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THE BRITISH AMERICAN CULTIVATOR.

"AGRICULTURE NOT ONLY GIVES RICHES TO A NATION, BUT THE ONLY RICHES SHE CAN CALL HER OWN."—Dr. Johnson.

Vol. 1.

TORONTO, JUNE, 1842.

No. 6.

THE ANNUAL AGRICULTURAL SHOW OF THE NIAGARA DISTRICT, was held on the 20th ult., in the village of Drummondville, and we are happy to say was numerously attended. Previous to the examination of the Stock, the assembly was ably addressed by GEO. ADAMS, Esq., the President of the Society, who said he was pleased to have it in his power to address such a respectable concourse of farmers, met together for a purpose so laudable and praiseworthy—namely, the advancement of the interests of agriculture. That at the first few exhibitions of Stock in the District, the competitors were but few, and consequently the premiums were divided among those who then stood foremost in introducing improved grades of Stock. He was happy to witness the change; a spirit of enterprize had gone forth among the farmers generally, and the very persons who took credit to themselves for importing into the District various breeds of Horned Cattle, Sheep, and Swine, were now literally almost ashamed to show their stock; and he was bound to acknowledge himself of the number. He would offer a word of advice to the Judges: that in awarding premiums for stock, they should be particular in paying due regard to the points and symmetry of the different animals, and most approve such as combined these qualifications with utility and fitness to the country.

Mr. Adams further said he would advise every farmer to have at least one Agricultural Paper in his possession, not only for his own benefit, but also that of his children; and was pleased to notice our Journal in flattering terms. He said it was the duty of every farmer to support it; that the subscription was so trifling as to place it within the reach of all: and each one would, by paying attention to the suggestions of its Editor, and numerous contributors, reap benefit to the amount of ten times his subscription.

After the address, the Judges and concourse retired to the ground allotted for the purpose, (that so celebrated in the annals of Canadian history, Lundy's Lane), where the Stallions and Carriage Horses were exhibited. A better collection of the latter we have never seen, at any show which we have had the honour of attending.

The collection of Horned Cattle, Sheep, and Swine were also excellent; and we can say, that on the whole, we were much delighted with the exhibition. The unanim-

ity and good feeling manifested on the occasion by all parties was truly admirable, and worthy of imitation in every other District in the Province. We will not close our article, without expressing a wish that the different Agricultural Societies would take some special means to render their annual meetings generally interesting. Much depends upon the interest that is excited in the minds of the community, and it is too true, that a lamentable indifference as to the proceedings of the Societies, prevails in some Districts. We do not hesitate to suggest the propriety of a plain, cheap, but substantial dinner, being prepared for the occasion, to be followed by appropriate speeches—and in order to secure attention and success, two or three of the intelligent yeomanry or gentlemen of the vicinity, should be duly warned to be prepared to express their views publicly; or otherwise a special address might be delivered upon the occasion. It would, however, be a fitting opportunity to discuss subjects of interest to practical farmers, and to gather matter for the consideration of the Legislature.

MR. JOHN HANNAM'S LETTER.

We beg to call attention to the excellent letter of Mr. JOHN HANNAM, which will be found in another page of this Number.—With a view to bring our paper, in some partial degree at least, under the notice of the British public, we dispatched some of our first numbers to various persons in England, and among others to Mr. Hannam, confident that in him at least—a gentleman of acknowledged zeal in the cause of agriculture—we should find a friendly advocate. The letter above alluded to is the result,—a letter which so sufficiently displays his truly British heart, liberal feeling, extensive research, and practical good sense, as to supersede the necessity of any remarks of ours to manifest them. We trust that though his first, it will not be his last appearance in our columns.

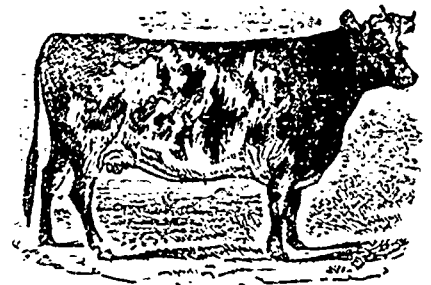
His remarks on Emigration, coming as they do at a time when the public mind at home and in the colonies, is so much directed to the subject, and his suggestions on a Central Agricultural Society for the promotion, amongst other things, of that great object, are well deserving of a more extensive circulation than the columns of our periodical can pretend to give them. If, however, our contemporaries should concur with us in opinion respecting their value, we doubt not that they will give them a place in their pa-

pers, and unite with us in extending them as generally as possible. We have already a number of Agricultural Societies throughout the Province, which have done and are doing much essential benefit. But how much more effective must be their influence when the energies of all are concentrated through a medium such as proposed by Mr. Hannam,

THE ST. CATHARINES' NURSERY.

On our tour through the Niagara District, we availed ourselves of the opportunity of calling upon Dr. C. BEADLE, the proprietor of this Nursery. The quantity of ground actually covered with trees of almost every sort and variety, is nearly 19 acres, and he anticipates extending his Nursery ground until it covers 40 acres. Eight years ago, the above site of ground was a complete thicket of forest. The soil, locality, and climate, are well adapted for the purpose, and the trees are of a bright complexion, and most thrifty growth. At a future day, we will bring it more fully to the notice of the public.

AN AYRSHIRE COW,



The above is a true likeness of an Ayrshire Cow. We will give, in our next, a detailed account of this celebrated breed of Cattle, by a gentleman who is fully competent to do the subject justice.

Our present Number has been unavoidably delayed over the usual time of publishing, in consequence of having ordered a better quality of paper, which did not arrive until the ordinary time of mailing it. For the future, our paper will have a more uniform appearance.

The advertisement of the Gore District Agricultural Shows has not been published in this Number owing to this above delay.

Advertisements of Shows should be forwarded at least two months in advance of the time of Publication, to secure them insertion.

EXTRAORDINARY CALF.—A four year old heifer, the property of Mr. Brown, of Mirey, produced a cow-calf, the enormous weight of six score and six pounds. Its girth was three feet two inches, and the length from the nose to the end of the tail five feet nine inches. The cow and calf are doing well.—*M. L. Express.*

EXTRAORDINARY FECUNDITY.—Mr. Francis Crago of Liskeard, has in his possession five ewes, which this season have yeaned 11 lambs, three having produced three lambs each. It is not a little remarkable that the dam of two of these prolific ewes, in the course of 12 years, yeaned 31 lambs, having had three lambs at a birth for ten successive years.—*ib.*



THE CULTIVATOR.

"Agriculture is the great art which every government ought to protect, every proprietor of lands to practice, and every inquirer into nature to improve"—*Dr. Johnson.*

Toronto, June, 1842.

SIR ROBERT PELL'S CORN LAW has passed the British House of Commons, and probably will be finally enacted, without any material alteration, by the other branches of the Legislature. His New Tariff, however, is yet under discussion, and from the opposition given to it by British agriculturists, we would suppose that it will not become a law in its present form. From our present view of the subject, we do not apprehend that the New Corn Law will be much more unfavourable to us than the former law was, and more than this we cannot say in favour of it.—Time only can show what effects the New Corn Law will produce upon the markets of the British Isles. Our own opinion is, that in time of peace and favourable seasons, there will be a very large importation of wheat into Britain from the wheat producing countries of Europe. It can scarcely be otherwise, as in the countries referred to, the land is fertile, almost the whole population, which are not very dense, are engaged in agriculture, and the wages of labour is low. The consequence will be, a large production, and England will always be the best, if not the only market for this production, whatever may be the price. Taking all these circumstances into consideration, in favourable seasons, the price of wheat is not likely to be high in England. The difference of duty in our favour as a British colony, will scarcely make our situation equal to the European producer, who is so much nearer the market, and who pays so much less wages for labour. The New Tariff, should it happen to pass without any modification, we consider very unfavourable to us in many of its provisions. It is true, it gives us generally, an advantage of fifty per cent. in the amount of duty over foreign produce, but then the duty on foreign produce is reduced to so low an amount, that we cannot successfully compete with European producers, who have a more favourable climate for cattle, and are so much nearer to England. Live cattle, sheep, and swine, can be imported into Britain by the proposed Tariff at a very low duty, and the facility and cheapness of communication, by steam navigation and rail-roads, will enable the French, Dutch, and German farmer, to bring their live stock to English markets on nearly as

easy terms as the Scotch and Irish farmers could do. The consequence will be that French, Dutch, and German fat cattle, and swine, will be brought to England and slaughtered there, and reduce the price of fresh and salted meat so low, that the market will continue closed to us, as completely as it has been hitherto by an excessively high duty. There are many other articles included in the Tariff that might be produced here, under reasonable protection from foreign competition; we fear, however, that is now useless to enumerate them, as the Tariff will be decided upon, long before our humble representations could come under consideration, if they would receive any consideration.

From observations made by several members during the discussion on the New Tariff, the agricultural class in Canada have much cause to regret, that their Representatives did not give more attention to their interests in the last Session of the Provincial Parliament. Had the Provincial Parliament made enquiries into the present state of Canadian agriculture, they would have been able to understand what measures were necessary to be adopted to promote its improvement and prosperity. Had these enquiries been made and the results reported, it might have had some influence on Sir Robert Peel and Mr. Gladstone, and suggested a modification in the New Tariff, that would be favourable to this country. A representation coming from our Representatives in Provincial Parliament assembled, could not fail to have considerable weight, both with the Government and the Imperial Parliament. The result of an enquiry into the state of our agriculture, might not be such as we would anticipate, but this we are certain of that it could not result in reporting our agriculture in an improving and prosperous condition. The causes of this depression might be considered very different from what we conceive them to be, as well as what might be the proper and possible remedy that would be suggested for their improvement. At all events, had such an enquiry been instituted, it would have elicited some useful information on the subject, and it would have shown a disposition in our Representatives to remember and attend to the interests of their constituents. The several Legislatures of the Provinces of British North America, are the proper sources for communicating the wants and wishes of the people of these Provinces to the British Government and Imperial Parliament, through the Governor General of course.

Aware that we have Provincial Legislatures, representing a constituency, nine tenths of whom are agriculturists, what are the Government and Imperial Parliament to think of our wants and wishes, if no notice is taken of them by our own Legislators? They must very naturally conclude, that the Provincial Legislatures being interested and upon the spot, ought to be perfectly acquainted with the state of our affairs, and feel anxious to promote our prosperity, and that if they are inattentive to the interests of agriculture, it must be from an impression that those interests require no attention from them. This is a reasonable inference, and one which we have no doubt, has been the cause of much injury to the interests of agriculture in Canada. As Editor of the only Agricultural Periodical published in Canada, we have assumed a duty to agriculturists in British America, which we are determined to fulfil in the best manner we are capable, and it shall not be our fault if the wants and wishes of agriculturists in these Provinces, are not

brought fully and fairly before the public. Our views may be erroneous on many points but we shall submit them, and after we have done so, we shall willingly be corrected, if demonstrated to us that we have been in error. Those who generally take the most active part in the management of matters that interest us, are not, perhaps, always perfectly well acquainted with the manner in which these interests may be influenced in various ways, directly and indirectly. As Editor of *THE CULTIVATOR*, and as a practical agriculturist, that is personally interested, we shall make it part of our duty, to explain these matters in the best way we are capable, and it shall not certainly be want of inclination, if we fail to explain them satisfactorily. We have often read with surprise and regret, the erroneous ideas that are entertained in Britain, of the wants, the wishes, and the true condition of the agricultural population of this country. Indeed, one would suppose, they or their affairs are not thought worthy of any consideration, and that any law or arrangement made, has no reference to them or their interests. British America is looked upon as one of the most valuable possessions of Britain, and it certainly would be so, under judicious encouragement and proper management. But we take upon us to state, that it never can become the valuable appendage of Britain that it is capable of, unless through a successful and prosperous agriculture, by whatever means that can be accomplished. Let those who think differently state their views, and we promise that if we find them clear and satisfactory, we shall not only cease to recommend and advocate the interests of agriculture, but we shall discontinue the profession we have been brought up to, and hitherto preferred to all others.

THE NUMBER OF PLOUGHINGS GENERALLY GIVEN IN FLANDERS FOR THE DIFFERENT CROPS.

Flanders is remarkable for the reiterated use of the plough in the production of its crops. Either in strong or light soils, it seems to prevail alike in the former, for the sake of pulverization as well as cleanliness; in the latter, chiefly for the destruction of weeds, and blending the manure with the soil. Indeed it is surprising how time can be found for the number of ploughings which are universally given. Very generally, the number, for the various crops respectively, is as follows:—

For wheat, two ploughings, and two harrowings,	
Rye, two or three.....	ditto ditto
Oats, three.....	ditto ditto
Potatoes, four.....	ditto ditto
Carrots, four.....	ditto ditto
Flax, two.....	ditto ditto
Buck-wheat.....	ditto ditto
Rape, three.....	ditto ditto
Barley, three.....	ditto ditto
Hemp, four.....	ditto ditto
Turnip, three.....	ditto ditto
Beans, two.....	ditto ditto
For Fallows, four or five ditto	ditto

There must be some good reason for this apparent superabundance of labour. Whatever theory or fancy might prevail amongst a few individuals, no people generally, however industrious, would voluntarily tax themselves with such an increase of trouble and exertion, if it were not conducive to profit. Upon the frequent stirring of the ground they rely, as has been remarked, not only for good tilth, but for an equal mixing of manure, and for the eradication of weeds.—Hence, proceed those magnificent crops of clo-

ver for which Flanders is remarkable. To accomplish the number of ploughings considered necessary in Flanders, Flemish industry and attention appear to be essential, and we fear it will be many years before a similar system will be introduced into Canadian husbandry, however probable it might prove to be.

ROYAL ENGLISH AGRICULTURAL SOCIETY.

In addition to the premiums offered by this Society for Cattle and Implements, they have offered premiums for Essays on the following subjects:—1st. On the Diff. Husbandry of Turnips: 2nd. On the Natural History, Anatomy, Habits, and Economy of the Wire-worm: 3rd. On the Mechanical Properties of the Plough: 4th. On Prognostics, or Natural Signs of Changes in the Weather: 5th. On Cheese-making: 6th. On the Rotation of Crops best suited to Light Lands: 7th. On the Rotation of Crops best suited to Heavy Lands: 8th. On the varieties of Wheat, suited to different soils, in order to ascertain what is the best wheat which each soil is capable of producing: 9th. On the Food of Plants: 10th. On the best mode of curing Butter for future consumption, and preservation in Foreign Countries—the Butter to be obtained from grass-fed cows, milked between the 20th of May and the 20th of June of the present year.—They also propose a Prize for the best managed and cultivated Farm in the District in which the Society may annually meet. The competitors for this Prize will be required to give a statement of the course of management and cropping during the two years previous to the commencement of the Rotation embracing the period of competition; to render a detailed account of the whole system of management, as regards cattle and sheep, tillage, manure, produce, expenses, and proceeds during the Rotation, with the value of the land and stock, at the commencement and conclusion of the Rotation. Prizes are offered for the best ploughing, and for the best performance of many other branches of agricultural labour.

We give these details in order to show farmers in British America, the exertions that are being made in England, the best cultivated country on earth, to advance still further the improvement of agriculture in all its branches. And if they consider it expedient and profitable to encourage the improvement of Husbandry in Britain, would it not be much more necessary to give instruction and encouragement for the improvement of agriculture in Canada? No man, acquainted with this country, will pretend to say that improvement is not required here; and this being a fact that cannot be disputed, we would enquire what instruction or encouragement has been given, either by the Government, or by individuals that would be calculated to produce the required improvement? We may be answered, that every man should be left to manage his own affairs as he may think proper; that if he was satisfied with matters as they are, it was his affair, and no man should meddle with him. The English community, however, appear to think and act very differently. Every member of that community seem to be impressed with the conviction of the utility of introducing every improve-

ment that is possible in the art of agriculture, and in every other art. In that country, they appear to think that it is the duty and interest of all, that improvement should advance, and they adopt every possible means to instruct and encourage the general progress of improvement.

METHOD OF FEEDING HORSES AND MILCH COWS, IN SOME PARTS OF FLANDERS.

It is said that working horses are kept in excellent condition fed on eight pounds of beans, and twenty pounds of bean-straw, and twenty pounds of barley-straw cut into chaff, daily.—Milch cows, get twenty pounds of hay, and twenty pounds of straw each, in the twenty-four hours, when not fed with roots. We would recommend that sixteen pounds of hay should be substituted for either the bean or barley-straw for the food of horses. In the District of Burgeois, six and one-third quarts of oats, and thirty-five pounds of hay, is given per diem to each horse. In lieu of fifteen pounds of the hay, seventy-three pounds of carrots are given. A little over half the quantity of beans is substituted sometimes for the oats. A small quantity of oil-cake is dissolved in the water given them, and it is whitened with rye-meal, oat-meal, or the flour of buck-wheat. Milch cows get eighteen pounds of straw, and sixty pounds of turnips in the twenty-four hours, with a white drink as to horses.—In lieu of the turnips, gram, potatoes, or carrots are given. Six pounds of hay is sometimes substituted for a part of the straw. In feeding horses, cut straw is invariably mixed with their oats, and the horses in consequence are kept in better condition on seven pounds of oats per diem, than they would be on double the quantity of oats given to them unmixed. When oats is mixed with cut straw, the mastication necessary, converts every grain of corn into nutriment. Chopped hay or straw is not much used in feeding horses in any part of British America.

MINERAL BONE-EARTH.

Mr. PUSEY, M. P., reported to the Council of the Royal English Agricultural Society, as Chairman of the Geological Committee, the result of Professor Phillips's examination of the Specimens of Native Phosphate of Lime from Estramadura, in Spain, presented to the Society by Mr. Kemberley at a former meeting of the Council, and referred to the Geological Committee for their opinion of its value in an agricultural point of view, as a substitute, to a certain extent, and as far as the phosphate of lime was concerned, for bone-dust as a manure.

Mr. Phillips found that this specimen contained no less than 90 per cent. of the phosphate, and he was therefore of opinion that it would be a most important manuring application, provided its mechanical texture could be modified in such manner as to assimilate it to that of the phosphate existing in bone-dust. Mr. Pusey reported that Professor Phillips investigation on this point had led to a successful result, and that he had discovered a mode by which this valuable mineral substance could be brought into a fit state for application as a manure; but he considered that it would be important that a full examination of this substance should be instituted, previous to any steps being taken to import it as articles of commerce.

Dr. Danbony is about to undertake a journey into Spain, at his own expense, for the purpose of inspecting the geological occurrence of this mineral in that country.

ON REARING CALVES.

(From The London Mark Lane Express).
SIR,

Having noticed that the query of your correspondent with respect to the best substitute for milk in rearing calves has not been answered, I have taken the liberty of sending you an account of the mode pursued by myself. It is not answering your correspondent's question, but he may find that linseed and wheat ground together are very useful in rearing calves.

I never have reared any calves entirely without milk. If possible for the first month, twelve pints of new milk is daily given them, six at morning, and six at night. Hay is placed before them in a small rack, which they soon learn to eat. The following fortnight six pints of new, and eight of blue (skum) milk is given them daily; the latter is much better boiled, and when new, milk-warm, mixed with the new milk. At the expiration of that time, I commence mixing porridge with the skum-milk, and entirely leaving off the new. The porridge is made of boiling water, and ground linseed and wheat. Stir the latter into the water as it boils until it becomes as thick as good gruel; when cool it is fit for use. Five stone of linseed to a bushel of good sound wheat, ground together, makes very good lining for gruel. When the milk fails, the gruel is given as a substitute in the same quantity. A few cut turnips are likewise given. This has been the general manner in which I have reared calves, and they turn out well in the spring to grass.—At times, being much pressed for milk, I have been obliged to commence with porridge; when the calves have been very young, sometimes only a fortnight old, a little new milk was always put into it: the calves were also kept at the pail a much longer time. I have been in the habit of rearing from ten to eighteen calves yearly for the last eight years, during which period I have lost but five. Linseed whole, Oil-cake, and Sago have been tried, but the ground wheat and Linseed have been always found to answer the best. Your correspondent might try the linseed and wheat; the first month without milk, will be the most trying to the young calves. Oil-cake, beans, or oats ground, should be placed daily in a trough, which they will soon begin to lick, and it will keep their bodies from becoming large. The wheat should be sound, and above all the serving of the calves should be intrusted to a trusty person. If this food is given either too hot or too cold, they are injured. New milk warm, and regular feeding does much for them, I have turned out finer calves than some persons who have given much more milk, but have neglected warmth, regularity of feeding, and cleanliness. I remain yours respectfully,

March 14th, 1842.

THE SLEEP OF PLANTS.—The common chickweed with white blossoms, affords a remarkable instance of what is called the sleep of plants, for every night the leaves approach in pairs, so as to include within their upper surface the tender rudiments of the new shoots, while the next under part at the end of the stalk are furnished with longer leaf-stalks than the others, so that they close the terminating pair, and protect the end of the branch.—16.

RISE OF THE SURFACE OF THE LAND IN EUROPE.—In Sweden as well as in Italy, the land rises constantly from out of the basin of the surrounding sea. This operation takes place very slowly and gradually, yet it seems without intermission. According to the late observations of M. Niccolini, the Neapolitan Geologist, the land of the west coast of Italy has risen from the year 1823 to 1833, one hundred and twelve millimetres. The same facts has been long observed in Sweden, but never yet ascertained by any accurate measurement.—17.

TIMBER DUTIES.

If Norway, and the Baltic were the same distance from us as North America, the proposed duties of Sir Robert Peel of 25s. on foreign and 1s. on Canadian timber, would, it cannot, afford a sufficient protection to our colonies; but as the distance to America is more than double, the freight being 40s., whilst it is 20s. from the Baltic only, the protective duty is thereby reduced to 1s.—a total prohibition of the use of Canadian produce and throwing out of employment our British shipping, the timber from the Baltic being now brought in foreign vessels, which go back in ballast only; so that the proposed measure would be a great boon to the foreigner.—*M. L. Express.*

The New Tariff, will have precisely the same effect upon other descriptions of Canadian produce. The duty on foreign produce is, by this Tariff, proposed to be so low, that there will not be any protection for the produce of British North America. England has flourished and improved above all other countries of the earth, under the protective system, and we very much doubt, if the free-trade system will improve her condition, or the condition of her colonies. If the free-trade system was completely established all over the earth, and the most perfectly free interchange of commodities allowed between all nations and people, it might answer very well, but as this will be impossible, while revenues have to be raised for the support of governments and states, we confess that we cannot perceive the reasonableness of offering free-trade to nations that are not disposed to reciprocate these advantages. England, with her extensive colonies in every part of the earth, might be more independent of other nations than any one of them ever can be of her. Her colonies might, possessing as they do, every diversity of soil and climate, yield every production that is necessary for the use of man, and might also furnish all the luxuries that habit or custom have now made necessary, provided they were encouraged and protected. We do not object to trade and commerce, but we are most decidedly opposed to any trade or commerce that would be injurious to the industry of British subjects wherever they are situated, or to the improvement of any portion of the widely extended British Empire.

We have attempted to establish a communication with "*The Royal Agricultural Society of England*," in order that we might enjoy the great advantage of ascertaining the improvements in the theory and practice of agriculture, published through the medium of that Society, and hence be enabled to give the most useful information on these subjects to the Subscribers to *The British American Cultivator*. From a Report of the proceedings of the Council of *The Royal Agricultural Society*, at their meeting of the 6th of April last, as published in *The Mark Lane Express*, we copy the following notice referring to our communication:—

"WILLIAM EVANS, Esq., of Montreal, Editor of '*The British American Cultivator*,' a periodical work established for the improvement of Canadian Agriculture, and published monthly at Toronto, transmitted to the Society the two first parts of that publication, with a promise of the continued supply of the future parts of that work, as long as he was connected with its direction, expressing the interest which he felt on the subject of effecting such a communication with the Society, as would enable him to diffuse throughout that portion of the British dominions the improvements in agricultural theory and practice,

ascertained and published through the medium of the Society."

Our communication, with others, were referred to His Grace the Duke of Richmond, with a request that he would favour the Council with a report on the various topics to which they related.

AGRICULTURAL REPORT FOR CANADA EAST.

Though the snow disappeared at an early period this spring, the weather has not been very favourable for sowing up to this time. Except on lands well drained, and properly ploughed, the soil has not been in the very best condition for harrowing up to the 16th of May, and even at this date, a considerable proportion of the grain is not yet sown, and there is scarcely any of the potatoes planted. Wheat sowing has been put off very generally, until after the middle of May, in order that it might have a better chance of escaping injury from the fly. We believe there will be much more wheat sown this spring than for several years past. The farmers appear to hope that the fly will not be so numerous this year as usual, and we wish sincerely they may not be disappointed in this hope. Being unable to grow wheat for a few years past, in this part of Canada, has been a serious injury to farmers. The last winter was not so favourable for fall wheat as the previous winter. Fall wheat was generally exposed to the frost, in consequence of there being very little snow, and we find that our own fall wheat, though sown in the first week of September, is very much injured, and a large proportion of the plants completely destroyed. Our wheat was sown broadcast, and only harrowed in, which we believe to be a very defective mode of sowing, and would strongly recommend, sowing fall wheat in this part of Canada, on land prepared by summer fallowing, and that the seed should either be sown in drills, or covered lightly with the plough. By this means the roots of the plants would be more securely fixed in the soil, and would be better protected from the effects of severe frost, should there not be sufficient covering of snow to protect it. A protracted spring sowing time, is very unfavourable for this country; the ploughed land, unless well drained, if exposed to much wet in spring, runs into a mass of mud, and when sufficiently dry for harrowing, is not in a fit state to receive the seed until again ploughed. The fall ploughed land, should be perfectly drained, so that after the snow melted in spring, the water would run off, and the land be immediately fit for sowing. When the fall ploughed land remains over for weeks after the snow disappears, before it is sown, there will not be much chance of a crop, particularly in heavy clay lands, unless ploughed again previous to sowing. The roots of weeds being in the ploughed land, they commence sprouting before the grain is sown in spring, and generally keep a head of the cultivated crop, and hence our weedy and scanty crops of grain, that would be discreditably to any country. There are many good farmers in Canada, but there are not many arable fields drained according to English fashion. In our humble judgment, the want of perfect draining is the greatest defect in Canadian agriculture—and a perfect and profitable system of husbandry is impracticable without it.

If the weather is not more regularly favourable for sowing and planting than it has been hitherto, the work will not be finished before the end of June. Though we had not much rain, it

has been very frequent, and the soil has been constantly damp and cold. We have not had three warm sunny days since the commencement of spring.

The meadows do not appear to have suffered much injury during the past winter, notwithstanding their unusually light covering of snow. We seldom, however, see a very heavy crop of hay succeed a winter that had not much snow. Last year, at this time, provender for cattle was extremely scarce and dear—now it is abundant and can be purchased for one-fourth of the price. Every description of agricultural produce is low in our markets, and not likely to rise this summer. The supply must, of course, be abundant, when this is the case. Can it be otherwise, when we do not export any part of our produce, and when there is a large importation of foreign produce into a country that is almost exclusively agricultural. To a stranger that would hear that we possessed a most excellent soil, and had more than four acres in cultivation for each inhabitant in Canada, it would appear incredible that we did not raise food sufficient for our own people, and had to import a supply from a foreign nation. There certainly must be something amiss in our management or circumstances, that would allow such a state of things to be possible for a day.—We consider it our duty to bring this subject before the public on every opportunity, and we shall do so whether it will receive any attention or not. The farmers are not altogether so indifferent to their own interests, as to neglect improving the opportunities their situation and circumstances would afford them, if there was not some unsurmountable obstacle that checked and discouraged them. They are perfectly aware that there is no encouragement held out to them to expend labour or capital on crops or cattle, because the trifling markets they have are open to the competition of a foreign nation, that live under different laws and circumstances. A few of the trades in England are likely to be affected by Sir Robert Peel's new Tariff, and though these trades would still have very ample protection, yet they exclaim loudly against any modification in the existing law in favour of foreign manufactures. What are farmers but the manufacturers of the necessaries of existence, and why should it be unreasonable that they should wish for the same protection enjoyed by other classes.

We would strongly recommend the preparation of soil by careful summer fallowing, for the sowing of fall wheat. We do not believe it possible to prepare it so well and so cheaply, by any other process in the power of the Canadian farmer. It is by this means that the soil will be effectually loosed and pulverized. As we observed above, fall ploughed land, that is not properly drained, becomes hardened by the warm weather of spring and summer, and is not in a fit state to produce a full or profitable crop. The tender roots of plants, such as those of grain crops, cannot extend or extract sufficient nourishment in a clay soil that is hard, and baked by the heat of the sun. A properly managed summer fallow, is in the very best state of preparation to receive the seed, or ordinary seasons, and if the seed is put in well, and the land judiciously water furrowed in the fall, it will continue in the best state and will not become too hard. If summer fallow is allowed to remain over for a spring crop, it will be equally necessary that it should be perfectly well drained before the winter.—Farmers may object to the loss of land for a year by summer fallowing, but as there is not at present sufficient encouragement to grow green crops &c.

a considerable extent, we think that following is the most cheap and easy way of cleaning and fertilizing foul and exhausted soils. The rent and taxes are not heavy here, that we should have a great objection to lose a year's crop of portions of our land. But under any circumstance, one good crop would pay the farmer better than three bad crops, obtained from foul and exhausted soil. In our next number, we expect we shall be able to give a more full report of the state of the spring sowing and planting, and the appearance of the crop.

Cote St. Paul, May 17th, 1842.

SOCIETIES INSTITUTED IN BRITISH AMERICA FOR ENCOURAGEMENT OF AGRICULTURAL IMPROVEMENT.

The British American Cultivator has been published with a view to promote the improvement of husbandry, and to advocate the interests of those engaged in that business. It is for agriculturists to judge whether, so far it has been conducted in a manner that would be calculated to produce any benefit to them. It must be well understood that this periodical cannot be published without a considerable expense to the Proprietor. If it possesses any merit as an Agricultural Journal, it certainly does not show much generosity in those for whose benefit it is published, if they do not give it their unanimous support.—The charge of one dollar a year, including postage, is not much. Indeed we would hope that we may be able to furnish in each future number, new and interesting information, that would be worth double that sum to every Subscriber who is open to improvement. We have sources of information in our power that no individual agriculturist can possess, and we shall use every possible diligence to make selections, that will be acceptable and useful to Subscribers. As we observed in former numbers, we do not pretend to instruct those who may be much better qualified to instruct ourselves; but nevertheless we may be permitted to say, that we expect to have it in our power to make the columns of The British American Cultivator resort to the best qualified agriculturists in this portion of the British Empire. The very best qualified in any profession might receive a useful suggestion, from one of very inferior qualification to himself. For our own part we have invariably been inclined to doubt the pretensions of those who conceive themselves to be above all instruction, and particularly if they belong to our own class. We should always remember that while we are in this state of existence, it is possible for us to learn something useful, and those who think otherwise, are generally more in want of instruction than those of more moderate pretensions.—Agricultural Societies are instituted for the encouragement of agricultural improvement. If the members of those Societies find this periodical calculated to promote the same object, we confidently appeal to them for support. We hinted in our last that two Societies had already ordered a considerable number of our journal—and we have now the pleasure of announcing to our readers, that the Society for the Niagara District have ordered sixty copies of The Cultivator, and we expect the Societies in the other Districts will follow their patriotic example.

If each Agricultural Society, established throughout the Province, were to order a few numbers, for distribution amongst non-Subscribers to The Cultivator, it would be a means of

recommendation and support. The Cultivator would be a medium of communication between the Societies and the farmers.

Agricultural Societies are of little use unless they make their views and proceedings known to the public. We offer them the means of doing so, and we ask them for their countenance and support, by becoming Subscribers, as a Society, to The Cultivator. We shall have more confidence, and be the better able to serve the cause we advocate, if we feel conscious that we are supported by the best instructed of the class to which we belong.

We have frequently seen American agricultural papers, having a circulation of from 20 to 25 thousand, making an appeal for every subscriber to become an agent, and procure not less than ten new subscribers each to their journal. We have no desire to make such an unreasonable request, but would hope that every subscriber to our paper, who thinks it worthy of support, would at least, recommend it to the favourable notice of their neighbours, and endeavour to enlist them in our ranks.

A Subscriber from Frampton, (near Quebec), makes the following inquiries, to which we kindly solicit the attention of our readers, and hope they will be promptly answered by those who may have had practical experience on the treatment of those diseases. We would have given our opinion and experience on these subjects ourselves, but forego the opportunity in the hope that it will elicit new and valuable correspondents to our journal. He states that the horned cattle in that neighbourhood are sorely afflicted with the horn distemper, and the horses much subject to bots; both of which not unfrequently prove fatal. He further wishes some instruction on the breaking and management of oxen.

GESTATION IN ANIMALS.

We have seen several interesting reports of experiments that have been made to ascertain the period of gestation in domesticated animals, and from them we have selected the following:—

“The experiment made by order of Earl Spencer on cows, has been reported in the Journals of The Royal Agricultural Society, and is very full and satisfactory. The number of cows noted was 761. The shortest period in which a live calf was produced was 229 days, or not much over seven months, but no calf produced in less than 212 days, or about eight months, could be raised. The longest period of gestation was 313 days, or ten months and 9 days. Of the 761 cows, 314 calved before the 281 days, and 310 calved after the 285th day. From this it would appear that the probable gestation in the cow may be fixed at 285 days, or nine months and a half, and our own experience perfectly agrees with this.

The report of M. Tessier of Paris, of his experiment, made on the experimental farm established by the French government, both on cows and mares, shows the following results:—Of 522 mares which received the male but once, the shortest period of gestation was 287 days, or little more than nine months and a half—and the longest 419 days, or about thirteen months and a half, making a difference of 132 days, or over four months. Of 575 cows, 21 calved between the 210th and 270th day—541 calved between the 270th and the 299th day—Mean 282 days—and 10 calved between the 299th and 331st day—Mean 313 days.

A German publication gives the following table:—

Animal.	Shortest period.	Longest period.	Mean period.
Mare.....	322 days	419 days	317 days.
Cow.....	240 do.	321 do.	283 do.
Sheep.....	146 do.	161 do.	151 do.
Sow.....	109 do.	143 do.	115 do.

Professor Johnson observes, ‘That any calf produced at an earlier period than 260 days must be considered decidedly premature, and any period of gestation exceeding 300 days must also be considered irregular; but in the latter case the health of the produce is not affected.’”

HORSE TRAINING.

The plan mentioned by Mr. Cullen, as adopted by the Indians in subduing and training the *Mestos* or wild horse, by covering the eyes, and breathing into the nostrils, has been lately tried by Mr. Ellis in Yorkshire, and with singular success. One of the animals experimented on was remarkably head-strong, and apt to rear and kick with his forefeet, rendering it exceedingly difficult to get at his head, which was only effected by climbing a tree to which the filly was tied, and leaning over as far as was practicable. The moment one nostril was breathed into all was easy.—W, who was very skilful in the management of a horse, coaxed it, and rubbed its face, and breathed from time to time into the nostril, while the horse offered no resistance. In about ten minutes he declared his conviction that the horse was subdued; and he then unfastened it, and to the great and evident astonishment of the owner (who had been trying all the morning in vain to gain a mastery over it), led it quietly away with a loose halter. Stopping in the middle of the field with no one else near, he quietly walked up to the horse, placed his arm over one eye, and his hand over the other, and breathed into the nostril. It was pleasing to observe how agreeable this operation appeared to the horse, who put up his nose to receive the puff. In this manner he led the horse through all the fields to the stable yard, where he examined the fore feet, and then the hind feet of the horse, who offered no resistance—but while he was examining the hind feet, bent his neck round, and kept nosing his back. He next buckled on a squire, and then a saddle, and finally bitted the horse with a rope. During the whole of these operations the horse did not offer the slightest resistance, nor did it flinch in the least degree.—*M. L. Express.*

ABORTION OR COWS SLINKING CALF.

This is most probably occasioned by tying up cattle and breeding them on bad hay or stale grain, and should, therefore, be prevented by pursuing a better method. The hog on unwholesome food with want of exercise, occasions indigestion and flatulency, and thus probably so disturbs the young calf in the uterus, as to cause either abortion, or such an alteration in its position, as to render delivery difficult, and often impracticable. When a cow slips a calf, and anything offensive is left in the field, all pregnant cows smelling it, are liable to the same. Every thing that is of an offensive smell, especially putrid flesh or blood, should always be carefully removed. In Gloucestershire, they suffer the cows to eat the after-birth, and it is supposed to be useful.—*Whites' Cattle Medicine.*

THE EFFECTS OF DRAINING.

There is a field on the estate of the Earl of Leicester, at Longford, in this county, which some years ago, was occupied by Mr. John Sheratt, and brought forth rushes in such abundance, that the occupier gave leave to any body to carry them away who would be at the trouble to mow them. Three years ago, the field was drained, under the direction of Mr. T. Harper of Foster, and this year, we are told, the present occupier, Mr. Robinson, has cut three tons per acre, of a rice herb as every grown.—*Derbyshire Chron.*

Surface Drainage.

From a late number of *The Mark Lane Express*, we copy the following:—

"It is now generally admitted, by all those who are competent to give an opinion, that draining is the most important improvement of the soil that can be adopted. The operation may be divided into two departments—Surface Drainage, and Main Drainage. By the former, lands under cultivation will be rendered capable of producing a much larger arriable quantity of produce; and by the latter, many tracts of land constantly under water, or frequently flooded, will be rendered permanent by production. Speaking of Surface Draining, Mr. Dudgeon says:—"Taking the arable land alone of the Empire, we may well conclude there are not less than what would be equal to 10,000,000 acres annually under crop, to which the improvements of thorough draining and its accessories might be profitably applied, and with immense advantage to the nation's comfort and pecuniary resources. From what is known of the effects of those operations, on different kinds of soil, I consider that I am within the mark in estimating the result of their application on so extended a scale as I have contemplated, as equal to an average of fully eight bushels an acre. Indeed, Mr. Smith states, the effect of such improvements upon the most unpromising sterile soil, as exhibiting a return of sixteen bushels an acre higher than the average assumed by Mr. McCulloch for the arable land of all England; and, in point of fact, to justify the expense of all those operations, we are warranted in assuming to the full the increase I have supposed.—This, then, without having recourse to new soils, would give an addition to the annual produce of the Empire of 10,000,000 quarters—an amount about ten times larger than our average annual importations for the last forty years.' Here is a source of improvement involving the profitable employment of from fifty to sixty millions in labour, and affording means for continuing the permanent employment of that labour."

We have for long been convinced that there is not any improvement more required in Canadian agriculture, than more perfect Surface Draining, and Main Drainage.—Good farming, or productive crops, we never can have on land that is not sufficiently drained. In this climate in particular, the soil never can be in a proper state for arable culture, if it is not drained. And how can we expect that plants will thrive and find nutriment in a soil that is at one time saturated with moisture, and at another time, dried and hardened by the effects of excessive heat and drought. When the soil is properly drained, ploughed land will not become hard, but remain loose and open, and receive the full benefit of the dew, and light summer showers, that are so well calculated to nourish and preserve, in a healthy state, the plants growing upon it. The tender and delicate roots of plants cannot extend, or collect sufficient nutriment in a hard soil, which neither dew nor slight showers can penetrate; and soil not sufficiently drained, will be sure to become hard in the summer heat we have in this country. In passing through the country in the summer season, it is easy to observe the destructive effects of the want of draining, on lands that are naturally flat, and the soil of strong quality.

Last year, in particular, we had an opportunity of seeing the crops of grain growing upon such lands, and we believe, in many instances, they would not produce the seed sown. How could it be otherwise? as from what we could see of these lands, the soil must have been in a wet and unfit state for sowing and harrowing, when the seed was put in the ground. No wonder the crop should be bad.

INSURANCE OF FARMING BUILDINGS AND STOCK.

We perceive, by *The Mark Lane Express*, that Insurance can be effected in England, on houses and farming stock, at extremely low rates, compared with what farmers have to pay in Canada, for the same description of property. In England, farming stock are insured without the Average Clause, at 1s. 6d. per cent.—no duty. Private houses, not hazardous, 1s. 6d. per cent. Hazardous, 2s. 6d. per cent. Double hazardous, subject to special agreement. In Canada, we pay rates of insurance on farming stock, buildings, and their contents, ten times the amount per cent. that is paid in England. We cannot see any reasonable cause for this great difference in the rate of insurance. Indeed, we believe, that farming stock and buildings, are more subject to casualties, by fire, in the British Isles, than in Canada.—Why is it that we should not have "A Farmers' General Fire Insurance Institution" in Canada.

ACQUISITION OF PROPERTY.

There is something healthful to the human mind in the possession of a portion of the earth. Property of other kinds is easily squandered or dissipated, and never can give rise to those feelings of attachment which spring up in the minds, even of the lowest of mankind, with the acquisition of property in land. The incessant labour which it requires; the habits of solitude or of domestic society to which it gives rise; the permanence of the object itself; all tend to introduce habits of foresight and attention, and to check that propensity to present indulgences from which so much misery arises to the lower orders.

The great difference between the effects of property in land and in money upon the human character, consists in the superior facility of dissipation which the latter possesses. The proprietor of a field cannot convert it into money, or render it the means of indulging individual gratification, without disposing of it to a purchaser, or burdening it with debt. But either of these is a great and decisive step, sometimes drawing after it a change of residence, an alteration of employment, and probably the sacrifice of habits of feelings of attachment. Men pause before they take so serious a step, or indulge in the habits likely to render it necessary. But the case is totally different with the possessor of a sum of money; it melts away insensibly with the indulgence of taste for dissipation, and can be entirely spent without involving a change of home, a sacrifice of affection, or alteration of employment. Every person must have felt himself, or witnessed in others, the great difference between the facility with which an individual in the higher ranks draws upon a bank, or spends money in his possession, and

disposes of his estate; and hence the importance which the friends of every man of improvident habits attaches to getting part of his professional earnings invested in land, or a house, or some other permanent object.—*Alison on Population.*

THE COMPARATIVE ADVANTAGE OF FEEDING CATTLE WITH GRAIN OR OIL CAKE.

If the farmer was a friend to himself, the preferable mode of fattening, was to feed the animal with the good and clean produce of his own farm. When in the English markets, beans can be purchased at 15s., and barley at 13s. per coomb, of 4 bushels, it is recommended decidedly to feed with farm produce. It is the opinion of eminent feeders of cattle, that to feed a beast for a prize, corn is preferable to oil-cake; for independently of the cheapness of the one, the exact composition of the oil-cake sold in England was not known; and besides, feeding stock with corn, was beneficial to the farmer, as it was creating a market for his own produce.

A Farmer states further:—

I gave my feeding beasts ground corn for several years with success, particularly bean meal; I also used barley and wheat meal; which, when I gave to them without a large proportion of bean meal, disagreed with them, causing them scour; but three years ago, having a quantity of inferior barley, and no beans, I determined to try whether the boiling of the barley would prevent the effects the meal produced on the bowels. The trial was so successful that I continued feeding with boiled barley ever since; and this year I have six beasts feeding on boiled barley, superior to any I have seen in the neighbourhood fed on oil-cake; and so convinced was a friend who saw them very lately, of the superior condition of mine to his, which are feeding on oil-cake, that he expressed his intention of immediately following my example.

The method of boiling the barley is as follows:—To two quarts of water add one of barley, then boil it slowly; when it boils add no more fuel, but let it remain in the vessel closely covered; at the end of forty-eight hours take it out to cool, and if properly done, it will have imbibed all the water, every corn will be burst and in a jelly-like state; this mix with chaff, and afterwards, give hay to assist rumination. My six beasts, each weighing from 50 to 60 stone, (14 lbs. to the stone), consume two bushels of barley per day, worth at market 3s. per bushel. The cost of boiling, now coals are selling at 1s. 6d. per cwt., is 1½d. per bushel.

It would be very desirable that farmers should try the above experiment, and we doubt not of its complete success. We would also recommend ground oats to be used in fattening cattle. Half a bushel of ground oats, of moderate quality, would be a good allowance for a common sized ox or cow, given in three mashes. We will take upon us to say, that with good hay and proper attention, cattle will fatten as well and at as little expense, fed on ground oats, as on any other food they can be fed on in British America, and it would be the most profitable market for this sort of grain.

In the Victualling department at Portsmouth, an eye witness reports that, corn was bought, ground, cleaned, mixed, rolled, cut into shape, stamped with the Queen's mark, baked, taken out, and carried into the stores, in thirty-three minutes.

HOME-MADE BRICKS.

The following is the process of making the bricks which are much used in Norfolk for building cottages, walls, and farm buildings, on account of their cheapness. The first process is to dig the clay or brick-earth as free from stones as possible, and put one load of sand or road scraping to two loads clay; a quantity of water is required in mixing, which is done by treading of horses; some short straw being evenly thrown in during the process of treading, as much as can conveniently be trodden in is required. This prevents the bricks from cracking as they dry. As soon as sufficiently dry to bear turning, they should be set on one edge, and kept frequently turned that they may dry evenly. They may be made any size. They are usually made two feet long, ten or eleven inches wide, and nine inches thick. They are made in a mould the same as common brick in the place they are to remain till dry. The ground they are made on, should be quite even and smooth, and lightly covered over with sand. The mould is placed on the ground and the earth put in to form the brick, after which the mould is taken away and the brick is left to dry. In building with them, brick earth, with a little lime may be used instead of common mortar. The expense of digging, treading, and making, is from seven shillings to eight shillings per hundred, exclusive of carting and horse labour. The width of the brick may vary according to the strength of the wall required. For instance—nine inches wide is sufficient for a cottage—and twelve to fourteen inches wide for a barn. One hundred of these bricks, nine inches thick, ten or twelve wide, and two feet long, are equal to about 1,500 common bricks, and they cost from eight to ten shillings the hundred; the common bricks four shillings the hundred. To insure the buildings great permanency, it would perhaps be best to build a foundation of common bricks or stone, five or six inches out of the ground, and to give the home-made bricks a coating of coal-tar, or other similar substance.—*English paper.*

BRICKMAKING MACHINE.—The foreign papers lately mentioned a mechanical apparatus invented by M. Janquet, for the manufacture of bricks. This machine is finished, and the results are not less important than was calculated. The following explanation will convey but an imperfect idea of them. It is ascertained that according to the usual method, ten men can only manufacture 8000 bricks a day; while the apparatus of M. Janquet, put into operation by merely turning the handle of a machine, and with the help of ten men, can manufacture according to the extent of the ground, from twenty, thirty, to forty thousand bricks in a day of twelve hours length. In addition to this, the bricks possess the advantage of being perfectly even.—*Mark Lane Express.*

In the war with Hyder Ali, Sultan of Mysore, Colonel Wood, who commanded the British forces, found it impossible to bring him to a pitched battle, so great was the rapidity and secrecy of his movements. At length, Colonel Wood wrote him a letter stating—“That it was disgraceful for a great prince, at the head of a large army, to fly before a detachment of infantry and a few pieces of cannon, unsupported by cavalry.” Hyder returned the following reply:—“I have received your letter in which you invite me to an action with your army. Give me the same sort of troops that you command, and your wishes shall be accomplished. You will in time come to under-

stand my mode of warfare. Shall I risk my cavalry, which cost a thousand rupees each horse, against your cannon-balls, which cost two pence! No! I will march your troops until their legs shall become the size of their bodies—you shall not have a blade of grass, nor a drop of water. I will hear of you every time your drum beats, but you shall not know where I am a month. I will give your army battle, but it must be when I please; not when you please.”

He is a public benefactor who, by the prudent and skilful outlay of his money in bettering its condition, shall make a single field yield permanently a double crop: and he who does this over a square mile, virtually adds a square mile to the national territory—may, he does more, he doubles to this extent the territorial resources of the country, without giving the state any larger actual area to defend. All hail, then, to the improvers of the soil! health and long life be their fortune—may their hearts be light and their purses heavy—may their dreams be few and pleasant, and their sleep the sweet repose of the weary—may they see the fruits of their own labour, and may their sons reap still heavier harvests.—*Blackwood's Magazine.*

In a pamphlet, lately published by Prof. Johnston, of the University of Durham, on agricultural improvement, he observes:—

“I would not, on this point, affirm what is not consistent with my own personal knowledge; but I would suggest to the consideration of such of my agricultural readers as know better than I do, the actual condition of their own class, whether the respective grades attached to the art of agriculture as well trained and as specially instructed for their several occupations, as those who are employed in the mechanical and manufacturing arts—whether the foreman or superintendent in each line are equally conversant with their own special branches—whether the land owner has anything like the same knowledge of the art by which he lives, as the master spinner, or manufacturer, or calico printer, who derives an income from his trade—whether he can, with equal skill, direct and regulate the application of his capital, or discover as easily the management of his subordinates.”

The further argument of the author is, that were this special instruction more generally given, the application of science would then be more generally and more skilfully made, and the progress of the art of culture in consequence, much accelerated. The author again, after some observations on the lifeless state of most of the Agricultural Societies for the greater part of the year, and the generally exclusive direction of their efforts and funds to the encouragement of stock, gives the following summary of the objects they ought fairly to contemplate, and the same objects should occupy the attention of the Agricultural Societies of British America:—

“Such Societies have much in their power. They can indicate those parts of their district in which improvement is most required; they can show how such improvement may be best and most economically effected; they can use their influence for the introduction of a better rotation, for the abolition of the old universally diffused three-course system which still lingers in thousands of our most improvable acres—they cannot more fully recommend; they can urge

and press upon both landlord and tenant the necessity of draining—they can publish and encourage the best and most economical methods of doing it—they can stimulate to a higher style of general farming, and to the growth of better crops of corn, in hitherto unproductive localities, or of new kinds of crops, or of new varieties better suited to the soil and climate—they can suggest experiments—they can expose deficiencies in the ordinary practice of preparing manures, and illustrate the advantages to be derived from a more judicious or careful management, or from the introduction of new manures altogether. They have many opportunities also of directly diffusing information—they can circulate agricultural tracts—they can encourage farmers clubs—and they can co-operate in endeavouring to secure a better education for all. These, and many other objects are within their reach, as they are within their legitimate province—and all this, without withholding from the encouragement of stock that due share of attention, which its relative importance demands.”

Were our Agricultural Societies to act upon these suggestions, there cannot exist a doubt that they would produce the profitable improvement of agriculture in British America. When the efforts and funds of such societies are principally directed to the encouragement of stock, it is only a few of the most wealthy, and favourably circumstanced farmers, who participate in the benefit derived from them, while those who most require instruction and encouragement are altogether neglected. If the land was better drained, and a more judicious system of agriculture, and rotation of crops introduced generally, we would be sure to have an improved stock of cattle and sheep.—Without a good system of husbandry, and good crops and pastures, it is impossible we can have good stock.

CHEAP FOOD.—We tell the people that those who harangue on the facility of plundering the farmer, take the direct opposite of the way to the comfort of the artizan: that plenty consists not in the penury of the grower of food, but in the wealth of the purchaser; and that if the loaf were raised at this moment to five shillings, and the artizan's power of paying for it to ten, the country would be in five times a higher state of prosperity, than with a shilling loaf and a two shilling customer.—*Blackwood.*

THE THISTLE.—The thistle is a biennial plant, and consequently if the seed of every thistle on a farm were to be kept from ripening for two years, the whole race would be eradicated. It would pay well, therefore, in pastures, to employ an old man and boy during the month of June; one to cut off the thistles just below the crown of the root, and the other to place a tablespoonful of common salt on the root, which is thus destroyed at one operation, before the seed has been ripened or scattered abroad. If the same expense were generally incurred in destroying thistles, the mischief of which plant is almost incurable, as in catching moles, which do probably no more mischief than is balanced by their usefulness, thistles would soon be as scarce as moles. To effect this, however, there must be no thistles left in the hedgerows or on roadsides to scatter their baneful seeds over the neighbouring land.

WEEDING THE CROPS.

We do not know any farming operation that is generally more neglected in Canada, than keeping the crops and pasture free of weeds. We can scarcely estimate the loss sustained by the prevalence of weeds in Canada East, at less than one-third of the produce of the soil. Indeed in many places it is much more. Weeds is the consequence of imperfect draining, bad ploughing, the want of summer fallow, and green crops—and a judicious rotation of crops being observed. The principal rotation in most part of Canada is, a crop of grain mixed with weeds one year, followed the next year by a crop of weeds, mixed with a little natural grass, and white clover.—We do not say that there are not exceptions, on the contrary we are ready to admit that there are many farms as well cultivated and managed, as we could expect them to be, considering the low prices of produce and the high price of labour. We do not offer these observations with a view to annoy or offend, but in the hope that they may produce improvement where required. Every farmer who is conscious that his own crops and land are clean, must know we cannot allude to him, and therefore he will not be offended; and those farmers who see that their own crops and land are full of injurious weeds, that are not only hurtful to themselves, but that scatter their seeds far and wide over the lands of their neighbours, who may be desirous, and incur a heavy expense to keep their lands clean, deserve to be told the consequences of their neglect, both to themselves and to others. The principle of allowing every one to act as they think proper in their own business, may be generally a very fair one, but as regards the allowing of hurtful weeds to perfect their seeds, and scatter them over the country, we humbly conceive that there should be a law to prevent it, and that every farmer should be obliged to cut down the weeds upon his farm, before they would mature their seeds. It is in vain that the industrious farmer, who wishes to pursue a careful and judicious system of agriculture, does all in his power, by a heavy expense of money and labour, to clean his land and keep down all weeds, his farm has constantly the seeds of weeds sown upon it from other poor farms, that only produce weeds in perfection. We may suppose how probable it is, that the seed of weeds sown upon a clean, well cultivated and fertile soil, will grow upon such a soil. Hence it is, that good farmers find a great difficulty in keeping their land clean, or in a proper state. We have never passed through the country in the summer season, without experiencing feelings of regret, to see a soil, naturally of excellent quality, bearing a produce, a large proportion of which consisted of hurtful weeds, useless both to man and beast. The crops and appearance of the country is disfigured by such a large quantity of weeds being permitted to grow, without any exertion being used to prevent

it or destroy them. Few countries on earth would be more beautiful in summer than Canada, if all her occupied soil was cultivated with the same care and attention that is observed in the greater part of the British Isles. We excuse ourselves for this neglect by saying that farming will not pay the expense of careful cultivation. We observe, in reply, that if careful cultivation will not pay, slovenly cultivation, that allows a large portion of the produce to consist of weeds, will not, under any circumstances, pay the farmer. A judicious system of agriculture does not require or justify a profuse expenditure: and, if such a system, managed under the superintendence of practical experience, will not pay, no other will pay. We do not say that any system of agriculture, however judicious, and managed by the very best practical experience, will pay in Canada, under our present circumstances and existing laws, but we say, that if such a system will not pay, neither can any other—and a good system has so far the advantage, that it will be beautiful to look upon, and a new produce three or four-fold greater will be created, that will afford food and employment to three or four times the number of men and animals, that a defective and slovenly system would yield. Under every circumstance, therefore, we presume that a judicious and careful system of agriculture, will be the best to follow in every country.

We give the following extract from "British Agriculture" published in *The Penny Magazine*, on the subject of weeding and keeping the land clean:—

"As one of the principal points in good farming, is keeping the soil clear from weeds and all such plants as impoverish the ground, or injure the quality of the crops, and as the present month may be considered the period for weeding and destroying the noxious productions of the soil, we will proceed to offer a few remarks regarding the ordinary sorts of weeds that infest land in general, and cannot forbear expressing it as our decided opinion, that notwithstanding the various improvements that have been introduced into our code of agriculture in most parts of the country, even where farming has attained a fair reputation, the extermination of weeds is still less regarded and attended to than the importance of the subject deserves. Weeds, in all sort of crops, lessen the quantity, and in grain crops lessen the quality too, whether intended for seed, or used for ordinary domestic purposes.

Amongst weeds, as amongst plants in general, there are many annuals—such as come to perfection in one year, bear seed, and die; and perennials, or those that continue alive an infinite number of years.—Some of the latter are propagated by the seed only, but others either by the seed or the roots. Among farmers, as well as horticulturalists, weeds are commonly divided into two classes—those propagated by seed, and those propagated by the root. In crops of grain, pulse, &c., weeds, by mingling their seeds with the crops, not only deteriorate their quality, but also rob the soil of a portion of the nourishment intended for the crops themselves, and frequently occupy so much space as greatly to encroach upon that originally intended for the useful plants to occupy. Some persons will argue, who

from their agricultural experience ought to know better, that crops of corn under almost any circumstances, have room sufficient to grow in; and that it is the want of nourishment alone that prevents the plants from succeeding so well when sown or planted thicker than usual. But this is by no means the case, for allow a piece of ground to become infested with weeds that do not grow tall enough to interfere with the ears and upper parts of the cornstalks, and yet the plants will be found to be slender, lean, and unproductive: being destitute, in a great measure, of those offshoots or collateral branches without which we never find a full and productive crop of corn, although the soil should be of the richest quality.

Since nearly all weeds (for there are a few that wind themselves around other plants and draw their nourishment from them), are fed and supported upon the same food that would nourish useful plants, it must be obvious that when weeds are permitted to grow among them, they will be robbed of a portion of the food that should have been theirs. And although it has been ascertained that the food of all sorts of plants is not precisely of the same kind; yet, generally speaking, such plants as are commonly growing in the same soil by the side of each other, may be considered as subsisting upon the same description of food or nourishment. Weeds, nevertheless, that are found growing in the same soil, are exceedingly different in their natures; for whereas the seed of some will decay or putrify in a year or two, if deposited in a moist soil and prevented from vegetating by the air being excluded from them, there are others whose seeds will remain many years, in similar situations, without having the vegetative principle injured or destroyed.—This being the case when arable lands become infested with weeds of certain sorts, the farmer often finds it the best plan to let the land rest for a few years, by which means, if the weeds were of the first sort spoken of, they will be entirely eradicated. On the other hand, it sometimes happens that grass-lands become so infested with useless or noxious plants, all such been properly termed weeds, and the best or perhaps only way of effecting a thorough destruction of them, is that of subjecting the soil to a few years tillage, which, however, upon old grass farms, agriculturists are often loath to resort to. It might have been mentioned, that lands overrun with couch-grass and other root-weeds of the same class, by being laid down to grass for half a dozen years, will be found completely freed from them, for on examination it will be found that the roots have been completely decomposed and destroyed. But the precise length of time necessary for the thorough destruction of root-weeds, very much depends upon the nature of the soil; a hard and dry soil being a great deal more in the farmer's favour for effecting his purpose, than a moist, soft, and spongy one. It may be remarked, however, that it is not always convenient to change the character even of a small portion of a small farm which is decidedly either an arable or a grass one; and hence the evil of permitting the soil to continue infested with weeds from year to year is frequently submitted to.

It must not invariably, however, be considered as a decided proof of bad management, the appearance of certain weeds in the crop of the farmer, unless at periods of the year when a careful vigilance should have kept them under some sort of subjection; for the theory of vegetation is so truly wonderful, that notwithstanding the great enlightenment of the present age, among the generality of the farming community, it

is still but very imperfectly understood.—Some sorts of soils seem to be peculiarly prone to the production of certain plants and weeds; to an extent that they are considered by many to be indigenous thereto.—Much also depends upon the nature of the seasons; for frost or open winters, and wet or dry summers have a great effect in increasing or diminishing several kinds of weeds during the ensuing year. Moreover, the most careful and best managing farmer often has the mortification to discover that along with the manure he finds it necessary to procure from a distance, he introduces a variety of weeds into his future crops, that otherwise would have been perfectly clean. The manures here alluded to are mostly the produce of stables, or the sweepings of the streets; for there are some sorts that are found to be great destroyers of certain weeds which some soils are commonly infested with. Thus, for instance, lime, when laid upon waste common or moor lands, will frequently be found not only to destroy many of the weeds or useless plants, but in a few years their places will be found occupied by a nutritious and excellent herbage.

When the seasons prove favourable, the skilful farmer is commonly able to subdue most sorts of weeds by a succession of ploughings and harrowings; for where there are annuals, and grow only from seed, by exposing as much of the soil as possible, from time to time to the action of the atmosphere, the seeds thus brought near to the surface will be caused to vegetate; when by allowing the young plants to grow for a short time, and then ploughing them under, all the seed that vegetated is thus completely destroyed: and this process being repeated from time to time, the whole of the seed deposited in the soil is brought into contact with the atmospheric air, and in the above manure destroyed. But there are others, particularly among the perennial class of weeds, that all the ploughings which it is possible to give to a piece of ground would not effectually eradicate: so that when the soil, through mismanagement or some other cause, becomes infested with them, they have either to be hand-weeded, or carefully raked or gathered out, when the soil is finely pulverized, or else the land has to be sowed with grass-seed, and allowed to remain unmolested until the roots of those weeds decay and are thus got completely rid of.

Among the numerous weeds infesting arable lands, we will enumerate a few which may be considered among the most pernicious to the interests of the agriculturist; but since the same weeds are not common to every part of the country, persons whose practical knowledge is confined to particular local districts cannot be supposed to be familiar with them all.

Annual darnel-grass, commonly called white darnel, has ever been considered among the greatest pests of corn crops; but the ridiculous notion that it was produced from bad seed-wheat is now generally explored. When used in either bread or beer, it used formerly to be believed that it caused feelings near akin to drunkenness; and, even at the present day, it is considered bad for the eyes, and sometimes believed to produce vertigoes. It is an annual weed whose seeds ripen at the time the corn does among which it grows: so that where plants of it have been permitted to grow up with the crops, some of the seed is usually shed, and lays the foundation of future injury.

Colts-foot, or foal-foot, is a very common weed, principally infesting light gravelly soils, and is very difficult to extirpate. It propagates its species both by its seed and long running roots, every piece of which,

when cut by the plough, or torn asunder by the harrow, will produce a new plant; so that in order to get rid of it completely, the land requires to be well and carefully dressed, for every piece of the roots of this plant has to be gathered, and burned, or otherwise destroyed. The plants while young may be pulled up the hand. The plants of this weed increase so rapidly, and take such complete possession of the soil, that they greatly impoverish any crop of grain among which they grow.

Charlock, or, as it is sometimes called, chadlock or wild rape or wild mustard, is among those worst of plants that are known to infest crops of grain, particularly oats and barley. There are but few farmers, who have not, at one time or other, had the mortification to find whole fields, or otherwise promising crops of corn, quite yellow with an unexpected growth of Charlock, or wild mustard, completely overtopping the young grain. The term unexpected is used because this is one of those peculiar weeds, the seeds of which will remain dormant in the soil for a long term of years, the seed being of so oily a nature, that it does not decay; so that when by-lands are ploughed up, or a deeper furrow exposes new soil, in which the seed has formerly been deposited, to the action of the air, the farmer is annoyed by finding his crops, during the beginning of July, assume more the appearance of rape or mustard than either oats or barley. The plants of this pernicious weed are frequently so numerous, that it would be impossible to weed them out without destroying the crop of grain. Some farmers, therefore, when the charlock is in blossom, (if it can be done before the corn spindles up for earing), skim over the whole field with the sythe, cutting off the principal part of the blossoms of the charlock without seriously injuring the corn; but as many plants will still mature and shed their seed, much cannot be said in favour of this plan."

It is nearly impossible, by following to destroy this pernicious weed when once it has got possession of the soil. It is only by seeding down the land for meadow, that this weed and the Canadian thistle, can be effectually checked.

CULTIVATION OF WHEAT.

To the Editor of *The Mark Lane Express*.
Sir,

I this autumn tried an experiment on wheat-sowing; our crops of wheat in this district are very apt in our clay soils on the banks of the Forth called *Carrie*, to be thrown out in the spring, by alternate nights of frost and days of sunshine, whereby the roots, if the plants are not entirely destroyed, are so injured, that to support nature the plants puts outside shoots, and there being no firm hold of the ground, becomes what in England is called *root-tallen*, and lodges long before the grain is ripe, thereby producing grain of an inferior quality as well as quantity. To endeavour to get the better of these faults, I tried what drilling my wheat as beans are drilled in our farms would do. I sowed my wheat by a plough drawn by two horses, five or six inches deep, and covered it with the next furrow at ten or twelve inches breadth. I never harrowed it after sowing, and horses foot never trod on it. The wheat was covered by the deepest part of the furrow. and to my surprise, and that of my neighbours, the wheat thus sown and covered, came up sooner than wheat sown the same day in the common broad-cast way on some adjacent ground of

similar quality, and the fallow treated in exactly the same way, as to ploughing, hmg, &c., through the summer. As it is well known that wheat prefers a stiff soil to a loose one, I attributed the rapidity of the growth to the stiff soil and suiting the wheat more than the loose broad-cast, for it not only come up sooner, but kept the start it got, and now, after heavy rains and frost, looks better, the ground not being run together and battered with the winter rains, as the broad-cast wheat is; and having examined it during severe frost, I found that the roots of the plant had not suffered by it, whilst that sown broad-cast had. The roots of the drilled, wheat actually considerably longer than the broad-cast sown the same day; I have, therefore, little doubt that I shall most probably have a standing crop of wheat in place of a lodged one, or at least not so soon lodged, and that I shall escape the root falling from the spring frost. It is well known that in England, an instrument called the *presser* is used in light soils to firm the ground, and also that sheep are often pastured or driven over it for that purpose. Another advantage of this plan of sowing is, that all trouble and time of harrowing is saved; and if sudden rain comes on, the sowing is stopped at once, without the risk of being half harrowed; the ground is also much more cloddy in winter, thus affording shelter to the young plants, and an excellent cover for the grass-seeds, if sown in a dry, bleak, frosty morning, without harrowing, by the decomposition, and falling down or mouldridge of the ground as the day advances, and the effects of the sun are felt on it. My experiment extended over two fields comprehending about twenty acres; and I harrowed part of the one field, and I sowed the part unharrowed looks better than the part harrowed; however, time will show which has succeeded best. I was thrice stopped by rain during the sowing, but as I said before, felt no inconvenience from it.

My drill machine is fixed between the stults of the plough, and one horse is sufficient, the same man ploughing and sowing, and no harrowing being required considerable labour is saved. As to the croon, that cannot be determined till harvest, but I am satisfied with the experiment so far as it has gone.

Yours, &c.,
W. M.

STERLING, N. B., March 8th, 1842.

The above communication may serve to give very useful suggestions on the cultivation of wheat in Canada. We have very little doubt but the same method might be very profitably adopted with us, and that it would effectually prevent root-falling, or the throwing out the roots by spring frosts, which causes the greatest damage to fall sown wheat in this country. As we have no regular drilling machines, a simple drilling machine that would deposit the seed in the furrow made by the plough as it works, and that could be fixed between the stults of the plough as above described would answer well, perhaps better than a machine of any other construction. An expensive machine, that would sow from ten to eighteen drills at a time, would require that the soil should be well prepared, and free from all obstructions, or it might be very soon damaged or broken. We strongly recommend the above mode of sowing, at least, by way of experiment, on a small scale. Indeed we cannot see any cause why it should not succeed if the machine is constructed of the proper size to sow the seed regularly and in due quantity.

Necessity of Capital being Proportioned to the Size of Farms.

(From British Husbandry).

We frequently see indications of a strong desire in the farming community, to undertake larger farms than prudence would allow, or than a limited capital could possibly stock or cultivate properly: by which means the parties thus acting not only find themselves embarrassed in their circumstances, being not only unable punctually to meet their engagements, but under the disagreeable necessity of neglecting some thing or other which they know requires immediate attention, in order to obtain therefrom any ultimate gain or advantage. To be aware of this cannot fail at all times to be both irksome and annoying; and the better the farmer understands the management of his crops, &c., the greater will be his mortification to see his lands neglected for the want of sufficient capital to enable him to cultivate them properly. Moreover, we have sometimes known it happen that a farmer, in consequence of want of capital to enable him to manage his affairs properly and judiciously, has undeservedly acquired the reputation of a bad manager, which ever after has stuck to him, when, had he possessed the means, not any of his neighbours would have cultivated the farms better or more judiciously, nor have sustained a fairer reputation among the best class of farmers.

The disadvantage of engaging in a larger farming business, than a person's means will warrant, is certain to involve him who does so in a numerous train of difficulties, and to reduce his profits upon all the produce which he may have to dispose of. If his capital will not allow him to purchase sufficient stock of the proper kind and quantity, it cannot but be clearly apparent that his profits upon this particular head, will be smaller than they otherwise might have been. And as respects his crops, either the requisite amount of labour and expense will not be bestowed upon them, or else not in due season; so that under ordinary circumstances, it would be absurd in him to look for as good crops, as others on the adjoining farms where ample means had been enjoyed, of bestowing all necessary care and expense upon them. Then, as regards markets, the needy farmer is ever obliged to have recourse to his stock or his store-yard, to meet both the direct and incidental expenses that may come against him and his establishment, whereby he has not an opportunity of regulating his sales by the rise or fall of the market prices, for he must sell, however low the market may be, in order to meet the ordinary payments that are continually coming against a farmer, for domestic supplies, wages, &c. How different is the farmer who has got a little surplus capital where he can at any time command it, should an advantageous outlay warrant its investment. Besides, should an unfavourable season take place, or a great depression of prices in agricultural productions occur, he will then be able to reserve his stock and crops instead of disposing of them at a great disadvantage, his small reserved fund or capital being sufficient to meet all immediate demands. An anonymous writer, but evidently a person of experience, makes the following very judicious remarks:—The bad success of great numbers of farmers is owing to their not having sufficient capital to begin with, which invariably involve them in difficulties, and reduces their profits upon every article of produce. Their farms are unstocked; they necessarily sell at a disadvantage; their fields are scarcely half cultivated, and in a short series of years,

unless some lucky hit sets them up, they become abjectly poor, in spite of all possible industry, judgment and application."

Next to the want of capital in farming in order to insure success, is the want of judgment: and where this is the case, we usually find either too much, or too little stock upon the farm, and the kind and quality of it not at all proportioned to the nature and extent of the productions of the soil. One would suppose that it required no great deal of experience to be aware of the fact, that ten much-cows well fed, and properly attended to, will yield a greater profit than twelve, or even fourteen that are ill fed, and otherwise neglected. But too little stock, as well as too much may be kept, and either extreme is equally wrong. It is not, however, altogether in the improper manner of stocking a farm, that the want of judgment is apparent, since the nature and amount of agricultural implements necessary to carry on the various processes of husbandry upon a farm of certain extent, should be clearly comprehended by the practical farmer: for where there are many more implements and utensils than are really necessary, it is ten to one that those not in use will not have proper care taken of them. Besides capital thus invested would be uselessly sunk. On the other hand, a deficiency of those things most commonly employed about a farm is a continual inconvenience, and often causes a great sacrifice and waste of time.

The foregoing observations are perfectly correct. Without sufficient capital to stock a farm properly with cattle and implements, and to pay for the labour necessary to be expended in the judicious cultivation of crops, it will not be possible to farm with either credit or advantage to the farmer, however well qualified he may be in every other respect.

POTATOE PLANTING.—Upon a field uniform in its quality of soil, and equally manured, was planted, one-third of a certain space, with cut sets of potatoes in the usual way, one-third with whole potatoes large, and one-third with whole potatoes of middling size, of a rounded form, and of about an inch and a half in the smallest diameter. The culture was the same in every respect, and upon digging and weighing the potatoes of each compartment, the result was in proportion, as follows:—

Produce of potatoes planted by cut sets	8
Ditto by whole potatoes of large size	10
Ditto by whole potatoes of middling size	12½

Agricultural Societies.

The following observations, on the Bill of Premiums offered by the Stamford agricultural society, England, for competitors at the exhibition that is to take place this year 1812, may be interesting:—

"The premiums, with one or two exceptions, are but slightly altered from last year's bill, but those exceptions are, we apprehend, of a nature to stamp the meeting with a character for novelty and utility never before attained by a local society. The first is a case for Youngmen who have taken first prizes in this or other societies, and the competition among the Crichtons of 'wheel or swing ploughs' will necessarily be of the most interesting nature. It is a challenge to all the best ploughmen of England for a

Champion's Belt, the possessor of which may well be proud of his hard earned prize. The second and more intrinsically valuable of the introductions, is for an essay on the best mode of managing the Wheat Crop, and when we consider the vast body of intelligent practical men who abound in the district, we feel we shall not be encouraging a vain hope in expecting the result of this premium to be the publication of a map of most useful information. True it is, that folios have been written upon this subject, and by the first professors of the age too; but we cannot help thinking that the very greatness of the talent employed to illustrate this most vital matter, has proved in a degree a bar to its practical utility. Learned men write and speak in the language natural to them—and the body of the agriculturists who are called upon to put into practice the theories of talented authors, too frequently find themselves involved in all the intricacies of technical generalities, and abandon that which is really good because it is rather incomprehensible. There is much more benefit to be derived by the practical agriculturist from the result of such meetings as we have had the pleasure to attend in the Rutland Farmers and Graziers Hall, than from the most elaborate eloquence of a Whewell, or a Buckland; and we believe that a familiar essay on the management of wheat, written by a person who has practiced what he preaches—by a neighbour or a familiar friend—adapted to the district in which both writer and readers reside—may have the effect of at least calling attention to so important a subject, and of improving the science upon which a people's bread depends. Other subjects will, in successive years, offer them for familiar explanation—among which draining, the insects destructive to agricultural produce, and manure will not be forgotten."

The Agricultural Societies in Canada may take a useful lesson from these observations.

Smut in Wheat.

James Ellis, Esq. of Barming, in Kent, informed the Council of the Royal Agricultural Society of England, of the invariable prevention of smut in wheat, which had for thirty years, and on a farm of from 200 to 350 acres, attended his scalding the blackest wheat in boiling water, and afterwards drying it with lime: the wheat placed in a culender, or basket, being immersed in boiling water for a few seconds, just long enough to completely wet it, then immediately dipped in cold water; and afterwards dried with lime, mixed with the other wheat and sown. By this means the wheat was always found to be cured, while the vegetating principle was uninjured; great care being taken that the water was boiling, and the wheat taken out of the water as soon as completely wetted.

Mr. Ellis tried an experiment on a bushel of the blackest wheat he could procure, which he divided into sixteen equal parts, sowing them all on the same day but with different treatment. The result at harvest was, that the wheat sown without preparation produced thirty-three black ears out of every hundred, while that dipped in the boiling water and limed, had not a black ear in several thousands which were examined,

Spurry, (*Spergula Arvensis*), might be profitably cultivated in British America.—One light ploughing is sufficient, and as the grain is very small, it is but very lightly covered. About eight pounds of seed to the acre will be sufficient. Its growth is so rapid, that in about five or six weeks, it acquires its full height, which seldom exceeds fifteen to eighteen inches. The crop is generally a light one, but as it will grow on poor and sandy soils, it may be a profitable crop, as it is of rapid growth, and would supply, at trifling cost, a considerable quantity of food for milch cows in the latter end of the summer and harvest, when grass often becomes scarce. It will remain good until the frost sets in. It is sometimes made into hay; but from the watery nature of the plant, it dries in considerably, and is, therefore, more advantageously consumed as green food. Spurry may be sown any time in June, or even the first week of July.—Early sowing, however, is best.



OBSERVATIONS ON THE DISEASED STATE OF RYE, (CALLED) ERGOT, AND THE CONSEQUENCES TO WHICH IT GIVES RISE AS FOOD.

For the British American Cultivator.

Mr. Editor,

Rye is the prevailing grain in the greater part of the northern temperate zone, Sweden, Norway, Denmark, and on the shores of the Baltic sea, the north of Germany, and part of Siberia. In these countries it furnishes an agreeable kind of flour, which is made into bread. The distribution of this family is not determined merely by climate, but depends much on the civilization, traffic, and industry of the people; while on the one hand it extends from the frozen region of Kamskatka on the other, it is cultivated under the burning sun of an Indian clime, and from the low damp shores of the German ocean, to the soaring summits of the South American mountains, where one species (rice) is cultivated in sufficient quantities to supply the numerous hordes of inhabitants; and, indeed it may be said to furnish support to the greatest number of the human race.

Rye is subject to a disease, in which the pickle is changed into a long black substance resembling a spur, hence the name spurred rye. It has been known to attack several plants of this order,—as wheat, oats, and barley. A difference of opinion exists as to its cause. Some suppose the disease is produced by undue moisture combined with warmth, and the spur is simply a diseased process from the juices of the plant. Decandolle maintains it to be a *Scleratum clavus*, or the growth of a fungus, which vegetates in place of the germ on others; and it appears from the observation of Field, in America—where it is very numerous,—that the glumes are punctured by a species of butterfly, from which puncture the juice exudes and gradually becomes a spur.

Reid, who published a treatise on the Ergot in 1771, embraced nearly the same views, as likewise Fontana, Tillet, and

others, who say they have found the ovum and larva of the insect in the spur. Field, who having observed flies puncturing the glumes of the rye, during its milky state, by puncturing them with a needle; and found in both cases the juice exuded, and the peduncle exhibited in four days a little black point, which gradually became a spur.

An elaborate research was made by the Abbe Tessier in 1777, deputed by the Royal Medical Society of Paris, from the results of his investigation it appears to depend upon moisture, by damp lowlands, or fogs. He observed, the diseased rye was more prevalent in the damp part of a field, and principally in lands that were not long cultivated, being formerly forest. It does not appear to propagate by contagion; and to substantiate this, Horturg in 1824, made some experiments to that effect, which appears conclusive, although Fontana has alleged to the contrary.

The spur is about one inch in length, of a dull whitish gray tint, covered by a violet blackish husk, has an acid taste, and a peculiar smell. Its specific gravity is generally lighter than water, tough and flexible when moist, brittle when dry. It imparts its properties to water and to alcohol.—Bread baked from spurred rye, becomes moist, and cracks and crumbles after being taken from the oven.

Its analysis consists of gum, osmazic, salts of soda, and ammonia, lewis, colouring matter, a thick and slightly acrid oil, a thick reddish fluid, camphreatic odour, nauseous taste, composed more especially of resin, colouring matter, and extractive.

Its action upon man when taken as food gives rise to two diseases, one of which appears an active stage of the other; the first is described by Faule, as it occurred in the north of Germany in 1770. It commenced with dimness of sight, giddiness, loss of sensibility, followed by dreadful cramps and convulsions of the whole body, excessive thirst, great pains in the limbs and chest, small pulse, and generally proved fatal in 24 to 48 hours, in other times scattered abscesses and eruptions took place, accompanied by dropsy, looseness and convulsions. The milder form called the creeping sickness, has shown itself in Switzerland, Germany, France, Sweden, and Denmark, and most formidable distempers have appeared in 1597, 1709, 1716, and indeed since the commencement of the present century. It came on with general weakness, a feeling as though insects were creeping over the body; in a few days the extremities became cold, white, stiff, and so insensible, that deep incisions were not felt; afterwards fever, headache, fingers, toes, arms, and legs shrunk up and dropped off at the joints, and nature became exhausted. Frequently it came on with contraction of the limbs, weakness of the mind, and mortification in the limbs.

Dogs and cats generally vomit it and escape unharmed, but swine, moose, geese, ducks, hawks, sparrows, as well as leeches and flies are killed by it: the symptoms being giddiness, dilated pupil and palsy, followed by looseness, gatherings, mortifications, and the toes frequently drop off.

Yours, &c.,

C. SMALLWOOD, M. D. D.

St. MARTIN, L. C.

March 24th, 1842.

To the Editor of The British American Cultivator

Sir,

In the second number of *The Cultivator*, I observe an article under the head of "Cure for Scratches in Horses," in which you recommend that the part affected be

first washed with "soapsuds," and after being thoroughly dried, have a mixture of "white lead and oil" applied to it. Without questioning the efficiency or utility of that application, which I have not had the opportunity of testing, I would take the liberty of submitting to your notice, and through the medium of your very useful paper, to that of the public, the trial of one which I have used for that disease in my horse, not less than three times within the space of the last three years, and in each case with success. It consists in the application, to the diseased part of tar combined with a little tallow or axenge. The tallow being dissolved in the tar renders it more easy of application. My usual mode of preparing it, is to put about two gills of tar into a tin vessel, to set it on live coals, or the cooking stove, and to add about the size of a hocky nut of tallow; after the ingredients are thoroughly dissolved and combined I take it off, and after allowing to cool to such a degree of temperature as not to burn, I apply it to the affected part, after removing the hair. I have invariably found one application to be quite sufficient, and always efficacious; and am firmly persuaded that it will not fail in a single instance, if properly applied. The idea of using it in the case of scratches in horses was suggested to my mind, by observing its wonderful effects in a very singular case of scurvy on the human body. The case to which I refer, occurred in North Britain. The entire surface of the body of the patient was covered with the loathsome disease, to such a degree as to prevent the appearance of sleep, and to threaten the extinction of life. After receiving the best medical advice that could be procured, and using various medicines, to no good or useful purpose, the one which I have just described was advised, and had recourse to; which in a short time effected a complete cure; and by removing the disease, restored the patient at once to health and beauty as of oldtime. I may also state, that a similar application of the same remedy to the human body, under the same disease, although not so entire, nor so inveterate, was made in this neighbourhood not many years ago, and with equally happy and beneficial results. In such cases the application should be made only to a part of the body at one time, in order to prevent any bad consequences that might otherwise ensue from undue irritation.

These facts I consider to be of much importance, not only to farmers, or the public at large, but also to the medical profession, who may be called upon for advice in cases similar to those last specified. It is with this conviction that I embrace the opportunity, which you so generously offer in your Monthly Periodical to make them known; and although not a farmer myself, yet as I wish well to the comfort and prosperity of farmers—as every man in Canada ought to do—I would thus show my desire, as a stimulus to others, to contribute my "mite" to the general fund of useful and entertaining knowledge which *The British American Cultivator* contains, and is so eminently fitted to communicate.

Esquimaux, 9th March, 1842.

* * We extract the foregoing from a communication signed "A Subscriber," and would recommend it to the notice of our readers. We would have been happy to have had it in our power to have placed the author's signature at the foot of his communication, being satisfied that it would have had double the effect upon the public mind. Our views have been so frequently expressed upon the practice of publishing anonymous articles on agriculture, and its sister arts, that we hope none such will have occasion to be dissatisfied, or charge us with neglect, if their communications do not appear in our columns.

NORTH DATON, WETHERBY,
YORKSHIRE, ENGLAND April 5, 1842.

To the Editor of The British American Cultivator.

DEAR SIR,

I beg to offer you my best thanks for your courteous attention in sending me the two first numbers of your new Periodical. There advent has been a source of much gratification to me. This pleasure, however, has not been merely that which spring more or less from every courtesy received, but one of a higher nature—pleasure as an humble votary of that science which Johnson has said, "not only gives riches to a nation but the only riches she can call her own"—pleasure I say to find that the impulse which has induced us within the last few years to endeavour to develop more fully the treasures which the Almighty has hid in the earth; and to render more available the blessings which His powers upon us, in the sunbeam and the shower, is not confined to this country; but still greater pleasure, as an Englishman, to find, that this impulse is now felt in British America. That I am judging hastily in concluding that the spirit of Agricultural improvement is at work amongst you, I cannot for a moment entertain, when I see before me one of its *videttes*—for such I have no hesitation in saying is "The British American Cultivator." Indeed it is absolutely necessary that the ground should be looked over before an Army can take up a position, and that the enemy can be observed before he can be attacked. So in Agriculture, the spade must be applied to the ground, the rank woods of prejudice rooted up, and the mind followed for the seed of improvement, before we can anticipate a flourishing crop. Why, indeed, was it that century after century passed away and found the English Agriculturist stationary in some branches of his Art, and declining in others, but because the soil was not fit for the reception of the seeds of progressive knowledge. He thought he knew enough, *whatsoever was, was right*. The practice of his fathers could not be invalidated by any testimony, and therefore if ever an unwitting son of chance stumbled upon a valuable truth, it perished with its discoverer. The public mind was as I have already said, too much occupied to receive it. But *tempora mutantur*—it has been for popular education—the Press, and particularly such works as yours, to denounce error and trumpet forth truth,—till the Agriculturists of England have become capable of thinking for themselves. That is they do not follow a path without knowing where it leads to. The mind is trained to examine things, both old and new, and to take nothing upon mere opinions without a reason. The result is, some things that have been long trusted, are now rejected, and many that have been long neglected are now employed. But in this search the mind is improved as well as the soil, and the Agriculturist who pursues it, frequently in searching for *silver* finds *gold*. Will not a similar result arrive in some degree from the "British American Cultivator" in its sphere of circulation?

If I wanted any corroborating evidence that such will be the result, and to bear me out in considering it the harbinger of an Agricultural movement in British America, I would refer to the rapid strides of your prototype of the United States, "The Albany Cultivator." A work which, with the same object in view as your own, has already, if I am rightly informed, by pointing out prejudices, exposing fallacies and proclaiming facts, planted the germ of improvement in the bosoms of thousands of farmers who would otherwise have remained,

"By knowing evil, strangers to the good,"

That your Journal is upon the same plan as the one I allude to is far from being a disadvantage, for I can conscientiously hold that we have not in England a work of any description conducted in a manner better suited to the wants of its readers, nor indeed, have we an Agricultural Periodical at all to compare with it, as a medium of communicating information to the great *bulk of small farmers*, who are not prepared by pause or education to make use of a more expensive and more scientific magazine.

Conducted upon the plan and with the same object in view as its namesake of the States, the effects of the British American Cultivator must be similar, and I am therefore not too sanguine in regarding its appearance as an outward visible sign of the working of an inward spirit of improvement, nor too hasty in taking the two first numbers as a pledge to assure us "that, that spirit will be extensively diffused. But tho' gratified at observing these symptoms, I have said that I was peculiarly so at beholding them in British America. And I am not ashamed to repeat it, for I am not one of those Englishmen who are willing to acknowledge our Colonial possessions as long as they bring honour or profit, and yet who refuse their sympathies or assistance in the time of need, to every portion of the empire of Great Britain except the very "land they live in." Indeed it has been in my humble opinion a serious error in our policy that the work of Legislation went on with too little regard to the well being of our transmarine possessions.

Of what consequence is it that a wall of water is between the mother Country and the Colony. Is the hand or the foot to be neglected, because it is at the extremity of the body! Is the bosom to be clothed and the arms to be exposed to the weather! No. The part cannot be injured but at the expense of the whole. And it is with an Empire as with an individual. All that is of England, is not in England—Her empire is a giant body a system composed of many bodies and forming one complete whole. Every shock, then received by one part is felt by all for as the blood which tingles at the fingers end is the blood which flows from the heart, the loss of a drop is a loss to the whole system, and, as it is *British* energy and *British* Capital which have subdued the waves of the pathless ocean, peopled the wilds of the far west, opened the pleasure house of the East and planted the lion of England on the icy poles—so it is *British* interests and *British* subjects that suffer, it, while relying upon the mother country for protection and for justice our colonies receive oppression or neglect.

This is, however, an abstract view of the question, if however we look upon it in a more practical manner we shall see that locally has but little to do with nationality and ought to have influence over justice in the government of our most remote dependencies. Thus within the last fifty years the increased facilities produced by locomotion have reduced the distance of our colonies from the mother country fall 50 per cent. and we may reasonably conclude that in a very short time it will be still farther lessened. As it is however, a voyage across the Atlantic is no more thought of than a voyage across the Irish Channel was, while a journey from London to Toronto is made with a less amount of trouble than one from "Lands end" to "John O'G. oats" was, in the days of our grand fathers. Yet these two places were not thought too far a part to our government. The argument then for divided interests founded upon the mere fact of distance, is most untenable. Is the Thames considered an officious meddling

which deprives the demizen of Surry of the riches of Middlesex or vice versa? Is it not rather a visitor which mingles on its bosom the milk and honey of both counties, and leaves on each coast golden traces of its ebb and its flow! and so to England whose empire is on the ocean, whose national greatness was cradled on the world of waters, the sea must ever be rather a bond of union than a line of demarcation.

That the difference of climate, productions and local features of England and her colonies should prevent this union, is still more absurd, for it is this very variety that is the best guarantee of such an union, being beneficial to both countries, since it is upon *this ground only* that that system of commercial reciprocity which *enrichens both and robs neither*, can be erected. Indeed, were there staple riches of our various dependencies, fairly developed, Great Britain might establish within herself a complete circle of trade which would enable her to become independent of every other nation for the elements of prosperity. Aye, were labour and capital plentifully supplied to the wide spread possessions of England, so that the productions of each might be fairly brought to light, were every foreign port shut to her commerce, she would be able to maintain her wealth and greatness; and *if such were her policy* to look with silent scorn on the efforts of her enemies.

For these reasons, then, is it that as an Englishman, I am especially proud to see the efforts made to improve the Agriculture of British America, and I trust the time will come when every subject of the British Crown will think and act upon the principle that

"Membrum eget membro. Amicus eget amico"

The differential duties in favour of the colonies proposed, I may say carried, for such they will be before you receive this,—by Sir R. Peel in his new Tariff; and the avowed opinions of Lord Stanley upon Colonial Emigration. I think warrant the assumption "that the powers that be" are beginning to feel that the branches of the national tree will not produce fruit unless she receive the support of the stem.

But be this as it may our colonists have a duty to themselves to perform. They must be up and doing whatever the animus of the parent country may be. They must neither be discouraged by legislative neglect, nor soothed into apathy by political promises, if they would forward the prosperity of their country. Applying this argument to your case I can only say to you and every British American who has the cause at heart, continue to labour on "come what will." Look to government for assistance not for support, use its influence as a *stick*, but your own energies as a *catch*; and if I have any knowledge of the subject I will risk it, by venturing to predict that in the course of a few years British America will take no contemptible position in the annals of agriculture, "the gods help those who help themselves."

While upon this subject I would offer one hint, which if worked out would tend more than anything else you can do to give a stimulus to that spirit of improvement of which your Journal is the evidence. That I would suggest is the establishment of a central Agricultural Association. To speak of the importance of Agricultural Societies is unnecessary. Their advantages are as well known on one side of the Atlantic as the other. A leading association of the sort I would suggest would be a rallying point round which many would arise and the focus through which information would be diffused from society to society. I need only refer you to the leading societies of England and Scotland as models what such societies

should be. Ireland too has now got her "Royal Society." Why then should we look upon the "Royal Agricultural Society of British America," or the "Royal Association of Agriculture for Canada," as things to dream of.

Although space forbids me trespassing much farther on your attention. I cannot help mentioning how it would be in the power of this society to remove great and serious obstacles to your progress in Agriculture. Thus, the things most required by you are capital and labour, now of both these we have a superabundance; for to the facility of obtaining capital (real and fictitious) do we owe the present falling off in our manufacturing trade, machinery was forced into use and competition excited to such an extent as to glut all the markets, demand fell off, warehouses were full, and labourers were thrown out of employ by thousands. Both the necessaries you want, we have, and yet you don't get them. The reason is our lower classes are deficient in the knowledge necessary to make enquiries on the subject. They know nothing of the particular circumstances which they would have to undergo—there are no agencies established from which information can be had—no statements made by authority as to the advantages they would receive, the difficulties which would meet them, the money required and the best use of it, so that if they do emigrate it is a lottery chance if they take the right tract. Now were there a society of the sort I mention, it might open correspondence with the various leading societies of England on the subject, it might through them publish statements of the wants of the colony and give to the emigrant plain and practical advice.—It might open offices with an agent in each great town in England where information might be had, maps seen of the colony, papers read and every information had. Communications to the various provincial papers, hand bills, and other means of inviting the emigrant would be diffused by these agents, from the society. Offices two on the seaboard where the Colonist lands should be established, so that the emigrant might be able to get work, authentic information, advice, and to make purchases as soon as he lands, and before his ignorance or the cupidity of others lead him into error.

If any or all these were taken under the auspices of a society like that I advocate, if information could be easily had and if the public could depend upon it—and springing from such a society it would be such as we'd be trusted.—I have no doubt but, that both labour and capital would reach Canada in a much greater ratio than it does. But no more at present.—I have, I fear exhausted your patience, perhaps with what you may deem vague suggestions. If so you will no doubt give me credit for the *will*, though I fail in the *deed*. And believe me to be,

Yours verily truly,

JOHN HANNAM.

UNBURNT BRICK HOUSES.

To the Editor of The British American Cultivator.

Sir,

As you have had several communications on the subject of *unburnt brick houses*, allow me to direct further attention to that cheap and convenient mode of building in a country where substantial walls are desirable, and where notwithstanding the abundance of timber, so few understand the art of burning bricks and making lime, by acquainting you and your readers that in India buildings of that description are very common, and that in many of the military canton-

ments there the greater part of the private houses, though of very respectable and sometimes even handsome exterior appearance & possessing ample interior accommodations are composed of no better materials; and that I myself had twice to be my own architect in house building at two new military stations where nearly the whole of the officers dwelling were of the description alluded to. There are however several ways of finishing off these houses (which are always of the *cottage* or *bangalow* form) which it may be as well to describe, as considerable improvement may perhaps be made in the mode of building similar houses in this province.

The bricks are made in the usual manner, and of the usual form and size, without any admixture of straw, from the common surface soil or earth (which is generally of a loamy nature) without any other attention to quality than avoiding all brick clays, and earth, at all impregnated with saline matter; and the mortar made use of is common mud of a proper consistency well kneaded with the naked feet of the native workman. After the building is covered in, the interior walls are plastered, and the cornices and other ornamental work roughly moulded with similar mud mortars, containing a quantity of chopped straw, to render it more adhesive and less liable to crack, after which it receives a second coat, and is finally finished off with a finer kind of mortar, composed of carefully sifted mud with the addition of a considerable proportion, say a fifth of cow dung, — which admits of being as well smoothed with a polishing trowel as the best lime plaster,—after which, as soon as dry, the walls receive, preparatory to being coloured, a slight coating of cow dung and water mixed with a little fine clay, of the consistency of common white-wash, laid on with a broad brush, which, when properly done, leaves the surface nearly as smooth as any stucco work, ready to take whatever colouring may suit the fancy.—The ceilings of even the largest rooms, are seldom formed of lath and plaster, but are simply made of a sheet of coarse calico, stretched tight by means of a succession of loops at short intervals, tied to a line of small rods or bamboos laid all round, immediately above the projecting cornice, and when properly put up, and white-washed, look nearly as well as a regularly plastered ceiling.

So much for the interior. The outside is finished in a variety of ways, but the most common, but least durable, is similar to that already described, followed by a couple of coats of white or yellow wash. A better, though more expensive way, is to lay on a coating of lime plaster, and finish with white-washing.

Besides this mode of building, *safety* with sun-dried bricks, there is another, in which *unburnt* and *burnt* bricks are united in the same work; the whole of the inner walls, (which are generally $\frac{1}{2}$ brick thick) being composed of the former alone, while the outer walls have an outside casing of *burnt* bricks, so as to be capable of resisting the severest weather. Of course, the latter description of building is most durable, but the common kind, with a little care, lasts many years; and, but for the ravages of that destructive pest, the white ant—happily here unknown—which eat their way through and up the highest walls, until they reach and prey upon the timber and thatch of the roof, they would endure as long as any brick or stone house.

You will perceive by the above account, that it is not found necessary to use straw in forming the bricks; but were they made so very large as those described by your correspondent Mr. Sheppard, they should,

no doubt, require it to prevent their cracking. Mr. McGregor's mode of building, comes nearer the East India way, and may perhaps be copied from it. Of the two, I prefer the latter, and I am convinced that either will prove very little more expensive, and certainly form far more comfortable dwellings than a frame house, as, judging from my own, which is partly frame and partly of half squared logs, I find the former portion exceedingly cold in winter, and unpleasantly warm in summer.

Should any of your readers be disposed to "try their hand" at a cottage of the kind, and desire to have any further hints on the subject, I shall be happy to meet their wishes, through the medium of your very useful Journal; and, in the mean time, beg to be allowed to remain,

Yours very obediently,

R. LACHLAN.

COLCHESTER, WESTERN DISTRICT, }
May 29th, 1842. }

To the Editor of The British American Cultivator

Sir,

I have on a previous occasion, offered you my congratulations on your having commenced a periodical devoted exclusively to agricultural subjects, and I know of no good farmer, no lover of his country, I may however, say in one sentence, that I know no good man who will not cordially unite with me in wishing that your undertaking may be crowned with complete success.

Our Provincial Government have, in my opinion, acted wisely and certainly liberally, in granting money from the public funds, for the purpose of encouraging Societies, having for their object the promotion of improvements in agriculture; and I think those Societies would, in their turn, be acting wisely and liberally, by endeavouring as much as possible, to diffuse agricultural knowledge, which can in no way be better accomplished than through the medium of a periodical like THE CULTIVATOR.

As a means of carrying my views into effect, I would respectfully suggest to the Directors of Agricultural Societies, the propriety of making a copy of THE CULTIVATOR a part of every premium which they may offer; for instance, for a premium of ten dollars, I would pay nine dollars in cash, and for the remaining dollar, I would order THE CULTIVATOR for the current year, to be forwarded to the address of the person winning the premium, or (in case that he may already be a subscriber to that paper), to the address of any person whom he may choose to present it to. It will frequently happen, that one person may obtain several premiums, and it may be thought by some that it would be too much to compel such a person to take so many papers, but I would beg of such people to remember that a person under such fortunate circumstances can well afford to be liberal, and I will engage to say that they will have no difficulty in disposing of their superfluous papers as presents, to their less fortunate neighbours. If this plan was generally adopted, it would undoubtedly increase the circulation of THE CULTIVATOR, and consequently of useful knowledge to a great extent, and would lead to consequences of more importance than I at this moment have time to speculate upon.

I am, Sir,

Yours respectfully,

JOHN HARLAND.

COLCHESTER, May 21st, 1842.

MANURES.

The following articles have been recently analyzed by Boussegault and Payen, in order to ascertain their fertilizing principles as manures; and the figures below indicate the number of pounds respectively, which in their ordinary or moist state contain the equivalent of nitrogen to be found in 100 lbs. weight of farm yard manure:—

Woolen rags.....	lbs. 22
Codfish, (damaged, washed and pressed).....	23
Feathers.....	26
Blood, dry, (insoluble).....	26
Horn raspings.....	27
Cow hair.....	29
Muscular flesh.....	30
Blood, dry, (soluble).....	32
Graves.....	33
Pigeon dung.....	48
Bones boiled.....	57
Do. fat, (exposed to air).....	64
Do. moist.....	75
Linseed cake.....	76
Rape cake.....	81
Belloni's poudrette (dried and old night soil).....	103
Blood liquid.....	140
Urine of the horse.....	153
Pea straw.....	223
Buried roots of clover.....	248
Soot from coal.....	296
Wheat straw, being $\frac{1}{2}$ from the upper end including the trashed out ear.....	300
Animalized charcoal (recently prepared with night soil).....	322
Soot from wood.....	347
Wheat chaff, and carrot tops, each.....	470
Dung-hill drainings.....	677
Potatoe haulm, and horse dung, each.....	797
Saw dust, oak.....	740
Tops of green beet root.....	540
Sainfoin straw.....	323
Urine of the cow.....	959
Farm yard manure.....	1600
Cow dung, and oyster shells, each.....	1450
Oat straw.....	1425
Saw dust, Acacia.....	1550
Wheat straw.....	1650
Barley do.....	1739
Saw dust, fir.....	2119
Rye straw.....	2352

We are not to suppose that the above list indicates, under every circumstance, the exact value of these manures. Still it affords a good general criterion of their comparative value, and may be useful to farmers.

ENGLISH AGRICULTURE.—We frequently saw wheat in Berkshire in large fields, that would average from thirty to forty bushels per acre, oats sixty to eighty bushels, and other crops in proportion. Other fields of wheat would not be over fifteen to twenty bushels per acre, but when this was the case, the tenant was considered in the broad road to ruin, and certain it is, owing to the superior care bestowed in the cultivation, lands in Great Britain yield much larger average products than they do in the United States. * * *

We may sum up its agriculture by saying that many things there are worthy of all imitation by us, it is neater, more regular, and more scientific, and notwithstanding the two very adverse seasons of 1839, and 1840, owing to the indefatigable industry, skill, and prudence of the English people, it is in

a high state of prosperity.—*Tour in England by an American.*

SUGAR FROM THE STALKS OF INDIAN CORN.

In one of the late agricultural papers published in the United States, we have noticed an article on the manufacture of sugar from the stalks of Indian corn. In this article it is stated—

"That the juice of the cornstalk, by Beaume's saccharometer, reaches to ten degrees of saccharine matter, which, in quality, is more than three times that of beet, five times that of maple, and fully equal, if it does not even exceed, that of the ordinary sugar cane in the United States. By plucking off the ears of corn from the stalk as they begin to form, the saccharine matter which usually goes to the production of the ear, is retained in the stalk; so that the quantity it yields is thus greatly increased. One thousand pounds of sugar, it is believed, can easily be produced from an acre of corn. It appears also, by the experiments made, that the cornstalk requires only one-fifth the pressure of the sugar cane, and the mill and press for the purpose, is very simple and cheap in its construction, compared with what is required in manufacturing sugar from the sugar cane. The stalk remaining after being pressed, also, furnishes a valuable food for cattle, enough, it is said, with the leaves, to pay for the whole expense of its culture. It is supposed that animal carbon may not be needed in the manufacture, but that a little lime water will answer for the purpose of clarification."

Chief Agricultural Societies of Britain.

THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

Instituted 1838.

President 1840—P. Pusey, Esq., M.P.

Secretary—James Hudson, Esq.

Chambers, No. 5, Cavendish-square.

The Royal Agricultural Society of England consists of a President, twelve Trustees, twelve Vice-Presidents, Governors, and Members.

The President is Annually elected, and is not re-eligible for three years.

The President, Trustees, and Vice-Presidents, are elected from the Governors.

The Governors pay £5. annually, the Members £1, with the power to compound for life, by the payment in one sum of ten annual subscriptions.

The Council consists of the President, Trustees, Vice-Presidents, and thirty Subscribers; twenty-five of whom go out annually by rotation, but may be re-elected.

The Council have the power of appointing Committees of any Subscribers to the Society, of all which Committees the President, Trustees, and Vice-Presidents, are members *ex officio*. The Council meets the first Wednesday in every month.

Three general meetings are held every year. 1st. The "Anniversary Meeting," for the election of the President and Council, on the 22nd, (or should that day fall on a Sunday, on the 23rd) day of May. 2d. The "General Meeting," held in December. 3rd. The "Annual Meeting," to be held in the country, in the months of July or August. The next annual meeting will be held at Liverpool on the 22nd July, 1841.

The Council are elected at the anniversary meeting, held in London, in May, but do not enter upon the duties of their respective offices until after the annual meeting in the country.

All Governors and Honorary Members have the power of attending meetings of the Council and Committees, but have not the privilege of voting, unless forming part of such Council or Committees.

Every Candidate for admission into the Society as Governor or Member, must be proposed by a Subscriber. The proposer to specify, in writing, the name, rank, and usual place of residence of the Candidate; and every such proposal to be read at the first meeting of the Council next after such Candidate shall have been proposed, and every such Candidate to be eligible at the then succeeding meeting.

No Subscriber shall enjoy the privileges of the Society, or attend the meetings, whose subscription shall be in arrear.

It is a fundamental rule of the Society, and a condition of the Royal Charter, that no question shall be discussed, at any of its meetings, of a political tendency, or which shall refer to any matter to be brought forward or pending in either of the Houses of Parliament.

Subscriptions are paid in advance, and are due on January 1st, but Subscribers elected in December, are liable only for the year ensuing.

Payments due from Members to the Society may be made at the official apartments in Cavendish Square, or through Country Bankers, to the Society's account with Messrs. Drummond, of Charing Cross.

Each Member of the Society, on his election, will be entitled to the Volume of the Journal in course of publication at that date, and to all the subsequent Publications of the Society, while continuing a Member, if his last year's subscription be paid.

THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

Instituted 1784.

President for 1840—The Duke of Sutherland.

Secretary Sir Charles Gordon.

Society's Hall, Albany Place, Edinburgh.

The General Meetings of this Society are held, according to the directions of its Charter, on the second Tuesday in January, and at such other place, in June, or July, as the Society shall appoint.

The Society has, besides, a Great Annual Show—this was held at Aberdeen, in October, 1840, and will be at Berwick, in the end of September, or beginning of October, 1841. The competition for the prizes is open to stock from any part of the United Kingdom.

New Members are admitted at either of the General Meetings, by ballot. These pay in advance, £1. 3s. 6d. per annum, or a Life Subscription of twelve guineas.

SMITHFIELD CLUB.

President—The Earl Spencer.

Bankers—Messrs. Hoare, Fleet-street.

Hon. Sec.—Mr. H. Gibbs, Half Moon-street, Piccadilly.

The Meeting is now changed from the Old Show Yard, in Goswell-street, to the Horse Bazaar, King-street, Baker-street, Portman Square. It is commonly held about the 9th, 10th, 11th, and 12th of December.

The Annual Subscription to the Club is one guinea, payable in advance, for the year ensuing, either to the Bankers of the Society, or to the Secretary; but in the latter case, the Bankers' receipt must be produced to the Secretary; any person may compound for his Annual Subscription, for ten guineas. A list of their prizes, for the past and present year, may be obtained by a post paid application to the Secretary. No charge is made for the standing room of Live Stock exhibited. Every person exhibiting Seeds, Roots, and Implements, (not being a Member of the Club), must pay, previously, half a sovereign to the Secretary. Visitors pay one shilling for their admission to the Show.

THE ROYAL DUBLIN SOCIETY,

FOR THE PROMOTION OF HUSBANDRY, AND OTHER USEFUL ARTS IN IRELAND.

President — Viscount Ebrington.

Secretaries—Isaac Weld, Esq., R. B. Bryan, Esquire.

Assistant-Secretary — Edward Hardman, Esquire.

Chambers, Kildare-street.

This Society has a Cattle Show in Sept. and April of every year, when prizes are awarded for various Stock, and other Agricultural improvements. The terms of admission are for "Life Subscribers," either five guineas entrance, and two guineas annually, or twenty guineas in full of all payments; the "Associate Subscribers" pay annually two guineas.

SCALE OF DUTIES AFFECTING FARMERS —

In the scale of duties proposed by Sir R. Peel, we find the following:—*Horned Cattle*—No duty at present levied. The proposed duty is for oxen, cows, and calves, from foreign countries, 20s., 15s., 10s. respectively; from British possessions, 10s., 7s., 5s. *Sheep, Lambs, Swine, and Suckling Pigs*—Foreign prohibited; to be entered at 3s., 2s., 5s., and 2s.; and at 1s. 6d., 1s., 2s. 6d., and 1s., British possessions. *Horses*—The present duty of 20s. is reduced one half in respect of those imported from British possessions. *Oil Seed Cakes*—The duty of 2d. is to be increased to 6d. on the foreign, and 3d. on British imports. *Butter*—The present duty of 20s. to be reduced to 5s. on British imports only. *Cheese*—The duty of 10s. to be reduced on British imports only, to 2s. 6d. *Hides*—The present duty of 2s. 4d. reduced to 1s. on foreign; 6d. on British imports. *Bacon*—The present duty 23s. per cwt. on foreign reduced to 14s.; 8s. 6d. British possessions. *Salted Beef*—The present duty of 12s. per cwt. on foreign reduced to 8s.; 2s. British possessions. *Fresh Beef*, or slightly salted, prohibited, to be entered at 8s. on foreign; 2s. British possessions. *Salted Pork*—Present duty 12s. per cwt. reduced to 8s. foreign; 2s. British possessions. *Fresh Pork*—Prohibited; to be entered at 8s. foreign; 2s. British possessions. *Hams*—Present duty 23s.; reduced to 14s. foreign; 3s. 4d. British possessions.

INVENTION FOR WASHING SHEEP.—Mrs. Coote, of Bristol, has invented an apparatus which appears likely to remove much of the difficulty experienced in washing sheep.—This invention consists of a wooden floor of sufficient size for the sheep to stand upon, having on each side of it a wall of basket-work of the height and length of the animal. The sheep is driven upon the floor, when strong poles are passed through the front, back, and across the top of each of the wick-

er sides; to that the animal is detained by bars at the breast, over the back, and at the rear. It is then fastened by cords to its position, the basket is plunged by men into the water, while a man washes the back of the sheep with his hands.

Average Force required to draw a light four-wheeled Cart, weighing with its load 1,000 lbs.

Description of Road.	Force of traction required to move the Carriage
Turnpike-road—hard, dry.....	30½ lbs.
Ditto " dirty.....	33 "
Hard compact Loam.....	53 "
Ordinary By-road.....	106 "
Turnpike-road, new gravelled..	143 "
Loose sandy road.....	204 "

RULE FOR ASCERTAINING THE WEIGHT OF CATTLE BY MEASUREMENT. — Measure the girt close behind the shoulder, and the length from the fore-part of the shoulder-blade along the back to the bone at the tail, which is in a vertical line with the buttock, both in feet. Multiply the square of the girt, expressed in feet, by five times the length, and divide the product by 21; the quotient is the weight, nearly, of the four quarters, in imperial stones of 14 lbs. avoirdupois. For example, if the girt be 6½ feet, and the length 5½ feet, we shall have 6½ × 6½ = 42½, and 5½ × 5 = 26½; then 42½ × 26½ = 1109 1-16th, and this divided by 21, gives 52 4-5ths stones nearly, or 52 stones 11 lbs. It is to be observed, however, that in very fat cattle the four quarters will be about 1-20th more, while in these in a very lean state they will be 1-20th less, than the weight obtained by the rule. The four quarters are little more than half the weight of the living animal; the skin weighing about the eighteenth part, and the tallow about the twelfth part of the whole.

FLOUR MILLS ON THE DANUBE.—Leaving Buda and Perth, one is struck by the curious flour mills of the Danube, which consist of a wooden house erected in a large unwieldy boat, moored near to the most rapid part of the stream. Parallel to this, and only a few paces distant, is fixed a smaller boat; the heads of both being directed down the stream. Between them is suspended a water wheel, which of course revolves rapidly with the flow of the river. Ten or twenty of these are sometimes found in succession.

AN UNCOMMON OCCURRENCE.—On Wednesday last, a cow of the long-horned breed, belonging to Mr. Naud of Dumbleton, (so well known for good milkers), brought forth three fine calves. They are all thriving well, and are much admired in the neighbourhood for their size and beauty.

SILSDEN, (ENGLAND).—Six stallions have been lately purchased from the pleasant village of Silsden, near Keighley, to go to France to improve the breeds there. The prices ranged from two hundred to four hundred guineas each. One is left, the price of which is one thousand guineas, a proof that they are of no inferior breed.—Silsden has long been noted for its superior breed of horses.

The most profitable sales to a nation are those made by one individual to another within the nation; for these latter imply a national production of two values, the value sold and that given in exchange.—*Day's Political Economy.*

HER MAJESTY'S MINT.

The sole establishment of Great Britain, to which is assigned the responsibility of coining for the United Kingdom and her colonies has the means and appliances to work off ordinarily £7,000,000 of gold coin per annum. £3,000,000 of silver coins, and of copper coin 6,240,000 pieces per annum. It may not be uninteresting to state, that from 1816 to the end of 1841, the total value of the gold coinage fabricated at the Mint is estimated at over £60,000,000. Of silver at over £12,000,000, and of copper coins at over £200,000. From a pamphlet recently promulgated, we extract the following:—
"From 1816 to 1840 her Majesty's Mint coined as follows:—

	NUMBER OF PIECES.	VALUE.
Gold—Double Sovereigns.....	16,119	32,238
Sovereigns.....	55,158	1,103,160
Half Sovereigns.....	8,527,781	4,263,890
Silver—Crown.....	1,819,915	4,62,476
Half Crown.....	31,438,134	3,927,261
Sixpences.....	101,615,284	5,082,264
Stoppers.....	58,321,336	1,458,111
Fourpences.....	19,325,320	1,770,000
Pence.....	21,451,241	85,619
Halfpence.....	28,573,410	57,619
Farthings.....	49,633,632	51,150

The weight of the metals used in the fabrication of the above enumerated pieces of coin, is as follows:—Of gold, 1,279,067 lbs. Of silver, 3,375,092 lbs.; and of copper 563 tons.—*Mark Lane Express.*

IMPORTANT TO SEEDSMEN.—A decision was made by the barrister, on Thursday last, which is of interest to the public, and especially to those who sell seeds. A small farmer processed a shopkeeper residing in Westport, from whom he had purchased cabbage seed, for six pounds, alleging that he was at so much loss in consequence of the partial failure of the seed. The man who shook the seed deposited that about one third of it came up, that the land was prepared properly for it, and that the amount of loss sustained by the Plaintiff was about two pounds. The barrister gave a decree for that sum. The defendant said he would appeal, as he gave no engagement with the seed, if it was purchased from him at all, of which there was no other proof than the swearing of the plaintiff, and a witness that saw him come out of defendant's shop.—*Mayo Constitution.*

This was a very equitable decision. To sell old or bad seed to farmers or gardeners, is a very great fraud, and is a most serious loss to the parties who buy it, and sow it.—There should be no occasion that seedsmen should engage the goodness of the seed, such an engagement is implied when they sell the seed for sowing and growing, and receive a price for it.

EXHIBITION OF CATTLE BY THE
Wellington District
AGRICULTURAL SOCIETY

An Exhibition of Cattle will be held at Guelph, on Tuesday the 11th day of October next, when the following Premiums are offered to be awarded:—

	£.	s.	d.
For the best Stallion, for Agricultural purposes.....	2	10	0
Second best do. do.....	1	5	0
For the best Mare do.....	2	10	0
Second best do. do.....	1	5	0
Third best do. do.....	0	15	0
For the best Hackney.....	1	5	0
For the best Colt Foal.....	1	0	0
For the best Filly'rd do.....	1	0	0
For the best imported Bull...	1	10	0
Second best do. do.....	1	5	0
For the best Cow do.....	2	10	0
Second best do. do.....	1	5	0
For the best Bull, not thorough bred.....	2	0	0
Second do. do.....	1	0	6
For the best Cow, not thorough bred.....	1	10	0
Second best do. do.....	1	0	0
Third best do. do.....	0	10	0
For the best two years old Heifer, not thorough-bred....	1	0	0
Second best do. do.....	0	10	0
For the best Yearling Heifer not thorough-bred.....	1	0	0
Second best do. do.....	0	10	0
For the best Yoke of Working Oxen.....	2	10	0
Second best do. do.....	1	5	0
For the best Yoke of Working 4 years old Steers.....	2	0	0
Second best do. do.....	1	0	0
For the best imported Leicester Ram.....	2	0	0
For the best Pair do. Ewes	2	0	0
For the best South Down Ram	2	0	0
For the best Pair do. Ewes	2	0	0
For the best Three Ewes, not thorough-bred.....	2	0	0
Second best Three do. do.	1	0	0
For the best Four Lambs, not thorough-bred.....	1	0	0
Second best do. do.....	0	10	0
For the best imported Boar...	2	0	0
Second best do. do.....	1	0	0
For the best do. Sow.....	2	0	0
Second best do. do.....	1	0	0
For the best Sow, not thorough bred.....	1	0	0
Second best do. do.....	0	10	0
To the person who shall, during the present season, raise the greatest number of lambs in proportion to his flock of ewes, which flock must not consist of less than ten. A certificate will be required from two neighbours.....	2	10	0
The Two following Premiums are offered by Mr. Jackson.			
For the best Calf by his Devon Bull Union.....	1	10	0
For the second best do. do.	1	0	0
The Two following Premiums are offered by Mr. Harland.			
For the best pair of Spring Pigs of any breed.....	1	10	0
Second best do. do.....	0	10	0

RULES OF THE EXHIBITION.

- 1st. All Stock exhibited shall be *bona fide* the property of the person in whose name it is entered.
- 2nd. All entire Stock obtaining Premiums must serve exclusively within the District of Wellington the season afterwards, the

owner giving an undertaking to refund the Premium in case of a breach of this arrangement.

3rd. All Stock thorough-bred from Imported Stock, to be considered as imported.

4th. The Mares must have Foals at their feet, or the owners must give satisfactory evidence that they have had Foals during the present season.

5th. The Cows must be forward in Calf, or giving Milk at the time of the Exhibition.

6th. All Stock to be exhibited, must be named to the Secretary, (who will be in attendance at the Union Hotel in Guelph), previous to the hour of Four o'clock, on the Friday preceding the day of Exhibition, or the owner forfeit a quarter dollar for each lot named afterwards. The Secretary will be happy to receive entries of Stock on any occasion previous to the hour mentioned, either by letter, (post paid), or otherwise.

7th. Stock entered and not on the ground, (which will be pointed out by the Secretary) by the hour of ten o'clock, on the morning of the Exhibition, will be considered ineligible to compete.

8th. No Premium to be awarded for which there is not two or more competitors. In cases, however, where the Judges report great merit, in any lot, or single animal, this rule may be suspended.

9th. No person eligible to obtain a Premium who has not been a member of the Society for two months previous to the Exhibition.

10th. No person shall receive more than one Premium for the same class of animals.

11th. The Judges shall be procured from without the limits of the District.

12th. No person shall be allowed, in any manner, to interfere with the Judges during their inspection of the Stock.

JOHN HARLAND,
SECRETARY.

Guelph, May, 1842.

An Exhibition of Stock and Produce by the Agricultural Society, will be held at Fergus in the Township of Nichol, on Tuesday, the 4th of October, which will be combined with a Fair for the sale of Cattle, &c.

An Exhibition of Stock, &c., will be held in the Township of Waterloo, during the present season, of which due notice will be given.

It is also contemplated by the Society to hold an Exhibition of Fat Cattle, Grain, Seeds, Roots, &c., in the Town of Guelph, during the ensuing winter.

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TORONTO MARKETS:

For the Month ending 1st June, 1842.

	s.	d.	s.	d.
Flour Farmers', in barrels.....	25	0	a	26 3
Wheat.....per bushel	5	0	a	5 3
Barley.....do.....	1	8	a	2 4
Oats.....do.....	1	2	a	1 3
Pease.....do.....	2	0	a	2 6
Clover Seed.....do.....	25	0	a	30 0
Grass Seed (Timothy).....do.....	5	0	a	5 6
Potatoes.....do.....	1	0	a	1 3
Onmeal.....per barrel	21	3	a	22 6
Salt.....do.....	11	3	a	0 0
Pork.....per 100lbs.	15	0	a	18 9
Beef.....do.....	15	0	a	22 6
Mutton and Veal (qr.).....per lb.	0	34	a	0 44
Butter.....do.....	0	5	a	0 74
Turkeys.....do.....	2	0	a	3 9
Fowls.....per couple.....	1	6	a	2 2
Eggs.....per dozen.....	0	4	a	0 5
Hay.....per ton.....	60	0	a	70 0
Straw.....do.....	30	0	a	40 0

ANNOUNCEMENT.

To Farmers and Dairy-men

WHO WISH THEIR CHEESE TO HAVE A PRIME RICH COLOUR AND MEET WITH A READY SALE.

S. G. CLEMENTS, the original Inventor of the DEEP RICH ORANGE COLOUR CARE ANNATTO, of double the usual strength, continues to receive Testimonials of its very Superior Quality (to all others), from the Dairy Districts of Cheshire, Derby, Somerset, Wilts, Gloucester, Leicester, Stafford, Lincoln, Yorkshire, North and West of England, Scotland, North and South Wales, and Ireland, and in addition to the First Prize being awarded to Cheese coloured with this Annatto in Cheshire, has just received the following very favourable Report from his highly-esteemed Correspondents, Messrs. JONATHAN BELCHER & Co., Faringdon, Berks, of which the following is a true copy:—

"Dear Sir,—We have the pleasure to inform you that at the Faringdon Agricultural Meeting in December last, the First Prize for Cheese was awarded to a Dairy coloured by your incomparable Annatto, the delicacy of which was universally admired.

"We are, dear Sir, respectfully yours,
(Signed) "JONATHAN BELCHER & Co.
"Faringdon, Jan. 24th, 1842."

"To Mr. S. G. Clements,
"Bristol.

To be had only Genuine from the Lewin's Mead Annatto Works, Bristol, and S. G. Clements's appointed Agents throughout the United Kingdom.

N. B. Half the usual Quantity of this Deep Coloured Annatto need only be used.

A few boxes of Extra Orange Cake, and Extra Super. Cakeable Strength just received, and for Sale in Lots to suit Purchasers, by

RIDOUT BROTHERS & Co.

Toronto, 1st. June, 1842.