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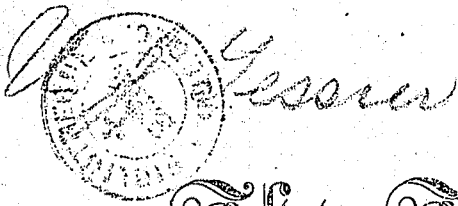
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The Farmer's Journal,

AND

TRANSACTIONS

OF

THE LOWER CANADA BOARD OF AGRICULTURE.

VOL. III, No. 10, MONTREAL, FEBRUARY, 1856.

POSTAGE FREE.

PRICE 2s 6d. PER ANNUM, IN ADVANCE.

The Farmer's Journal.

TO AGRICULTURAL SOCIETIES.

We have taken the liberty of addressing to each Secretary of the different local societies several copies of the Journal, for the last and present months, and we shall feel obliged by their circulating them in their respective neighbourhoods, with the view of obtaining a large addition to the list. When the Publisher undertook to issue the *Farmer's Journal* at its present low rate he was induced to do so by the consideration that there was an extensive organization throughout the province, in the shape of Agricultural Societies, whose officers would doubtless use their best exertions to put it into extensive circulation, and who besides would furnish him with useful local intelligence respecting crops, mode of cultivation, proceedings at agricultural shows, &c. In both respects he has been much disappointed, for, with a few praiseworthy exceptions, he has met with no aid whatever from the local societies. Nor has the Publisher experienced more consideration in the matter of advertising. He was led to believe at the commencement of the undertaking that his main source of profit would be derived from the publication of the particulars of the local Shows, meetings of societies, &c.; but only a very few have advertised at full length, others have sent in short notices, the charge for which is so trifling as sometimes not to warrant the trouble and expense of collecting, while in the great majority of cases Shows were held without being adver-

tised in any form in the Journal, although the Act of Parliament directs that this should be done. To improve the position of the Journal, and render it a more useful organ of the agricultural body, the Publisher would respectfully suggest:—

1st. That the different local societies should subscribe for a certain number of copies, and distribute them among their members. Where 50 copies are subscribed and remitted for, the price will be £5, or at the rate of 2s each.

2nd. That full particulars of the different local shows should hereafter be advertised in the Journal in accordance with the Act of Parliament.

3rd. That the Presidents, Secretaries and other friends of agriculture should stately communicate information of interest to be published in the Journal. The great secret of the success which has attended similar publications in other countries, is to be found in the fact that the Editor is assisted by a numerous body of intelligent correspondents, whose communications, coming for the most part from those practically engaged in and conversant with agriculture, give interest and variety to the paper.

Unless the subscription list to the Journal is greatly increased during the months of February and March, the Publisher will be reluctantly compelled to discontinue it after the close of the current volume.

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THE FRENCH EMPEROR—EXPERIMENTS WITH FLOUR.

The Emperor Napoleon the Third, who has shewn himself in many ways to be a very

uncommon man, conceived the idea that it would be practicable to compress flour so as to diminish its bulk, for convenience of transportation, without injuring its quality. In July, 1853, an experiment was tried at the suggestion of the Emperor, and with the object of testing his views. It was found that flour subjected to hydraulic pressure of three hundred tons, was reduced in volume nearly 25 per cent., and on examination and analysis it was found to possess all the alimentary properties it had before it lost its bulk. The flour subjected to hydraulic pressure was then put up in zinc boxes and hermetically sealed. At the same time other flour made from the same wheat, but not compressed, was packed in similar cases and sealed in the same way. In October following several of these packages, containing both kinds of flour, were opened and examined, and that which was compressed was pronounced to be the best. Again in October, 1854, another examination took place, and with the same result. The two kinds were then kneaded into separate loaves and baked. The pressed flour made the lightest and best bread. Again in March, 1855, more of the zinc boxes were opened, and on examination the loose flour shewed mouldiness, while the pressed flour was sweet and retained all its excellent qualities. Made into bread a very marked difference was discernible.

The Emperor has ordered experiments to be made at sea, as well as on land. Men-of-war are to take out both kinds of flour, and both are to be sent on sea voyages to hot and cold latitudes, and examinations are

to be made and recorded of the influence of climate and salt air upon each.

Of late, bread has been included within the economical movement of an association of labor, so manifest in many parts of Europe and America. In Amsterdam, Holland, is a joint-stock-bread-making Company, organized to produce unadulterated rye bread for the million. Its capital is 250,000 florins. In Stuttgart a similar Association manufactures 500 pounds of bread every 45 minutes, and in the 24 hours (the bakers work night and day) 16,000 pounds. Ten journeymen are employed, six of whom are constantly at work, while three rest, and one is taking a holiday. The flour is kneaded by machinery moved by a small steam engine. The bread is sold a kretzer less than the police price, yet so sweet and good is it, that every loaf is eagerly bought, and the capacity of the factory is to be doubled, and two larger concerns in the same city are to be started. Orders for this bread come in from neighboring towns daily, and are daily filled by railway.

In Prussia, the high price of bread has induced inquiry into the waste caused by separating the bran from the flour at the mills. It is found to be from 12 to 20 per cent, whereas the great German chemist Liebig has stated that wheat contains only 2 per cent of indigestible ligneous matter. There is a growing disposition among the better classes of that capital, to eat their bread hereafter unbolted. While their loaves will be cheaper, they will be more nutritious and digestible. And if the suggestion of the French Emperor is confirmed by extended experiments and observations, the hydraulic press will come into use among the millers in flour producing countries like America, and a material saving will be effected in the cost of freight, with a corresponding advantage both to producer and consumer, and *Vive l'Empereur* will be the exclamation in more parts of the world than one.

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AGRICULTURE, PAST AND PRESENT.

Professor Buckland, of Toronto, delivered, on Friday, the 21st December, a very interesting and practical lecture at the Mechanics' Institute, Toronto, "on Agriculture, Past and Present." In the last number of the *Farmer's Journal* we advocated the introduction of Lectures and *conversazioni* on Practical Husbandry in Lower Canada, feeling that *viva-voce* ex-

planations and illustrations are calculated to interest in a very high degree all engaged in agricultural pursuits. We are pleased to find that the same view is taken of the matter in Upper Canada, and hope we shall be enabled to follow the example of our western friends, in this as in other points of progress.

By the courtesy of Professor Buckland we were favoured with his notes of the lecture, and only regret that our synopsis of this valuable address must necessarily be short. We have reason, to hope however, that it will be published entire in the Upper Canada *Agriculturist*, and we refer to that publication for a very masterly treatment of a large and important subject. Professor Buckland is a thorough practical agriculturist, and we believe would have great and merited success if he could be induced by our Societies and Institutes to address himself to the farmers of Lower Canada.

The Lecturer began by stating that he would attempt, for the information of the audience, to sketch the progress of agriculture from the earliest periods of authentic history to the present times, and would glance rapidly at a few of the more prominent points which have distinguished or characterized this invaluable art at its successive stages of development. He said he would offer no apology for bringing a subject like agriculture before a general audience; in a country like this, so peculiarly adapted to agricultural pursuits, and in which probably three fourths of the entire population is engaged, and on the extension and improvement of which the progress and prosperity of our country must so much depend. Agriculture can never want earnest and zealous advocates, sincere admirers, and intelligent and ardent cultivators; the first and most pressing want of man being food, and agriculture being the only means of obtaining it with certainty and abundance, it behoves every one interested in the pursuit to study the most judicious and successful methods of cultivating the soil. The history of agriculture he contended was the history of civilization, and its various epochs constitute the history of the world's progress in wealth, knowledge, happiness and freedom.

The Lecturer then gave a rapid résumé of the history of agriculture, beginning with the Mosaic account. Our first parents were placed "in a garden to dress and keep it." Abel was a "keeper (i. e. a feeder) of sheep." Cain a "tiller of the ground."

Evidence in the very infancy of the human race, of the two great departments of husbandry, precisely as they are divided and followed in the present day. He next passed on to the records of agriculture in which Noah and his descendants were engaged, and thence to the Agriculture of Egypt, Syria, and the Holy Land. How easy, says the historian Pliny, is the husbandry of Egypt, for there the River Nile, serving the turn of a good husbandman, begins fairly and gently to rise and cover the land, and if it do not rise above twelve cubits, and leave its deposits to enrich the land, the people are sure to have a year of scarcity. After the agriculture of the Asiatic Empires, that of Greece and Rome was rapidly glanced at, and the rich and varied agricultural literature of these great empires was pointed out as evidence of their high agricultural acquirements, and of the taste and genius displayed in the pursuit. The prose of Pliny and Cato, and the poetry of the prince of Latin Poets, Virgil, were quoted to show how far the science was advanced so many centuries ago.

After dilating on the classic literature and progress of agriculture in the early ages, Professor Buckland passed on to its progress in the mother country during the middle ages, and to its condition when the Saxons, Piets, and Scots severally possessed themselves of portions of the British Isles, to the introduction of Norman Husbandry, and the labors of the monks in extending agriculture, and the evidences they have left of those labors in many of the loveliest districts of the British Isles, and in the records handed down to modern times. Coming thence to the labours of Davy and Liebig in agricultural Chemistry, and to the impetus given to agriculture by the Highland, English, and Irish Societies, admirably copied and imitated by the Societies of Canada and the United States, the Lecturer concluded with the following beautiful preroration.

"Thus physical things and the science which relate to them became invested with garments of meaning and of purpose altogether new. The drained morass, the fresh turned fallow, the waving cornfield, the meadow with its herbage interspersed with flowers, no longer stand separately before us, as things of mere labor, utility, or beauty, or our relation to them as the accident of a day. "Day unto day uttereth speech, and night unto night giveth knowledge" of nature. A higher ordinance and appointment, enveloped

within their teaching, becomes gradually but irresistably revealed, binding and disposing all to work together for the greatest end, not of the individual only, but of the whole family of man; not of his physical necessities or intellectual pursuits alone, but of his whole relation to that highest wisdom, whose evidences and attributes are engraven upon the fabric of nature, not of power or knowledge only, but of universal and inexhaustible beneficence."

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LEGISLATION FOR THE PROMOTION OF AGRICULTURE

As so large a portion of the population of the United Province follows that most ancient, and most useful of all occupations, agriculture, as the business of their lives; and as the legislature anxious to encourage improvement in this important pursuit, have legislated at various times, and have instituted Boards of Agriculture and Provincial Agricultural Associations, whose duty it is to watch over and promote the organization and development of County Societies, who, in their turn, control the Provincial Associations, by the votes of the Delegates, the farmer has by his own vote, and the voice of the individual to whom he delegates his authority, the power to decide upon all questions that concern his own individual interests, and which are calculated to promote the success of his peculiar pursuit.

It would appear, from recent events, that these privileges are not well understood, or sufficiently prized by the farmers of the Lower Province, or if understood, we are utterly at a loss to account for the apathy exhibited by so many of the Societies at the last fall exhibition. As was stated at the close of the Sherbrooke Exhibition not one delegate attended from any Society in Lower Canada, except those from Sherbrooke and its vicinity, and the very object of the Act of the Provincial Legislature in giving to the County Societies, who should best understand their own interests, the power to appoint their office-bearers and the places of exhibition is defeated, or becomes a dead-letter by reason of the non-attendance of the delegates from the County Societies.

As it is possible some portion of this apathy may arise from a want of knowledge of the scope and bearing of the provisions of the Act, we have thought it would be an acceptable service to our readers that we should turn to the Provincial Statute Book, and shew in a short, but succinct manner, the

objects of the Act for the better organization of County Agricultural Societies, and the means by which those Societies can, by systematic and combined exertion, promote the objects for which Parliament has legislated.

The Board of Agriculture is composed of eight Directors, four of whom retire every year to be re-elected, or replaced by the votes of the different County Societies, at their annual meetings in the month of February. It is of the utmost importance to the farming interest that these selections should be made with care and judgment. Those alone should be selected who are competent, resolute, and indefatigable men, earnest in season and out of season for the promotion of this object. If the proceedings of the Board have not been of such a character as to satisfy the agriculturist, or if the members have not shewn themselves to be persons of sufficient vigor, activity and intelligence, here is the remedy provided by the wisdom of parliament to effect a satisfactory change in its proceedings, and, if the farmer values his own privileges and interests, he will set himself anxiously to the consideration of this matter, and apply a remedy if it be needed at the usual time of election.

The Provincial Association is composed of the Board of Agriculture, the President and Vice-Presidents of the County Societies, and all annual subscribers of five shillings; the Board, and the President and Vice-President of the County Societies (or any two members in the place of the latter whom a County Society may appoint) are the Directors of the Association. And these Directors are bound by the Act to meet during the exhibition, which takes place during their term of office, for the purpose of fixing the place for the holding of the next exhibition, and appointing a President and Vice-President for the Association.

If any section of the country is anxious to have the exhibition within its limits, it should take care to have its interests well represented at this meeting of Directors. At this meeting also the representatives of County Societies would have the opportunity of discussing many important matters with the Board, and the future proceedings might be so shaped, after consultation and due consideration, as to advance in the highest degree the objects contemplated by the Act, and hence the importance of appointing, as

we have insisted, men of activity and intelligence to the trust.

The subject is one of deep and abiding interest to the agricultural community. We shall return to it, and shall be glad to find our warning and advice have not been uttered in vain. We were informed the other day by an extensive miller in the adjoining States, that Canadian Wheat is acknowledged universally by American Millers to be from 10 to 15 per cent. better than American Wheat. On asking him the reason why, he replied that he believed the snow of our much maligned climate nurtured a more vigorous and productive plant. Owing to the superiority of our cereals, and the great demand likely to arise for them in the present state of Europe, many American farmers have come over to purchase our wheats, and even want to purchase and farm our lands. Much of the famous flour sold in Europe with the Genessee brand, is manufactured in that district from imported Canada Wheat, which the miller prefers to that grown in the Genessee valley. It will be a deep reproach to our people if others can perceive and appreciate the advantages we possess, and are prompt to profit by the circumstances of the times, and if we should be so slow or apathetic as to be insensible to those advantages, or should fail to second the local legislature in its thoughtful and carefully matured efforts to promote our own agricultural prosperity. In this case the fault will be justly ascribed to those who neglect the important functions they are appointed to fulfil, and who thus inflict a serious injury upon the most productive interest of the Province.

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STATE BOARDS OF AGRICULTURE.

The Hon. Henry J. Gardner, Governor of the State of Massachusetts, in his annual address to the two branches of the Legislature, refers in the following terms to the State Board of Agriculture, and its influence upon the agricultural prosperity of this important part of New England:—

"No portion of my official duties has been more agreeable than those performed as a member of the State Board of Agriculture; and, though the relative expenditure of money under this head is small, no department of government is intrusted with a subject of more intimate concern to our entire community. The wise foresight, which encourages the different county societies by a State grant, and which gives to each of them a direct representation at the Central Board, where the experience of all is considered and compared; and the prac-

tical sagacity which established the State Farm, where, without annual cost, valuable results are arrived at by experiments in fertilizers, in improving breeds of stock, in introducing vegetable productions new to the State, and in testing theoretical probabilities by actual trials, have largely contributed to raise the standard of farming, and to stamp that degree of excellence on our agriculture, which our soil and climate would seem to forbid, and to which, without these facilities, we should not have attained. By these methods, judiciously improved, as they doubtless may be, it is possible that the agricultural perfection of Old England may be rivalled, or even surpassed, and our State become the model farm of the world."

SCARCITY OF FARM LABORERS IN ENGLAND.

The London Farmers Magazine, in alluding to the difficulty of obtaining hands, says that "instead of two men looking after one master, two masters are looking after one man." The war has something to do with this, the improved condition of Ireland something, but emigration has been the great means of improving the condition of the farm laborers of England. The article alluded to says:

"Those districts which depend on a periodical influx of Irish laborers for their harvest, receive them no more. They have solved the problem of a self-supporting emigration. The Highlanders who performed in the same way the periodical labor of the Scottish lowlands are emigrating to Canada, where they can obtain land of their own. The English rural population are shaking off their dread of foreign parts. They are acquiring a better knowledge of them, and of the prospect they afford to the laboring man of becoming a land owner and employer of labor himself."

THE CORN CROP OF THE COUNTRY.

According to the best information, the corn crop of the United States for the present year is immense, greater than that of last season. It cannot be realized however to the full extent, for some months. The estimate in some quarters is a thousand millions of bushels. Corn constitutes a leading item in our agricultural products, and such a crop cannot but materially assist the prosperity of the nation. This cereal is used in many portions of the South and West as a substitute for wheat and rye, while it is one of the essentials in feeding horses, swine, poultry, and in the manufacture of whiskey. A heavy corn crop, therefore, is a great national blessing. We shall have a surplus extending to millions of bushels, and already numerous cargoes have been engaged for exportation. It should be remembered, however, that in order to render the corn of the remote West available in the Atlantic ports, the price must be reasonably high, for otherwise it cannot be

brought over the various railroads and canals with advantage. At some points, for example, corn sells as low as thirty cents a bushel, and at others as high as a dollar and ten cents. When it falls to fifty cents in New York and Philadelphia, it cannot of course be brought from the towns in the West, where it sells for thirty cents. Nay, in such cases, it must be consumed on the spot, for it becomes comparatively valueless. It is essential, therefore, in order to realize the entire crop, that the prices should be remunerating in the Atlantic cities. Only yesterday, we heard an extensive dealer express the opinion that corn would sell in Philadelphia in May as low as seventy-five cents a bushel.—*Philadelphia Inquirer.*

MAPLE SUGAR AN ARTICLE OF COMMERCE.

To the Editor of the Mercury.)

SIR—The material prosperity of every country depends so entirely on the extent and value of its natural productions, that it is the duty as well as the interest of every one, to use his exertions in promoting their development. This premised, I am desirous of calling the attention of the public and especially the agriculturists, to the following extract from the Medical Chronicle for January, which has just come to hand. It is from the pen of my friend, the talented "London Medical Correspondent" of that Journal, George D. Gibb, M.D., Esq., although it only bears the modest initial of the writer G. As the excellent periodical from which I copy, is necessarily, from its character, confined to a comparatively small class; I am anxious to give the important subject on which it treats, a publicity commensurate with its importance.

Under date of London, 7th December, 1855, he says:—

"Of the solids and fluids consumed by all classes of her Majesty's subjects, none are in such demand as sugar; it is not only very scarce but very dear, and many of the lower orders can only purchase it in very small quantities. This scarcity is believed by many political economists as likely to continue some years. Now it is a question worth considering, whether the sugar of the maple might not be exported from Canada with advantage to the manufacturer; but in a granular or crushed form, and deprived of its colour, to some extent. I merely throw out the suggestion which some may think worthy of consideration. Looking at the point in a physiological sense, I believe the deprivation of sugar among the lower classes likely to be followed by general emaciation, and a tendency to many of the exhausting diseases, especially chronic pulmonary complaints.

"I have endeavoured to show, elsewhere, and I think satisfactorily, that the great source of combustible fat in the economy is a proper supply of sugar, and although we may already have a good deal of inherent

sweetness in our composition, a supply from without is a matter of necessity, and at the present time one of anxiety."

That Canada possesses almost boundless forests of the sugar maple (*Acer Saccharinus*) which are comparatively unproductive, cannot be denied; therefore an extensive field is open for the manufacture of a commodity, that, according to Dr. Gibb, is almost an essential to life and health. No doubt can exist, but immense quantities of maple sugar may be manufactured at a trifling cost, and at highly remunerative profits. No cultivation is necessary, nothing but the preservation of the trees from the woodman's axe, and the season at which the maple gives its sweets, is when no other agricultural labour can be exercised. I will not at present enter at length upon the expediency of preserving the maple forests and groves of Canada, but merely drop the hint for legislative consideration.

Some very fine specimens of maple sugar have from time to time been exhibited at our Local Industrial Exhibitions (of which I have the satisfaction of having been one of the earliest and most zealous promoters), and for which premiums were granted. Some of these specimens from the Eastern Townships, among which I may name the products of Mr. J. R. Lambly of Leeds, Megantic, were far superior in colour and taste to the very best muscovadoes, and little if at all inferior to the crushed whites, (not bastards,) and were, as suggested by Dr. G., in granular crystals.

I would respectfully suggest for the public benefit, that the District Agricultural Societies should offer premiums for the best quality, and largest quantity of sugar manufactured in each district, and that persons possessing the best method of making sugar be invited to communicate the same through the public press, which will I am confident be freely open to them. In conclusion, as the season is not far distant when the annual manufacture of maple sugar will commence, permit me through your columns, to enlist the services of the press generally in giving prompt and active circulation to this subject.

I am, Sir,

Yours, &c.,

W. MARSDEN, M.D.

Quebec, 15th Jan., 1856.

AGRICULTURE OF LOWER CANADA.

I suppose it to be an established fact, that Agriculture was the first Art practised by mankind, and as it was the most necessary Art from the creation of the first man, Adam, we might naturally expect that it would by this time, have attained to the greatest perfection it was capable of. Experience, however, convinces us, that though our teaching has continued for a period of near six thousand years, without the interval of a single year, except during the time of the Flood covering the earth, we have not yet learned perfectly either the Art or the Practice of

Agriculture,—notwithstanding that the Art and practice is, by most persons, considered very simple and easy to be understood. No doubt the *principles* of the Art are very simple, and consist chiefly in first draining the land of superfluous moisture. Secondly,—breaking up the soil intended for growing crops thoroughly and effectually, by the plough or otherwise. Thirdly,—by supplying the soil with manure when required, to restore fertility to the soil if exhausted by producing crops. Fourthly,—to sow good, clean, and unmixt seed, of whatever variety, in the proper season and in a judicious manner. Fifthly,—not to allow any plant to grow with the cultivated crop, except such plants as are the produce of seed sown. Sixthly,—to establish a rotation of crops, suitable to the soil and the locality, and to carry out this plan of rotation as closely as circumstances will admit, constantly observing the rule of not allowing the same species of grain or roots to succeed each other upon the same soil two years in succession, and not to cultivate any species of crops which the quality of the soil is unsuitable to produce in perfection. Seventhly,—when lands are let out of tillage, with whatever object, to seed them down invariably with some variety or varieties of grass seed, and thus give the land a chance of being covered with verdure, as when first brought under culture, whether of trees or grass. This would be doing justice to the soil, for which the soil will make a generous return. The subsequent management of crops I will not discuss on the present occasion. In my Treatise on Agriculture, published many years ago, I endeavored to describe this management, and I could not give any better description now. If the rules I have above enumerated were properly executed and carried out, we should not have much to complain of in the tillage part of our agriculture, and, though they are very simple, yet they are manifestly to be observed, in order to insure good crops and preserve the quality of the soil from deterioration. No doubt, Agriculture in every department, has attained to a great degree of perfection in the British Isles, though all circumstances considered, this perfection is not surprising at this advanced age of Agriculture, continued down from the time of Adam. However, it would appear to be our duty to imitate the improvements so successfully introduced in England so far as they have gone. Our lot has been cast in a country possessing a very superior soil, that has been left in a state of nature—accumulating fertility, probably more than five thousand years longer than other parts of the world supporting a large population. Unquestionably these are favorable circumstances, and we should show our appreciation of them, by endeavouring to attain a high, if not the very highest rank in the practice and productions of Agriculture, as I am convinced we are capable of attaining.

The Agricultural Products sent from Lower Canada to the Paris Exhibition of

the Products of all Nations, were not very carefully selected, because there was not sufficient time or notice to make the selection, and it was also so late in the season that most of the produce was disposed of by Agriculturists, particularly the best samples. This circumstance I had an opportunity of ascertaining in my capacity as Secretary to the Montreal Central Committee for the Paris Exhibition. But, notwithstanding these unfavorable circumstances, almost all the products sent, except Fall Wheat, of which I believe there was not any sample sent, took first class prizes. I can further say, from experience, that there are hundreds of thousands of acres of land in Lower Canada of equal, if not of superior natural quality, to the lands which produced the samples of grain, &c., sent to the Paris Exhibition. This is an unquestionable fact, and why then should we be second to any country in any department of our Agriculture, or the quality of any part of our produce be inferior? Now is the time for action, when the products of Canada have attained so high a position, when in competition with the products of the first countries on earth. We shall have numerous visitors to see the country whose productions, and other wonders, stand so high in the Exhibition of the products of all nations; and it becomes our duty, in order to secure a consistent character, that our practical system of Agriculture in every department, should be in a strict accordance with the high character our products have attained in Paris.

Probably many who may have read my late communications on the state of our agriculture in Lower Canada, may be disposed to entertain a different view of it from that which I have given. It is not by any means my wish to give an unfavorable view of our agriculture, but only to state things as they really are, and suggest improvements which I think might be advantageously introduced. It may be replied that the changes I propose, if they are desirable, can only be introduced gradually, and will require a long period to bring them into operation. It is certain, however, that the longer we put off improvements that are required, so much longer do we put off obtaining the advantages we might expect to derive from them, and they will have to be adopted at last. At the present moment there is more encouragement for agriculturists to produce abundantly, than ever was offered to them before in Canada. What does it signify to farmers that there should be high prices—many good markets, with easy and cheap means of access to them, if they have no surplus produce to dispose of? What is the advantage to us if we have millions of acres of good land, in tillage, meadows and pastures, and hundreds of thousands of horses, cattle, and sheep, if all are not judiciously cultivated and managed so as to yield the greatest amount of annual production, or, at all events, what might be considered a remunerating average of production? There is another incentive which should have as

powerful an influence upon agriculturists as upon any other class of the community—the desire to possess the means of obtaining all the necessaries, conveniences, and even the elegancies of life, to as great an extent as possible. Now, it is quite certain unless we are able to raise a considerable surplus from our farms over what is required for simple food and clothing, we cannot have many of the enjoyments which are common to other classes of this community. Farmers are generally proprietors of the farms they cultivate. (about 100 arpents) and under good cultivation and management, they should afford means of comfortable living to their owners. Of course, what might be thought a comfortable or respectable mode of living by some parties, might be considered quite the contrary by others; but I shall not attempt to define the standard of what should constitute the one or the other. It is sufficient for my purpose to say, that the larger the quantity of excellent produce we obtain from our lands in every way, the more we shall have at our disposal to expend, and undoubtedly, the means to expend is calculated to afford a great amount of satisfaction both to ourselves and others, if we know how to expend on laudable objects.

When I have expressed regret at the backward state of agriculture, it has frequently been replied to me, that the farmers were perfectly satisfied with their condition, and were not desirous of any change, and that it was nothing less than offensive intrusion to find fault or object to their modes of cultivation and management, or to recommend new systems for their adoption. To avoid giving offence I have been always very cautious, and rather endeavoured to demonstrate what was objectionable, than condemn it without explanation. I have ever wished honestly to submit the result that might be expected from different systems, and recommended that for adoption which I conceived to be the best and most profitable. It would be very desirable that agriculturists in Lower Canada would not cling to a defective system and practice of husbandry that must be unprofitable. We owe a duty to our country as well as to our own interests, to adopt all practicable means, that the lands we occupy shall produce as much as they are capable of producing, and there is not any one who knows the country that will pretend to say that we do so at present. There is another circumstance worthy of note, that the lands we occupy, unless they are constantly improving, must be deteriorating, and if they are deteriorating, as they must be if our system of cultivation and management is defective, what must result from all this at last, but that they will become worthless. There is a simple fact connected with sheep which I omitted to mention under the heading "sheep." It has been ascertained that the careful and regular feeling of sheep has a most important influence on the value of the wool. As the general rule, whatever keeps the animal in

a healthy state promotes the regular growth of the wool, and thereby renders it more valuable for whatever purpose it may be applied. It is found in England that when sheep have not a sufficiency of good food, the wool grows irregularly, and the wool is tender and weak at that part which was growing when the check to its supply of food took place. With such facts before us, what can we expect from our sheep if not sufficiently provided with suitable food at all times? It is by hearing the results of practice in other countries that we can best understand the practice we should adopt. I have seen lately some interesting statistics of English and French agriculture, which were given in a lecture delivered in Cornwall, England, by M. R. de LaTrebouais, an eminent French agriculturist, who has purchased largely English breeding stock and sent them to France. He stated that the average produce of wheat in England was 23 bushels to the acre, and in France it is a little less than 14 bushels to the acre; that there is 1½ sheep kept for each acre in England, and only 1-3 of a sheep kept to the acre in France; that 4,000,000 cattle are slaughtered annually in France, weighing on an average only about 2 cwt. each, and in England less than half that number of cattle, but weighing on an average about 5 cwt. each. Though in this review, I have undoubtedly found great fault with the general management of cattle here, yet I believe that the average weight of cattle slaughtered in Lower Canada would exceed the weight of the French cattle, if the lecturer was correct. But however all this may be, I conceive I was perfectly justified in all I have said in relation to our cattle and sheep. Our aim should be to equal, if not surpass, others and not excuse any deficiency, by imagining that we are not inferior to other agriculturists. I have trespassed to a great extent on your columns, but must beg your indulgence a little longer before I can conclude my task.

W. M. EVANS.

Cote St. Paul, Jan. 10, 1856.

THE NEW-YORK HORSE MARKET.

The principal sale stables are located on Twenty-fourth street, between Second and Lexington avenues, where Bull's Head tarried a few years on its march from the old location near the Bowery Theatre to its present location in Forty-fourth street. This part of the street is known as the Horse Market. We have never visited it at a time when it wore a more dull appearance than it did on Tuesday, December 4.

We have seen 800 or 900 horses in the dozen stables along these two blocks at one time for sale. There is one stable-keeper who has sometimes had 300 sale horses on hand at once. He has about 40 now. There is another stable with stalls for about 200 horses. In this we counted 21—good bad, and indifferent. Another stable capable of holding about the same number is not one-fifth full. Some of the smaller stables are still more empty.

It is probable that 150 would count all the horses for sale in the street, and while we were present, we only saw or heard of one buyer on the lookout for a horse.

The price of a common horse does not vary materially from the price a year ago, but the sales are very much fewer and difficult to effect. As compared with two years ago, there is scarcely one tenth as many sales. One reason is the large sale of mules for a year or two past. One dealer told us he had sold 180 mules to one railroad company in this city.

About the average price of such horses as are used in our city stages is \$125 to \$130; cart horses range from \$125 to \$175, and matched work horses for \$300 to \$500 a pair. Carriage and fancy horses always sell for fancy prices, just now but few persons are in the fancy of buying. The asking price is pretty high. It is said that a good many horses have died in this city of some epidemic, within a year, and that has deterred owners from bringing such stock here, and deterred gentlemen from buying.

It is perhaps owing to this that prices are higher than last year, to those who do buy, and sales slower to those who wish to sell.

In the present state of the market, it would be rather a bad speculation for a farmer to come here and wait for a chance to sell.

The attention of Western drovers, during all the past Summer has been turned toward Cincinnati, Chicago, and other Western towns, where the prices have been as good as in New-York, and keeping lower, and sales quicker.

In conclusion, we must advise our country friends that the New-York Horse Market is now decidedly dull, and very likely to remain so during the Winter.—*New York Tribune*. Dec 20th.

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ANTWERP RASPBERRIES.

The *Poughkeepsie*, (N. Y.) *Eagle* gives a very good account of the details and extent of one branch of "Fruit Culture" thus:—

But few persons are aware of the extent and importance of this comparatively new branch of the Agricultural, or rather Horticultural business.

The most extensive operations in this part of the country, are carried on at Milton, Ulster county, although the fruit is largely cultivated in this county.

There are now about 100 acres of raspberries in bearing in the immediate vicinity of Milton, and immense quantities of plants are being set out every year.

A few days ago we visited the raspberry plantation of Nathaniel Hallock, at Milton, in order to learn the *modus operandi* of the culture. Mr. Hallock's being one of the principal plantations.

The pickers were in the fields with their baskets between eight and nine o'clock in the morning, as soon as the dew was off the plants, as the berries do not keep so well when picked wet.

In a short time the pickers began to bring in the baskets of berries. These baskets hold about a pint, are very neat looking, being made of willow, and much superior to the baskets in which strawberries are sold, in fact the berries would hardly sell, if sent to New York in strawberry baskets.

There were about fifty pickers at work, men, women and children, the women being the most expert pickers of course. One per-

son was employed constantly, and a part of the time several persons, in picking the baskets. The baskets, as soon as picked and examined, are packed into boxes of different sizes according to the crop of that day. The object of putting them into boxes is to ensure their safe transit to the market, and in order to do this, the packer has to work carefully to fit the baskets in so that each one braces the other; when the boxes are filled to the top, the lid is closed and locked, and the boxes are ready for shipment.

The season lasts about six weeks, and this period is one continual round of business, the berries being sent off to New York every night except Saturday, (there being no sale for them on Sunday.)

The berries were all picked about six o'clock, and after supper they were conveyed to the landing, the baskets making two very heavy horse loads, and as near as we could calculate, the steamboat took off about 60,000 baskets that night, making about 20 tons of berries, exclusive of the weight of boxes and baskets.

The baskets are imported from France by hundreds of thousands every year, and although such quantities are manufactured every year, the supply is inadequate to the demand, the latter exceeding the former by about one-half.

The culture of the plants requires the services of a large number of people.

The pickers constitute a small army, there being from five to ten, and often more required for each acre, according to the time in the season, which was at its height this year about the second week in July.

The manufacture of the boxes in which the baskets of berries are packed is no small item, and the steamboats that carry this extra freight are obliged to employ extra men to handle it.

This business, though at first view it seems small, gives employment to, and distributes its gains among thousands of persons.

From the Milton landing, the average daily export is 10,000 baskets, and the retail price in New York averages about ten cents per basket; thus the product of 100 acres amounts to \$1,000 per day, or \$42,000 per season. We call to mind no other crop which produces as much per acre, or which gives employment to so many.

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AGRICULTURE OF LOWER CANADA.

Horses.

With respect to horses, there is, perhaps, more attention bestowed upon them generally, than upon any other farm stock, though their management is, nevertheless, far from being unobjectionable. It may be said that we have no distinct breed of horses in Lower Canada, but a mixture of every breed known. This confusion of breeds is to be regretted, particularly so far as regards what was known as the true Canadian breed of horses—so well adapted for the country, and for agricultural purposes. I know there have been objections made to their size for farm purposes, but if this defect really existed, it is one perfectly capable of remedy by proper selection and judicious breeding and feeding. The form of the true Canadian horse was unexceptionable, and I have no doubt he would weigh considerably more in proportion to his height, than any horse of the mixed breeds we have at present. It would be impossible to find a more perfect shaped horse for draught than a first class Canadian horse, and while we have

such animals in the country, the breed might be brought up to any standard of size that would be thought necessary, by judicious management. It is by careful selection and judicious management, that other breeds of farm live stock have been brought to the great perfection they have attained in England. It is not actual size and height which gives strength to a horse, though size and height may be necessary for certain purposes. It is the form of the horse that indicates strength or the absence of that quality. I have frequently seen horses not of large size perform their work much better and with more apparent ease than larger horses. I do not advocate horses that are too small for their work, as a considerable portion of our present stock certainly are, from neglect in breeding and insufficient food. The pure Canadian breed of horses when I first came to this country was of moderate but sufficient size; strong, active, and hardy, well adapted to agricultural purposes. It is, however, difficult now to find any of this breed in its purity, and the crosses with other breeds have not generally been an improvement, either in form, strength, activity or endurance. There are exceptions, I believe, where the cross has been with imported English breeds of horses of very good quality, and of very similar form to that of a good Canadian horse. These crosses have succeeded very well, and have enlarged the size of our horses. The true cause, however, of deficiency of size, is actually mismanagement, both in breeding and feeding, so that there is scarcely a good specimen of Canadian horse now to be found. It must be a great loss to a country to have a numerous stock of horses not sufficiently strong for the work they have to perform. It is quite impossible that any breed of horses could be kept up to the proper standard of size, while there was so little attention given to selection for breeding, in either the male or the female; and the latter have, in numerous instances, been allowed to breed when only two years old. We could not expect any other result from such mismanagement, but a dwindled and inferior race of horses. Fortunately, it is in the farmer's power to adopt a remedy; first, by strictly confining all stallions, and not allowing them to go at large on any pretence; secondly not to breed from mares of inferior quality, nor allow mares to breed until of proper age; thirdly, to keep only such stallions as might be expected, from their excellence, to produce good, and perfectly sound progeny. If these simple rules were strictly observed, and horses supplied with suitable food from their birth, we should have quite a superior stock of horses to those we possess at present. Horses would be a very profitable stock to cultivate here, if judiciously managed and kept up to the required standard for general purposes. There is a constant demand and a fair price attainable for almost every description and size that we have now, and we should have a very much better market and higher prices, if our horses were what they might be. The pure Canadian breed of horses is highly prized in the neighboring States, but they complain that it is almost impossible now to procure any of the true breed. In Lower Canada there is every encouragement to cultivate a good description of horses, both for our own use, and for sale to foreign customers, who come to the farmer's doors to purchase them at a good price. If Canadian farmers residing at a considerable

distance from Montreal and Quebec were to give due attention to the breeding of horses to a reasonable extent, they would pay them, perhaps, as well as any stock they could raise; but, like all other farming live stock, the success and profit will depend upon the skill and good management bestowed upon their breeding and feeding. There are many Canadian farmers who understand the management of horses much better than I could inform them, and keep excellent horses, but it is not for such farmers that I submit these suggestions. I am perfectly aware that we have as good farmers in Lower Canada as can be found on this continent, and who farm as well in every department as can be desired. We have also some excellent live stock—horses, neat cattle, sheep and swine, and they are well managed and attended to. It is not, however, for agriculturists who understand their own business, and who are perfectly conscious of their skill in everything which belongs to their profession, that I would ever attempt to write on the subject of agriculture. I only write for those farmers who may think that some of my suggestions might be advantageously adopted, and would be an improvement of their present system of husbandry. I therefore request that skillful and practical agriculturists who may happen to read my communications will do me the justice to believe, that I do not pretend to write for their instruction; but rather to induce farmers who may not be so well qualified or instructed in their profession, to adopt the improvements that are manifestly required in their system of husbandry, and thus be upon a more equal footing with the most skillful agriculturalists, which they never can be while they practice a defective system of agriculture.

GENERAL REMARKS.

I believe it is very generally admitted that the arable lands of Lower Canada might very readily be made to produce on an average, over double the crops they do at present,—notwithstanding that we raise some excellent crops,—by a more judicious system of husbandry. There is not any doubt that the live stock of the country, though we may have a considerable proportion very good, is capable of improvement to fully the same extent on an average, so as to be worth double the amount they are worth in their present condition. It may be imagined, then, how vastly the property of agriculturists might be increased by the introduction of an improved system, that is quite possible. I have not in my power to give the exact numbers of our live stock at present, but supposing them to have increased within the last twenty years in the same proportion as our population have increased in the same period, our stock of horses would now be little short of 200,000, neat cattle 700,000, sheep from 800,000 to 900,000, and swine from 500,000 to 600,000, and perhaps there is from 3,000,000 to 4,000,000 arpents of land in tillage, meadow, and pasture. If this estimate be nearly correct, and that almost all these live stock, and this great extent of arable land, are only producing now, half as much as they would be capable of producing annually under a better system of agriculture, should not this fact be sufficient to show that the necessary improvements should be introduced by all means that are possible. If we are satisfied that our system is defective, and that these defects are of such a nature as to be under our control, and capable of remedy, as they unquestionably are, there is no excuse for allowing

a defective system to continue. One of the greatest difficulties to farmers in a new country so extensive as Canada, was the want of easy access to market with their produce. Heretofore, this circumstance was felt to be a serious drawback, and exercised a very unfavorable influence on agriculture. Farmers had no encouragement to produce much in excess of the supply of their own wants in simple food and clothes, from the difficulty and expense of taking any surplus to market, and disposing of it. Now, this difficulty is to a great extent removed, and the means of rapid and cheap access to market is already very general, and likely to become more extended every day. The Reciprocity Treaty has given us the United States for a market, in addition to the markets we had before. It is almost impossible that our position could be more favorable and encouraging for the improvement of our agriculture. When I came to this country, we had neither canal, railroad, nor turnpike road, and only about half a dozen steamers on all the numerous rivers and waters of Lower Canada. Compare what we have been with our present proud position. We have the most splendid line of canals, completing an inland water communication, that is unequalled in the world, for more than a thousand miles from the sea, for sea-going ships and large steamers. We have over one thousand miles of railroad, and, I suppose, about five hundred miles more under contract, and all these roads are constructed, in the very best possible situations for affording accommodation and convenience to all classes and interests, and I have no doubt, from the high character of our country, railroads may be extended to answer all our requirements. We have turnpike roads introduced as an experiment where most required, and they may be extended by our Municipalities where considered to be necessary. We have numerous bridges over large rivers, where there was not one; and there is now constructing over the great River St. Lawrence—a bridge, that when completed, will be the greatest in the world. Our navigable rivers and inland seas are covered with steamers of all sorts and sizes. We have a weekly line of Mail steamers, long established between England and Halifax, and a contract is made for a similar line between England and Montreal to commence in spring. These advantages are all, or nearly all, calculated to act as an encouragement to our agriculture, provided the charges for transport are not too high, and I may say, that all these advantages have been introduced within the last twenty-five years. In addition to all these, our agriculture is represented by a Department in the Government and the Legislature have granted an aid of £250 annually to the Agricultural Societies of each county, on the favorable condition of the society subscribing the one-third of that amount amongst themselves for the same object. I enumerate the advantages which our agriculture has at present, and which they did not possess twenty-five years ago. There is another circumstance worthy of notice—that while the cost of transport of our produce to market has generally been greatly diminished, the price of our produce has been vastly increased. I must, however, admit that with all these advantages, farmers had some draw-back, to which they were not liable previous to the year 1835, I allude to the ravages of the wheat fly, and to the potato disease. The

first of these inflictions particularly, was a very great injury to agriculture in Lower Canada, and it was the more felt, because farmers did not immediately adopt the remedy of cultivating other crops instead of wheat, but clung to the cultivation of the latter grain before they had discovered any means of checking the ravages of the fly, by substituting new varieties of seed, and sowing at a later season than usual, remedies which have been found to check considerably the power of the fly to damage the crop, though it does not prevent the injury altogether. Under present circumstances the wheat fly is not so serious an evil as it has been. By skilful management some farmers are able to grow very fair crops of wheat, and if some farmers can do this, others may do so by adopting the same means. The great advantage of skill in agriculture is, that it enables the farmer to understand and overcome difficulties that may arise in the practice of his profession, which the unskilful farmer is unable to cope with. The markets of the United States, which are open to us at present, render the cultivation of peas, barley, and oats, as profitable as wheat, particularly if these latter grains are substituted for wheat on lands that are not suitable for producing it in the greatest perfection. Farmers may rest assured that a good crop of peas, barley, or oats, which I may add, are certain crops here when cultivated properly, will pay much better than an inferior crop of wheat, or any crop of wheat that is under a fair average. The markets of the United States were not only closed to us by heavy duties twenty years ago, but there was a considerable importation of agricultural produce from that country. Now these markets are open to us, and the importation of agricultural produce to Canada may be said to be at an end. These advantages are more than sufficient to compensate us for the damage of the wheat fly and the potato disease, particularly now that a remedy for both these afflictions is better understood. I have no doubt that with the advantage of the Reciprocity Treaty, Lower Canadian farmers will find it their interest to grow barley, peas, and oats, rather than wheat, where there is any uncertainty of a fair crop. It is better to allow those who can, to grow wheat, and we can exchange the grain we grow in perfection for wheat. It appears to be a very proper subject of enquiry, whether our agriculture has made that progress in improvement within the last twenty-five years which might reasonably be expected, under all the favorable circumstances I have enumerated. So far as I am acquainted with the subject, I have no hesitation in saying that very considerable improvements have been introduced, and with every prospect that these improvements will rapidly extend; but, at the same time, it must be manifest, from this review which I have attempted, that our agriculture generally is still in a very backward state, and is susceptible of vast improvement in every department. My chief object in preparing this review is to bring this subject, that is of such vital importance to Canada, prominently before the public, and agriculturists in particular, that means may be adopted to correct any defects that are found to exist in our system of husbandry. I know that the progress of agricultural improvement must be slow but at the same time we should accelerate its progress as much as possible. I must, however, conclude for the present,

but I shall have to trespass upon you on a future occasion.

WM. EVANS.
Montreal, December 28, 1854.
Montreal Gazette.

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AGRICULTURE.

The sustenance, clothing and comforts of the human race come mainly from the soil; and whilst commerce is absolutely necessary to distribute its fruits, yet it is evident that we cannot too highly appreciate the dignity and importance of that profession, which produces them. The cultivation of the soil is the first and most important of all secular employments, and so it should be brought, even more than to any other, all the powers of intellect and all the attainments of science.

Nor does the soil yield an ungrateful return for the application of intellect and science. The man who first applied the principle of rotation of crops more than doubled the produce of Britain. The man who introduced the cultivation of turnips and other root crops doubled it again. The man who applied thorough draining to the soil introduced a principle which has doubled or will double it once more. Thus, with the same area and natural capabilities to work upon, the surface of Britain produces probably eight times as much as it did a century ago, and we may well ask where is the limit to this progression? The old Fly Coach yielded to the Royal Mails, dashing along at a speed of eleven miles an hour, and those who thirty years ago chronicled this marvellous change, doubtless thought that the utmost limit of rapid locomotion had been attained. But in that short time, all these dashing coaches have been hopelessly distanced and driven off by the long Railway Train. And even that, for the transmission of intelligence, has been left creeping behind by the Electric Telegraph. In like manner, the present perfection of Agriculture in the Lothians, East Anglia, and Belgium; may be utterly distanced by some future application of the simple principles of science. The great truth, that the man who doubles the depth of his productive soil virtually doubles its extent as much as if he had added another farm of equal dimensions, is capable of indefinite application: and it is, we confess, in this direction that we look for the greatest improvements in modern agriculture. Thorough draining and deep ploughing are approximations; but, inasmuch as the roots of most plants will, under favorable circumstances, penetrate to a depth of three, four, or five feet, we think there can scarcely be said to be a commencement made yet in the science of deepening the soil.

Were every intelligent farmer to consider his farm, in some respects as a laboratory, and he himself as a scientific experimenter, with a view to benefit not only himself but the human family; were he to obtain all the information he can, and then to proceed with a continual series of such experiments as

would not materially interfere, even should they not prove successful, with his profits; and farther, were he to communicate to the public, through a Bureau of Agriculture, the results of these experiments, he would find his mind cultivated, enlightened, and expanded, and his profession invested with a dignity and importance of which the mere mechanical routine farmer can form no conception; whilst the aggregate of such experiments acted upon and applied by so many different minds, would be certain to elicit great results.—*The Witness.*

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THE CULTIVATION OF POTATOES.

A light soil abounding in rich organic matter is found by experience to produce the largest crops of potatoes; but since the visitation of the mysterious scourge the "Potato Disease," it has been found advantageous to cultivate them on light, poor soil, for while the rich soil in many instances continues to grow the largest crop, the tubers are diseased and unpalatable so that a small sound crop is more profitable. The poor sandy soils around this city are now planted with potatoes to an extent that almost exceeds belief. We were in the town of Water-vliet a short time since, and called upon several farmers in the town in order to ascertain a few facts in regard to the cultivation and yield of their staple crop. We went along three roads, enclosing a triangular piece of land containing somewhat more than a square mile, and called on thirty farmers whose houses were near the road. These thirty farmers raised the past year *seventy-six thousand, six hundred and twenty-two bushels of potatoes.* Several of the farms were more than half planted every year with potatoes, and on two or three farms three-fourths of the land was thus occupied. On one farm, that of L. & A. Gove, 8750 bushels were raised this year. D. D. T. More, on 55 acres, raised 6255 bushels. The Messrs. Osborn on 88 acres, 7710 bushels. J. Ferris, 7500 bushels, and many others raise annually three, four and five thousand bushels of potatoes.

The yield per acre is not large; the average of these farms where we could ascertain the number of acres planted, was 102½ bushels per acre, the highest farm being 133 bushels per acre—in this instance three fourths of the farm, (a small one,) was in potatoes.

Peruvian guano is used to a considerable extent, and is found a cheap and effective fertilizer. In one instance we found a field where potatoes had been grown four years in succession manured with guano, and the crop this season was the best it had ever produced, averaging 150 bushels per acre. It is somewhat remarkable that this light, sandy soil, which we should suppose poor in all the mineral elements of plants but especially in potash, should thus annually yield a fair crop of potatoes, which of all our agri-

cultural plants removes from the soil the most potash; and the Peruvian guano should prove such a powerful fertilizer, while of all manures it is the poorest in potash—containing not more than 2 per cent.

A good clover sod, plowed under immediately before planting, is considered the best preparation for potatoes, though since the introduction of guano potatoes are frequently planted after potatoes, corn, rye, &c. Plaster, about 12 bushels per acre, either sown broadcast or scattered on the hills just as plants are breaking the soil, is an effective fertilizer and is used to a considerable extent. Plaster on this sandy soil, has a highly beneficial effect on clover.

Potatoes of medium size, are usually planted whole, in hills about 2½ feet apart, 10 bushels of seed per acre. Plant as early in the spring as the soil will admit, and many farmers continue planting as late as the first week in June, but the crops are light. The *Mercer*, although a poor producer, is the favorite variety, now commanding the highest price. The *Long Johns* will yield one third more per acre, but they bring a less price and when the market is dull, it is difficult to sell them at all.

A few farmers still draw manure from the city, three miles, but since the introduction of guano the practice is becoming less common every year.

We met with a few good old farmers who had never tried guano, and had "no faith in it;" but all who had used it, without exception, thought it a "powerful" manure; yet we were somewhat surprised to find that no one could give even a good Yankee guess as to the number of bushels of potatoes over and above the unmanured soil 100 lbs. of guano could produce. M. D. D. T. More used 200 lbs. of Peruvian guano on potatoes side by side with "Northern Marl"—an article, we believe, which is said to contain a large quantity of phosphate of lime;—the marl did *no good*, while the guano "increased the crop fully one third." Mr. More's crop averaged 113 bushels per acre, so according to this, 200 lbs. of guano increased the crop 28 bush. per acre. The *safest* way to apply guano is to sow it broadcast and plow and harrow it in immediately; but it will produce a great effect if placed in the hill with the potato, but great care is necessary to incorporate it well with the soil, for it will assuredly kill the seed if it come in contact with it.

There is nothing remarkable about the method of cultivating potatoes in this district; the reason why farmers have engaged so extensively in their cultivation is to be ascribed to the almost total exemption from the rot, which is so injurious in richer and heavier soils.

PROPAGATION OF FISH.

Information of the highest importance on the artificial propagation of fish was laid before the late meeting of the British Association. Experiments with salmon, made at Perth, Scotland, have been extremely suc-

cessful. Three hundred boxes were laid down in twenty-five parallel rows, each box partly filled with clean gravel and pebbles. On the 23d of December, 1853, 300,000 ova were deposited in the boxes; in June they were admitted into the pond, their average size being about an inch and a half in length.—From the time of their admission to the pond the fry were fed daily with boiled liver, rubbed small by the hand. By the spring of the present year they had increased in size to the average of three and four inches in length. On the 2d of May a meeting of the committee was held at the pond, to consider the expediency of detaining the fry for another year or allowing them to depart, but it was thought they had not assumed the migratory dress till the 19th, when the sluice communicating with the river Tay was opened, and every facility for egress afforded. Contrary to expectation, none of the fry manifested any inclination to leave the pond until the 24th of May, when the larger and more mature of the smelts, after having held themselves detached from the others for several days went off in a body. A series of similar emigrations took place until full half the fry had left the pond, and descended the sluice to the Tay. It has long been a subject of controversy whether the fry of the salmon assume the migratory dress in the second or third year of their existence. So favorable an opportunity of deciding the question as that afforded by this experiment was not to be overlooked.

In order to test the matter in the fairest possible way, it was resolved to mark a portion of the smelts in such a manner that they might easily be detected when returning as grilse. A temporary tank, into which the fish must necessarily descend, was constructed at the junction of the sluice with the Tay; and as the shoals successively left the pond, about one in every hundred was marked by the adhesion of the second dorsal fin. A greater number were marked on the 29th of May than on any other day, in all about 1200 or 1300. The result has proved highly satisfactory and curious. Within two months of their liberation, twenty-two of the young fish so marked when in the state of smelts on their way to the sea, have been, on their returning migration up the river, recaptured and carefully examined; the conclusions arrived at are most gratifying, and proved what has heretofore appeared almost incredible the rapid growth of the young fish during their short sojourn in the salt water. Those taken first weighed 5 to 5½ lb., then increasing progressively to 7 and 8 lb., whilst the one captured on the 31st of July weighed no less than 9½ lb. In all these fish the wound caused by marking was covered with a skin, and in some a coating of scales had formed over the part.

The experiment has afforded satisfactory proof that a portion at least of the fry of the salmon assume the migratory dress and descend to the sea shortly after the close of the first year of their existence; and what is far more important in a practical point of

view, it has also demonstrated the practicability of rearing salmon of marketable value within twenty months of the deposition of the ova.

There can be no doubt that the quantity of salmon (as well as other fish), may be enormously increased by the artificial breeding process, and we regard the experiments as of great importance. At Cleveland, Ohio, success has attended the first experiments of Dr. Garlick and his coadjutor, who may do a vast deal for their fellow men by fully populating our western lakes. In the salmon region, east and west, the subject deserves attention and there is little doubt that in neighboring rivers where salmon is now unknown, they might by thus successfully introduced. How much more useful would it be if some of our sportsmen would take up the subject instead of devoting their hearts, bodies, and time to the poor enjoyment of shooting useful birds!—*Horticulturalist*.

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HIRED MEN, AND THEIR EMPLOYERS.

Some years ago the son of an English farmer came to the United States, and let himself as a farm laborer, in New York State, on the following conditions: commencing work at the 1st of September, he was to work ten hours a day for three years, and receive in payment a deed of a field containing twelve acres—securing himself by an agreement, by which his employer was put under bonds of \$2,000 to fulfill his part of the contract; also, during these three years he was to have the control of the field; to work it at his own expense, and to give his employer one-half the proceeds. The field lay under the south of a hill, was of dark heavy clay, resting on bluish colored solid clay sub-soil, and for many years previous had not been known to yield anything but a yellowish stunted vegetation.

The farmer thought the young man was a simpleton, and that he, himself, was most wise and fortunate; but the former nothing daunted by this opinion; which he was not unconscious, that the latter entertained of him, immediately hired a set of laborers, and set them to work in the field-trenching, as earnestly as it was possible for men to labor.

In the morning and evening, before and after having worked his ten hours, as per agreement, he worked with them, and continued to work in this way until, about the middle of the following November, he had finished the laying of nearly 5,000 yards good tile under-drains. He then had the field ploughed deep and thoroughly, and the earth thrown up as much as possible into ridges, and thus let it remain during winter. Next spring he had the field again ploughed as before, then cross-ploughed and thoroughly pulverized with a heavy harrow, then sowed it with oats and clover. The yield was excellent—nothing to be compared to it had ever been seen on the field. Next year it gave two crops of clover, of a rich dark green, and enormously heavy and luxuriant; and the year following, after being

innured at an expense of some \$7 an acre, nine acres of the field yielded 936 bushels of corn, and 25 wagon loads of pumpkins; while of the remaining three acres were taken 100 bushels of potatoes—the return of this crop being upwards of \$1,200. The time had now come for the field to fall into the young man's possession, and the farmer unhesitatingly offered him \$1,500 to relinquish his title to it; and when this was unhesitatingly refused, he offered \$2,000, which was accepted.

The young man's account stood thus:

Half proceeds of oats and straw	
first year.....	\$165.00
Half value of sheep pasturage,	
first year.....	25.00
Half of first crops of clover, first	
year.....	112.50
Half of sheep pasturage, second year	15.00
Half crops of corn, pumpkins and	
potatoes, third year.....	690.00
Received from farmer for relinquish-	
ment of title.....	2,000.00
	<hr/>

Account Dr.....\$3,232.50

To under-draining, labor	
and titles.....	\$325.00
To labor and manure,	
three seasons.....	475.00
To labor given to farmer,	
\$16 per month, 56	
months.....	576.00
	<hr/>

Balance in his favor....\$1,856.50

Our farmers must learn that knowledge and enterprise and perseverance exercised in their business, will not only add a hundred fold to their own income, but will also confer more permanent benefit upon our country than these qualities exercised in the same degree in any other business whatever.—*N. Y. Times.*

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THE POTATO CROP OF 1855.

There are some facts in connection with the potato crop of the last season, which are worthy of notice.

When that scourge of the potato, variously called "rot," or "disease," began to rage generally and destructively in this country—about the years 1845 and 1846—speculation became rife as to the cause and cure of the malady. While the minds of some persons were laboring between "insects," "fungus," and "constitutional degeneracy" as the cause, and "salt," "lime," and "raising from seed" as the remedy, the new "philosophy" of the "Ponglikepsie Seer," endorsed by professed "spiritual mediums,"—summarily disposed of the subject by declaring that the plant had run its destined course, and was soon to become extinct! In future, potatoes, if brought to our tables at all, would be shown merely as fossil relics, to illustrate the grand idea of "progress."

But this new light did not beam with converting power on all men; many were determined that so valuable an esculent should

not be given up so. The potato disease, therefore, continued to furnish a theme on which much could be said on all sides. The advocates of the notion that the plant had degenerated from long propagation by tubers, contended that it could be renovated by propagation from seed. Of course varieties from seed were soon produced, for which a credulous public were willing to pay enormous prices, without waiting to have their superiority demonstrated—such was the confidence in the system. It would be interesting to know how many of the kinds produced from seed sold at five dollars an ounce, or from tubers sold at ten dollars a bushel, within the last ten years, are still cultivated. So far as we know—and we have seen trials with many of the new kinds—a large proportion of them have been thrown up as worthless or unprofitable. Taking them together, they have even shown more tendency to rot than the old kinds. It is true that some valuable kinds have been produced, but this fact is nothing in reference to the idea that the species has degenerated and can be renovated by raising from seed. The new kinds should show a general improvement. But where one has proved good, a dozen have proved good for nothing. The history of the superior sort known as "Davis's Seedling" may be given in point. We have been informed by the originator of this variety that he produced many others about the same time, and that all except one were given up after a few years' trial, on account of their tendency to rot. We know that something like this has been experienced in numerous instances.

But the results of the last season ought to give a quietus to the hypothesis (it is not worthy the name of *theory*) that the potato disease is attributable to degeneracy of the species in consequence of propagation by tubers.

The vigorous growth of the potato plant in 1855, attracted attention from the start. The stalk was large and strong and the leaves numerous and of good color. The early crop in this vicinity was greater in yield per acre, and came to market in better condition than for many previous years. It consisted in a great degree of the variety known as Mescer, with various synonyms—as Gilky, Neshannoek (sometimes corrupted to Meshanick), Chenampo, &c.—a variety which, although not comparatively old, has been so predisposed to rot that in some sections it has been given up on that account; yet it came out this year in great perfection, as to yield, appearance, and quality.

The later and main crop showed the same flourishing growth; but in some instances the tops were so green as to be somewhat injured by the frost of the 31st of August. In other instances the tops were affected with the blight—the premonitory symptom of the rot—though the attack was much less general and less virulent than usual. Some

tubers have rotted, but we have heard of only a few sections where the damage has been serious. The soundness and excellence of those which have come to market during the autumn and up to the present time has left nothing to complain of on this score, while the price—50 to 62 cents per bushel, at wholesale—shows that there is no deficiency in the quantity. The favorite Carter variety, possessing all its pristine mealiness and flavor, has been *retailing*, at 70 to 75 cents per bushel. This is another of the kinds which has been very liable to rot—so much so that its cultivation was to a considerable extent abandoned. We have never seen it better in every respect than it was at the late harvest, and our winter's supply laid in at that time, is free from every defect.

The superiority of the last crop is not confined to our own country: from the British Islands and the Continent of Europe we have accounts of its good yield and quality. The *Mark Lane Express* in its review for October, says—

"The potato crop in all parts of the United Kingdom, but more especially in Ireland and Scotland, is proving wonderfully large and almost wholly free from disease. It is much to be regretted that so many reports of an opposite tendency should have found their way into print during the last two or three months. Whatever arguments may be advanced to the contrary, we affirm—and we do so advisedly, and after the most mature consideration—that the aggregate growth of potatoes is by far the largest and best ever known. This great fact will, no doubt, have considerable influence upon the value of other kinds of food."

Of the crop in France, the *Revue Contemporaine* says—

"We receive from all sides most satisfactory accounts of the potato. The disease with which it has been attacked for the last ten years, is on the eve of completely disappearing. It has scarcely shown itself at all in a great number of departments the most remote from each other, and in those where it has appeared the injury it has inflicted is very trifling."

It should be noted that in these accounts nothing is said about the new kinds doing any better than the old. If any such superiority had been shown, it could not have escaped attention and remark. All that can be said is that, from some cause which human knowledge has not yet reached the potato, on the whole, has been comparatively free from disease during the past season and that *this exemption has no special reference to new or old varieties.*—*Boston Cultivator.*

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AGRICULTURAL STATISTICS.—The Scottish agricultural statistics for the year 1855, voluntarily rendered and collected, for the second year, by the intelligent and public-spirited farmers of Scotland, show the follow-

ing ascertained results, as contrasted with the estimates of McCulloch and other writers :

	Former estimates	Ascertained.
	1854.	1855.
	Qrs.	Qrs.
Wheat . . .	1,225,000.	606,063 . 632,817
Barley . . .	1,800,000.	654,950 . 751,613
Oats	6,500,000.	4,231,789 . 3,758,893
Beans & Peas.	150,000.	135,115 . 147,956

9,675,000 5,627,917 5,301,279

The potato crop this year yielded 732,141 tons, against 529,915 tons in 1854. If the whole produce of the two last harvests in Scotland be reduced in tons weight, and potatoes be included, the result is found to be that there is very little difference between the two; the year 1854 having yielded 1,532,004 tons of food for man and beast, and the present year 1,592,604 tons.

THE DOG.

It is no pleasing employment to study the degree in which the several breeds of dogs are not highly intelligent, but fitted by nature for the particular duty they have to perform. The pointer, the setter, the hound, the greyhound, the terrier, the spaniel, and even the bull-dog, were made, and almost perfected, by a nature chiefly for one office alone, although they may be useful in many other ways. This is well illustrated in the sheep-dog. If he be but with his master, he lies content, indifferent to every surrounding object, seemingly half asleep and half awake, rarely mingling with his kind, rarely counting, and generally shrinking from the notice of a stranger; but the moment the duty calls, his sleepy, listy eye, becomes brightened; he eagerly gazes on his master, inquires and comprehends all he is to do, and, springing up, gives himself to the discharge of his duty with a sagacity and fidelity, and devotion, too rarely equalled even by man himself.

Mr. James Hogg, the Ettrick Shepherd, living in his early days among the sheep and their quadruped attendants, and an accurate observer of nature, as well as an exquisite poet, gives some anecdotes of the colley, (the Highland name for sheep-dog,) with which the reader will not be displeased. "My dog Sirrah," says he, in a letter to the Editor of Blackwood's Edinburgh Magazine, was beyond all comparison, the best dog I ever saw. He had a somewhat surly and unsocial temper, disdainful all flattery, and refused to be caressed; but his attention to my commands and interest will never again be equalled by the canine race. When I first saw him, a drover was leading him with a rope. He was both lean and hungry, and far from being a beautiful animal; for he was almost black, and had a grin face, striped with dark brown. I thought I perceived a sort of sullen intelligence in his countenance, notwithstanding his dejected and forlorn appearance, and I bought him. He was scarcely a year old, and knew so little of herding he had never turned a sheep in his

life; but, as soon as he discovered that it was his duty to do so, and that it obliged me, I can never forget with what anxiety and eagerness he learned his different evolutions; and when I once made him understand a direction, he never forgot or mistook it."

On one night, a large flock of lambs that were under the Ettrick Shepherd's care, frightened by something, scampered away in three different directions across the hills, in spite of all that he could do to keep them together. "Sirrah," said the shepherd "they're a' awa!"

It was too dark for the dog and his master to see each other at a considerable distance, but Sirrah understood him, and set off after the fugitives, the night passed on, and Hogg and assistant traversed every neighbouring hill in anxious but fruitless search for the lambs; but he could hear nothing of them nor of the dog, and he was returning to his master with the doleful intelligence that he had lost all his lambs. "On our way home, however," says he, "we discovered at lot of lambs at the bottom of a deep ravine called the Flesh Cleuch, and the indefatigable Sirrah standing in front of them, looking round for relief, but still true to his charge. We concluded that it was one of the divisions that Sirrah had been unable to manage, until he came to the commanding situation. But what was our astonishment when we discovered that not one lamb of the flock was missing! How he had got all the divisions collected in the dark, is beyond my comprehension. The charge was left entirely to himself from midnight until the rising sun; and, if all the shepherds in the forest had been there to have assisted him, they could not have effected it with greater promptitude. All that I can say is, that I never felt so grateful to any creature under the sun as I did to my honest Sirrah that morning."

A shepherd, in one of his excursions over the Grampian Hills to collect his scattered flock, took with him (as is a frequent practice, to initiate them in their future business) one of his children about four years old. After traversing his pastures for a while, attended by his dog, he was compelled to ascend a summit at some distance. As the ascent was too great for the child, he left him at the bottom, with strict injunctions not to move from the place. Scarcely, however, had he gained the height, when one of the Scotch mists, of frequent occurrence, suddenly came on, and almost changed the day to night. He returned to seek his child, but was unable to find him, and concluded a long and fruitless search by coming distracted to his cottage. His poor dog also was missing in the general confusion. On the next morning by daylight he renewed his search, but again he came back without his child. He found, however, that during his absence his dog had been home, and, on receiving his allowance of food, instantly departed. For four successive days the shepherd continued his search with the

same bad fortune, the dog as readily coming for his meal and departing. Struck by this singular circumstance, he determined to follow the dog, who departed as usual with his piece of cake. The animal led the way to a cataract at some distance from the spot where the child had been left. It was a rugged and almost perpendicular descent which the dog took, and he disappeared in a cave, the mouth of which was almost on a level with the torrent. The shepherd with difficulty followed; but, on entering the cavern, what were his emotions when he beheld the infant eating the cake which the dog had just brought to him, while the faithful animal stood by, eyeing his young charge with the utmost complacency! From the situation in which the child was found, it appeared that he had wandered to the brink of the precipice, and then either fallen or scrambled down,—the torrent preventing his re-ascent. The dog by means of his scent had traced him to the spot, and afterwards prevented him from starving by giving up a part, or, perhaps, the whole of his own daily allowance. He appears never to have quitted the child night or day, except for food, as he was seen running at full speed to and from the cottage."

Mr. Hogg says, and very truly, that a single shepherd and his dog will accomplish more in gathering a flock of sheep from a Highland farm than twenty shepherds could do without dogs; in fact, that without his docile animal, the pastoral life would be a mere blank. It would require more hands to manage a flock of sheep, gather them from the hills, force them into houses and folds, and drive them to markets, than the profits of the whole flock would be capable of maintaining. Well may the shepherd feel an interest in his dog; he it is indeed that earns the family bread, of which he is himself content with the smallest morsel; always grateful, and always ready to exert his utmost abilities in his master's interests. Neither hunger, fatigue, nor the worst treatment will drive him from his side, and he will follow him through every hardship without murmuring or repining. If one of them is obliged to change masters, it is sometimes long before he will acknowledge the new owner, or condescend to work for him with the willingness that he did for his former lord; but, if he once acknowledges him, he continues attached to him until death."

We will add another story of the colley, and proceed. It illustrates the memory of the dog. A shepherd was employed in bringing up some mountain sheep from Westmoreland, and took with him a young sheep-dog who had never made the journey

* Annals of Sporting, vol. viii. p. 83.

† "The Ettrick Shepherd has probably spoken somewhat too enthusiastically of his dog; but accounts of the sagacity and almost superhuman fidelity of this dog crowd so rapidly upon us that we are compelled to admire and love him." — Hogg's Shepherd's Calendar, vol. ii. p. 308.

before. From his assistant being ignorant of the ground, he experienced great difficulty in having the flock stopped at the various roads and lanes he passed in their way to the neighbourhood of London.

In the next year the same shepherd, accompanied by the same dog, brought up another flock for the same gentleman who had had the former one. On being questioned how he had got on, he said much better than the year before, as his dog now knew the road, and had kept the sheep from going up any of the lanes or turnings that had given the shepherd so much trouble on his former journey. The distance could not have been less than 400 miles.*

Bullion gives an eloquent and faithful account of the sheep-dog.—“This animal, faithful to man, will always preserve a portion of his empire and a degree of superiority over other beings. He reigns at the head of his flock, and makes himself better understood than the voice of the shepherd. Safety, order, and discipline are the fruits of his vigilance and activity. They are a people submitted to his management, whom he conducts and protects, and against whom he never employs force but for the preservation of good order.” “If we consider that this animal, notwithstanding his ugliness and his wild and melancholy look, is superior in instinct to all others; that he has a decided character in which education has comparatively little share; that he is the only animal born perfectly trained for the service of others; that, guided by natural power alone, he applies himself to the care of our flocks, a duty which he executes with a singular assiduity, vigilance, and fidelity; that he conducts them with an admirable intelligence which is a part and portion of himself; that his sagacity is such as at the same time that it gives repose to his master, while it requires great time and trouble to instruct other dogs for the purpose to which they are destined: if we reflect on these facts we shall be confirmed in the opinion that the shepherd's dog is the true dog of nature, the stock and model of the whole species.”†

MANAGEMENT OF THE LEICESTER SHEEP.

The Leicester ewes, although they do not bring so many lambs, nor rear them so certainly, nor make them so fat as sheep of a more hardy description do, yet have very much improved in these respects, and actually rear from a hundred and ten to a hundred and twenty lambs from every one hundred ewes; the ewes that are barren being mostly fit for the butcher, and those that lose their lambs getting fat in much less time than any other breed. On account of this promptitude to fatten, the Leicesters are brought into the market, and average as much per quarter at one year old, as those of most other breeds do at two and

three; the farmer also having the power to stock harder and closer with them than with any others of equal weight, as they are always in good condition, even when suckling lambs, or hard kept. The ewes will not fatten their lambs for the butcher; but this is no eventual loss to the farmer, as lambs of this breed are much better kept on for mutton and wool, and it would be a public detriment to slaughter them prematurely.

Some farmers, however, finding a great and steady demand for lamb as well as for mutton, have been induced to keep an annual stock of sheep, consisting only of ewes and wethers bought in at Michaelmas, principally of the Cheviot and Anglesey breeds. The ewes are immediately put to a Leicestershire ram. The lambs are fattened and sold in June or July, and the ewes are afterward fed on clover-grass, and sold in October or November. The Cheviots are good sucklers, and generally make fat lambs, averaging about 15lbs. the quarter, while from 3 to 4 lbs. of wool are cut from each. The wethers are of the same kind, and are bought about May or June, from one to four years old. They are fed on clover or grass, and mostly sold in the autumn, averaging about 16lbs. the quarter, and yielding from 3½ to 4½ lbs. of wool. Sometimes they are kept on until the following spring, and fed upon turnips; but being of a restless disposition, they seldom increase more in weight than from 2 to 3 lbs. per quarter from October to March.

The Leicester ewes are put to the ram at the beginning or middle of October, and taken from him again about the second week in November. One ram will serve from 60 to 70 ewes; but if he is kept in a close, and a teaser employed, he will serve from 80 to 100. He is raddled at the time that he is put to the ewes, and those which are served are taken from him once a week and numbered. They are then put to another ram that has been blackened, in order to distinguish the ewes that are served again. These are likewise drawn every week and marked with a different number. This precaution will save much trouble when they are drawn for lambing, which ought always to be done.

The ewes will approach their time of yearning about the beginning or middle of March; and this being often an inclement season, and the Leicesters requiring more attention than the hardier kind of sheep, the ewes that are coming to the last week of pregnancy should be separated from the others according to their numbers, and brought nearer home, that they may be put into a yard at night, constructed for this purpose, having a good shed in it, and being well protected from the cold wind. They should have a plentiful supply of turnips, ox-cabbage, &c. The greatest attention should be paid to them at this time, and the shepherd should be with them as much as his other duties will permit. If it is a peculiarly valuable flock, the shepherd should

sleep on the premises, for the Leicester ewes are more liable to require assistance when yearning than any other sheep are. The lambs are generally large, and the ewes very fat, and so a double difficulty occurs.

The lambs are kept up for a few nights, leaving them out with the mothers in the daytime. They should be castrated when about a fortnight old; but a fine and dry day should be selected, and they should be kept up for two or three nights afterward. They should likewise be tailed at the same time. The lambs remain with their mothers until the beginning or middle of July; they are then weaned and turned into good pasture of seeds or grass, until the latter end of October, when they are put upon turnips—sometimes the common turnips first, and afterward the Swedes; but they do better upon turf, provided it is to be had—a few turnips being drawn when the weather is severe. The ewes remain on the ordinary pasture, which probably will bear from seven to eight per acre, until within three weeks of their being put to the ram, when they should be changed into good pasture, which will cause them to flower sooner and more regularly. The ewes continue on the old pastures until the end of November, from the time the rams are taken away, when they are sometimes hurried upon turnips, the fat sheep having been penned upon them first, and the ewes following to make clean work.

The lambs are seldom shorn until the second year, when the fleece will weigh between 7 and 8 lbs., the length of the staple being from ten to twelve inches. The aged ewes yield from 5½ to 6 lbs. of wool. The usual time of shearing the store sheep is from the beginning to the middle or end of June; sometimes, however, they are shorn in May, and yield from 7 to 9 lbs. of wool. The washing usually takes place in the last week in May; after which the sheep are sent into clean pastures for a week or fortnight before they are shorn. Some farmers permit a longer time to elapse in order to allow the yolk to rise into the wool; this makes it weigh heavier, and also work better in the manufacturing process. The yearling wethers are generally separated from the thieves at the time of shearing, and they are put upon good keep, and most frequently upon seeds. The thieves run upon the common pasture until the ewes go to better keep, previous to being sent to the ram. The wethers are generally kept on turnips, and sold in the early part of the following spring. On large and well conducted farms they have a rack in the field, well supplied with coarse straw, and a trough is fixed under the rack, containing common or rock salt. The system of folding is rarely adopted where the New Leicester sheep are kept; neither the nature of the sheep nor the size of the farms will often allow it.

No apology is made for the insertion of this simple, intelligible, and complete sys-

* Jesse's Gleanings, vol. 1, p. 93.

† Jesse's Gleanings, vol. 1, p. 93.

tem of long-wooled sheep-husbandry: it should, however, be stated, that it more accurately describes the course pursued by the large than the small farmer.

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A TWENTY-FIVE YEAR OLD TROUT

Editors.—Can any one tell how long a trout fish will live. Twenty-five years the past summer, I came on the farm where I now am. Almost the first work that I did after getting in my spring crops, was to drain a bog swamp, the outlet of which leads into the Croton River. I had an old Scotchman to do the ditching. One day he brought up a trout fish about the size of a man's little finger, in his whiskey jug, (by the by we used a little on the farm then, and *not since then.*) I put it in the well near the house, and it is there now, grown to a goodly size—say about a foot long, and large in proportion. It has been fed but very little: once in a while some one throws in a grasshopper or cricket to see him catch it. The well is thirty feet deep, and water hard, and settles down nearly to the bottom and then again rises to near the top. He has been taken out a few times to clean the well, but not the last five years.

Friday last I got a grasshopper, the last one I expect to see this fall, and gave it to him. The water is now twenty-five feet deep but it hardly touched the surface before he had it. If any one has a fish older than mine I would like to know it. F. Hovr. *South East, Nov. 19th, 1855.*

And so should we also; and if any one has any curious facts of this kind, we should be much obliged if he would follow Mr. Hovr's example, and communicate them.—Eds

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TO MAKE GOOD BREAD.

I am a farmer's wife, and have been a housekeeper for more than twenty years: raised a family of children, and the greater part of that time have personally presided over my household affairs. I have therefore not much time for publication, but seeing in your excellent paper several articles on bread making, and believing I am pretty well posted in that department, I will give you and the readers of the Cultivator the benefit of my experience; truth will bear twice telling.

In order to have good bread, a necessary ingredient is good yeast. My mode of making yeast is as follows: To three pints of water, add one handful of hops, boil well together, strain and put the liquor into the pot again, then take three large-sized potatoes, wash, pare and grate them, and stir into the liquor while boiling, then add one table-spoonful of salt, one teaspoonful of sugar or molasses, and thicken with a spoonful of flour; pour it out, and when cool add sufficient yeast to rise it; when light set it in a cool place for use. To make bread, pare and cut two quarts of potatoes, boil them in water enough to mix one gallon of sponge; when well boiled wash and strain through a cullender, stir in flour while hot, when cool enough, stir in a teaspoonful of yeast, then set to rise, and the next morning make up your bread in the usual way; when it is light, mould into loaves and let stand until fit to be put in the oven.

This is my way of making good bread, and I know of none better.—“Aunt Debby” in Ohio Cultivator.”

THE MORAL QUALITIES OF THE DOG.

It is truly said of the dog that he possesses

“Many a good

And useful quality, and virtue too,
Attachment never to be weaned or changed
By any change of fortune; proof alike
Against unkindness, absence, and neglect;
Fidelity, that neither bribe nor threat
Can move or warp; and gratitude, for small
And trivial favours, lasting as the life,
And glistening even in the dying eye.”

It may here be noticed that, among the inferior animals with large nerves and more medullary substance, there are acuter senses; but man, excelling them in the general bulk of his brain, and more particularly in the cortical portion of it, has far superior powers of mind. These are circumstances that deserve the deepest consideration. In their wild state the brutes have no concern—no idea beyond their food and their reproduction. In their domesticated state, they are doomed to be the servants of man. Their power of mind is sufficient to qualify them for this service: but were proportionate intellectual capacity added to this—were they made conscious of their strength, and of the objects that could be effected by it—they would burst their bonds, and man would in his turn be the victim and the slave.

There is an important faculty, termed *attention*. It is that which distinguishes the promising pupil from him of whom no good hope could be formed, and the scientific man from the superficial and ignorant one. The power of keeping the mind steadily bent upon one purpose, is the great secret of individual and moral improvement. We see the habit of attention carried in the dog to a very considerable extent. The terrier eagerly watching for vermin—the sporting dog standing staunch to his point, however he may be annoyed by the blunders of his companion or the unskilfulness of his master—the foxhound, insensible to a thousand scents, and deaf to every other sound, while he anxiously and perseveringly searches out the track of his prey—these are striking illustrations of the power of attention.

Then the impression having been received, and the mind having been employed in its examination, it is treasured up in the storehouse of the mind for future use.

This is the faculty of memory; and a most important one it is. Of the *memory* of the dog, and the recollection of kindness received, there are a thousand stories, from the return of Ulysses to the present day, and we have seen enough of that faithful animal to believe most of them. An officer was abroad with his regiment, during the American war. He had a fine Newfoundland dog, his constant companion, whom he left with his family. After the lapse of several years he returned. His dog met him at the door, leaped upon his neck, licked his face, and died.

Of the accuracy and retentiveness of memory in the dog, as respects the instruction he has received from his master, we have abundant proof in the pointer and the bound, and it may perhaps be with some of them, as with men, that the lessons must sometimes be repeated, and even impressed on the memory in a way not altogether pleasant.

[We knew an imported Irish setter, formerly in possession of a gentleman of this city, who on many occasions, while hunting, displayed an extraordinary instinct, even sufficiently remarkable to make us believe that he possessed not only the most acute powers of observation, but that he also enjoyed the faculty of “inductive reasoning,” independent of any mechanical training, many of his performances being entirely voluntary, and the result of causes dependent upon accidental circumstances alone: for instance, when lost from observation he would noiselessly withdraw from his point, hunt up his master and induce him, by peculiar signs, to follow him to the spot where he had previously observed the birds.

In his old days, “Smoke” was much opposed to hunting with an indifferent shot, and would leave the field perfectly disgusted, after a succession of bad shooting; seeming to argue that he no longer sought after game for amusement, but that he expected his efforts to be repaid by the death of the birds.

The dog was of a morose and dignified disposition, surly with strangers, and inclined to quarrel with any one who carried a stick or whip in their hands, never forgetting an injury, and growling whenever any person who had offended him made their appearance. He was also particularly irritable and tenacious of his rights when hunting, slunning all puppies or heedless dogs, and exhibiting a very irascible disposition if superseded in a point by another dog; and on one occasion attacked a young pointer in the field, who, in opposition to all his growling and show of irony, would persist in crawling before him, when on a point.—L.]

—:—:—

BRUSSELS SPROUTS.

This variety of Cabbage is supposed to have originated from Savoy. It is a celebrated vegetable in Europe, especially near Bruxelles and other large towns in Flanders, where, from October to April, it is an everyday dish on the table of both the rich and the poor. Till recently very little attention has been given to it in this country.

Culture.—Sow the seed in April, and transplant in June, or July, in the same manner as Broccoli. The leaves of the plant are similar to Savoy, crowning a stem about two feet high, from which grows out numerous little cabbages of from one to two inches in diameter. After the sprouts have been frosted (which is necessary to their perfection) they may be gathered. Immerse them

in clear water for an hour, and cleanse them from faon, dust and insects; then boil them quickly for about twenty minutes, using plenty of water. When soft, take them up and drain them well. They are then to be put in a stew-pan with cream, or with a little butter thickened with flour, and seasoned to taste, stirring them thoroughly. They may be served up to table with tomato sauce, which greatly heightens their flavor: or seasoned with pepper and salt, and eaten with any sort of meat. As this vegetable is comparatively little known, I have made these observations with a view of encouraging its culture. Plants for seed should have their tops cut off, and the little cabbages allowed to shoot, from which the seed is more perfect. It will keep fresh and sound in a dry place three years, but when grown for that object should not be near any other sort of Cabbage.

—:—
MUSHROOM SPAWN.

We copy from the transactions of the London Horticultural Society, the following approved method of making Mushroom Spawn:

"In June or July, take any quantity of fresh horse-droppings (the higher fed the better) mixed with short litter, one-third of cow's dung, and a good portion of mould, of a loamy nature; cement them well together, and mash the whole into a compost. Spread it on the floor of an open shed, to remain till it becomes firm enough to be formed into square flat bricks; which done, set them on edge, and frequently turn them till half dry; then with a dibble make two or three holes in each brick, and in each hole insert a piece of good old spawn, about the size of a walnut,²³ or the spawn which consist of a fine white threads that may be found where mushrooms are growing in pastures. "The bricks should then be left till they are dry. This being completed, level the surface of a piece of ground, under cover, three feet wide, and of sufficient length to receive the bricks; on which lay a bottom of dry horse-dung, six inches thick; then form a pile, by placing the bricks in rows, one upon another, with the spawn side uppermost, till the pile is three feet high; next cover it with a portion of warm horse dung, sufficient in quantity to diffuse a gentle glow of heat through the whole. When the spawn has spread itself through every part of the brick, the process is ended, and the bricks may then be laid up in a dry place for use."²³ Mushroom Spawn, made according to this direction, will preserve its vegetative power many years, if well dried before it is laid up; but if moist, it will grow and exhaust itself.

—:—
BEANS FOR SHEEP. Bean straw is valuable as food for sheep and when properly cured they eat it with avidity. In a chemical analysis of beans it is found they abound with a greater quantity of the elements of wool than any other grain or vegetable; to make sheep

produce heavy fleeces, they are therefore particularly desirable as food, and such is their natural fondness for them that they will eat them with avidity whole or ground, even in a damaged state. To our store flocks, during the winter seasons, we generally gave a pint of beans per head, per day, and when we had not these we fed with peas, onis and potatoes. Corn is good for fattening sheep, but not so valuable as beans, peas, oats, and most other kinds of grain, for the productions of wool.

Agriculturist.

—:—
AN AGED FROG.—James Crabtree, pitsinker to Messrs. Aukroyd, of Burkinshaw Bottom, in sinking a pit at Morley, near Leeds, last Monday, found a live frog in the centre of a large coal, seventy-eight yards below the surface, considerably below the Morley tunnel, to which it is close adjoining. The frog is still very lively. When found it was very dark in colour, but on Wednesday becoming like the common every-day species. The eyes are very bright, and surrounded with a gold ring. It has four claws on its fore feet, and five (web-footed) on the hinder feet. Its mouth is closed or firmly shut, but it has two vents, apparently nostrils, on the top of its nose. The seam of coal from which it was disinterred was saturated with water, and probably from this circumstance, combined with close confinement, it has been enabled to sustain its half-torpid life through countless ages.—*Leeds Mercury.*

—:—
CORRESPONDENCE.

To the Editor of the Farmer's Journal.

SIR.—There is a very considerable agitation about the best method to get rid of the Toll Bars in the Island of Montreal, especially in some localities where the burden falls more oppressively and unequally than it ought to do. The following thoughts, I would prefer putting before the public through the medium of the *Farmer's Journal*.

Farmers probably having more time, will undoubtedly give it more consideration, than the mercantile class, who run so fast after fortune.

The items of expenditure by the Road Trust, I shall range under three heads:

1st. Interest on capital borrowed at 8 per cent. of £50,750, amounts to four thousand and sixty pounds, £4060.

2nd. Annual charge for ten Toll Bars £100 each, say one thousand pounds. It may be double this sum, and could easily be shewn, has sometimes cost double that amount.

3rd. Annual repairs, this I am not prepared to speak upon, but it may be inferred from what follows. The gross amount of the revenue I assume as not exceeding six thousand pounds.

Say.....£6000

Now we have to pay for Interest, 4060

Do do for Toll Bars,.... 1000

5060

leaving a balance to cover repairs, &c., of fifteen hundred pounds.*

I have not documents to quote from to shew exactly how the matter stands, it is not necessary for my purpose as I am reasoning from a principle to attain a certain end.

One thing must not be lost sight of, that in Lower Canada road making is a burden on the land, it is, therefore, a gross injustice to farmers living out of the island to pay for making roads on the Island of Montreal.

My proposal is to assess the whole Island of Montreal, including the city, so as to raise this £6000—in an equal a manner as possible. The debt of £50750 being secured upon the whole real estate of the island the security would be first rate, not even excepting the government, the money could then be had at 6 per cent., which would make a saving of one thousand and fifteen pounds.

£1015
Add to this the saving from
Toll Bars,..... 1000

2015

you have then a saving of one third of the annual expense above quoted.

I would divide the assessment in this manner: out of the revenues of the Corporation of Montreal I claim one half, say £3000 per annum. If there is any truth in the maxim of political economists, that the consumer pays the taxes, Montreal would get cheaply off at this rate. I think it demonstratable that the city pays at present three-fourths.

The whole island has been valued for assessment purposes, and local municipalities established, so that the assessment could be levied easily.

I do not propose to interfere with the management of the Road Trust except in the above manner. The roads are good and probably well managed. G.

—:—
To the Editor of the Farmer's Journal.

ROSEBROOK FARM,
Three Rivers, 10th Jan., 1856. }

DEAR SIR.—Would you oblige by informing one of your subscribers what would be the cheapest and best mode of top-dressing a new laid down hay-field. The soil it is growing on is very light, and it was laid down a year ago, but, owing to the excessive dry season, it came up very thin, the clover only in patches, but the timothy even, but very thin. I concluded in trying an experiment by allowing the timothy to ripen and cast its seed, which it did thoroughly and to my satisfaction. The fall rains covered my field completely with a thick coat of timothy as it came up, and was about from one to two inches long when the frost came. The field is about 14 acres, and as top-dressing with manure in the spring would be

[* Should not this be £940? — *Farmer's Journal.*]

too heavy for the young timothy, how would plaster or gypsum do? I also have a swamp close at hand, where I could get muck, also clay, but the cost of hauling in the spring on so large a field would come more expensive than the plaster. Will you let me know how plaster would do, and how much to the acre, how to apply it, and where I could get it the best and cheapest, and what the cost would be a bushel or barrel. Do you think clay would do better if put on early in the spring?

Respectfully yours.

A SUBSCRIBER.

NOTE BY THE EDITOR.—For light land, such as our correspondent describes, the plaster would be a very proper top-dressing. It should be laid on just after the snow disappears, in the proportion of eight or ten barrels to the field of fourteen acres. Plaster has been sold in the city for 4s 6d to 5s a barrel, but it may be purchased at the mills from \$7 to \$9 per ton.

—:o:—

To the Editor of the Farmer's Journal.

SIR.—I was much pleased in looking over the last number of your Journal, to see that the Board of Agriculture had adopted several new regulations for the Provincial Exhibition, which is to take place at Three Rivers in September next. Mr. Editor allow me to suggest a few additional rules, which I think would be of infinite advantage to the country at large. In the class for Field Productions, all persons to whom prizes are awarded should be bound, before receiving the amount awarded to them, to give a statement in writing of their mode of cultivation, nature of the soil, quantity grown per acre, and reply to any other questions that might be required; all of which might be published in the *Farmer's Journal*, and circulated throughout the whole Province. In regard to the Implement Department, I consider that the rule which has been adopted by the "Highland and Agricultural Society of Scotland," that none but the maker or inventor be allowed to compete, should be introduced.

I shall make a few remarks in regard to our County Societies, several of whom have done a vast amount of good in their different localities. I may mention as an example for imitation the County of Montreal. The plan they have adopted of annually giving prizes for well managed farms and growing crops cannot be surpassed in any country. I cannot see the reason why the above plan is not carried out by every County Society receiving grants of public money. I shall explain briefly a few of the abuses under the present system of giving prizes for such small quantities of grain as a bushel or two bushels at most. Previous to a late Show, a farmer on the St. Foy Road, whose stock and implements are of the very worst description, sowed his garden, not

more than half an acre, with three different varieties of grain, for the sole purpose of catching a few prizes—and what lately took place at an Agricultural Show near Quebec, where wheat was mixed with shot, and persons weighing their grain a second time, and many other mal practices which too plainly shows the folly of such systems. So long as the public money is distributed in this manner, it only tends to open up a road for all manner of frauds, and the honest industrious hardworking farmer has no chance of competing. I have witnessed these paltry shows for these last twenty years, and the prizes in most cases for Field Productions have been carried off by the worst farmers. The only true and legitimate way to improve our agriculture is for our County Societies to give prizes for well managed farms, growing crops, good draining, good stock of farming implements, well managed dairies, &c. &c. I think also that the increased circulation of the *Farmer's Journal* in the County of Quebec would be of much advantage. Its present limited circulation too plainly shows the small interest which our farmers take in what is so essential to their interests, which is published at the low rate of 2s 6d per annum, and each number is well filled with both original and selected articles.

Yours truly.

MATTHEW DAVIDSON.

St. Foy Road,
County of Quebec. }
22nd January, 1856. }

—:o:—

MONTREAL MARKET PRICES.

Rules at which produce is purchased from the Farmers.

1st February, 1856.

Hay from 10 to \$13 per 100 bundles.
Straw from 3 to \$4. do.
Fresh Butter, per lb., from 1s 3d to 1s 6d.
Salt Butter, do from 1s to 1s 0½d.
Country Cheese, from 6d to 8d.
Wheat, 6s 6d to 7s.
Barley, 4s 9d to 5s
Rye, 4s 6d to 5s.
Oats, from 1s 8d to 1s 0½d.
Yellow Indian Corn, from 5s 6d to 6s.
Indian Corn, 5s to 5s 3d, Ohio.
Buckwheat, from 8s to 9s 6d.
Peas, from 4s 6d to 4s 9d.
Beef, per 100 lbs, from 5 to \$8.
Mess Pork, 9 to \$10.
Mutton, per carcase, from 2½ to \$5.
Lamb, do none.
Veal, 2½ to \$4½.
Eggs, from 1s to 1s 2d.

PRINTING AND BOOKBINDING.

THE undersigned executes with neatness and despatch, and at moderate prices, all kinds of PRINTING, such as BOOKS, CATALOGUES, PRIZE LISTS, CARDS for CATTLE SHOWS, &c. —ALSO— BOOKBINDING, either Printed Books, or Merchants Ledgers, Journals, &c.

H. RAMSAY.

FOR SALE by the Subscriber, a general assortment of the various kinds of APPLE TREES, best adapted to this climate,—also a few very fine PLUM TREES, of various sorts, with some handsome HORSE CHESNUTS and MOUNTAIN ASH TREES.

Apply to

GEORGE McKERRACHER,
Partenais St., Quebec Suburbs.

Or to

JOHN AULD,

At Summer Hill, (late McGregors,) Guy Street.

Oct. 1, 1855.

Prize School Books.

THE Subscriber obtained Diplomas at the Provincial Exhibitions, held at Montreal and Hamilton, in 1853, "For the best collection of School Books printed and bound in Canada." In this collection were

THE NATIONAL SERIES.

General Lessons, to be hung up in Schools.
First Book of Lessons.
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Sequel to the Second Book.
Third Book of Lessons.
Fourth Book of Lessons.
Fifth Book of Lessons.
First Book of Arithmetic and Key.
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Treatise on Mensuration.
Appendix to Mensuration, for the use of Teachers.
Elements of Geometry.
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Large coloured Maps for School Rooms.
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Key to ditto.
Dodd's High School Algebra.
Dodd's Elements of Geometry.
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Olney's School Geography and Atlas.
Professor Hooker's First Book in Physiology.
Physiology for High Schools.
Brocklesby's Astronomy.
Brocklesby's Elements of Meteorology.
Comstock's Introduction to Natural Philosophy.
Do. System of Natural Philosophy.
Do. New Elements of Chemistry.
Do. Elements of Botany.
Do. New Elements of Geology.
Bullion's Latin Lessons.
Do. Latin Grammar.
Do. Latin Reader.
Do. Latin Exercises.
Do. Key to do.
Do. Greek Lessons.
Do. Greek Grammar.
Do. Greek Reader.
Arnold's Cornelius Nepos.
Lincoln's Livy.
Ferguson's Ovid.
Carson's Phaedrus.

H. RAMSAY.

PRINTING IN BOTH LANGUAGES
OR AGRICULTURAL SOCIETIES, furnished with the greatest expedition and on the most moderate terms.
H. RAMSAY.

Notice to Farmers and Dealers in Grains.

\$200 to be offered in Premiums for SEED GRAIN.

The DIRECTORS of the COUNTY OF MONTREAL AGRICULTURAL SOCIETY, with a view to afford to Farmers an opportunity of selecting SEED GRAIN, purpose holding a GRAIN MARKET in connection with the HORSE SHOW in the Spring, when the sum appropriated will be offered for the following, viz. :—

3	premiums, 20 bushels, Wheat.
3	do 20 do Oats.
3	do 20 do Barley.
3	do 20 do Pease.
3	do 10 do Beans.
3	do 5 do Tares.
3	do 5 do Timothy Seed.

The amount of Premiums and other details will hereafter be published.

By order,
JAS. SMITH,
Secy.-Tres.

LOWER CANADA

Agricultural Implement Warehouse AND SEED STORE.

THE Subscriber begs to intimate, that he purposes opening an AGRICULTURAL IMPLEMENT WAREHOUSE, in the LARGE HALL over the ST. ANNS MARKET, in this City, which he has leased from the City Corporation for this purpose.

He will keep constantly on hand an assortment of the best and most approved IMPLEMENTS of ENGLISH, CANADIAN and AMERICAN Manufacture, which he can with confidence recommend to his friends.

The Subscriber begs further to intimate that, in connection with the Implements, he will have for Sale AGRICULTURAL SEEDS as well as FLOWER SEEDS of every description and variety.

The Seeds will be of the best description, clean, unmix'd, and of the latest growth obtainable.

With this view, he has made arrangements with one of the first Houses in France, for Clover and other Seeds, which he hopes to receive about the 1st of January next.

An establishment of this description has been long wanted in Canada, and the Subscriber trusts to have such a supply of SEEDS and IMPLEMENTS as will ensure him the patronage of Agriculturists.

Wm. EVANS, Junr.
Montreal, 1st Dec., 1855. 5 in.

NOTICE TO FARMERS.

THE MUTUAL FIRE INSURANCE COMPANY of the COUNTY of MONTREAL, insures the properties of farmers in Lower Canada, at 5s. for £100 currency, for 3 years, &c.

Apply at the office, St. Sacrament Street, Montreal; to the Agents in the Country; or to the undersigned Directors :—

- Wm. Macdonald, Esq., President, Lachine.
- B. H. LeMoine, " Montreal.
- Edward Quin, " Longue Pointe.
- F. M. Valois, " Pointe Claire.
- John Dols, " Petite Cote.
- G. G. Gaucher, " Ste. Genevieve.
- Frs. Quenneville, " St. Laurent.
- Joseph Laporte, " Pointe-aux-Trembles.

P. L. LE TOURNEUX,
Secretary and Treasurer.

Montreal, 1st July, 1854.

Bull Calves for Sale.

THE Subscriber offers for sale Five BULL CALVES of the best pedigrees.

RALPH WADE, Junr.
Cobourg, December, 1855. 3 p

Important to Agriculturists. JUST PUBLISHED.

THE YEAR BOOK OF AGRICULTURE for 1855 and 1856, exhibiting the most important discoveries and improvements in Agricultural Mechanics, Chemistry, Botany, Geology, &c., illustrated with numerous Engravings by David A. Wells, A. M.

Price 7s 6d.
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THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS and CULTIVATOR'S ALMANAC for 1856. 288 pages. Embellished with ONE HUNDRED AND FIFTY ENGRAVINGS. Price 1s 3d. Can be sent by post on receipt of postage stamps.

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AGRICULTURAL SOCIETY, No. 1,

OF THE
COUNTY OF GASPE.

EXHIBITION of GRAINS, SEEDS, DOMESTIC MANUFACTURES, DAIRY PRODUCE, &c., to take place at Mr. JAS. G. TUZOS Farm-House, AINCE-A-BEAUFILS, on the SECOND MONDAY in FEBRUARY next. Prize List as follows, viz. :—

	Best.	2d do.	3d do.
	s. d.	s. d.	s. d.
Wheat, White, Bald or Yellow, 1 minot, sample of 4 minots, Do Red, 1 minot, sample of 4 minots, .	20 0	15 0	0 0
Barley, 1 minot, sample of 6 minots, .	15 0	12 6	10 0
Oats, Black, 1 minot, sample of 6 minots, Do White, 1 minot, sample of 6 minots, .	12 6	10 0	7 6
Buckwheat, 1 minot, sample of 3 minots, .	12 6	10 0	0 0
Rye, 1 minot, sample of 3 minots, Field Peas, 1 minot, sample of 3 minots, .	12 6	10 0	0 0
Timothy Seed, 1/2 minot, .	15 0	12 6	10 0
Clover Seed, 6 lbs, .	15 0	12 6	0 0
Flax Seed, 1/2 minot, .	15 0	12 6	0 0
Swedish Turnip Seed, 2 lbs, White do do	10 0	7 6	0 0
Parsnip Seed, 2 lbs, .	10 0	7 6	0 0
Carrot Seed, do	10 0	7 6	0 0
Yellow Turnips, 1 barrel, sample of 6 barrels, .	12 6	10 0	0 0
White Turnips, 1 barrel, sample of 6 barrels, .	10 0	7 6	0 0
Potatoes, Pink-eye or Blue, 1 barrel, sample of 6 barrels, .	15 0	12 6	10 0
Potatoes, other kinds, 1 barrel, sample of 6 barrels, .	12 6	10 0	7 6
Parsnips, 1 minot, .	12 6	10 0	7 6
Carrots, 1 minot, .	12 6	10 0	7 6
Flax or Hemp, 3 lbs or more, Do Thread, 2 lbs or more, .	12 6	10 0	7 6
Rope, Cordage or Line of Flax or Hemp, 10 fathoms or more, .	10 0	7 6	5 0
Homespun Cloth, all wool, 10 yards or more, .	12 6	10 0	7 6
Homespun Cloth, wool and cotton, 10 yards or more, .	12 6	10 0	7 6
Homespun Flannel, all wool, 10 yards, or more, .	12 6	10 0	7 6
Homespun Flannel, wool and cotton, 10 yards or more, .	10 0	7 6	5 0
Homespun Stockings or Socks, 4 pairs, .	5 0	4 0	3 0
Homespun Mittens or Gloves, 4 pairs, .	5 0	4 0	3 0

Dairy Produce.

	1st.	2nd.	3rd.	4th.
Butter, 30 lbs or more, .	15 0	12 6	10 0	7 6
Cheese, one or more, .	12 6	10 0	7 6	0 0

RULES IN ADDITION TO THOSE ALREADY IN FORCE.

- 1st. No premium allowed unless the article be considered prize worthy.
- 2nd. No article of Grain or Seed allowed to compete if hand-picked, kiln or fire dried, or having undergone any chemical process.
- 3rd. All articles to be the produce of the last year.

By Order of the Committee.

L. WINTER,
Pres't. Agt. S., No. 1, Co. Gaspe.

Percé, 8th January, 1856.

O. T. CONNICK,
Secretary-Treasurer.