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U. J. Jewier

The Farmer's Journal,

AND

TRANSACTIONS

OF

THE LOWER CANADA BOARD OF AGRICULTURE.

VOL. III, No. 8, MONTREAL, DECEMBER, 1855.

POSTAGE FREE.

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The Farmer's Journal.

BOARD OF AGRICULTURE,
Montreal, Wednesday, Nov. 7,
1855.

By instructions from Major Campbell, the President of the Board, the Secretary addressed letters to the Members, requesting a Meeting of the Board to take place here this day at 11 o'clock, A. M.

Gentlemen present:—

Major Campbell, C. B., President; James Thompson, Esq., Vice-President; John Yule, Alfred Piusoneault, R. N. Watts, Esqs., Members of the Board, and B. Pomroy, Esq., President of the Agricultural Association.

The President having taken the Chair, the Secretary placed before the Meeting a list of different subjects to be submitted for consideration:—

1. A statement of receipts and disbursements at the late Provincial Exhibition at Sherbrooke, with various documents connected therewith.

2. Statement showing the distribution of the Government allowance to the several Agricultural Societies who have been paid the allowance for this year.

3. Statement of the General Funds of the Board, Disbursements, &c.

4. A Memorial from the County of Beauharnois Agricultural Society No. 1 was read, stating various objections to the sanction given by the Board to the organization of Agricultural Society No. 2, in the same County, and questioning its legality. The several documents accompanying this Memorial were all examined, as also, the papers of No. 2 Society, filed in this office, and after due consideration, the Board came to the following decision:—

That the Petitions of the Agricultural Society No. 2, in the County of Beauharnois, having been granted under the impression, that the necessary forms had been complied with, and the Board now finding conflicting statements supported with equal earnestness by both parties on the subject,

1. *Resolved*—That the decision allowing the formation of said No. 2 Society, shall remain in force till February next, and that the same shall after that time, be re-united to No. 1 Agricultural Society of said County, saving to said Society No. 2, the right to make a new application, after giving the necessary notices.

The Secretary was instructed to write to Societies No. 1 and 2, and acquaint them with the decision of the Board, sending each a copy of the foregoing Resolution.

An application from Agricultural Society No. 2, in the County of Two Mountains, that the Government allowance for this year to that County, should be distributed differently from the last two years, was considered, and various documents connected with the subject carefully examined, and the following decision was come to unanimously:—

2. *Resolved*—That the decision of the Board adding the Parishes of St. Placide and St. Hennes to Agricultural Society No. 1, of the County of Two Mountains, on their Petition, dated the 5th of February, 1855, be entered on the Records, the same having been omitted by oversight. The Secretary was instructed to communicate the decision of the Board to Society No. 2, in the County of Two Mountains.

The following Resolutions were proposed and adopted unanimously:—

3. *Resolved*—That the thanks of the Board be tendered to A. T. Galt, Esq., M. P. P., for

his very liberal subscription towards the funds of the Provincial Exhibition at Sherbrooke.

4. *Resolved*—That the thanks of the Board be tendered to the British American Land Company, for their very liberal subscription to the funds of the Provincial Exhibition at Sherbrooke, and for the use of the ground.

The Secretary was instructed to apprise Mr. Galt, and the Commissioners of the British American Land Company, of the two foregoing Resolutions, and send copies to each.

Letters were submitted from St. Andrews and Three Rivers, advocating these places respectively as the most suitable site for the Agricultural Exhibition next year, when it was

5. *Resolved*—That the President be authorized to correspond with the different parties advocating Three Rivers and St. Andrews respectively, as the site for the ensuing Exhibition and to accept the most eligible offer guaranteed to the Board.

6. *Resolved*—That the President and Messrs. Yule and Piusoneault be appointed a Committee for carrying out the arrangements for the Exhibition next year.

The Prize List for the Provincial Agricultural and Industrial Exhibition for next year was discussed and decided upon—also—additional Regulations, to be published with the Prize List.

A Memorial from Wm. Evans, Junr., of Cote St. Paul, asking for the patronage of the Board for an Agricultural Implement Warehouse which he proposed to establish immediately in Montreal, was submitted, and the Board was pleased to accede to the same.

WM. EVANS,
Secy. Treas. Board of Agriculture.

AGRICULTURE IN LOWER CANADA.

The Colonial Legislature has shown a just appreciation of the importance of encouraging improvement in agriculture, by voting funds for Public Exhibitions, and Meetings for Discussion, Lectures on the Theory and Practice of Improved Husbandry, the circulation of Agricultural Periodicals and Prize Essays, together with the introduction of improved Stock, Seeds, Implements, and Machines, and by aiding in the organization of County Societies, and Township Societies, whose members and office-bearers are placed in direct communication with the Board of Agriculture, whose duty it is to watch over the interests of agriculture, and to act as far as may be practicable, in improving its condition, and promoting its prosperity.

The great Exhibitions at Sherbrooke and at Cobourg, in the months of September and October, have afforded us opportunities of observing the progress and comparing the activity of the Societies in both Provinces. It must be obvious that however perfect the plans may be which are devised by the collective wisdom of parliament, and however faithfully they may be carried out by the Boards of Agriculture, no practical good can be accomplished without the hearty and earnest co-operation of the farmer himself, and of the Societies who represent the interests of the different districts.

At the meeting at Cobourg no less than sixty delegates attended to represent every portion of the Upper Province, and so keen was the competition for the honor of obtaining the next Agricultural Show, that more than one place offered each £1,000 towards the expenses, and the honor was eventually acquired by Kingston, after a vehement and prolonged discussion, by forty-four delegates voting for Kingston in opposition to sixteen who voted against it.

In the same way at the recent Agricultural Fair in the State of New York, the small town of Elmira came forward with an offer of several thousand dollars, and in the United States Show at Boston, the municipality at once voted 20,000 dollars, to induce the managers to fix the Exhibition in that city. We could quote other instances to show how highly the advantage of such gatherings is esteemed, and how ardently it is desired by the inhabitants of different localities, but the advantages are so self-evident that it cannot be necessary to dwell upon them. At the Exhibition at Sherbrooke not a single delegate from any County Society, except those of the place attended, although the important business of electing officers, and determining the place of meeting for the ensuing year, had to be discussed at the close of the meeting. We are utterly at a loss to understand, or account for this apathy, and up to this time we cannot

hear that any more than two places—St. Andrews and Three Rivers have applied for the honor of having the next Provincial Exhibition held in their localities. We perceive that our very able friend the Editor of the *Three Rivers Inquirer*, claims it for his town, and expresses a doubt of the soundness and prudence of the principle which would make the eligibility of the site depend upon the amount of the bribe offered for the honour. But surely our astute contemporary must see that the amount of the subscription is a most material element for the consideration of the Board. The expenses of the Provincial Exhibition are of necessity large, and its success depends to a great extent upon the amount of the disbursements. This has been proved over and over again in other localities, where the advantages were equal in population, produce, and convenience of access. Besides when the people of a locality come forward liberally with their purses to sustain an exhibition of such vast importance to the community, it affords satisfactory and irrefragable evidence of their determination to aid the constituted authorities in their efforts to render the show successful. We have no means whatever of knowing whether Three Rivers, or St. Andrews is most likely to be selected. We believe in the advantages of the perambulating system for agricultural exhibitions, as fully as we believe in the disadvantages of the system for governmental purposes. Three Rivers is admirably situated in a thriving district, and with the great commerce of the noblest river of North America flowing past it. If our contemporary wants the Exhibition, let him exhort his neighbours to show themselves worthy of it by their activity, intelligence, and liberality. We have but one wish on the subject, and that is that the best place may receive the preference.

While upon this subject we would beg the attention of our readers to some valuable suggestions of Mr. Evans, the Secretary-Treasurer of the Board of Agriculture. This experienced agriculturist in his monthly report draws the attention of the Lower Canadian Farmers, to the necessity of sufficient draining and good ploughing in the cultivation of the lands, and affirms that both are extremely defective. He remarks:—

It will be admitted by all experienced agriculturists that sufficient draining and good ploughing are most essential to good farming, and that remunerating products cannot be expected from arable land where the draining and ploughing are imperfectly executed. In Lower Canada it is quite certain that both draining and ploughing are very defective in general, and in sections of the country where it is most required that both should be as near perfection as possible. A large portion of Lower Canada is of very level surface, and the soil is a strong clay, naturally of excellent quality; but to make it productive, careful

draining is of the first importance. No doubt draining has been executed to a considerable extent, but in most cases not sufficient, and in almost every case the drains that are made are not regularly cleaned or kept in proper order. Their construction is also objectionable: the sides of the drains are almost perpendicular in numerous instances, when they should be sloped—the excavated earth is allowed to accumulate on the banks of the drains, and the land is highest where it should be lowest, and the levels and out-lets are not carefully attended to. Drains will not act, if they have not sufficient fall, and if the grass and weeds are not constantly cleared out of them. In a flat level country, the draining requires much more attention than where the surface is undulating, and a sufficient fall for the drains almost always attainable.

As regards ploughing, according to my ideas, I would consider it to be very generally defective. The ploughing and ridges are not straight, the furrow-slice is too wide in proportion to its thickness, and consequently is too flat to dry or harrow well; and the furrow between the ridges is too wide and shallow, because it is not finished properly by running the plough in the subsoil of the furrow after the surface is all turned over. When the furrows are not properly cleaned out, the moisture remains in and under the ploughed surface, and cannot run off, because the bottom of the furrow is only level with the under-side of the ploughed soil, and the furrow left in this unfinished state causes a waste of nearly a third of the land. The obvious remedy for these defects is,—to plough straight and have the furrow-slice in due proportion, 5 inches deep by 8 or 9 inches wide, or 6 inches deep by 9 or 10 inches wide, carrying out the same proportion if ploughed deeper; and when the ridges are finished pass the plough deeply in each furrow, thus making a sufficient drain to carry off the water from the ploughed soil to the head land. The head land should be carefully ploughed, and a deep furrow between it and the ridges, and the furrow be made so as to carry off the water from all the furrows of the field, with outlets from it into the main drains at the end or side of the field. By adopting these simple and easy improvements, the land would be in good condition at the first commencement of the spring, and the farmer would be able to sow and plant in the proper time, and not waiting for the sun to dry up the vast quantity of superfluous moisture accumulated in the soil for months, for want of drains and water furrows. There would be no waste by wide furrows, because the plough in finishing the furrow would loosen sufficient soil in each side to form a seed bed for the grain, and hence the furrow would be only one foot wide, instead of two or three feet, as at present. I do not propose impracticable improvements, but such as any farmer may adopt, with very little additional expenditure of labor or money; and these improvements must precede all others. Manure is little better than wasted if the land is not sufficiently drained and properly ploughed. From my own experience, I am persuaded that insufficient draining and defective ploughing is the main cause of deficient crops in Lower Canada.

Mr. Evans also insists upon it that green crops, and summer fallow are essential to profitable farming, and suggests to all farmers who desire to keep their stock in good condition, the necessity of making a larger

provision of roots, such as mangold wurtzel, ruta laga, carrots, &c. He affirms that by proper cultivation, from 30 to 40 tons of carrots may be produced per acre on suitable soil. Our land is generally of excellent quality, and when properly treated returns good crops. The flour and the beef of Canada should be equal to any in North America, and if it be not so, it is the fault of our farmers. As we stated in our last number the markets of France are thrown open to us, and those of continental Europe will in all probability be thrown open likewise. With good lands, and good markets, and every facility for transporting produce, we need only energy, enterprise, and improved agriculture, to develop the boundless resources of our country. Let our farmers bethink them of all this betimes, and set themselves to improve their agriculture, as every other nation of the civilized world is doing. "Aide toi et le Ciel t'aidera."

NEW YORK STATE FAIR.

The month of October was celebrated for the number of Agricultural Shows. The Agricultural Exhibition for the State of N. Y. was opened at Elmira on the 2nd Oct., and continued for four days. It was visited by nearly 50,000 persons, special trains being organized at reduced fares from most of the adjacent States, and from the Canadas. The display of stock was good, but by no means large. Governor Bigler, of Pennsylvania, and Governor Wright, of Indiana, and several other eminent persons delivered addresses. The fair was closed by a Ball and Banquet, and as a somewhat unusual feature, the day following the termination of the fair, was held as a gala day, and prizes were offered to ladies for racing on horseback, and for driving in light buggies. This portion of the entertainment was got up by parties who had horses to exhibit and sell, and the first prizes in riding and driving, were respectively awarded to Miss Conover, of Onondaga, and Miss Desmarest, of Chemung. A little girl, 8 years of age, attracted much attention by the skill and courage with which she rode and managed a spirited horse. The fair was successful beyond expectation.

CONNECTICUT STATE FAIR.

This fair was held the second week in October. Five hundred horses were exhibited, and the show of cattle and working oxen was very large as well as fine. More than 30,000 people were present on the second day, but on the third day a severe storm occurred, which made the attendance very small. Agricultural Shows are fast growing in popular favor in the States, but there is also a strong feeling that it is unwise to postpone them so late in the season. If possible they ought to be fixed before the usual appearance

of the autumnal equinox, but farmers prefer a late period to avoid their interfering with farm operations.

UNITED STATES AGRICULTURAL FAIR.

This agricultural fair was held at Boston on the 23rd, 24th, 25th, and 26th October. Fifty acres of land, within the precincts of the city, and abutting on Harrison Avenue, with a soft marshy soil, were selected and covered with thousands of loads of gravel from the adjacent heights of Dorchester and Roxbury, the land was then levelled and rolled. A half mile course of elliptical form was stacked out for racing. Near the centre, the Architect of the Society had constructed a beautiful and finely proportioned entrance arch, flanked by two lofty towers fifty feet in height. Within the entrance, and near its centre was another ornamental tower about 30 feet in height, erected to serve the purpose of a Judges Stand. Buildings were also raised for the accommodation of the various Committees, and immense stables, stalls, and pens, for the reception of horses, cattle, pigs, and sheep. Ten thousand dollars were appropriated, to be presented in premiums, besides a considerable amount to be given in discretionary premiums for cases of rare excellence; the entries on the 23rd amounted to 450 horses, 400 head of neat stock, 400 swine, and 200 sheep, and considerable additions were hourly arriving. Immense numbers of strangers had arrived in town, and the exhibition opened on the 23rd with a great Equestrian Procession, and terminated on the 26th with some fine races. On the 24th there was a severe storm from the north-east with heavy rains, which re-converted the grounds into a dreary swamp, but on the 25th the weather was fine, and during the day no less than 50,000 persons visited the exhibition grounds. Altogether the Exhibition at Boston was a great success.

We beg to call the reader's attention to an advertisement of Mr. Wm. Evans, junior, which appears in another column. It will be seen, that he purposes opening immediately an Agricultural Implement Warehouse and Seed Store, in the Large Hall over St. Ann's Market. We have no doubt, but that Agriculturists will be glad of the opportunity thus afforded them of examining the great variety of Implements which will be on show, and furnishing themselves with such as may be requisite for the supply of their several necessities. The Board of Agriculture for Lower Canada have extended their patronage to this branch of Mr. Evans' business—the other branch consists in the sale of Seeds—Agricultural as well as Garden. From his long practical acquaintance with the business in which he is about to engage, we have no doubt, but the advertiser will give every satisfaction to the public.

REVIEW OF BOOKS.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS AND CULTIVATOR'S ALMANAC for the Year 1856. By J. G. Thomas. Price 1s 3d. Albany: Luther Tucker. Montreal: Hew Ramsay.

This is beyond all question one of the most valuable Registers and Almanacs extant. It contains practical suggestions of the highest value, embellished with one hundred and fifty engravings of farm buildings, implements, animals, fruits, and flowers. No farmer should be without the entire series, which will be found alike valuable for instruction and amusement. The price is low, and the arrangement and illustrations excellent. We commend the work most earnestly to the attention of the farmers of Lower Canada. We should think a French translation would be highly acceptable, if any enterprising publisher would undertake to produce it.

THE HORTICULTURIST AND JOURNAL OF RURAL WIT AND RURAL TASTE. Smith: Philadelphia.

An octavo monthly Magazine of rare merit, devoted to American Horticulture, and conducted with great taste and judgment. America is justly proud of her horticulture, and the main object of the work is to impart knowledge and encourage taste in this pleasing pursuit. The work is profusely illustrated with appropriate engravings.

THE WOOL GROWER AND STOCK REGISTER. D. D. T. Moore, Rochester, N. Y.

A monthly journal devoted to the interests of that large portion of the community who are engaged in wool growing and stock husbandry. The work is extremely valuable to the owner or breeder of sheep, cattle, horses, swine or poultry, and deserves an extended circulation.

THE NEW ENGLAND FARMER for Nov., 1855. Joel Nowise, Boston, Mass.

A monthly agricultural journal of the farm and garden, edited by Simon Brown, and enjoying a very high reputation in the Eastern States of the Union. It is printed in a bold type, on excellent paper, with numerous illustrations, and is published at a dollar a year.

THE YEAR BOOK OF AGRICULTURE FOR 1855-1856, by David A. Wells, A. M. Philadelphia: Childs & Peterson. Montreal: H. Ramsay. Price 7s 6d.

This is a most valuable repository of agricultural information, and will meet, we hope and trust, with such an amount of public patronage as to warrant the Editor in continuing his work in future years. The Year Book

exhibits the most important discoveries and improvements in Agriculture, Mechanics, Chemistry, Botany, Geology, Zoology, Meteorology, &c., together with Statistics of Growth and Production, Tables of American Patents, Catalogue of Fruits adapted to different localities, and the Editor contributes a most valuable and comprehensive Review of the Progress of American and Foreign Agriculture for the present year. The mechanical execution of the work is creditable in the highest degree to the publishers—it is printed on excellent paper, is illustrated by a portrait of Mr. Downing, by several beautifully coloured Engravings of Flowers, and an endless variety of Woodcuts descriptive of Machinery, Implements, Houses, Barns, &c.

—:—

DYE'S BANK-NOTE PLATE DELINEATOR.—This publication contains a perfect description of every part of the genuine bank bills circulating in the United States and British America. It is a volume of 300 pages, and over three years have been spent in its preparation, at an expense of \$30,000. It is recommended by all the bank note engraving companies in the United States. The office of Mr. Dye is 172 Broadway, New York. We append two of the certificates to the value of the work. Further comment is needless.

New York, October, 1855.

John S. Dye, Esquire,

SIR—Having examined the plan proposed in your "Bank-Note Delineator," for enabling the public to detect spurious and altered bank-notes, by furnishing accurate descriptions of the genuine notes of all the banks of the country, we take pleasure in expressing our approval of the same, as affording a simple and effectual provision against that species of fraudulent paper money.

Respectfully yours,
RAWDON, WRIGHT, HATCH & EDSON.

New York, October, 1855.

John S. Dye, Esquire,

DEAR SIR,—We take great pleasure in enclosing Mr. Cary's opinion of your Bank-Note Plate Delineator, and in recommending it as a work of the greatest utility. Respectfully yours,

TOPPAN, CARPENTER & CO.

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AGRICULTURAL MEETING AT PADHAM, ENGLAND.

The sixth annual show of the Padham (Lancashire) Agricultural Society was held on Thursday, 18th Sept., and was considered the most successful exhibition yet held under the auspices of the association.

The annual dinner took place in the evening in the Padham Assembly-room. Mr. Le Gendre Nicholas Starkie, jun., presiding.

The usual preliminary toasts having been duly honoured, Sir J. P. Kay Shuttleworth, in proposing "The Health of the Lord-Lieutenant and Magistrates of the County," said, the Lord-Lieutenant and the majority of the Magistrates of the County are great land-owners, and as such they have great social duties to perform. In connection with associations such as the one which is assembled here to-night they have duties of a nature deeply interesting to the members of such societies, and I think that associations of this

character may be made chiefly useful if we each according to our ability, contribute that share to the common stock of information which our opportunities best fit us to impart. My own acquaintance with agriculture is necessarily of a very limited nature. It is confined to those general improvements which are necessarily the function of the proprietor, such as the general drainage of estates, the improvement of farm buildings, and the introduction of those permanent means of advancement in the culture of the land, such as the means of storing liquid manure and so on, which are properly the duties of a proprietor. (Hear, hear.) I have also felt it my duty, as I know it has been the custom of some of the gentlemen who surround this table, to make myself well acquainted with those improvements in science which affect the progress of agriculture—I mean such knowledge as is conveyed by books. And there is in one direction an opportunity which I have possessed of late years, owing to the necessity of foreign travel for the restoration of my health, for I have been enabled to bestow much time and a good deal of minute attention on a comparison of the systems of foreign agriculture with that of the British. What occurs to me, therefore, in relation to that which is the object of our meeting to-night, and that which I may say calls upon me to speak as a duty, as a magistrate and a proprietor in this county, is that which I can best do in connexion with the objects of this meeting,—that I should in some very brief and general terms, without at all descending into minute and fatiguing statistics, give you a slight sketch of what appear to me to be the great features of contrast between foreign and British agriculture. Now, I am very happy to say, at the outset, that in many most important respects the agriculture of England has made, especially in the present century, an enormous advance over that of our foreign neighbours. That advance has been owing to the application of some very simple principles in the breeding of cattle and in the culture of the land; and to these I will endeavour to direct your attention, because I think we may learn even from our past successes and from having a clear idea of what are the principles of progress that we have hitherto pursued, and which have given us a great advantage over our neighbours, in what direction our efforts may best in future be turned. In the first place, anybody who travels abroad will be greatly struck with the vast difference which exists in the breeds of cattle in the various countries of Europe. It is very common throughout the whole of Europe to employ the cattle to an immense extent for purposes of labour. Almost all the farm work is performed by oxen, and likewise a very large quantity of the cartage of the continent is performed by oxen, and not, as in this country, by horses. Even in the case of a gentleman's carriage abroad, when it comes to the bottom of a very steep hill, the relays at the bottom of the hill are not relays of horses generally, but of a long team of oxen, which drag the carriage to the top of the hill at a very slow pace. Now, there is a very great consequence of that which your own show to-day will make you at once aware of,—that it has been the great object, in the breeding of cattle abroad, to give great prominence to bone and strength as the means of labour, in preference to that which constitutes the great object of breeding in England—the smallness of the bone, the early delicacy and precocity of the animal, the roundness of

form, the bulk, and instead of great capacity of labour, such bulk as is a great hindrance even to locomotion. Now, the way in which this great change in the character of the breeds of cattle in England during the last 80 or 90 years has been produced has been by the principle of selection. Mr. Bakewell, with respect to the Leicester breed, the Elms, with respect to the Southdown breed, and Mr. Collins, with respect to the Cheviot breed, have produced an immense change, for example, in the sheep of this country. They have produced sheep with great roundness of form, with exceedingly small bone, with great weight, but with very small powers of locomotion; and the same principle has been applied to cattle, the Shorthorns, the Hereford breed, and the Ayrshire breed being all characterised by the same qualities, smallness of bone, the great bulk of carcase, and the large amount of meat that they will yield. In England, likewise, in reference to sheep, we have thought much more of the production of meat than wool, whereas in France and a large part of the continent, agriculturists have paid much more attention to the production of wool than meat; and one of the consequences has been that, even in England, seeing that we have preferred the production of meat to that of wool, the carcase of the sheep has been much larger, and therefore the fleece has been much larger, and in England the value of the fleece has been on the average as great as in France, while the value of the meat in England is double the value of that in France. Connected with these principles has been a third. The breeds of sheep and cattle produced in England have not as I said before, been calculated for endurance of labour, as they are on the continent, and consequently they have had little bone, but they have been also breeds of great delicacy. The principle of selection has been precocity of growth; the breeds of sheep and cattle, with one exception, arriving at their maturity in two years, and they are ready for the butcher at the end of two years, whereas the breeds of cattle in France and on the continent generally are kept many years for purposes of labour, after they have arrived at the greatest growth. Therefore the whole consumption upon the farm for the maintenance of these cattle is simply expended in labour, and it was evidently a false economy which led the French to suppose that, while they were having the advantage of the cattle for labour, they were also getting some advantage of them in meat; for, after two years, with an animal properly selected for the purpose, there is no increase in bulk, and it is better to kill the animal. Now, these principles, which are very simple, the principles of the selection of the breeds of cattle in England, are connected also with another very great change in England—that is, with the introduction of the rotation of crops, with the limitation of the extent of land applied to the purposes of growing corn, with the application of richer manures, with the keeping upon the land of the largest amount of stock, and therefore with the production of the largest possible amount of corn from the land. On the contrary, in France and over almost the whole of the continent, the plan of furrows still remains, the land is to a very great extent, very generally, much richer than that of England; there is a much larger extent of arable land, and it is land generally of a much more friable nature; and the climate is in every respect better adapted to the success of agricultural operations, yet,

owing to the introduction of the system of rotation of crops, to the keeping of a very large amount of stock upon the farm for the production of meat, and the application of these manures to a limited extent of arable land, the amount of corn produced on the same extent of land in England, as compared with the majority of countries on the continent, is at least double, and in many cases treble; so that the much smaller extent of land produces the same quantity of corn. Now, the whole of these several operations singularly hang together. They are links of a chain of proceedings which can scarcely be dissociated, and it would be extremely difficult, I have often thought, for a French proprietor, in some remote part of France, to change the system upon which they are now proceeding, to introduce horses instead of cattle, and to feed his stock simply for the meat-market. Even since they have introduced railways into France it would be very difficult for him to do it; and we certainly owe a very large amount of our success, at least of the rapidity with which we have introduced this system in this country, to the fact that we have markets so near at hand, that we have such a dense population, that we have such a little distance to carry our milk and butter especially, and that to a very large extent the farms of England can be dairy farms, and where not so con with such ease and advantage be meat farms. It would be more difficult to bring about this system in France; but so strongly are the thinking men of France convinced now of the great advantages of the system we pursue, that in the course of years I have no doubt whatever, we shall see the English system rapidly introduced more and more over a great part of the continent. You perceive that we have valued our cattle chiefly on account of the milk and the meat they produce, and we have discarded that which is the least valuable portion of the contribution that the animal can make to the wealth of the country, and that is its labour, in respect to cattle which are fed upon farms; and we have valued less the fleece of the sheep than we have the meat, and the result is that the whole moneyed produce of the farms in England, on the good farms, is nearly fourfold that of the same extent of land—even of better land—in France. I connect these facts very much with the toast I have the honour to propose you, and for this reason, that I think a very large part of the success of the agriculture of England has been owing to the good feeling which has subsisted between the proprietors and tenantry of the whole of England, to the extent to which the gentry of England have lived among their tenantry, and been ready to associate with them in such meetings as the present, and their readiness to pay close personal attention to the improvement of their estates, of which we have had such noble examples as Mr. Coke of Norfolk, the late Lord Leicester, the present Duke of Bedford, and many others whose names I might enumerate as examples of a class of proprietors who have spent their time, fortunes, and talents which would have made them probably statesmen of the highest order, on the improvement of their estates and the welfare of their tenantry. I believe these results are to a very great extent owing to the attention the gentry have paid to the improvement of their estates, and likewise to the energy, skill, and enterprise of such men as Mr. Bakewell, the Elmans, and others, who have especially devoted themselves to the im-

provement of the different breeds of cattle in this country and the introduction of right principles of culture.

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EVERY FAMILY SHOULD HAVE AN AGRICULTURAL PAPER. It is worth more than it costs simply for educational purposes. Parents have hardly a right to deprive their families of its advantages in these times. Children will learn more, as they go to and from school, to drive the cows to pasture, or pick berries by the way, if their observation is quickened by what they hear their parents read or talk over from the agricultural papers; and when they form habits of reading for themselves, such reading is both safe and useful. Reader, if your neighbor has no agricultural paper, persuade him to take one. Even if he is poor, he can better afford to take one than to do without it; for if he takes one, his children will be likely to be better off—to make a good home for themselves, and may be for him in old age. Not all will have farms; but all will need to know something of the garden and orchard at least; and we advise no parent, who feels that he may sometime be dependent upon his children, to bring them up without the means of instruction in rural economy. It should be regarded as essential in the education of any child, male or female.

American Cotton Planter.

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THE HOUSEKEEPER.

Buttermilk.—It is not generally known that buttermilk can be used for many purposes in domestic affairs; and in consequence it is often thrown away or given to pigs. Now butter-milk as a drink is cooling and moist, the best remedy for a hot thirsty stomach, good for hoarseness, excellent in consumptions and fevers, and also for constipation of the bowels. When stale and sour it may be used in combination with bi-carbonate of soda for the making of bread, pastry, &c. The bread, buns, and rolls made with it are excellent, keeping moist and good much longer than those made with yeast.

Tea Cake.—Take of white flour, two pounds; bi-carbonate of soda, quarter of an ounce; sugar, two ounces; butter, two ounces; sour buttermilk, twenty ounces, or one pint. Rub the soda, sugar, and butter well into the flour, and mix with the buttermilk; roll out and make into cakes, of any convenient size, and bake in a moderate oven twenty minutes.

Luncheon Cake.—Take of white flour, one pound; bi-carbonate of soda two drachms; sugar, three ounces; butter, three ounces; sour buttermilk, half-a-pint, or ten ounces. Mix as above, and bake in a quick oven, in a tin one hour.

Scotch Buns.—Take of white flour, two pounds; bi-carbonate of soda, two drachms; salt, quarter of an ounce; sour buttermilk, one pint or twenty ones. Mix and bake the same as for tea-cakes.

Plum Cake.—Take of fine flour, one pound; bi-carbonate of soda, two drachms; currants, four ounces; eggs, two; sugar and butter, each three ounces; sour buttermilk, half-a-pint, or ten ounces. Mix the flour, soda, currants, sugar and butter well together, then beat up the eggs and mix with the buttermilk. Mix the whole together and bake a tin one hour and a quarter.

Pastry for Tarts, &c.—Take of fine flour, one pound; bi-carbonate of soda, two drachms; butter, six ounces; buttermilk enough to bring it to the consistence required.

This paste is much superior to that made in the common way.

To cure Hams.—The following method of curing hams has been found most successful—the flavour is delicious and the meat tender and juicy. With six ounces of saltpetre rub over the ham or hams, and so let them remain twenty-four hours. Then boil two quarts of strong old beer with one pound of brown sugar, half a pound of bay salt, and two pounds common salt. Pour this boiling hot over the hams. Turn them every day for a fortnight, after which smoke or dry in the usual way. The above is sufficient for forty pounds of meat, and may be used again if boiled up with a little fresh salt, and a little more beer.

Another Way.—(The quantity given is sufficient for from twenty-five to thirty pounds of meat.) Bay salt, one pound, common salt, one pound and-a-half, saltpetre, two ounces, black pepper, two ounces. All to be finely powdered, well mixed, and made thoroughly hot. With this mixture rub the hams over, taking care that every part is touched. So let them lie four days, turning daily, and rubbing till the whole of the ingredients have run to brine, then it is to be poured over each. After four days, pour over one pound and-a-half of treacle. Turn and rub twice a-week for a month, lading up the pickle and pouring it over; after this, lay them in cold water for a night. Afterwards hang them in a chimney, where a wood-fire is constantly kept. When the hams are to be dressed, put them into cold water over the fire; but do not soak them. Where sea-weeds are accessible, bacon and hams hung over the smoke of dried sea-weeds, acquire a rich and delicious flavor.

Fresh hay is very useful in preserving salted meat from rust. A lay-band may be twisted round each article, and the bacon slices or other articles be laid in a box on a bedding of fresh hay. A layer of hay also above each layer of meat, and one at top of all. Close tightly and keep in a dry warm place.

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CANADIAN MANUFACTURES.

Every possible encouragement should be given to domestic manufactures in Canada, that could be made from our raw produce, for our own use. Agricultural implements of every description, should be of Canadian make. We do not advocate, however, that we should make use of inferior implements because they were of Canadian manufacture, in preference to superior implements of other countries. There is no necessity for this, as we may have the very best models, and we have excellent materials and workmen. We should not purchase low priced implements for their cheapness, because such are generally unfit to execute work properly, and from their being made of unsuitable materials, and too slight for their use, they are the most expensive implements a farmer can purchase, however low the price.

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SUMMER FALLOW.

Executed in a proper manner, from the commencement to the end of the process, is an excellent means of improving the soil, particularly in heavy clay land. There are not any better means of cleaning the land of all weeds, of mixing and pulverising the soil, of ploughing to the depth required, and of straightening the ridges, if previous crooked,

and making them of suitable and uniform width. These improvements cannot be well made without summer fallow. The benefit of the process is not confined to these improvements; but the soil is actually enriched and rendered much more capable of producing good crops, though no manure should be directly applied to the land. The frequent ploughing and harrowing, and exposure of the soil to the influence of the sun and atmosphere, has a very ameliorating effect upon it, however it is produced. The ploughed soil must imbibe the gases that are constantly floating in the air, and thus acquire fertility. It is only when the land is broken up, and kept constantly stirred and turned, that it is capable of attracting the useful gases that float in the atmosphere; and unless the process of fallowing is properly executed, and the soil constantly broken up by the plough, the harrow and grubber, the great improvement by fallowing is not attained.

The land intended for summer fallow should be ploughed or drilled up the previous fall. The drilling answers a good purpose, takes less time, and the land is dry, and early in spring is fit for work. The drills can then be well harrowed, and the land ploughed across. This is the commencement of the process. After the spring work is finished, the fallow should again be worked with the harrow, the grubber or the plough, or all three if required. The small seeds of weeds will probably have sprouted, and then will be the proper time to destroy them by the plough and harrow, and all roots of weeds by hand picking and burning, if their vitality is not destroyed by the sun drying them up while exposed.

Summer fallow affords the farmer full opportunity of cleaning, levelling, draining, liming and manuring the land. If he has manure to apply, it should be with the last ploughing, and then the land to remain over for spring sowing. The land that is summer fallowed in a proper manner, with or without manure, will give a better crop of grain the following year than by any other mode of cultivation. For fall wheat, is the best preparation possible, and we should not hesitate to sow fall wheat, if sown in time, and in a proper manner, in drills, or ploughed in lightly, on summer fallowed land.

BLUE STEM WHEAT.

PUTMAN BURTON, of Gaines, Mich., writes to the *Michigan Farmer*, a letter relative to the excellence of Blue stem wheat, over that of Soule's variety, in which he says:

"In 1850, I sowed ten acres of wheat on a new fallow: five of these acres were sown with six bushels of Soule's wheat and five with six bushels of the Bluestem variety. About the fifth of the June following, the field was struck very severely with the frost, which cut the wheat badly, so that I had little hopes of a crop. I found that where the fallow had been thoroughly burned, the frost had done but little injury, and the wheat was good. During the time of the frost the weather was very dry, and kept dry until the 14th of June, when the wheat that was frosted sprung up from the ground thick and heavy, and both kinds headed out very handsomely, but then it was struck with the rust. The Soule's especially suffered badly, as its grain never filled out larger than chess seed. The Bluestem, on the contrary, did not suffer from the rust, but proved tough, and turned up well; yielding when threshed out, about 15 bushels

to the acre, although there was a great waste at harvesting, which took place on the 13th and 14th August, 1851. The next year I tried another experiment, from which it was judged that the bluestem wheat was more productive than the Soule's wheat, by some three bushels per acre. In 1854 my new fallow ground was badly frosted, but yet the bluestem yielded from 12 to 15 bushels per acre. The present year my new fallow was killed as dead apparently as it well could be, yet I find that I have from 15 to 20 bushels to the acre of remarkably plump wheat, which I harvested on the 6th day of August.

The Auburn (N. Y.) American states that Joel Schoonover, a man ninety-eight years of age, was sentenced in that city recently to two years imprisonment in the State Prison, for the crime of arson, he having been convicted of burning no less than three barns belonging to near relatives—children, it is said. He exults in the commission of the deed, which consigns him to the convict's cell.

FLAX-GROWING IN IRELAND.

The *London Morning Post* thus accounts for the decrease this year in our Irish flax-growing. Besides, the reason here adduced, they should add the enhanced price of wheat:

It appears, from a return just completed, that the quantity of flax grown in Ireland during the present year falls far short of that produced in 1854. At first sight, it would seem difficult to account for this decrease. We have been at war for the last eighteen months with the country from which our foreign supplies of the article in question are chiefly derived, and we would naturally conclude that this circumstance would lead to a material increase of cultivation within our own dominions; but a very small amount of reflection will enable us to explain why the opposite result has taken place.

In anticipation of the war and its effects, there was a decided extension of flax cultivation in Ireland both in 1853 and 1854. But our total departure from the rules of maritime warfare hitherto maintained by this country upset the calculations of those enterprising agriculturists who sought to supply the anticipated deficiency. They assumed that, as was always the case in times past, all commercial intercourse must cease between us and our enemies, and that, therefore, we should be compelled to look to other quarters for those commodities with which they had supplied us. The free permission accorded to neutral nations, under the existing orders in Council, to import the produce of Russia into the United Kingdom, if we may judge from the returns before us, has rendered the speculation of the Irish farmers an unfortunate one. The quantity of flax grown in the present year has not only been less than in that by immediate preceding, but less than in any year since 1850. The fair and necessary inference is, that our imports of Russian flax have not diminished in spite of the war, and in spite of the blockade of the Baltic ports. By virtue of the orders in Council issued at the outbreak of hostilities, it finds its way to our markets, through the Prussian territory, with as great regularity, and in as great abundance, as in time of peace. And such being the case, we need not be surprised to find that whereas in 1851 there were planted in Ireland 151,403 acres of flax, in the present year the quantity has fallen to 97,192.

CULTIVATION OF THE BASKET WILLOW.

Mr. M. D. Everest of Macedonia Depot, Ohio, writes the *Ohio Farmer* under date Sept. 15, as follows:

Last April, I bought of Geo. J. Colby, of Vt., fifty thousand Willow Cuttings. We got through sticking them the 14th of May, and now many of the sprouts are six feet long, and all will average about four feet. They will pay well this year, if there should be sale for cuttings. My ground was only plowed, for the wet weather commenced before I knew that I should obtain any cuttings, but we were particular to put the cuttings clear through the soil, into the soil below and only a few of them failed to grow. The best time to prepare the ground is in the fall, for most of the land, that is suitable for the willow, is too wet to till in the spring, early enough. It takes about three days' work to stick an acre with the cuttings; it should be done early in the spring, before other work commences, so that it can be done well without costing too much per acre.

From what I know of the willow trade, and the cultivation of the willow, there is no doubt, in my mind, that farmers will find it very lucrative to grow them. Most every farmer has some land on which nothing but trash grows, which is just the land for the willow.

AGRICULTURE IN FRANCE BY HORACE GREELEY.

PARIS, Tuesday, July 17, 1855.

A Yankee here lately said to a Frenchman: "I am amazed that your people continue to cut grass with that short, clumsy, wide-bladed, straight-handled, eleventh-century implement, when we in America have scythes scarcely dearer which cut twice as fast." "Why, you see," responded Monsieur, "while you have less labour than you need, we have far more; so that while it is your study to economize human exertion, it is ours to find employment for our surplus. We have probably twice as many labourers as we need." "Then," persisted Jonathan, "your true course would seem to be to break your scythes in two and work them at half their present length, thus adjusting your implements to your work, since you are confessedly unable to find work enough for your laborers, even with the wretched implements you now use." Monsieur did not see the matter in this light, and the stream of conversation flowed into another channel.

Now while otherwise sensible Frenchmen actually believe that labour is here in excess, there is at this hour a pressing need of all the surplus labor of France for the next forty years to be absorbed in the proper drainage of her soil alone. For want of this, whole districts are submerged or turned to marsh for three or four months between November and April, obstructing labour, loading the air with unwholesome humidity, and subjecting the peasantry to fevers and other diseases. Thorough draining alone would immensely increase the annual product, the wealth, and ultimately, by promoting health and diffusing plenty, even the population of France.

So with regard to Plowing. It is not quite so bad here as in Spain, where a friend this season saw peasants plowing with an implement composed of two clumsy sticks of wood, one of which (the horizontal) worked its way through the earth after the manner of a hog's snout, while the other, inserted in the former

at a convenient angle, served as a handle, being guided by the plowman's left hand, while he managed the team with his right. With this relief of the good old days, the peasant may have annoyed and irritated a rod of ground per day to the depth of three inches; and, as care is taken not to afflict in this fashion any field that cannot be irrigated, he may possibly, by the conjunction of good luck with laborious culture, obtain half a crop. It is a safe guess that this cultivator, living the year round on black bread moistened with weak vinegar or rancid oil, because unable to live better, cherishes a supreme contempt for all such quackery and humbug as book-farming.

The display of Plows in the Palace of Industry I may have alluded to, but I am not yet done with it. It is therein perfectly demonstrable that the same expenditure of human effort and animal muscle which is now employed to disturb the earth indifferently to an average depth of five inches would suffice, if properly directed, to pulverize the same area thoroughly to the depth of ten or twelve inches, increasing our annual harvests by at least twenty-five per cent and affording a safeguard against the evil influences of both wet and dry seasons. A few enlightened minds here are contemplating this result; the great majority of French farmers either never think on the subject or else regard it much as one of our own inveterate blockheads—of that sort which not only knows nothing but glories in it—expends his substitute for wit on any meeting of a Farmers' Club.

France has naturally a magnificent soil. I prefer it, all things considered, to that of our own Western States. We have much land that is richer at the outset, but very little that will hold its own in defiance of maltreatment so well as this does. Lime abounds here in every form—the railroads are often cut through hills of loose chalk—and very much of the subsoil in this vicinity appears to be a rotten limestone or gypsum, but is said to be a marine deposit—proved such by the infinity of shells therein imbedded. There is not a particle of stone in the surface soil; the rotten gypsum is, for the most part, easily traversed by the plow, though at a depth of ten to twenty feet the same original formation may be found hard enough to quarry into building-stone. To re-enforce such a soil, after the exhaustion produced by a hundred crops in succession, it is only requisite to run the plow two inches deeper than it has hitherto gone—a process urgently desirable on other grounds than this. I never before observed land so thoroughly fortified against the destructive tendencies of human ignorance, indolence and folly. Then the Summer of France, as compared with ours, is cool and humid, exposing grain-crops to fewer dangers of smut, rust, &c., and breeding far fewer insects than does ours. (O that there were some power in America adequate and resolved to protect those best friends of farmers—the birds—against the murderous instincts of every young ruffian who can shoulder a musket!) I have seldom seen finer Wheat than grows profusely around Paris, and I think this region ought to average more bushels to the acre in the course of a century than any part of the United States.

But French genius and talent do not tend to the soil. I must have already observed that the "Imperial" School of Agriculture at Grignon, though twenty-eight years old, with

1,100 acres of capital land, a choice stock and well adapted building, enters on its twenty-eighth year with barely seventy pupils. A kindred testimony is wafted from a "Reform School" in the western part of the country. To this school young reprobates are sent from the adjacent cities and made adepts in Agriculture as a just punishment for their sins; and its last official report boasts that the school has been conducted with such wisdom and success that *over half of its graduates have enlisted in the Army!* There's a climax for you!

—The Agricultural Department of the Exhibition contains little by which intelligent farmers could be instructed. Samples of choice Wheat, Oats, Peas, Beans, &c., are very well in such a show, and may stimulate some cultivators to try to equal them, but do not tell them how the thing is to be done. I have already incidentally spoken of the Plows other than English as an ill-favored lot—those of France only less irrational than some competitors from other portions of the Continent. I judge one from Norway will take any premium which may be awarded to the worst. The chief anxiety of the contrivers would seem to be, that each shall be thoroughly guarded, at whatever cost, against running too deep into the ground, though to that excess they manifest not the slightest inclination. It is very plain that the makers of these Plows believe all the earth which lies more than six inches from sunshine very noxious to growing plants—as some of it may be while it remains unturned and unstirred since creation—but if so, that seems to me a very urgent reason for turning it up to daylight and giving it a chance to amend. I do not perceive a steam-plow among the novelties exhibited, but we shall not have to wait many years for that. Many of the newer harrows evince respect for the truth (which I believe has already commended itself to the approval of most enlightened cultivators in America) that the pointed, wedge-shape tooth is radically vicious, tending to compact the soil which it tries to pulverize and loosen. Harrow-teeth based on the principle of the plow and the cultivator, cutting easily, lifting and turning over all the soil that they disturb, are evidently coming into fashion.

Draining begins to fix the attention of the judicious few in France; a cheap treatise on its importance and processes has just appeared from the pen of one of the Professors at Grignon, and a tolerable sample of a tile-drain is laid down in the Agricultural Exhibition. Unlike those to which I am accustomed, in this drain an independent collar or broad ring (say three inches wide) loosely covers each junction of the tile, not so much to prevent their filling up with earth as to keep one from sinking below or rising above the other so as to stop the flow of water. The material is of course that of the tile. I should think this collar needless where the ground is firm and the tile well laid, and ineffectual elsewhere; but it is said to be considered worth its extra cost by those who have tried it.

Prof. John Wilson, well known in America, assures me that the tile-laying machine, of which only drawings and descriptions, so far as I am aware, have reached our country, is commending itself to the judgment of British improvers. This machine, now worked with moveable steam instead of horse-power, takes up its position at one side of the field to be drained, and commences the first drain at the point opposite on the other, slowly drawing

thence to itself a chain, to which is attached an apparatus which cuts a mere crease from the surface downward to the required depth, at which it makes a hole barely larger than the tiles, which closely follow on a string, being firmly attached to the perforating apparatus, and paid out from the starting-point just as fast as required. Thus each foot of the drain is perfected the minute after it is begun, while the labour of throwing out and replacing several cubic feet of earth for every foot of drain is obviated. Obviously, this would not answer in a rocky and in a mry soil, though in the latter this mode of cutting would tend to give firmness to the earth immediately surrounding the drain, at least for a time. I shall try to see a machine of this sort at work in England, and I wish some extensive, thrifty, wealthy, improving landowner would import or construct one. On the broad prairies, or on the fertile intervals of Western New York, it ought to work well.

—It is unsafe to condemn what you do not fully comprehend, but many of the European contrivances for mowing, reaping, &c., by horse-power, seem absolutely puerile compared with those known in our country. So the machines for thrashing and cleaning grain here exhibited seem generally such as we have for the last twenty or thirty years been superseding by better, and some of them clumsily made and in bad condition, as if they had been brought here from some old lumber room, without cleaning. This is not what one expects or is accustomed to see in Paris. On the whole, I do not believe any decided impulse will be given to Agricultural improvement in France by the Exhibition, though in nothing more has France more pressing need of progress.

Yet let me not close without a tribute to the enlightened few in and near Paris who are making most spirited efforts for such improvement, regardless of the flouts and sorry jokes wherewith stibborn Ignorance is ever set on to oppose such efforts. At the head of these laborers for human good I place the working members of the Society founded here last Winter under the auspices of the philosopher St. Hilaire, which has for its object the domestication of animals hitherto useless to man, and the introduction to France of those which have been proved useful in remote regions, but have not yet been naturalized here. (The attempt now being made by the U. S. Government to introduce the Camel and the Dromedary to the wild, scarcely peopled region which separates Missouri from California is far narrower, but of the same nature with this.) The acclimation of Plants also is likewise to be vigorously prosecuted, and I learn it already gives promise of important and not distant results. An edible root from China may be relied on to take the place of the Potato, should the disease by which that root has been afflicted for the last ten years prove incurable; while a new and far harder Silk-Worm, has been discovered in Australia, which will thrive on the foliage of the oak and other trees common to our forests, producing therefrom a staple quite as serviceable, though not quite so delicate, as that for which Europe was originally indebted to Eastern Asia. The absolute value of these and kindred additions to Man's available resources remains to be settled, but none can seriously doubt that many blessings, hitherto unrealized, will yet crown the peaceful labors of Science impelled by Philanthropy.

I have just had a conversation with Mr.

Wray, an intelligent English planter from Natal, (South Africa), who has been a sugar-grower in both the East and the West Indies, and who is confident that a plant known among the Caffres as the *Imfy* might be advantageously naturalized and grown in all temperate climates for the production of Sugar. He says it will grow wherever Indian Corn will ripen, though it likes a hot bright Summer; that two crops a year may be harvested in our Cotton States and one in any part of our country south of 45°; that it does not require replanting oftener than the Hop, (say four times in a century;) and that it will yield three to four thousand pounds of choice Sugar to the acre at each harvest. A plant similar in species but inferior in kind has recently been brought hither from Northern China, and is doing well. The expressed and boiled juice of this plant has hitherto been supposed incapable of granulation, but Mr. W. has discovered a process which obviates this difficulty. I heartily trust this subject will receive due attention in America, and I think Mr. Brown, in the Agricultural department of our Patent Office, can give further information with regard to it.

—I bid adieu to the World's Exhibition of 1855 in the saddening conviction that I have not half seen it, and that nine-tenths of its visitors are even more ignorant of its contents than I am. Its immensity tends to confuse and bewilder; the eye dances rapidly from one brilliant object to another, while the mind fixes steadily upon none; so that he who wanders fitfully gazing from court to court, from gallery to gallery, may carry away nothing positive but a headache. You will see hundreds jostling and crowding for a peep at the Imperial diamonds, crowns, &c., which are said to have cost several millions of dollars, where a dozen can with difficulty be collected to witness the operation of a new machine calculated to confer signal benefits on the whole civilized world. Who looks at the Self-Adjusting Windmill, which was first exhibited in our country last year? Yet that, if it prove what it promises, will do mankind more service than all the diamonds ever diverted from their legitimate office of glass-cutting. As I pass through the darker courts and relatively deserted outskirts of the Exhibition, my eye rests on admirable products on which years of faithful labor have been spent—to very little purpose so far as their presence here is regarded. It will be instructive to preserve a copy of the awards made by the Juries now scanning the various inventions, &c., and compare them ten years hence with the verdicts stamped on those same inventions by experience. What competent observer will act on this hint and publish the result.

DECREASE OF EMIGRATION.

The total number of emigrants who sailed from Liverpool for all foreign ports during the three months ending June 30, was 43,880, against 84,330 in the corresponding quarter of 1854. The decrease is not confined to any particular branch of the migration trade.

THE IMPROVEMENT OF GRASS LANDS.

In the improvement of grass land, the first thing to be done, is the removal of all

stagnant water by means of thorough under-draining. Unless this is accomplished the best of cultivation, seeding and top-dressing, will fail to produce their full effect.

When our meadows fail, from whatever cause, it is generally advisable to plow them up in the fall, and cultivate them thoroughly for two or three years, with corn, potatoes, or other root crops, manuring them heavily, and seeding down again when the white daisy and other weeds have been destroyed, and the old turf has entirely disappeared. If, however, the land is so low that it is not desirable to cultivate it with other crops, it may be plowed up in August, and well worked with the cultivator, harrow, &c., till a fine "seed bed" is obtained, not forgetting to give it a good coat of manure;—if long manure plow it in; if well decomposed compost, which is best, spread it on the furrows, harrow and cultivate till it is thoroughly incorporated with the soil. About the first of September, sow it with artificial grasses, and be not sparing of the seed; half a bushel of Timothy and half a bushel of red-top, or other grasses in proportion, is none too much. Generally, by so doing, a fair crop of good hay is obtained the next season. This method of re-stocking worn out meadows has been practised with much success by many excellent farmers in New-England. Some of them recommend sowing clover with the Timothy and red top, in the fall, but we should be inclined to fear it would seldom survive our hard winters; unless indeed it were sown quite early, say in July or first of August.

We have seen meadows greatly improved by simply scarifying the sward in the fall by means of a heavy harrow, and then sowing from eight to sixteen quarts of Timothy, red-top and rye-grass seeds, equal parts, to the acre. In the case alluded to, heavy rain followed immediately after the sowing, and the seeds were not harrowed in at all, but generally it would be well to cover them slightly with a light harrow. We need hardly add that a good coat of compost, spread on the sward before the first harrowing, would be of much benefit.

The best time to top-dress all meadows that are not of too light or porous a nature, is in the fall. In England nothing was more common, twenty years ago, than to make a compost with barn-yard manure and old headlands, and after it was well decomposed, to cart it on to the meadows during the winter months. The effect was very beneficial. Unmixed manure was seldom used. Since the introduction of Peruvian guano, however, the practice of composting old headlands has, to some extent, given way to top-dressing with light artificial manures. Guano gives a better immediate effect at a much less cost; but whether it is ultimately more profitable is an open question. With hay at from \$15 to \$20 per ton, there can be no doubt that a judicious application of good Peruvian guano, in the fall, or very early in the spring, will give sufficient

increase, for a few years at least, to pay for the guano and have a reasonable profits. The constant exportation of hay draw heavily on the soil for potash, and as *guano contains very little potash*, (not more than 2 per cent) it may reasonably be supposed that to manure with guano alone will soon leave the soil deficient of available potash. If such should be the case however, an application of wood ashes occasionally would supply the deficiency.

Aside from underdraining, there is no improvement better worthy the attention of American agriculturists than that of irrigating grass land. Who that has ever seen the beautiful water meadows of Gloucester, Hampshire, Devon, and other English Counties, can doubt that we have in irrigation a grand means of increasing the production of our grass land, and through them, by keeping an additional quantity of stock, of raising the general fertility of the farm? If, Signor J. DEVISORZI, secretary of the Italian committee on Irrigation, could say that "irrigation as an art is neglected in England," what would he say of this country? A perusal of his "Report on Milanese Agriculture," showing the astonishing effect of irrigation in Lower Lombardy, would satisfy the most sceptical that we have in the water now running uselessly down our hill-side a great and perpetual source of wealth. We have enterprising farmers who raise water a considerable height by means of hydraulic rams, windmills, &c., for irrigating purposes, and if it will pay them to do so, how much more profitable would it be for those so located, that an abundance of water can be obtained by damming up a stream and diverting it from its natural course by means of artificial ditches sluices, &c.?

The Hon. A. B. DICKINSON, at the last Annual Meeting of New-York State Ag. Society, stated that he had found hard water, containing much lime, far less valuable for irrigating than soft water. This is quite probable, since the soft or rain water contains much more ammonia than the hard water; nevertheless the water running over the calcareous soil of Hampshire in England, and which is consequently very hard, is used with great success. It is generally supposed that water productive of fish, particularly trout, is well suited for irrigating, for the reason that the substances which supply the young fry with food, are also beneficial to plants, while mineral matters which are noxious to fish, are also injurious to vegetation. For grass land, experience seems to indicate that clear water is preferable to that which is turbid from containing organic or inorganic substances.

But although, as a recent writer says, the "clearer the water the better," an admixture of animal excrements adds greatly to its fertilizing properties, and there can be no doubt that there are many farms so situated that a stream of water could be turned through the barn-yard, and used to convey a considerable portion of the manure

to the land at a slight expense. In the dairy districts of Devonshire and Cheshire, and some parts of Switzerland, this practice is adopted to some extent with advantage.

We cannot close our eyes to the fact that many have tried irrigation to some extent with but partial success; and there is a very general impression that irrigation is not adapted to our climate and circumstances. In case of failure, the trials, so far as they have come under our observation, are very imperfect, and generally manifest entire ignorance of the laws of vegetable growth, on the part of the experimenters. The fundamental error usually lies in imperfect drainage. *The water is suffered to become stagnant on the land, and, of course, under such circumstances would be likely to do as much harm as good.* In nine cases out of ten, it is impossible to improve our grass lands to any great extent without thorough under-draining. This secured, there is hardly any limit to the crops of grass which may be obtained by good seedling, top-dressing and irrigation. In Lombardy, they cut eight or nine crops yearly from a meadow." This seems hardly possible, though the statement rests on good authority. In the colder climate of England, irrigation has done wonders. In the poetical language of PHILIP PUSEY: "A slight film of water trickling over the surface—for it must not stagnate—rouses the sleeping grass, tinges it with living green amidst snows and frosts, and brings forth a luxuriant crop in early spring, just when it is most wanted, while other meadows are still bare and brown. It is a cheerful sight to see the wild birds haunting these green spots among the hoar-frosts of Christmas; or the lambs, with their mothers, folded on them in March. A water-meadow is the triumph of agricultural art, changing, as it does, the very seasons."—*Country Gentleman.*

FISHES AND THEIR MIGRATIONS.

We have from "Putnam's Magazine" some curious details concerning herrings, eels and other fish thus:

For known and for unknown purposes, in the tiny mountain brooks and in the wide ocean, fishes are seen in unceasing motion, darting in all directions, travelling now single and now in shoals. Their regular journeys are mostly undertaken for the purpose of spawning; the delicate mackerel moves southward when its time comes, and the beautiful sardine of the Mediterranean goes in spring westward, and returns in autumn to the East. The sturgeon of northern Europe is seen singly to ascend the great rivers of the Continent, and the ornal or migratory salmon of the polar seas travels, we know not how, through river and lake, up into the Baikal, and there swims, in whimsical alternation, but always in immense crowds, on the southern and then on the northern bank.—The travels of the salmon are probably best known, because the fish was a favorite already in the days of Pliny, and yet, strange

enough, it is found in every sea in the Arctic, near the equator, and off New Holland, only not in the Mediterranean. They press in large triangular masses up all the great northern rivers of Europe, Asia, and America. They enter Bohemia with Shakespeare by sea, sniling up the river Elbe; they approach Switzerland in the green waters of the Rhine, and even the foot of the Cordilleras by a journey of 3,000 miles up the Amazon! Their crowds are not unfrequently so dense that they actually stem for a while the current of mighty rivers; still these bands are formed with great regularity. The strongest and largest females lead—a fact which will rejoice the strong-minded women of our age—followed by others of the same sex, travelling two and two at regular intervals; after them come the males in like order. With a noise like the distant roaring of a storm they rush up the stream, now sporting in easy, graceful motion, and now darting ahead with lightning speed that the eye cannot follow. Do they come to some rock or wall that impedes their way, they leap with incredible force, and repeat the effort until they have overcome the difficulty; it is even said that, at the foot of the casaracts, they will take their tail in their mouth and then suddenly letting it go, like an elastic spring, rise twelve or fifteen feet in the air. And thus they travel on, undismayed and untired, until they have found a suitable place for depositing their eggs, and with the same navelous instinct return, year after year to the distant ocean.

The herring is a small insignificant fish, yet it gives food to millions, and employment to not less than 3,000 decked vessels, not to speak of all the open boats employed in the same fishery. Where their home is, man does not know; it is only certain that they are not met with beyond a certain degree of northern latitude, and that the genuine herring never enters the Mediterranean, and hence remained unknown to the ancients. In April and June, all of a sudden, innumerable masses appear in the northern seas, forming vast banks, often thirty miles long and ten miles wide. Their depth has never been satisfactorily ascertained, and their denseness may be judged by the fact, that lances and harpoons thrust in between them sink not and move not, remain standing upright!—

Divided into bands, herrings also move in a certain order. Long before their arrival, already their coming is noticed by the flocks of sea-birds that watch them from on high, while sharks are seen to sport around them, and a thick oily or slimy substance is spread over their columns, coloring the sea in the daytime, and shining with a mild, mysterious light in a dark, still night. The sea-ape, the "monstrous chimera" of the learned, precedes them, and is hence by fishermen called the king of the herrings. Then there are first seen single males, often three or four days in advance of the great army; next follow the strongest and largest, and

after them enormous shoals, countless like the sand on the sea-shore and the stars in heaven. They seek places that abound in stones and marine plants, where to spawn, and like other animals they frequent the localities to which they have become accustomed at a regular time, so that they may be expected as surely as the sun rises and sets.

Other fishes have strange peculiarities connected with their travels. Thus, we are told that the mackerels spend their winter in, what would appear to others, a most uncomfortable position. In the Arctic as well as in the Mediterranean, as soon as the winter comes they deliberately lunge their head and the anterior part of their body into deep mud, keeping their tail erect, standing straight up. This position they do not change until spring, when they emerge, in incredible numbers, from their hiding-places and go southward for the purpose of depositing their eggs in more genial waters. Still they are so firmly wedded to this element that they die the instant they are taken out of the water, and then shine with phosphorescent light.

The eel is the strangest of travelling fishes; he even performs journeys on land. In hot, dry summers, when ponds and pools are exhausted, he boldly leaves his home, and winding through thick grass, makes his way by night to the nearest water. He is a great gourmand, man-o'-war, and his young, tender peas so dearly, that he will leave the river itself and climb up steep banks to satisfy his desire, and, alas! to fall into the snares of wicked men. Other fishes travel in large crowds all night long and perch in Tranquebar not only creep on shore, but actually climbs up tall fig-pines, in pursuit of certain shell-fish, which form his favourite food. Covered with viscid slime, he glides smoothly over the rough bark of spines, which he may sheath and unfold at will, save him like hands to hang by, and with the aid of side fins and a powerful tail he pushes himself upward, thus completing the strange picture of fish and shell-fish dwelling high on lofty trees.

EXPERIMENTS WITH SPECIAL FERTILIZERS.

MR. FREAS.—It is greatly to be wished that those who are in the practice of using special or concentrated manures in the fertilization of their soils, would so apply them as to cast some light upon the great and important question of their specific and relative value. I have myself made some field attempts with this view, but my experiments have approximated but remotely the object contemplated. We should, I think, be extremely cautious how we predicate opinions upon mere isolated cases; yet in the present instance, the result appeared strong to be so decided and unequivocal that I hesitate not to present them, and will do so in as few words as possible.

The trial was made on a piece of Indian corn, of the eight rowed variety, and was as follows: A piece of land, of a light, sandy

texture, with a free descent, and a porous subsoil, was ploughed eight inches deep on the 6th of May, 1854. It was rolled, and then thoroughly harrowed, and struck off into furrows four feet apart, the furrows being three inches deep. Commencing on one side, I deposited half a gill of guano in each hill, the distance between each hill being three feet, and having levelled it, drew over it about half an inch of soil, and then dropped my corn, six kernels to the hill. The corn was covered with the common hand hoe, and, as nearly as I could calculate, one inch deep. Six rows of twenty hills—making one hundred, and twenty in all—were planted in this way. The next six rows were manured with poudrette, and the quantity used was the same; so also were the details of dropping covering, &c. The third six rows were manured with super-phosphate of lime, (Du Bourg's,) a table-spoonfull to the hill, the other details being the same as in the previous cases. The next six rows were manured with half a pint of unleached wood ashes, salt, plaster and pulverised charcoal, in equal quantities, i. e., one glass each, to the hill, and the corn dropped directly upon the mixture. The next, and last six rows, were planted with no manure.

The corn all came on well, as the weather was genial, and very favorable from the time of planting, till the spires appeared above the surface. The whole piece was worked three times with the cultivator and hand hoe, and great care taken to keep down the weeds through the season. Now for the result. The six rows manured with guano, yielded thirty quarts, or just half a pint to each hill; the six rows manured with poudrette, produced twenty-five quarts, the third six rows, manured with Du Bourg's super-phosphate, produced thirty-four and one-fourth quarts; the six rows on which the ashes, charcoal, plaster and salt mixture was bestowed, yielded twenty-seven and a half quarts; and the unmanured six rows, twenty quarts. The weight of stover on the several compartments, was very nearly in the same relative ratio as that of the corn, and the ripening about the same in each case.

J. N. R.

Burlington co., N. J.
Germantown (Pa.) Telegraph.

SAVING MANURES.

After the hay harvest is over farmers have leisure time enough to attend to the making of composts. Stable manure must not be suffered to lie long in heaps without mixing it with much other matter. That from horses, in particular, will heat to excess in a very few days, provided it lies tight and admits the air to the head.

But even this kind of manure will not heat in case it is trodden down hard so as to exclude the air. Let a horse in a stable, twelve feet square, stand on his manure and tread it close and there is no danger of heating. It is on this principle that when we want to prepare manure for the field, early

in the Spring, we overhaul it often and throw it up as light as possible.

This is a good time to gather weeds and sods and peat mud to increase the compost heap. All the scrapings should be gathered, for all will be wanted for September seeding, or for spreading on grass lands in October.

As to the barnyard, that may be ploughed before the compost matter is carried out. But we doubt much of the propriety of the practice of ploughing often in the summer in barn yards. We only expose the strong portions of the manure to evaporation. And if the cowyard in the Spring was well covered with loam or other matter, it may lie till September to be enriched by what is dropped by the cattle.

We object not to the use of a plough in the yard a few days before carting out to the field, for this makes the labour of shovelling easier and also serves to mix up the ingredients. It is a good practice to cover all the fresh manure by throwing on a little loam each morning. Have two or three heaps of loam in different parts of the yard, and use a shovel instead of a plough.—*Massachusetts Ploughman.*

TURKISH WHEAT.

There have been received at the Patent-office one hundred bushels of Turkish flint wheat, produced by the United States dragoon at Constantinople from the foot of Mount Olympus. This wheat has already been tested in Virginia and Maryland, and has proved both hardy and productive. It possesses in a remarkable degree the quality of long keeping, as was indicated by a sample shown us which was brought to this country by Captain Porter, of the navy, four years ago. We learn that the Sultan takes a lively interest in the affairs of this country, and has intimated that there are other wheats in his dominions which would be highly desirable for our government to obtain.

A plan has been suggested—which would undoubtedly prove highly advantageous to the agricultural interest of this country—of importing large quantities of wheat from the shore of the Mediterranean and Black Seas for supplying our farmers with seeds at about the cost of the original purchase, freight, &c. It has been proposed that the store-ships of the navy, which usually return from the Mediterranean in ballast, be freighted with seed-wheat, purchased by government, and sold to agriculturists at a nominal rate, on condition that they shall cultivate the same, and report the result to some proper authority, by whom the excess of cost may be refunded to them.

We understand that wheat of an excellent quality can be purchased at Constantinople, under ordinary circumstances, for less than half the usual price in the Atlantic markets and in the United States. If this be true, it would be cheaper and more profitable to the farmers in the end to sell his own, and purchase his seed-wheat from abroad, as the

change of soil and climate would often cause his crop to mature earlier, and give an increased yield.—*New York Life Illustrated.*

MULCHING.

This process, although known and practised for many years by a few cultivators, has become extensively adopted only at a very late period. It seems peculiarly adapted to our hot and dry summers and operates chiefly in preserving the moisture of the surface, and in preventing the growth of weeds. The moisture at the surface of the earth from rains and dews, is quickly dissipated under a hot sun; and if this surface is allowed to become covered with a dense growth of living grass and weeds, these pump out of the soil and throw off into the air a much larger quantity of moisture than is evaporated by a bare surface of earth only. But if this surface is covered with a few inches of old straw, hay, or leaves, the moisture is retained in the soil, and the growth of weeds prevented. As a general rule, we have found it most advantageous to leave the surface bare and keep the soil well mellowed till near mid-summer, and then to apply the mulching. For a covering of litter, while it promotes the humidity, also prevents the heating of the soil, in and in this way may retard early growth if applied too soon. There are exceptions, however; one in the case of large, deeply-rooted trees not affected by nor needing mulching, and the other which are removed in summer, need the careful and constant retention of the earth. We have succeeded, with scarcely one failure in fifty, in transplanting the strawberry drought and heat of summer, by simply giving the surface a mulching of two inches of barn manure and on which the watering was poured when necessary. Indeed, there is nothing that better prevents the ill effects of baking by surface watering, than a covering of this sort of a moderate depth. Mulching will, however, promote moisture in the soil, even when neither artificial nor natural watering is given, simply by arresting such as rises upwards through the earth. In one instance a striking illustration of this effect was furnished during a very long season of drought which injured and threatened to destroy a row of newly transplanted apple trees. Their leaves had already begun to turn yellow, and growth had ceased, but on coating the ground about them with a crop of mown weeds, a change was soon effected, and in three weeks the leaves had returned to their deep green hue, and in some instances growth had recommenced. But on no kind of tree is mulching more necessary than on newly transplanted cherry trees. Thousands of these are lost every season, after they have commenced growing, by the drying heat of mid-summer, and the evil is sometimes increased by superficial watering. A deep mulching will generally prove a complete remedy if seasonably applied.

Some interesting facts on this subject

were stated, and a valuable suggestion made at one of the conversational meetings of the Massachusetts Horticultural Society. S. Walker remarked that he had used tan, sawdust, litter, leaves, &c., but he believed short, newly mown grass one of the best things,—he had mulched a great deal with it, and found it laid close to the soil. He also recommended the succulent weeds of the garden or roadside. He found tan and sawdust to be useful merely by retaining the moisture. D. Haggerston had found sedge from salt marshes best, particularly if cut short; a good watering upon it made it lay close to the ground. He found it excellent for strawberries. He had also found tree leaves excellent, if they had partly decayed, so as not likely to be blown away. Old hot bed materials made of leaves and manure had proved particularly fine. Several spoke of the ill effects of too deep a mulching, but we think the more common error is in spreading the covering of the soil too thinly.

Country Gentleman.

CAREFUL CULTIVATION.

It is of no use to make a garden, plant beds, set out trees, bushes, flowering plants, &c., and then suffer the interest in these things to abate, after the first excitement in procuring them has passed off. Many err, egregiously, in this way. They saw, last year, handsome trees, luscious fruits or beautiful flowers, in some person's garden or yard, and resolved to have the same sort this year for their own. Or they have read in the newspapers, or noticed in a Nursery Catalogue, cert in things described which had awakened an interest in their behalf. So, they send off for some choice Apple trees, or dwarf Pear trees, or hardy Grape Vines, or flowering shrubbery, and when they arrive, laudable pains are taken to prepare the soil well and set them out in good shape. For the first year, perhaps, they will be properly attended to. The ground will be kept loose and free from weeds, and the plant protected from high winds, ranging cattle and vagrant boys. But nature must have her own time, and it takes perhaps years before the fruit shows itself. In the meantime, the novelty has passed away, the excitement abated: the trees are neglected; the earth around them becomes swarded and bound; the lice, caterpillars and vermin are allowed to take possession; the snows have broken down a limb or two; the high winds have given the trees a lurch and half turned its roots out; the patience of the owner is exhausted, and he concludes his original outlay was a waste, and the flourishing accounts he once read, were a humbug. So he blames the newspaper, the catalogue, the nurserymen, and every one but the right one—himself. He is the one at fault. He has violated the

wants of nature, and his shrubbery cannot stand rebellion against her laws. The fruit never appears; or if it does, it is not what was expected of it, and what it might have been,—all because the tree which produced it had been stunted, neglected, starved.

Whatever is worth purchasing is worth taking care of; and it is so ordered in this world that without care we can have nothing. Young trees should have a rich mellow soil; they should be supported by a stake; the ground should be cultivated for some years around it; the aphids and other vermin should be washed off; the diseased or broken limbs should be removed, and the cattle and boys should be kept away from them. With this care, all one's original expectations will be realized in due time. So of pear trees—so of cherry—so of plum—so of grape vines—so of gooseberries, currants, and indeed of everything else in the orchard or garden. *Take care of your things and they will repay you;* neglect them, and then blame, not the nurseryman or newspaper editor, but yourself alone.—*Rural Intelligencer.*

SUMMER STABLED HORSES.

Horses which have nothing but dry hay and grain all the year through, must suffer both in comfort and condition. Like other domestic animals they relish variety in their food; and the tendency of such variety to improve the condition of animals has been so often noticed as to have passed into the common proverb—"Change of pasture makes fit cattle."

Truths of this kind seem to be very generally forgotten by some of those who have occasion to keep their horses in the stable throughout the whole year. Many seem to forget or ignore the fact, that when dry hay and unbruised grain may be the handiest and least troublesome feed for their horses, these useful servants are thereby curtailed of comfort and prevented from enjoying that amount of good health and of ability to endure labor, which they might obtain by a somewhat different mode of feeding.

Various methods might be employed to secure some variety in the food of summer-stabled horses according to the varying circumstances of their owners. Roots, corn for boiling, grasses cut green, mashes, and things might be occasionally introduced as agreeable and wholesome changes. At the present time, when hay and grain are so high, economy as well as the comfort of the horses might be consulted by some occasional change of food, and where nothing can conveniently be had but hay and grain, something desirable might be affected, both as regards expense and the health and comfort of horses, by cutting the hay quite fine and steaming it occasionally, and by grinding or bruising the grain. Hay cut and grain ground will go much farther than in the natural state. We know that a horse may be kept in good condition on a daily ration

of three perks of cut hay and four quarts of Indian meal; and if the yearly amount of such an allowance is calculated it will be found that it requires about a bushel of corn per week, or fifty-two bushels per year, and one ton of hay (which should be of the very best quality) for feeding a horse during a whole year. *This is economical;* and if boiling water should be poured over a part of the hay occasionally and the meal with a little salt added to it, it would give a variety and degree of succulence to the otherwise dry feed, which would make it more relishing and wholesome.

We think this hint, if practically applied, will prove of service both to man and beast—both to horses and their owners. We may add here, being forgotten in its proper place, that horses will sometimes prefer boiled turnips or ruta bagas to raw ones, and we will make them still more acceptable.—*Country Gentleman.*

THE ONION MAGGOT.

Messrs. Editors:—In this vicinity, for several years past, our onion crop has been a total failure, in consequence of the depredations committed by the maggot. The result has been to give up the attempt to raise them, and but few of our gardeners in this vicinity have sown the seed, considering an attempt to raise them so much time thrown away. But a complete and sure remedy was accidentally discovered by one of my neighbors last season. He had sown a bed of onions, and they appeared to be doing well, till one day when they had grown to about three inches high, he discovered that they were drooping and dying; and from that day forward they continued to diminish, until it was evident, that unless some preventive was applied they must all share the same fate. Ashes, dust, soot, &c., were applied, but with no beneficial results. One by one the plants disappeared, until, as a last attempt to save them, (although it was applied with little faith) the contents of a tub containing the liquid of thoroughly steeped tobacco, in which he had been washing his sheep and lambs to fill their ticks, was poured upon the bed. The insects ceased their ravages at once. The plants revived, and an abundant crop of onions was raised. This is the only maggot exterminator I have heard of, that has proved efficacious, and this one that may be relied on as a sure cure, if bountifully applied.

JAMES FELLOWS.

Salisbury, N. H.—*Boston Cultivator.*

"Grouting" is a simple operation by which the roots of plants taken up in dry weather are coated over with a moist and (sometimes) fertilizing substance, which prevents their dying from excessive evaporation, and gives an impulse to their growth until their existence is rendered certain by a shower of rain. When properly done, it is of great utility, rendering the gardener or planter almost independent of the "seasons."

We scarcely ever wait for a rain, in order to transplant cabbages, tomatoes, sweet potato draws, or any similar plant, our practice being simply this: We take a bucket of rain water or soap suds from the washing tub, and stir into it enough leaf or woods mould and scrapings from the cow-pen to make it as thick as batter or thin mortar. Into this batter, we dip the roots of sweet potato draws or any other plant, and when they are well coated with the grouting mixture, we set them where they are intended to stand, in a hole made with a dibble or pointed stick, and having pressed the earth firmly around all parts of the root, the work is done.—*Michigan Farmer.*

THE USE OF LEAVES.

The office and utility of leaves are becoming better understood by cultivators than formerly; yet we find a good many still adhering to the old belief that the sun's rays, directly shining on farm fruit, are what perfect it in dependently of other influences.

On this subject, theory and practice have been invariably found in perfect accordance with each other. The principles of physiology teach us that the sap of a tree, when it passes in at the roots, remains nearly unchanged in its upward progress through stem and branches, until it reaches the leaves, where, being spread out in those thin organs, to light and air, it undergoes a complete change, and thus becomes suited to the formation of new wood and new fruit. Strip a jolly growing tree of its leaves at midsummer, and from that moment the supply of new wood ceases, and it will grow no more till new leaves are formed; and if it have young fruit, the growth and maturity of the latter will cease in the same way. A few years since, a Yellow Gage plum tree lost all its foliage from leaf-blight, when the plants were not fully grown, and while yet destitute of flavor. The fruit remained stationary and unaltered, until, in a few weeks, a second crop of leaves came out. They then swelled to full size, received their crimson dots, and assumed their homied sweetness of flavor.

The object of pruning should be, therefore, to allow the leaves to grow to full size without being injured from crowding.

FLEMISH HUSBANDRY.—We have to thank Mr. Hutton for a copy of a pamphlet lately published by the Bureau of Agriculture,—"Outlines of Flemish Husbandry as applicable to the improvement of Agriculture in Canada." Mr. Hutton, in the preface states, that the work was originally compiled by an eminent Agriculturist, at the request of the Society in England for the diffusion of useful knowledge. It was strongly recommended to the consideration of the Bureau by Robert S. Atcheson, Esq., one of the Commissioners of the Trust and Loan Company of Upper Canada, and upon this recommendation was printed. It treats of the division of land into polders, and upland;

the variety of soils; implements of husbandry; modes of ploughing; manure, and its application; the succession, rotation, and cultivation of crops; the cultivation of flax and hemp, and other plants valuable for their oily seeds, or used for their colour in dyeing; the management of grass lands—of cattle and horses, of gardens, orchards, and woods; and of spade husbandry practised in the small farms in Flanders. This portion of the Kingdom of Belgium, is perhaps the most prosperous agricultural country in the world, and our own people, being similar in their habits, character, and circumstances to the natives of Flanders, with no great disparity in the soil, this publication cannot fail to be perused with interest, and effect much good. The chapter on select farms is a most useful one, and those parts of the work which relate to increasing the depth and fertility of the soil by deep ploughing and trefching, the collection and application of manures, and the succession and rotation of crops, are worthy of special notice. "They will not only convince the farmer," says Mr. Hutton, "that the average produce of the poorest soils in Canada, those even which have been exhausted by over-cropping and years of neglect, may be at least doubled; but will also point out to him, in the plainest manner, the simple means by which that result may be effected."—*Transcript.*

ON AGRICULTURAL IMPROVEMENTS IN IRELAND.

In the "Farmer's Herald," a very useful and well conducted agricultural work, there appears a long and able article under the title prefixed to this note, signed "An admirer of all kinds of improvements." We recommend the article to perusal, and meantime append an extract from it, illustrative of the writer's notion or knowledge of the rapid progress and extraordinary, because surpassing, development of agricultural excellence going on in Ireland, through the agency of the National Board of Education. This extract is certainly a startling one, and calculated to make English and Scotch agriculturists prick up their ears:—

"The greatest, most rapid, and successful stride lately made in agricultural improvement in Ireland, is the introduction of Model Farms, which must do more for the proper grounding of the young Agriculturist, than all the lecturing upon Chemistry, agricultural discussions, and publications united; as a proof of which, it is said, that one of his pupils has lately been appointed manager and practical instructor of the youths attending the Albert Model Farm, Glasnevin. And what adds to the eclat of the rapid progress of these institutions is, the gentleman who proved to be the successful candidate for the situation alluded to, obtained it in the face of about 70 candidates from Ireland, England, and Scotland, many of whom, it is understood, were men of long and extensive experience—in short, agriculturists of the

first class. And should such a marked selection have been judiciously made, of which there is no doubt, such a circumstance must speak volumes for the rapid agricultural education in Ireland, and tend greatly to remove that old and still existing idea, that Ireland is far behind England and Scotland in agricultural improvement, &c."

YELLOW BIRDS vs. WEEVIL.—Mr. D. H. Roberts, residing on the farm of Orson Marsh, in Colesville, communicates the following; A neighboring farmer wished he would get a gun and kill some yellow-birds, which farmers generally suppose destroy the wheat. Mr. R. declined, as he does not like to kill birds of any kind. Out of curiosity, however, he killed one of the birds and opened its crop, when he found that the bird, instead of eating the wheat, eat the weevil—the great destroyer of the wheat. He found as many as two hundred weevils in the bird's crop and but four grains of wheat, which had the weevil in them. This is a very important discovery, and should be generally known. The bird resembles the canary, and sings beautifully.—*Binghamton Republican.*

TALLEST CORN OF THE SEASON.—There was shown in our office, on Saturday, a stalk of corn over thirteen feet in height—actual measurement. It was grown at Terre Haute, Ia., by Capt. Van Brunt, Assistant Superintendent of the Alton and Terre Haute Railroad. Had it remained in the ground, it would undoubtedly have attained an altitude several feet higher. We have seen corn, the growth of the Wabash Valley, over eighteen feet high. And upon the Illinois Bottom, and in various other localities in this State, corn attains a height which would astonish people down East, who are accustomed to see corn about as tall as our wheat.

The same gentleman had also a specimen of spring wheat, which was some of the finest we ever saw. The berry was large, plump, and white—equal in appearance to most of the winter wheat of ordinary seasons.—*Chicago Democrat.*

TRIMMING TREES.

As soon as haying is over, fruit trees of all kinds may be trimmed. Now is the time to expect the wounds to heal rapidly as the trees make wood fast at this season.

Never cut off large limbs from fruit trees unless you choose to induce premature decay. You cannot do worse than to cut off large limbs. If there are too many of them, let them remain while you thin out the twigs that are not too large to bear fruit.

Let no man with heavy boots climb your trees. Pliable shoes are much better than boots. Nails in boots may do to go on ice, but they are quite too hard for the limbs and bark of fruit trees.

A FACT IN REGARD TO DRILLING WHEAT.

We wish to record a fact which seems rather remarkable in regard to drilling in wheat. We sowed about nine acres 1st fall, with one of Ross' Drills, and some three acres among corn, with a three shovel cultivator. Of the former, we did not notice a single plant heaved out with the frost during the winter, though a part of it was sown on the poorest clay land on the farm, with but one plowing. It was sown immediately before that among the corn, and presented in the early winter a decidedly poor prospect. But that sown among corn was badly killed with winter, many plants lying on top of the ground, dead. In some places, it seemed almost entirely ruined. It was the same kind of wheat as that which was drilled. Our readers may draw their own conclusions.—*Indiana Farmer.*

PRESERVATION OF MILK.

The following method is recommended for the preservation of milk, either at sea or in warm climates:—

Provide pint or quart bottles, which must be perfectly clean, sweet, and dry; draw the milk from the cow into the bottles, and, as they are filled, immediately cork them well up, and fasten the corks with pack-tread or wire: then spread a little straw on the bottom of a boiler, on which place the bottles with straw between them, until the boiler contains a sufficient quantity. Fill it up with cold water; heat the water, and, as soon as it begins to boil, draw the fire, and let the whole cool gradually. When quite cold, take out the bottles and pack them with straw or sawdust in hampers, and stow them in the coolest part of the ship, or in a cool place.

Some years since there was a Swedish or Danish vessel at Liverpool, having milk on board, preserved in this manner. It had been carried twice to the West Indies, and back to Denmark, and been above eighteen months in the bottles; nevertheless, it was as sweet as when first taken from the cow.—*London New Monthly Magazine.*

On this subject the Editor of the "Chemist," in the May number, remarks:—

"We lately tasted, at the Royal Institution, milk preserved by Mr. Mabburn's process, and which had been presented by the Abbe Moigne to Mr. Barlow, who alluded to it in his lecture on preserved meats and vegetables. This milk was one year old, and was as sweet as when first drawn; a considerable quantity of cream had collected in the neck of the bottles."

COLORED GLASS AND THE GROWTH OF PLANTS.

Chambers' *Journal* says:—Recent discovery has shown that remarkable effects can be produced on plants, by interposing colored glass between them and the sun. Blue glass accelerates growth, and Messrs. Layson, of Edinburgh, have built a stone house glazed with blue glass, in which they

test the value of seeds, and to judge of the quality by the number that germinate; the more, of course, the better. Formerly, ten days or a fortnight elapsed while waiting for the germinating of the seeds; but in the blue stove house two or three days suffice—a saving of time, worth, so say the firm, \$2500 a year.

This use of color in the growth of plants is not altogether new, but its application to the germination of seed has not, perhaps, commanded the attention it deserves. But all scientific agriculturists must be familiar with the experiment of colored glasses upon the palm plants at the Kew gardens, and the gratifying success that attended the experiments. Varying climates will give varying results, just as solar rays vary. We have no doubt that many of the rich tints of flowers of other climes could be made perfect in this country by properly colored glasses to rival the palms of the tropics. The subject opens a wide field for experiments that would richly remunerate an enquiring and tasteful horticulturist.

BREADSTUFFS IN SOUTH AMERICA. It is a singular fact that the grain crop in South America bids fair to be as short as it is in Europe, though from causes quite different. Chili, which has been sending largely to California and Australia for several years, being cut off from the former market, raised less this year than usual, yet considerably more it was believed, than was required in the country. Many shipments were accordingly made to Australia before it was ascertained that it would be required at home. Flour has now advanced much in price, so that they may be obliged to import it from California. In Peru and Ecuador there is a scarcity, owing to various causes, one of which is the refusal of the emancipated slaves to labor. In Ecuador the price of flour has gone up to \$40 a barrel. Fortunate is it, therefore for the world that the crop has been so abundant in the United States that we have enough to make up the deficiency wherever it is required, and leave enough for ourselves.

Providence Journal.

CATTLE BREEDING.

It is stated in the London Quarterly Review that the effect of Sir Robert Peel's tariff in abolishing the duty on the introduction of live stock into England in 1844, was to revolutionize the character of Dutch and Danish farming. Before that event the pastures of the two countries were chiefly devoted to dairy purposes; but immediately after, "the farmers began to breed stock, and consequently turnips and mangel-wurtzel have been creeping over fields, where once the dairymaid carried the milking pail." The Jutland beef is described as being especially savory, and some of the animals sent to England by the Danes are acknowledged to be equal to the Durham short-horns. The Americans are said to be the best customers of Great Britain for fancy specimens of stock; and the prices we pay them for bulls are described as fabulous by the Reviewer, who instances as in point, the fact that an American gave last year a thousand pounds for the celebrated bull bred by Earl Ducie, which by the way, un-

fortunately broke its neck in the passage out; and that, for another from the same breeder, six hundred pounds was paid.

LOOK WELL TO THE FARM STOCK.

The *Ohio Cultivator* sounds a warning note to farmers in reference to the winter feed for animals. Sheep, it is well known, prefer "roast meat to boiled." They do better on a little well matured food in a dry season than on an abundance of succulent, unchlorinated grass in wet. Whether matters are generally as bad as the following would represent, we are unable to say, but the advice can be safely followed:

One of the most observable features among the live stock, in this season of abundance, is the ill condition in which they are prepared for the winter. The luxuriant growth of grass has been at the expense of its nutritious qualities, and every where we go, we find the cattle, and more particularly the sheep in a lean and often sickly condition; and when we consider that very much of the hay and grain for next winter's use is a good deal damaged, we feel apprehensive that our farmers will suffer great loss among their animals, unless they bestir themselves in time. Farm stock now, is even worse prepared for the winter, than after the great drought of last year.

BEST WAY TO PRESERVE EGGS

MESSRS. EDITORS—In Sept. No. of *Cultivator*, G. asks some questions on eggs. I cannot answer all, as one or two are difficult; but I will state many methods of preserving eggs.

I take a pine barrel (an old fish barrel well cleaned out answers very well,) and put in the eggs when they are sound, fresh and clean. I then cover them with lime water, made like common whitewash; the lime settles around the eggs, and the water stands on the top of the lime (the eggs all under lime.) Look at the barrel once in a while, to see if four inches of water, little more or less, covers the whole. If the water is all dried up, the lime gets hard and they are difficult to take out when wanted, and you have to carry them somewhere else to wash off the lime; so always keep water on the top. This lime water must be made at least two weeks before you pour it on the eggs or your eggs will be boiled hard enough to carry in your pocket.

When I am putting eggs away for future use, I use a pine pail to wet the lime in, and stand it by the side of the barrel in the cellar until it is cold enough; then pour on the eggs, and fill the pail again, and when it has been stirred two or three times and stood two or three weeks, do as before, and so on till I get through. Keep the vessels covered to keep out all dirt, or the eggs will look a poor dingy color. Be careful about this in the lime and water, and you will have fine white eggs.

I cannot tell how long they will keep, as I never saw any spoil. I have some that are five years and a half old as good as they ever were. I always preserve in this way, and have done so over thirty years with perfect success. I have seen people have eggs all spoiled, have heard them say they would never put any more in lime water. If I transport eggs, I barrel them with oats, well shaken down and headed up. They do well for a voyage of two or three weeks, but for daily use at sea, for whaling

or other long voyages, the first method is used and perhaps the best method known. JOHN WEATHERLY. *Geneva, N. Y.*

Country Gentleman.

—:—

A MODEL FARM OF THE EMPIRE STATE.

One of the most interesting agricultural articles we have read for some time is the statement of G. W. Coffin of America, Dutchess Co., N. Y., to whom the New-York State Agricultural Society awarded the second premium of \$30 for good farm management. It will be found in the Transactions of 1854, just published.

Management of Grass Lands.

The farm contains 108 acres, 90 of which are improved. The soil on about two thirds of the farm, is a limestone loam; on the other third it was what is generally called black slate. Mr. C. thinks the best mode of improving the soil is to keep it stocked down to grass, taking care in pasturing not to allow too close feeding off, and such portions as have furnished the winter stock of hay, should receive a dressing of manure as soon after the hay has been removed as convenient. August the best time. A thick mat of grass left on the land in autumn, answers the double purpose of protecting it from the searching winds and biting frost, affording a rich bed of manure as well adapted to its growth as any that can be applied. In seedling clover land to grass, he is careful to give it a complete and thorough "breaking down," and a bountiful supply of timothy and clover seed.

Experiment with Manures on Grass.

Mr. C. tried Peruvian guano, superphosphate of lime, plaster, and ashes, as manures for grass, with the following results:

Lbs. hay per acre.	
Without any manure of any kind, . . .	2060
400 lbs. of Peruvian guano,	4080
800 lbs. of plaster,	2680
400 lbs. of superphosphate of lime, . . .	3040
Unleached ashes, 26½ bushels,	3540

The cost of a ton of hay produced by the various manures over and above the natural yield, was, with guano, \$9.60; superphosphate, \$18.23; with plaster \$10.83; with ashes, \$3.60.

Superphosphate of lime was used on corn, a table-spoonful to the hill. *It had no apparent effect.*

Culture of Indian Corn.

Mr. C. has tried various methods of preparing seed corn, by soaking and rolling in different substances, but has abandoned the whole, and plants as it comes from the cob. He prefers "applying stimulants on the young plants as soon as they make their appearance." He uses plaster and ashes for this purpose—one part of the former to two of the latter, mixed, a small handful applied to two hills. He runs a steel tooth cultivator twice in a row, each way, a man following with a hoe to set up the injured corn and attend to such weeds and grass as are in and near the hill. As soon as the plants attain the height of about six inches, they are thinned out to four in a hill; another dressing of plaster and ashes is then applied, same quantity as at first, and by the time the corn is from 12 to 15 inches high, it has received its last cultivation by horse-power. We should have said that Mr. C. usually plants his corn on sod land that has lain down from 8 to 10, or even 15 years. He does not plow

till the last thing before planting. This gives the corn an equal chance with weeds and grass. Plows from 4 to 6 inches deep, harrows lengthwise of furrows, and marks with a drag 3 feet a part each way for medium sized varieties of corn, and farther apart one way for larger.

From experiments, Mr. C. finds that the most grain is obtained by cutting up corn at the ground and stocking.

After six years' careful experiment, with a view to ascertaining the relative value of seed corn from different portions of the ear, Mr. C. is compelled, against all former notions, to yield the palm to that from the *small end*. On different soils with like treatment, it has out-yielded that from other portions of the ear, *in every instance* where care was taken to select those ears that were well rounded over at the little end—the increase reaching as high in some instances as at the rate of 1000 lbs. (22 bushels of ears per acre) Five times out of six, the *larger ends* have yielded more than the middle.²⁵ Have any of our readers made similar experiments? and if so with what result?

Mr. C. sows from one to two acres of corn for fodder, which is used to good advantage when pastures become dry in August or September. He turns over green sward from first of June to tenth of July, and sows at intervals of two weeks. Makes broad furrows, 3 feet apart, and scatters from 50 to 60 grains to the foot covering by passing the harrow once across the furrows.

Four times as much cured fodder he says, can be produced in this way as is generally taken from the same amount of ground in hay.

Mr. C. tried an experiment in suckering corn. When the suckers first began to appear, they were taken off alternate rows. They soon grew out, and were cut again; the third time cutting finished the growth. The corn was husked at the usual time, 50 hills left to grow without suckering, produced 47½ lbs.; 50 hills from which the suckers had been taken off, produced 57½.

Root Crops.

He raises four to five hundred bushels of carrots per acre, by turning a rich piece of greensward, and sowing in drills 18 inches apart, about the 1st of June. In this way he has little trouble with weeds. Ruta bagas, Mr. C. says, have failed for the last few years, in consequence of a rot similar to that of potatoes.

Guano was applied to oats, at the rate of 200 lbs. per acre. It advanced their ripening about six days. The same amount of superphosphate had no apparent effect.

Mr. C. plants his potatoes on corn stubble, and although not quite exempt, they are less affected by the disease than those of his neighbors. He attributes this to the absence of all rapidly fermenting substances. The potatoes, however, are small. He made an experiment on potatoes, with the following results:

10 hills without any manure, gave . . .	13 lbs.
Do with handful of fresh ashes . . .	6½ "
Do with handful of compost hen	
manure,	19½ "
Do with handful of plaster	19½ "

The manures were applied in the hill at the time of planting; the ashes proving too strong, but each of the others increased the yield at the rate of about 50 bushels per acre. We are surprised that plaster should have had as

great an effect as compost, though we have known it to act very beneficially on light, dry soils.

Irrigating Meadows.

There is a never failing stream of hard water running through the middle of the farm, a distance of one hundred and thirty rods, and in that distance falls sixty feet. It is taken from its entrance on the farm, and conveyed in an open ditch, along the sloping grounds that descend towards the natural stream, and turned out so as to spread over about five acres of meadow. The meadows are near the barn, and are fed down in the fall and spring, until they exhibit a prospect of no great yield of hay. The water is turned on generally the first week in April, and changed, from week to week, to different places until the fore part of June; when it is allowed to spread out upon a pasture lot.

"So enormous," says Mr. C., "has the growth of grass become by the last of June, that we often cut the heaviest portions, and secure them before the month is out. Three tons per acre have been cut from the watered portions, while that adjoining without water or irrigation, would scarcely yield a ton, though the soil and grasses were of the same nature." This is a gratifying result, and one which accords with the experience of all those who judiciously practise irrigation on grass lands. The Hon. A. B. Dickinson states, as our readers may recollect, that *hard water*, is valueless for irrigating purposes. The above is evidence, if such were needed, to the contrary.

The Dairy.

Mr. C. keeps five Cows. In the summer of 1852, an accurate account of their produce was kept from the 15th of April to the 15th of November. The number of lbs. of butter produced in this time, (214 days,) was 820½. Which, at 21 cents per lb, make . . . \$176.08
5 calves sold at \$5 each, 25.00
2 quarts of milk, for family-use, per day, 214 days, at 2 cents, 12.84
Allowing each cow to produce 100 lbs of pork from skim milk, sold at \$8. 40.00
3 quarts of milk per day for family, for 60 days, at 3c. 5.40
Milk sold in 60 days, at 3 cents per quart 36.25
50 lbs. of butter made in winter, at 23 cents, 11.75

\$307.32

This is \$61.26 per cow. Who can beat it?

The cows during the grass season have nothing but pasture. After the frosts began to appear, they were fed pumpkins twice a day, until they had eaten 20 cart loads. Hay and corn stalks form their winter food, except an old cow, that furnished the family with milk and butter through the winter—she had four quarts of corn meal and buckwheat bran, mixed, per day.

Sheep.

Mr. C. keeps thirty full blood South-Down sheep, and twenty Cotswold; the former sheared 3 lbs. 14 oz. of wool, and Cotswolds 6 lbs. In 1853, sold the wool altogether at 41 cents. In 1854, was offered 3½ cts. South Down wool is generally worth from 2 to 4 cents more than the Cotswolds. Mr. C. says:—

"I seldom have a ewe that does not produce one lamb, certain, and sometimes three.

I do not let them reproduce until 2 years old South Downs are more productive, and best calculated to breed in large flocks, endure cold and storms better. I rear 35 per cent. more lambs than I have old sheep; seldom lose one; I sold one full blood South Down lamb that was 60 days old, to a butcher for \$5—no extra feed; sold eleven buck lambs for \$90. Wethers bring \$8 to \$12 per head, at two years old for market. Long-wooled bring more than South Downs for mutton, but costs more to fatten them." Mr. Collin doubtless means that the Longwools are larger than the South Downs, and bring more money on that account—not that they are worth more per pound. In London, South Down mutton is worth from 2 to 3 cents per lb. more than Cotswold mutton. Mr. C. also, we presume, would not be understood to say that it costs more to produce a lb. of Cotswold mutton than a lb. of South Down, for it is certain that such is not the case; "it costs more to fatten" Cotswolds, because they are much larger.

Since the failure of the ruta baga crop, Mr. C. allows his sheep, in their stead, a few small potatoes in the winter.

Sub-soil Plowing

In regard to subsoiling, Mr. C. says:

"I have used the subsoil plow on a portion of several lots of different soils, and for different kinds of grain; subsoiled one land of about sixty feet in width, greensward, slaty on one end, and limestone soil on the other; left hands each side without subsoiling, planted to corn; all treated alike otherwise, and no perceptible difference in the yield or growth at any time; next year followed with oats; no perceptible difference in this crop. In another field, soil, limestone, loam and clay; subsoil of an adhesive character; land in corn the year before; subsoiled one land, working to the depth of eighteen inches, and sowed to oats the whole field; stuck stakes and visited the ground often, but could never see a shade of difference in the color of the growing grain, nor in the quantity produced; the stakes were all that marked the boundaries; same field sowed to wheat in the following fall, all plowed alike, showed no evidence of different treatment.

In a field on another part of the farm, less loam and more clay in soil; used the subsoil plow to about the same depth on one land only; sowed the whole lot to oats, and could see soon after they came up, that on the sand subsoiled they looked yellow and sickly for the first two weeks, but then began to improve, keeping on until they presented the same appearance as the rest of the lot; no one being able to perceive any difference up to the time of harvesting. On gathering, the difference was so apparent that one could have almost told with his eyes shut as soon as he came to this land. Although there was about the same growth of straw as on other portions, yet the bundles were much heavier and heads better filled. The amount produced by subsoiling must have been as much as eight bushels to the acre more than where the common plow was used only. No perceptible difference in the grass this last summer."

The Country Gentleman.

CROSSING.—It may be asked, is crossing objectionable in all cases? It is not, when understandingly done. As an illustration of this position, I may instance the New Ox-

fordshire sheep that rank next to the Cotswolds, and by many are found equal to them. These are one-eighth or one-sixteenth Leicester and the remainder Cotswold. Thus we make experiments by crossing different breeds, and if we make an improvement in any particular, continue the cross, if not, then return to the original stock.

Those who have bred ewes of mixed blood to thorough-bred bucks have met with more or less disappointment from the following cause. It is an admitted fact among all breeders of close observation, that, as a general rule, the produce of an animal is not, in color, size, symmetry, &c., the counterpart of its immediate sire or dam, but is likely to take after some of its remote ancestors. If this proves acceptable, I may extend the subject in a future number. [Bourbon County (Ky.) Stock Grower.]

—:—:—

As we were going to press, we received a communication from Mr. W. Boa, on the subject of the Judges Report on the Crops of the past year, in the County of Montreal. It will appear in our next.

MONTREAL MARKET PRICES.

Rates at which produce is purchased from the Farmers.

30th November, 1855.

- Hay from 16 to \$18 per 100 bundles.
- Straw from 4 to \$5. do.
- Fresh Butter, per lb., from 1s 6d to 1s 8d.
- Salt Butter, do from 1s 0 1/2 d to 1s 1d.
- Country Cheese, from 6d to 8d.
- Wheat, 10s to 11s.
- Barley, 4s 9d to 5s.
- Rye, 4s 6d to 5s.
- Oats, from 2s to 2s 3d.
- Yellow Indian Corn, from 5s 6d to 6s.
- Indian Corn, 5s to 5s 3d, Ohio.
- Buckwheat, from 4s 3d to 4s 6d.
- Peas, from 4s 0d to 5s.
- Beef, per 100 lbs, from 5 to \$7.
- Mess Pork, 14 1/2 to \$15.
- Mutton, per carcase, from 2 1/2 to \$5.
- Lamb, do none.
- Veal, 2 1/2 to \$4 1/2.
- Eggs, from 11d to 1s 0 1/2 d.

ATLASSES.

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- Johnston's Elementary Atlas.
- Ewing's School Atlas.
- Reid's School Atlas.
- Chamber's School Atlas.
- Chamber's Primary Atlas.
- Ramsay's Quarter Dollar Atlas.
- Ramsay's Scripture Atlas.

For sale by

H. RAMSAY.

ALMANACS for 1856.

THE Illustrated Annual REGISTER of RURAL AFFAIRS and CULTIVATOR ALMANAC, embellished with one hundred and fifty Engravings. Price 1s 3d.

—ALSO—

MACLEAR'S CANADIAN ALMANAC. Price 7 1/2 d.

—AND—

The FARMER'S ALMANAC. Price 3d or 1s 6d per dozen.

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H. RAMSAY.

1855.

AGRICULTURAL SOCIETY OF THE

COUNTY OF MONTREAL.

THE Subscribers to the Funds of this Society generally, are notified, that TWO THOROUGHBRED AYRSHIRE BULLS have been imported, one is kept at the Stables of Leon Laporte, Esq., in the Parish of Longue Pointe; the other, at the Stables of James Powley Dawes, Esq., at Lachine, in the Parish of Lachine; each Member of the Society for the current year, has the right of the gratuitous use of his choice of either Bull for two Cows, but must pay a fee of 2s 6d for every other Cow sent.

Members are requested to send their tickets of Membership, and money with every third or other Cow, if more than two be sent, as all payments must be made strictly in advance, otherwise no service will be rendered. And Farmers generally are requested to take notice that until subscriptions for current year be paid they will not be entitled to use Bulls.

By Order,

JAMES SMITH,

Secretary.

N.B.—Another Bull is expected in the Spring, and forthwith, after its arrival, will be placed at St. Laurent, for the use of Farmers in that locality.

FRUIT TREES,

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 McGegors,) Guy Street.

Oct. 1, 1855.

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. Le Moine, " Montreal.
- Edward Quin, " Longue Pointe.
- F. M. Valois, " Pointe Claire.
- John Dods, " 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.

LOWER CANADA

Agricultural Implement Warehouse
AND
SEED STORE.

THE Subscriber begs to intimate, that he proposes opening an AGRICULTURAL IMPLEMENT WAREHOUSE, in the LARGE HALL, over the St. ANN'S 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.
5 in.

Montreal, 1st Dec., 1855.

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.

Philadelphia: CHILDS & PETERSON.
Montreal: HEW RAMSAY.

Early Calves for Sale.

THE Subscriber offers for sale Five BULL CALVES of the best pedigrees.
RALPH WADE, Junr.
Cobourg, December, 1855. 3 p

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,	29	bushels,	Wheat.
3	do	29	do	Oats.
3	do	29	do	Barley.
3	do	29	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

Montreal: Printed and Published by H. Ramsay, No. 37, St. Francois Xavier Street.

JUST PUBLISHED,
FOR 1856.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS and CULTIVATORS' 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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Albany: L. TUCKER.
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John Armour, Montreal; P. Sinclair, Quebec; A. H. Armour & Co., Toronto; Alex. Bryson, Ottawa; John Duff, Kingston; J. C. Ansley, Port Hope; Andrews & Coombe, London.

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10. Buist's Family Kitchen Gardener, 3s 9d.

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