65  |
| Venus, red and white, calved 4th June, 1852—Cartwright, Aynhoe Park                                                                                              | 95  |
| Thirty cows, heifers, and neifer calves yielded 1555 guineas, or upwards of 50 guineas each: 10 bulls and bull calves yielded 278 guineas, or nearly £30 apiece. |     |



CANADA, BEGINNING TO BE UNDERSTOOD AND APPRECIATED AT HOME.

[We subjoin the following leading article, without abridgement, from the *Gardener's Chronicle and Agricultural Gazette*, of June 3rd, under the able editorship of Professor Lindley. The expression of opinions like those which follow, in the most influential journals of Britain, cannot fail to awaken attention to the claims and advantages of this immense and prosperous portion of Her Majesty's dominions. The princely banquet lately given to our esteemed and noble-minded Governor, in the metropolis of the Empire, was indeed the highest compliment which Britain's most distinguished Statesmen, of all political parties, could pay to Canada, and as such we gratefully accept it. It will be remembered that on that most auspicious occasion both Lord Elgin and Mr. Hincks, in returning thanks, delivered speeches alike worthy of themselves and the country they represented. We are glad

to find that the talented and indefatigable Secretary of our Board of Statistics, Mr. Hutton, has, during his recent visit to England, prepared and published a pamphlet on a subject which he has both ability and disposition to handle fairly and masterly, the result of which must be in the highest degree beneficial to this country.—*Editor.*]

We are not anxious to give advice to emigrants, although continually solicited to do so. A man's temperament, means, habits, and peculiarities, exercise so great an influence upon his destiny, that it requires a considerable acquaintance with him for even the most sagacious friend to know where in the wide world he is more likely to be successful than at home. It will, therefore, be easily understood why we shrink from the responsibility of saying that which may determine, whether for good or for evil, the future destiny of any correspondent. Nor is it easy to know what value to attach to the reports which reach Europe concerning distant colonies. That statements are very often overcolored—unintentionally, perhaps—is certain. Nor can it well be otherwise; for it is natural for a man to eulogise the country in which he has created his fortune, it is equally his interest to say whatever will attract thither the population which will increase the value of his property. And, on the other hand, he who fails assigns his want of success to anything rather than his own unskillfulness, imprudence, or lethargy. The one exaggerates what is good, and overlooks the reverse; the other exaggerates what is evil, and forgets the unquestionable good.

Men of skill and energy will succeed in any colony. To them advice is needless. It is those who have no confidence in themselves, no judgment, no self-reliance, but need to be sustained by continual reference to others who require to be told, if not where they may most certainly succeed, at least where they are least likely to fail.

Without depreciating any other colony, for nearly all have their peculiar advantages, we may safely say that no part of the world now presents such undoubted opportunities of acquiring rapid independence as the British Possessions in North America, and more especially Canada. The natural wealth and colonial industry in the latter country was attested in 1851, by the rich collections which Canadians sent to the great Exhibition of all Nations, and which placed it above all parts of the Empire except India. And we have now a perfectly trustworthy account of its resources in the statistical and social details lately published by Mr. William Hutton\*, a gentleman who is well known in this country, and whose exactness is unquestionable.

It was only the other day, on the occasion of a public dinner given to the Earl of Elgin, that Lord John Russell, in speaking of the noble Lord, took the opportunity of saying that it had been Lord Elgin's duty to act the part of a constitutional king over a province which has been continually

prospering and increasing under his care; which has risen from a little more than a million to two millions of revenue, which has increased in a short time from 600,000 to 1,800,000 population, and the imports and exports of which have shown year by year the symptoms of increasing trade, and improving industry. Such a declaration, from such a quarter, was no unmeaning phrase, but the announcement of a great Colonial fact, the knowledge of which cannot be too widely dispersed.

The reply of the noble lord, to whom the destiny of Canada is once more confided, deserves a far more permanent record than the fleeting columns of a daily journal.

"I have had the good fortune," said Lord Elgin, "within the last two or three months, to be present twice at great banquets held in honor of governors of East Indian presidencies, and attended by many distinguished persons in this country. I confess that when I listened to the glowing pictures of the prospects of India submitted to those audiences, and duly spread over the country through the instrumentality of the press, I could not help feeling something of a jealousy and regret that no similar opportunity was given for calling the attention of the people of this country to that great western dependency which, though it is no doubt inferior in wealth and importance to India, and though its condition in many respects even contrasts strikingly with the condition of India, is not inhabited by native tribes, but by a population drawn from the most energetic and active races, Englishmen, Frenchmen, Irishmen, and Scotchmen, and is bordered, not by effete and decayed empires, but by a youthful and vigorous republic, whose distinguished representative has honored us with his company this evening, and between whose country and the people of Canada generally, give me leave to say that nothing but feelings of mutual respect and gratitude are entertained. (Hear, hear, hear.) Well, gentlemen, your great kindness to me personally has provided such an opportunity, and I believe that very few persons without the walls of this room form an adequate conception of the magnitude of the question with which we are dealing, when we talk of the interests and future of Canada. (Cheers.) This Canada of which we speak so glibly, is the great heart of British America, and the greater part of the northern continent of America is still British. True, a large portion of that region is barren and inhospitable, but as to Canada—and I may join with it the sister provinces—it is notorious that it contains a territory capable of sustaining many millions of inhabitants, and is inferior in salubrity, fertility, and everything that can make residence desirable to persons of our race, to no part of the American continent. (Cheers.) And as to its being the more northern part of the continent, I am obliged sometimes to say to our Canadian fellow-subjects, when, with that modesty and diffidence which distinguish them, they vaunt of the great qualities of their southern neighbors, that in England, when we say that a man is too far north for another, we do not mean to say that he is not likely to be his match; and that if the Canadian people

\* Canada; its Present Condition. Prospects, and Resources fully described for the Information of Intending Emigrants. STANFORD, Charing Cross. (A Pamphlet.)



only make the most of their great resources and advantages, this proverb will become quite as significant in America as it is in Britain.—(Cheers.) This magnificent country, the noble inheritance of the British people, and *which is now brought by the agency of steam within a week's distance of our shores*, is at this moment in a condition of prosperity altogether unexampled, and is affording, to an extent which its previous history furnishes no parallel, a profitable field for the investment of English capital, and a congenial home for the subjects of her Majesty of all ranks of life. (Cheers.) I can add that a spirit of loyalty and attachment to the Queen pervades all classes of the colonists, whose institutions, as far as circumstances will permit, are now happily a faithful imitation of those of the mother country. (Hear, hear.) The people of Canada, divided as they are into different races, and religions, and notwithstanding their party disputes, yet recognize the fact that the common interests which unite them are greater than the causes of division."

It is seldom that a more eloquent description of colonial prosperity has been given; nor was its truth undeserving the brilliant language in which it was conveyed. The cheers of those who surrounded Lord Elgin, proceeded from eminent personages perfectly conversant with the facts. Had it been otherwise the statements now published by such an authority as Mr. Hutton, who is the Secretary to the Government Board of Statistics in Canada, more than confirm all that was said on the occasion. He is himself, we understand, an instance of the success which may attend the Canadian emigrant: having in 20 years risen to rank and fortune from a very small beginning, he is intimately acquainted with the country, knows its advantages and disadvantages, and indicates the one with the same unreserve as the other.

That Mr. Hutton's book will be very extensively read we entertain no doubt; without, therefore, attempting to deal with its details, which would be impossible in the space we can afford, we must be contented with selecting a few of the more striking facts. Although 5s. to 6s. 3d. currency are paid per day to harvest-men, yet such is the excellence of the climate that Wheat can be housed for 6s. sterling per acre, including all expenses; in fact the sheaves can be carried as soon as they are made up. Hay costs about 2s. an acre to cut, average about 1½ tons per acre, and is worth 35s. currency per ton. Timber, as is well known, forms one of the great sources of Canadian wealth; the black Walnut wood of the country is exported to the United States. Land heavily timbered costs for clearing and fencing in about £3 5s. sterling an acre, and is immediately ready for a crop of Wheat. "This cleared land is raised in value to the extent of the cost of clearing and fencing, and will generally sell freely for that sum extra the price of the same land wild. The upset price of the best Government land is 6s. 6d. sterling per acre; but on the one hand, while excellent land may be had even at 1s. 3d. to 3s. 6d. sterling, many lots cannot be had under 30s.,

and wild land in excellent situations has been known to sell for £2 10s. The taxes on a farm of 250 acres (175 cleared and 75 wild), are in all £1 10s. The number of pupils in common schools of all kinds, in a population of 950,000, has increased in ten years from 66,000 to about 180,000. Crime is so rare, that on a late occasion in three counties containing 80,000 inhabitants, the judge had not a criminal to try.

We cannot pursue this matter further for the present; nor is it necessary, for Mr. Hutton's pamphlet is so cheap as to be within any one's reach. It will be sufficient to quote what he says respecting the class of men best suited for emigration, among whom, if he does not name gardeners, it is no doubt because he classes them with farmers or laborers.

"Canada is the country, perhaps, above all others where the diligent practical man, no matter to which of these callings (capitalist, farmer, merchant, manufacturer, mechanic, or laborer), he belongs, reap an ample reward for his industry. Wages of labor, in fact, are so high that none but working men, in the wide sense given to that word, can possibly prosper—mere overseers cannot breathe in our atmosphere.

"The chief profit that the farmer makes is by doing his own work by himself and family, and thus not only saving outlay of cash for wages, but earning those wages for himself; thus, for instance, the man who hires another to do his work, say at 5s. per day, and remains idle himself, loses his 5s. which might have been the reward of his personal industry and is tempted by that very idleness to spend still more; and his neighbor, perhaps, who performs his own work himself, is 10s. richer than he when night comes. It is thus that Canadian farmers, who are a most industrious class, soon accumulate means to pay for their holdings and render them freeholds.

"In the Upper Province there is scarcely such a thing known as a tenant farmer; we are almost all our own landlords, or working our way up to that proud position; not one farmer in 500 pays *rent so called*."

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#### THE CURRENCY.

It may be of interest to farmers to be reminded that the Currency Act passed last Session comes into operation on the first of the present month, (August.) The Act makes no actual change in the value of any of our current money. It merely makes the denominations: dollars, cents and mills, equally legal with those of pounds, shillings and pence. The following, on the subject, is from the *Montreal Herald*:—

The Act, it will be remembered, was passed after a refusal on the part of the Imperial Government to sanction some acts on the currency, which were previously passed at Quebec. All

former currency acts are repealed, and it is enacted that the denomination of money in the currency of this Province shall hereafter be pounds, dollars, shillings, pence, cents and mills; the pound, shilling and penny, shall have, respectively, the same proportionate values as they now have. In any agreement or statement as to money, either denomination may be lawfully used. The pound currency is to be of 101 321-1000 grains, Troy of gold, the standard of the United Kingdom; the dollar to be one-fourth of the value. The pound sterling to be £1 4s. 4d., or \$4 and 86 $\frac{2}{3}$  cents currency, and to be a legal tender for that amount. Less British gold coins to be also a legal tender for proportionate rates.

Public accounts to be kept in the denominations of coin prescribed by Her Majesty. Accounts may be kept or stated, or agreements made, however, to be legally binding, in either class.

Such silver coins as may be struck at the Royal Mint, of the fineness now fixed by law for the coins of the United Kingdom, and of weights bearing respectively the same proportion to the value to be assigned to such coins in this Province, which the weights of silver coins of the United Kingdom, shall, by such names as shall be assigned to them by Her Majesty in her proclamation, declaring them lawful money of this Province, be a legal tender at the rates assigned in such proclamation.

Until otherwise ordered by Royal proclamation, the silver coins of the United Kingdom shall pass current for sums in currency according to the proportion hereinbefore fixed to the sums in sterling, for which they pass current in the United Kingdom, and no other silver coin than those declared so by this act shall be a legal tender for more than £2 10s. currency.

The copper money of the United Kingdom to pass current and be a legal tender to the amount of 1s. currency, and no more, that is to say, the copper penny, two cents; half-penny, one cent; and other subdivisions proportionably. Provided that any copper coins of like weights which Her Majesty may direct to be struck for the purpose shall be a legal tender, at the like rates, to the above-mentioned amount; and Her Majesty may declare by proclamation that the copper coins of the United Kingdom shall not be lawful current money of the Province.

The American Eagle coined before the 1st of July, 1834, is to be a legal tender, and to pass current for \$10 36 $\frac{2}{3}$  cents or £2 13s. 4d. currency; coined after that day and before the 1st of January, 1852, or after that day, but while the same standard of fineness is retained in the United States mint, and weighing 10 dwts. 18 grs. Troy, shall pass current for \$10, or £2 10s. cy.; and Gold coins the multiples or halves of the above of the respective dates, to be current for proportionate sums.

Other gold coins may be made current by Her Majesty's proclamation, at rates to be assigned in such proclamation; such rates being proportionate to the quantity of pure gold in such coins, reckoning ninety-two and eight hundred and seventy-seven thousandth parts of grains to one pound currency.

#### BUTTAN'S VENTILATING CAR.

[We take the following notice from a late number of the *Scientific American*. Since the article was written, we are informed that Mr. Ruttan has succeeded in rendering his arrangements for ventilating railway cars in summer, and freeing them of dust, more complete and efficient, so as to meet at once a principal want felt by all railway travellers. When the annoyance and injury to health occasioned by impure air, sudden changes of temperature, dust, &c., are properly considered, Mr. Ruttan's persevering labors in the needful work of ventilation, cannot fail to receive the thanks and patronage of a discerning public.]

We were present a few days since at the trial trip of a new Ventilating Car, invented and patented by H. Ruttan, of Cobourg, C. W. The car is now running on the New York and Erie Railroad. The plan of construction is to take a supply of fresh air from the top or sides of the car by a funnel-shaped opening, pass it down to the bottom of the car over a water tank to free it from dust and cinders, and introduce it to the inside through a double stove in winter, and a pedestal in summer. The current of warm air in going out of the car passes its whole length beneath the passenger's feet, and is discharged at the rear.

The experiment was highly satisfactory, every conductor on the route spoke highly in its favor, and said that passengers were unanimous in their approval. The only complaint we heard was from a single individual, who complained that the air was too fresh, but as the temperature was pretty constant at about 65°, there could be no just cause of complaint on this score. There was a singular equality of temperament throughout the car. Indeed, at one time the thermometer indicated the coldest portion to be the part nearest the stove. We noticed during the latter part of the trip a fact which spoke volumes in its favor. Every seat in the car was occupied, and there were even several standing in the passage. On going to the other car, which was one of the ordinary construction, there were only about a dozen passengers, yet even with this difference in the consumption of oxygen, the change in the smell of the air was decidedly disagreeable.

We are acquainted with no plan of car ventilation which we consider as good as Mr. Ruttan's, and are disposed to think that when he shall have made some contemplated alterations, rendering it more simple and at the same time more thoroughly efficient in freeing the air from dust, his plan will be nearly all that can be desired. We can only say in conclusion that railroad companies deserve and will certainly receive the censure of the public unless they adopt this or some better plan, (if a better one is to be

had,) of car ventilation. Railroad travelling as at present conducted is often little better than slow torture. That route between New York and the west, which will adopt early this summer some good ventilator like Mr. Ruttan's, will receive three-fourths of the travel.

#### INTRODUCTION OF DOMESTIC ANIMALS.

The following account of the introduction of domestic animals into America has been condensed from the United States Census Report. It furnishes a clue to the origin of our native cattle :

The first animals brought to America from Europe were imported by Columbus, in his second voyage, in 1493. He left Spain as admiral of seventeen ships, bringing a collection of European trees, plants, and seeds of various kinds, a number of horses, a bull, and several cows.

The first horses brought into any part of the territory at present embraced in the United States were landed in Florida by Cabeza de Vaca, in 1527, forty two in number, all of which perished or were otherwise killed. The next importation was also brought to Florida, by De Soto, in 1539, which consisted of horses and swine, among which were thirteen sows; the progeny of the latter soon increasing to several hundred.

The Portugues took cattle, and swine to Newfoundland and Nova Scotia in the year 1553. Thirty years after, they had multiplied so abundantly that Sir Richard Gilbert attempted to land there to obtain supplies of cattle and hogs for his crew, but was wrecked.

Swine and other domestic animals were brought over to Arcadia by M. L'Escarbot, a French lawyer, in 1604, the year that country was settled. In 1608 the French extended their settlement into Canada, and soon after introduced various animals.

In 1609, three ships from England landed at Jamestown, in Virginia, with many immigrants, and the following domestic animals, viz: six mares, one horse, six hundred swine, five hundred domestic fowls, with a few sheep and goats. Other animals had been previously there. In 1611, Sir Thomas Gates brought over to the same settlement one hundred cows, besides other cattle. In 1610, an edict was issued in Virginia, prohibiting the killing of domestic animals of any kind, on penalty, of death to the accessory and twenty-four hours' whipping to the concealer. As early as the years 1617 the swine had multiplied so rapidly in the colony that the people were obliged to palisade Jamestown, to prevent being overrun with them. In 1627, the Indians near the settlement fed upon hogs, which had become wild, instead of game. Every family in Virginia, at that time, which had not an abundance of tame hogs and poultry was considered very poor. In 1648, some of the settlers had a good stock of bees. In 1667, sheep and mares were forbidden to be exported from the province. By the year 1723, or before, sheep had somewhat multiplied, and yielded good fleeces.

The first animals introduced into Massachusetts were by Edward Winslow, in 1624, consisting of three heifers and a bull. In 1629, twelve cows were sent to Cape Ann. In 1629, one hundred and fifteen cattle were imported into the plantations on Massachusetts Bay, besides some horses and mares, and several ponies and forty-one goats. They were mostly ordered by Francis Higginson, formerly of Leicestershire, whence several of the animals were brought.

The first importation into New York was made from Holland, by the West India company, in 1625, comprising one hundred and three animals, consisting of horses and cattle for breeding, besides as many sheep and hogs as was thought expedient.

#### A CURE FOR PIG DISTEMPER.

To the Editor of the *Agriculturist* :

SIR,—Having noticed in a former number of the *Agriculturist* a request from one of your correspondents desiring information regarding the treatment of pigs, infected with a disease to which they are very often liable, commonly known as an affection of the brain, causing complete blindness and stupidity, excepting a natural instinct which impels them to seek a covering for their heads in the nearest fence or bush, and when that desire is attained, like the Ostrich in time of danger, they stand perfectly still, and unconscious of all commotion that may take place around them. This is a distemper very prevalent, and if relief is not speedily afforded is very destructive to swine. They are liable to be affected with it at all ages, but most generally when between three to six months old, and in many instances that have come under my observation it has singled out the very best of the herd for its prey.

If you will be kind enough to give the following simple remedy an early insertion in a corner of your valuable paper, you will doubtless confer a favor upon your correspondent and others who may be under the disagreeable necessity of administering relief to any of their *grunters* so distressed. Take a sharp knife and split the skin and flesh to the bone straight down the middle of the forehead, beginning at the top of the skull and drawing it down to a level with the eyes, after allowing it to bleed for a few minutes take a quantity of common salt and rub it into the orifice made by the knife. The cure is seemingly effected by the bleeding, and the irritation caused by the salt over the immediate location of the disease. Though the operation may appear a little barbarous, it is attended with no danger, and in every instance where it has been performed the results have been perfectly successful.

Yours respectfully,

J. K. GORDON.

Whitby, 12th July, 1854.

A lump of wet saleratus applied to the sting of a wasp or bee, will stop the pain in one moment, and prevent it from swelling.

## TUSSEK, THE AGRICULTURIST.

[We take the following remarks from a lecture recently delivered at Kelvidon, in England, by Mr. Crane, on the life and writings of the quaint author of "The Five hundred Points of Good Husbandry," who flourished in the sixteenth century.]

In early youth his father seems to have destined him for the church, then in the throes of the Reformation, and he was sent to the collegiate chapel of the Castle of Wallingford. This arose probably from his possessing an unusually musical voice, and he speaks of it as quite against his own will, as well as that of his mother. After a harassing time, apparently at different places, leaving us to infer that his voice was the cause of his trouble, he ultimately reached St. Paul's and speaks with gratitude of his progress in music under the celebrated John Redford, organist and almoner of that cathedral. From St Paul's he went to Eton, where he experienced sharp discipline, and probably good teaching, for he progressed to Trinity Hall, Cambridge. He recounts the pleasant way in which his time passed here "with learned men;" but was driven by long sickness to leave his books and seek his fortune at the court, where he obtained employment, probably in his musical capacity, through the influence of his patron, William Lord Paget, the first titled ancestor of the Anglesey family, of whom he speaks in terms of affectionate gratitude. He remained in this position about ten years, which must have been during the latter part of the reign of Henry VIII., and the first years of Edward VI.; his patron, who had been in great favour, about this time fell into disgrace, and was sent to the Tower; and Tusser, being disgusted, as he says, with the vices of the courtiers, and his views probably baffled by the fall of his patron, for, he says, "the court began to frown," married, and began business as a farmer at Catwade, a hamlet in the parish of Brandham, in Suffolk, on the river Stour, which divides that county from Essex. One could scarcely imagine a less eligible training for the calling than his had been, as a singing boy, student, courier, and musician. He must then have been over 30 years old, and started apparently ignorant alike of the theory, if there were theorists of those days, and the practice, rude as it then was, of husbandry.

It was here that he composed, or "devised," as he terms it, his "Book of Husbandry," the first edition of which was published in 1557, and dedicated to his patron William Lord Paget, who, having adhered to the Popish party, regained his influence, and held the office of Lord Privy Seal under Mary. He must have been engaged in farming for some years before producing even the rude essay which first issued from the press, and which formed the germ of his more perfect work, for in it is found a correct outline of agriculture, which could only be drawn by a practised hand, and the filling in and finishing of the picture seems to have been the solace and the business of his future life. This was the second work on agriculture that was printed in the English language, Fitzherbert's "Book of Husbandrie"

being the first. The work seems to have become extremely popular at once, and edition after edition issued from the press, polished, amplified, and continual additions marking its growth. Within comparatively a few years of its first appearance, Tusser's work was reprinted upwards of 20 times, and yet scarcely a copy of these early editions has been preserved, a proof that it had been sedulously applied to those purposes of instruction for which it was so admirably designed. As is remarked in the "British Biographer," "some books become heir-looms from value; and Tusser's work, for useful information in every department of agriculture, together with its quaint and amusing observations, perhaps passed the copies from father to son, till they crumbled away in the bare shifting of the pages, and the mouldering relic only lost its value by the casual mutilation of time." Copies of the modern edition, by Dr. Mavor, published in 1812, are scarce, and I am indebted to the kindness of our honoured chairman for the use of that from which the present paper has been compiled. I can think of no piece of mediæval literature that seems to promise a more liberal return, in a pecuniary point of view, than a cheap reprint of the works of the old Rivenhall rhymist.

The illness of his wife, and the too probable embarrassment of his affairs, induced him to quit Catwade, and he is found successively at Ipswich, at Dereham Abbey, and at Norwich, at which latter place Salisbury, the then Dean, of whom he speaks in terms of warm gratitude, is supposed to have obtained for him the place of a singing man in the cathedral. Tusser, compelled to quit Norwich by a painful disorder, afterwards farmed the glebe and tithes of the parish of Fairstead, in our neighbourhood, where he seems, however, as usual, to have been unsuccessful. We find, even at this early period, that the tithes were evaded as much as possible; for though he himself repeatedly speaks of the honest payment of the impost as a religious duty, he attributed his own failure in some measure to the opposite practice of the parishioners of Fairstead—

"The tithing life, the tithing strife,  
Thro' tithing ill of Jack and Gill."

drove him from Essex to London, whence, frightened by the plague of 1574-75, he again sought Cambridge, and found an asylum in Trinity College, which had been founded since his youthful sojourn at the university. On the cessation of the plague he returned to the metropolis to get a living by his voice or his wits, and died there about the year 1580. He was buried in St. Mildred's church, in the Poultry, where an epitaph, probably written by himself, and which is given in Stow's "Survey of London," recorded his memory. This monument perished, of course, with the church, in the great fire of London.

For an author, the vicissitudes of his life present an uncommon variety of incident; "without a tincture of careless imprudence," says Warton, "or vicious extravagance, this desultory character seems to have thriven in no vocation;" and Fuller, in his "Worthies of Essex," quaintly remarks, "that his stone, which gathered no

moss, was the stone of Sisyphus. He was successively a musician, schoolmaster, singingman, husbandman, grazier, poet, more skillful in all than thriving in any vocation. He traded at large in oxen, sheep, dairies, grain of all kinds, to no profit. Whether he bought or sold he lost; and when a renter, impoverished himself and never enriched his landlord. Yet hath he laid down excellent rules in his 'Book of Husbandry and Huswifery,' so that the observer thereof must be rich. He spread his bread with all sorts of butter, yet none would stick thereon; yet I hear no man to charge him with any vicious extravagance, or visible carelessness." I might quote the testimony of many other eminent writers to the moral worth of our poet, and the merit of his rhymes, while all lament his ill success in life. In that age of quaint device and allegory, a scythe and whetstone seems to have been thought an apt emblem of poor Tusser. This is found in Peachum's "Minerva" a book of emblems, printed in 1612, with a poetical commentary, and the same idea is more tersely rendered in a work printed in 1641, entitled "Recreations for Ingenious Head-pieces, or a Pleasant Grove for their Wits to Walk in;" thus—

"Tusser, they tell me, when thou wert alive,  
Thou, teaching thrift, thyself could'st never thrive  
So, like the whetstone many men are wont,  
To sharpen others when themselves are blunt."

#### WHAT TIME SHALL WE CUT TIMBER?

*Never in winter, but always in summer.* It should be cut during the most rapid season of growth, and while that season is drawing toward a close. The same rule should be followed that skillful nurserymen observe in performing the operation of budding—that is, just as the *terminal bud* on each branch begins to form—as soon as it is first evident that the growth of the branch is about to terminate, but is *still in active progress*. Experienced tree-propagators have found that much earlier than this, the juices of the tree are in too thin or liquid a state to form a good adhesion between the bud and the peeled surface.—From the moment that the bark separates freely from the wood, these juices continue to thicken, until growth ceases altogether and the new wood is completely formed; and when this new wood is in the state of a thick paste or cement, then is the time that the bud will adhere most perfectly. This is the period when the bark may be peeled from the tree without destroying its vitality. And this is the time for cutting timber. Early in spring, the tree is full of sap, which is little else than pure water, and which has been gradually accumulating through winter by the absorption of the roots, with no outlet for its escape, as there is in summer through myriads of leaves. While the tree is thus replete with water, it is in the worst condition to be cut. But towards midsummer, when a portion of this water has passed off through the leaves, and the rest has been much thickened by conversion into material for wood, the case is very different; for while the watery sap promotes only decay, the thickened juices soon dry

and harden, and assist in the preservation of the wood.

We have recently been furnished with a number of facts, in corroboration of this opinion, by Isaac Hathaway, of Farmington, Ontario county, N. Y., an old and enterprising settler, a close and extensive observer, and who has had much experience in connexion with saw-mills and timber erections. All his observations tend to show the great difference between winter and summer cut timber, and induce him to think that, cut at the best period, it will last under the average of circumstances three times as long as when felled in winter. In one instance, a fence, consisting of winter-cut materials, a part split into rails, and a portion in round poles, of beech, maple, iron-wood, bass-wood, &c., had completely decayed in fifteen years, and none of it was even fit for firewood. In another case, a quantity of bass-wood rails were cut in summer, and split from the brown or heart portion of the tree. This was done about fifty years ago; thirty years afterwards the fence was quite sound, and even now some of the same rails remain undecayed, although much worn away by the weather. Winter saw-logs, left over one summer at the mill, are usually much decayed for several inches towards the interior; summer-cut logs, which have lain a like period, are always sound. He has cut hickory for axe-helves; if done in winter, decay soon commences, and the worm which loves this wood, often wholly destroys its value. Summer-cut, he has never known it to be attacked by the insect, and indeed it seems too hard for them to penetrate. He had occasion to examine several old frames of buildings, and in every instance where the period of cutting could be determined, the same striking difference in durability was conspicuous.

He related several experiments on the durability of posts, one of which is worthy of repetition.—In a gravelly soil, where the water never remains, a stone bottom a few inches thick was laid in the post-hole, on which the post was set, and was then surrounded with stone closely rammed in on every side. As a consequence, the water never remains long enough in contact with the post to soak its interior, as would be the case if damp earth passed its outer surface. Such posts consequently give promise of remaining sound, after some years trial, at least twice the period of those simply packed in earth. He also finds that posts of what is termed the white cedar in western New York, (the American aborigine last much longer when set green with the bark on, than if sawed and seasoned, which he attributes to the protection afforded by the durable bark, against the vicissitudes of rain and drouth, and the air and weather generally.\*

Now that the season is approaching, best adapted for timber-cutting, as indicated in the preceding remarks, we hope those interested will at least satisfy themselves on the subject by a fair and careful trial.—*Country Gentleman.*

\*In ordinary instances, however, above ground, the bark by preventing seasoning, only accelerates decay.

## Literary and Miscellaneous.

## EDUCATION ANALYSED.

BY MRS. M. F. H. THOMAS.

## CHAPTER I.

I have chosen to-day, a hacknied theme; yet the truth has not half been told, and though more correct ideas obtain at present, than formerly, upon this subject; yet error—countless errors, rise with incalculable mischief, are abroad in the land; stamped with the signet of fashion and even religious orthodoxy. Some understand by education, merely the routine of school studies—when little, “to sit on a bench and say A;” and when grown up, to finish their education at some fashionable school. Finish their education! In a world so full of the wonderful and unknown; cease to learn! Why there is but one—Omnipotence alone, who possesses all necessary knowledge; (for all knowledge is necessary), and when we shall have finished our educations, we shall be like Him—*Allwise*. Finish their education!! Their minds crammed with mere words, conned parrot like, without correct habits of thought, or real ideas of the world they inhabit, or their needs, mental or physical;—the nature and destiny of humanity—the aim and object of their life mission uncomprehended and unthought of. What a curse to humanity is such an education. Better awake in the mind one spark of free, earnest enquiry, and then leave it to grope its way in the path of knowledge without teacher or guide, then reduce it to a mere machine, or rather receptacle.

But a process of *stuffing* is no education. What avails any amount of knowledge if it be jumbled together in such inextricable confusion, that we have no command over it? Ideas are not *ours* unless available in the hour of need. Some people spend hours every day looking for mislaid things; and never have anything ready when wanted. So in the mental world. If ideas are, so to speak, thrust into the mind without arrangement, classification, or analysis, if retained at all; and they seldom will be; they are not easily called to mind; and of course, never ready in emergencies—of no use in every day life; for this is a world made up of emergencies. Travelling on a path where all is unknown before us; what the requirements of the next hour—of the very next moment, may be, we know not; and he only, whose ideas are under at his command—whose “house is set in order,” is prepared for every issue. The worthlessness of *after wit*,” who does not know? Those words—that homely phrase of regret, “*If I had only thought*,” are “household words.” And to “*think*,” in time—to be ready; we must reason as well as learn. We must not only read but we must study the connections, relations, and adaptations which exist between different objects and phenomena, and so connect all ideas together in such a manner, that the suggestion of one will recall all analogous stored in the mind. It is the province and instinct of reason to discover relations—to trace analogies—to obliterate apparent discrepancies; and demonstrate

in the whole universe that vast bond of unity which marks it the work of one great Allpervading, Allwise mind.

“All parts of one stupendous whole.”

One province of reason is to trace the relations between cause and effect, and the true reasoner as he traces back the chain of causation, finds all its apparent multifarious shapes, gradually blending together, till all causes at last merge in the great first cause—“The God and Father of the spirits of all men.”

But to return. Others bend their whole energies to acquiring a knowledge of the art, or profession to which they trust for accumulating wealth, neglecting all other sources of improvement. In this case the mind is narrowed and unbalanced, by the exclusive exercise of a single set of faculties; and the consequence is, that not only is a source of great and legitimate pleasure lost; but partial views of all things are taken, and a habit of inattention to what else is passing around is formed. A word here upon *attention*. There is nothing more necessary to one who would acquire a correct and comprehensive education; than strict habits of attention to whatever is transpiring around him, to be wherever he may, except in his own closet—the only place for reveries. I know that meditative men are apt to walk like dreamers through the world—through society, rife with that problem of all others—man. He knows not how much he is losing. How many useful hints for the legislator, the teacher, the parent, the friend or neighbour—how much aid in settling the varied questions of social relations—how many clues to the bewildering labyrinth of existence are to be found in the casual circumstances, the careless words, and unstudied movements of every day life. Precious gems lost from the cabinet of thought. It was the habit of attention to physical phenomena that caused Newton to discover the law of gravity; and thereby enabled him to solve the problem of planetary motion. An apple fell to the ground—he saw it, and asked why. And here is another habit which should be joined with that of attention, viz: the habit of inquiring the reason, the *why*, of all things. From Newton’s earnest study to find the cause of this simple phenomenon resulted the greatest discovery ever known. “Go thou and do likewise.”

Brooklin 18th July, 1854.

## WHAT A GARDEN SHOULD BE.

From the *New England Farmer*.

Having discussed Gardens at some length under their ornamental aspect, lest the accusation be brought that the useful has been forgotten, this article shall be devoted to the special consideration of the Kitchen Garden.

We are wrothly apt to associate with the word Garden, a corner of land filled with weeds and flowers, and another corner marked into rows, by a regiment of White Birch, bean poles, and pea bushes, with an intersprinkling of corn stalks, some squashes—vines, and a great deal of rubbish, where, as the country people say, the

"Garden Sauce" is grown. Now, as the object of this article is to have a little talk about this very "Garden Sauce," let us see if we need to abandon our much loved vegetables, in improving our homestead, and making its surface a little more pleasing to the eye.

Rather than abandon them, it would be better to lose much that would be pleasing of the purely ornamental, for in the country, people are very dependent upon the vegetables of their own growing, as markets are rare, and but ill supplied. Were there no other argument for their culture but this, it, alone, would be enough, but there is a still stronger one: few are aware how conducive to health the summer vegetables are: all authorities agree in recommending their free use: and the danger of cholera arises, not from the bad effects of good, fresh vegetables, so much as from the stale and wilted denizens of the market. It is always a matter of very great surprise to city residents, to find so little attention paid to the growth of anything but potatoes, corn, and a few beans, in the country. Leaving bricks and dust for green lanes and trees, they revel in the fresh air, and with a keen appetite, eagerly await the promised dinner, imagining all the dainties of the vegetable world they have heard of, strawberries and cream, green peas, sweet corn, &c. When to their surprise they see the kitchen maid returning from the neighbour's with a bought, or borrowed pint of milk, and meet with the excuse from the matron, that "she regrets the lack of asparagus, lettuce, &c., but the butcher didn't bring any, and it's so hard to get vegetables in the country." The difficulty lies in the dread of trouble, not in the trouble itself: do not be so afraid, good sir, after you have come home from the day's work, to drop a few peas, or tomatoes or lettuce seeds! and do not let your imagination dwell upon the hot days' weeding and by-  
e.

It is a great shame, that it should be universally true, that it is no where so difficult to get vegetables as in the country. It will not do for you to say, anytime will answer for that work.—Anytime is no time. Believe me, the ten minutes of aggravation a day your wife will feel when the dinner presents no variety; of disappointment you will experience when you find your wife is not a fairy, and cannot produce baked beans and potato in any other shape than baked beans and potato, and is unable to alter the everlasting veal and bread, into green peas and sweet corn,—is much more, than the mere trouble of weeding, and sowing the seed. But weight enough has not been given to the healthfulness of vegetables: we are too essentially a meat-eating race; we do not know how to make the most of things; and hundreds of poor families might enjoy a luxurious variety, would they but use the bounties of the vegetable world.—The English and European peasantry live entirely on a vegetable diet, and yet are quite as healthy as we are, and hundreds and thousands of our poor people have more sumptuous meat fare than the majority of the inhabitants of the old world. Lay off, then, in your garden, a bit of land; plant a few of the different vegetables, just enough to supply yourself, and do not make that

fatal mistake of getting so much land under culture.

People are inclined to go to work too largely, and plant enough of a few things, to supply several families, and then to allow the quantity to take the place of variety. It is very easy to calculate how much you will want, and when you have decided, do not plant all at once, but have a succession; plant a row of peas and corn to-day, another in a week, and another the third week; then have a few hills of squashes, summer and winter, and remember it is no economy to cover the land with winter squashes to the exclusion of summer vegetables;—it is robbing Peter to pay Paul, and no gain; then a few hills of melons, some distance from the squashes, to prevent impregnation of seed. Have some ten tomato plants, a little patch, ten feet square, of carrots, another of parsnips, a few hills of rhubarb, or pie plant, a small square, say 20x20, of asparagus, and dotted in, a few pepper plants, some cucumbers, and in a corner by themselves, one hundred raspberry vines with two or three strawberry beds, 4x20 feet. On the edge of the walk, set currants and gooseberries, and a little further in, dwarf peas. By a judicious selection of place, you can get two or three crops a year from some of the land; the parsnips will be eaten before time of planting, when their place may be taken by radishes, and they be followed by peas, and they by a few turnips. To the other early peas, the parsnips may follow: on the corn land you can grow squashes, and *vice versa*.

Half an acre arranged in this way, will give all that a family of six persons can possibly need, but be sure to remember at starting, that you want no more land under culture, than you keep free from weeds, and to plant no greater quantity than you can use yourself. Where the most of the surface is under culture, and the ornamental is entirely excluded, there is danger of a too great spirit of utility; therefore do not forget the we must feed the mind and soul as well as the body but pay a due regard to both. It is very desirable, however, to keep each division by itself, and not mix them together heterogeneously. No one wishes to see gilly-flowers and cabbage side by side, because they are of the same family: let the two divisions be just as separate as parlour and kitchen, but do not omit either any more than one of these two rooms from your house. It may seem rather late to make this appeal to the vegetables, but there is yet time for tomatoes, late peas, sweet corn, carrots, parsnips, cabbages, and when you read over this list, recall the savory dishes they may be compounded into, and be willing to give your wife the assistance you can in the culinary department. Let the succession of the vegetables should be forgotten: an enumeration may be of service; first parsnips, then asparagus, rhubarb, radishes, lettuce, dandelions, peas, beans, cucumbers, corn, squashes, tomatoes, carrots, turnips, cabbages and potatoes. For fruits, strawberries, raspberries, currants, cherries, melons, pears, peaches and apples—all within the reach of every owner of one hundred and fifty feet square of land.

Reviews, &c.

*The Anglo-American Magazine*—July, 1854; Maclear & Co., Toronto.

The present number of this popular Canadian miscellany commences the fifth volume, so that the work may now be considered as fully established. A progressive improvement has hitherto marked its career from the commencement, and the present number of the new volume is, to say the least, no exception to the general law. It contains a lithographic portrait of our excellent Governor General, Lord Elgin; a striking view of the celebrated Cedar Rapids on the St. Lawrence, and two plates of the fashions for the Month. Altogether the "getting up" of this interesting serial is highly creditable to all parties engaged, and cannot fail to draw attention to the superior style in which such matters are managed in the Messrs. Maclear's establishment.

*The People's Journal*—New York: Alfred E. Beach, Editor and Publisher, 86, Nassau-Street.

This is indeed an extraordinary publication when quality, quantity and price are considered. It is published monthly, for one dollar a year; each number consisting of 32 large and closely printed octavo pages, profusely illustrated. The part for July, now before us, contains no less than forty cuts, illustrating number of interesting papers on Agriculture, Natural History, Typography, the Mechanical Arts, &c. We can confidently recommend the *People's Journal* as the best and cheapest publication of its class that has come to our knowledge.

*Chambers's Journal of Popular Literature, Science and Art*—Part 6—July, 1854; A. H. Armour & Co., Toronto.

The present part is, like its predecessors, well filled with interesting and instructive articles, several of them by the most accomplished and popular writers of the day. It completes the first volume of the new series, and those of our readers who are not ready subscribers could not do better than become so at once. The Journal of the Messrs. Chambers is too well known in every part of the civilized world to need any particular recommendation from Messrs. Armour of this city, are agents for this and the other numerous publications of those enterprising publishers; and distant readers can procure the original Edinburgh edition, monthly, of the booksellers in the principal towns of the Province, at the moderate charge of ten shillings per annum.

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ENGLISH CATTLE.

TO AGRICULTURAL SOCIETIES and OTHERS requiring the best bred Cattle from England—comprising:

PURE BLOOD HORSES. SHORT-HORNED CATTLE, NORTH DEVONS, HEREFORDS, AYRSHIRE and ALDERNEY COWS.

Also: Pure Bred Southdown, Cotswold and Leicester Sheep.

Also: Suffolk, Essex and Berkshire Swine; imported on commission into any part of Canada and the United States, by Messrs. Thos. Betts & Brother, of Herts, England.

Cattle ordered previous to the 1st of September will be insured if desired.

Every information with regard to terms and shipment of Stock to America will be strictly attended to by applying to W. EVANS, Esq., Secretary to the Board of Agriculture, Montreal, or to J. M. MILLER, 81 Maiden-Lane, New York City.

THOS. BETTS & BROTHER,  
Herts, England.

Toronto, August, 1854.

TO  
Agricultural Societies, Farmers, and Others!

ON SALE BY PRIVATE TREATY, by the Agricultural Society of the Township of ORILLIA, County Simcoe, that celebrated DEVON BULL

ROB ROY!

Being now six years old, and having received the first prize awarded by the Agricultural Association of Upper Canada, at Niagara, 1850. He has also received the first prizes awarded to Bulls by the Oro, Medonte, and Orillia Agricultural Society. The length of time he has been in possession of the Society renders it necessary to effect a change, which is the only reason for parting with him. Pedigree can be given, and further particulars known, on application to the Secretary,—if by letter, post-paid.

GEORGE TUDHOPE,  
Secretary.

Orillia, July 22, 1854.



**SIR CHARLES NAPIER,**

(Imported Short Horn Durham Bull.)

THE PROPERTY OF MR. RALPH WADE, JR.,

NEAR COBourg, c. w.,

**W**ILL serve Cows this season, 1854; thorough bred Cows at Ten Pounds, others at Two Pounds Ten Shillings each P. P. Calved Mareh, 1853, bred by J. M. Hopper, Esq., Middlesbro'-on-Tees, Yorkshire, England, got by Belleville, (6778), d. Polly, by Belleville (6778), g. d. Madeline, by Newham (4593), g. g. d. Ganymede, by Uptaker (5334), g. g. d. Garland, by Matchem (2231), g. g. g. d. by Fitz Remus (2925), g. g. g. g. d. by Cato (119), g. g. g. g. d. by Whitworth (695), g. g. g. g. g. d. bought of Mr. Mason, of Chilton.

**BELLEVILLE.**

(Vide Coate's Herd Book, Vol. 6, p. 18, No. 6778)

*The property of Mr. John Mason Hopper, will serve Cows at Newham Grange, near Middlesbro'-on-Tees, at 12 Guineas each Cow.*

In the year 1846, Belleville (sire of Sir Charles Napier) won the first Prize in the first Class, at the meeting of R. A. Society of England, at Newcastle; the first Prize in the first Class, at the meeting of the Yorkshire Agricultural Society held at Wakefield; the first Prize in the first Class, of the Royal Irish Improvement Society, held at Limerick, and the Challenge Cup of 100 Guineas' value, as the best Animal in the Yard, with one Gold and two Silver Medals; also, the first Prize in the first Class, at the meeting of the Highland Society of Scotland, held at Inverness, and the Silver Medal for the Breeder; likewise in 1848, the first Premium at the Durham Agricultural Society's Show, held at Darlington; and in 1850, at the meeting of the Highland and Agricultural Society, held at Glasgow, he won the sweepstakes of 2 guineas each, with 25 added by the country, as the best bull of any age, open to England, Ireland, and Scotland, beating nineteen others.

**CHALLENGE.****\$1,000 to \$4,000 a Side!**

Or in Friendly Competition.

**I**MPORTED "YOUNG LION" Within one Month after his Season is over (due notice being given), is open to

**WALK OR TROT 5 MILES AND UPWARDS.**

Against any Stallion, Gelding or Mare, of his weight or more, in Canada or in the United States, imported or otherwise, and as so to Horses, or in the case of weight with him any Horse weighing within 250 lbs. of his weight will be allowed to compete.

—ALSO—

At the same time, he will be open to Trot his Mile in less than **FOUR MINUTES**, in or out of harness.

—ALSO—

At the same time, he will be open to draw any weight from Two Tons and upwards, from 5 Miles to 100, and return unladen in the shortest space of time, against any Stallion, Gelding or Mare, of any class, size or weight, either in Canada or the United States, imported or otherwise.

—ALSO—

For Superiority of Action against any Horse of his Class wherever he can be found.

One Judge to be chosen from among the veterinaries of New York, one from Montreal and one from Toronto, whose services are to be paid for by the Winner.

The Trials to take place in the vicinity of Toronto; and all travelling expenses to be allowed to the Owner of any Horse that may compete coming from a distance.

**W. B. CREW.**

Toronto, May 27th, 1854.

6-6-m.

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