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OFFICIAL SERIES.

THE FARMERS' JOURNAL,

AND

Transactions of the Board of Agriculture

OF

LOWER CANADA.

VOL : XI. SEPTEMBER, 1858. NO. 1.

CONTENTS.

(General.)

FARMERS' JOURNAL.—(*Editorial Matter*;) Application of the Sciences to Agriculture; Grazier and Breeder; Poultry Yard; Rural Architecture; Enquiries and Answers; Foreign Agricultural Intelligence, Obituary, and Critical Notices, &c.
HORTICULTURAL JOURNAL.—(*Editorial Matter*;) Entomology, Meteorology; Ladies Department; Markets.
EMIGRATION.

All communications to be adressed—If for the French Journal, to J. PERRAULT, Esq., Secretary-Treasurer and Editor:—If for the English Journal, to JAMES ANDERSON, Esq., F. S. S. A., &c., &c., Editor, Board of Agriculture, Montreal.
N. B.—Communications received before the 15th of each month will appear in the ensuing Number.

*"O! fortunatos nimium, sua si bona norint,
Agricolos! quibus ipsi, pacem discordibus armis,
Fundit humo facilem victum justissima tellus!"*
VIRG. GEO.

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FARMERS' JOURNAL.

Our readers will observe that the Eleventh Volume of this Periodical opens under a change of management:—And it therefore becomes necessary to say a few words explanatory of the new arrangements.

The Board and Publishers have been so fortunate as to secure the assistance and cooperation of valuable and reliable correspondents in the kindred Sciences. The French Journal will be conducted by J. Perrault, Esq., Secretary Treasurer of the Board of Agriculture for Lower Canada, pupil of the Imperial School of Agriculture of Grignon, and of the Royal Agricultural College of Cirencester; and the management of the English Journal has been undertaken by an experienced Agriculturist and Improver, late Government Drainage Commissioner for Scotland, in whom they are fully justified, from his Antecedents, to rely with confidence.

The publishing of the Journal will be conducted, as formerly, by Messrs. De Montigny & Co.; but paper, type, and arrangement have been changed, as will appear at a glance, for the better;—and the Board and Publishers are resolved, should they be so fortunate as to meet with even moderate encouragement from the Agricultural and general Public, to introduce successive improvements from time to time, so as to render the Journal, as nearly as possible, a complete Repertory of Agricultural lore,—including, of course, the Kindred Arts and Sciences in their application to Agriculture.

Every exertion will be made to expand and store the mind of the Canadian Agriculturist, more especially the tyro, not only by a careful comparative review of the varying practice in different localities on the American Continent, but we shall take care besides to keep him *au courant* of what is doing in European Countries, in relation to the employment in which he is engaged,—or in which, as an amateur, he may feel a lively interest. Our ultimate object will, however, be to accumulate by degrees materials for the formation of an independent Canadian Agricultural Literature,—worthy of her unrivalled natural capabilities, and of the great future which so unmistakeably, if not immediately, seems about to dawn upon her.

The Transactions of the Board of Agriculture,—separately paged,—comprising Prize Essays,—Original Papers, addressed officially to the Board,—Abstracts of the Annual Reports of all the Agricultural Societies in connection with it,—together with the Official Report and Premium list of the Provincial Exhibition, will accompany the Journal;—a portion on each occasion of its publication.

Although very little time has been left to prepare the First Number under the new management, after the final conclusion of preliminary arrangements, and it must not, therefore, be taken as a fair specimen of those which are to follow in the series, whether as regards the intended proportion of original matter, or careful selection,—yet due pains will be taken,—before the appearance of the Second Number, to render it and its successors more worthy of general patronage and approval.

It seems scarcely necessary, in conclusion, to add, that the Farmers' Journal and Transactions of the Board of Agriculture for Lower Canada,—independently of its official character—will unquestionably be—with the exception of the Sister Journal of Upper Canada,—the cheapest periodical of its kind ever offered to the Canadian Public.

But we are especially anxious to impress on our Readers our settled conviction that, however unexceptionably this Journal may be conducted, it will fail in character and efficiency, unless we succeed in securing the hearty cooperation of the leading practical Farmers of this Country. However, this is not to be had in a day; more particularly as it has been too much disregarded in times past. We have now to announce, however, that means are being taken to secure such invaluable cooperation; and that in our next number, we shall be prepared to submit to the public such an array of names of leading agriculturists, in every district, under the head correspondents, as cannot fail to insure to us the confidence and support of practical Agriculturists both at home and abroad.

J. A.

THE APPROACHING PROVINCIAL EXHIBITION.

It has been truly said that head, heart, and members, the three grand seats of individual power,—the organs of the three supreme forces—these, one and all in harmonious action, constitute the complete Agriculturist and Mechanic—the true and perfect man in every sphere.

The approaching Industrial Exhibition is an Institute discovering the rarest wisdom,—a public Educator—an Institute of instruction to all classes, and in which all classes should cooperate and participate:—affording, as it will do, to both, reciprocal pleasure, profit, and instruction. Its avowed public object is to stimulate and quicken invention; to enliven and recompense the ceaseless toil of patient drudgery;—to encourage soul-depressing routine with the hope of reward;—to render old task-work bearable;—to raise the tone of his character, and vitalize and quicken the spark of laudable ambition in the dull and discouraged operative of every class,—formerly without the prospect—whatever his merit, of achieving personal distinction in his craft;—unless indeed by some rare and fortunate accident;—to forward the objects, and advance the main purposes of civilization: in a word, to act, at once, as the Educator and Benefactor of

society ;—affording a true index of the popular bent ;—as a truthful reflection of the popular taste and genius in this country,—so supremely blest in its natural resources, and in the blended natural vigour of its population.

It is clear, on the smallest reflection, that no more effectual means could be devised for the amelioration of society of every grade. By stimulating invention, you are doing your best towards the practical inculcation of the fundamental rule ;—for well directed industry alone can ensure permanent comfort and independence, while it is the best guarantee for the attainment of the most envied description of respectability in a country, wherein the vast majority are doomed, for many a day to come, to subsist, in the literal sense, by the sweat of the brow. Is it not clear, then, that in no country could such an Industrial Exhibition be more desirable, or commendable—better adapted, or more suited to the actual requirements and social and economical necessities of the population than in our Province of Canada, which now sees dawning upon her—in family participation with her enviable Sisterhood—the glorious future of a distinct Nationality.

By stimulating industry, you are taking the simplest and most direct course towards improving the material and social condition of the people. By the practice of industrious habits, the operative will be enabled to lodge better,—to fare better, to dress better,—and to educate to greater perfection himself and his children ;—himself by the aid of Public Libraries, Mechanic's Institutes, and Private study ;—and his children, partly by the means we have indicated, and by embracing the opportunities of instruction afforded by our Public Schools and Colleges, and the Information for the People, now published and circulated so widely at a very moderate price ;—so as to be, as nearly as possible, within the reach of all who may be in quest of it.

It is a characteristic feature of the form of society under which we live, that there is a distinct recognition of the true dignity of labour. The lazy demagogue may talk patronizingly of that portion of his fellow men which he is pleased politely to style the “working classes”,—in contradistinction, of course, to the more favoured compeers of his own quiescent state of *otium sine dignitate* :—he may bid for their favour as a politician— he may condescend to flatter, as he supposes, successfully, their innate human vanity ;—but the intelligent Agriculturist and Mechanic, he may rely on it,—poor-deluded mortal,—has discrimination and perspicacity enough to rate his compliments and flatteries at their true value ; recognising, at once, the motive and its promptings ;—and will, at once, turn with gratitude and hope to the true patriot and lover of his species, who, by the encouragement of such demonstrations as our Provincial Exhibition,—such jubilees of handicraft,—such ovations of patient and successful industry,—such coronations of the genius and dignity of labour, as would fain exalt the working man to his true and merited position in Society—teaching him to respect himself, while his distinguished genius and patient industry are extorting plaudits and respect from the public voice of his consenting and grateful countrymen.

The hero, the philosopher, the statesman, the saint, the agriculturist, the mechanic must, alike, win the civic crown by a prudent and persevering exercise of industry and virtue. We all, alike, contend in the great public arena, in which we find ourselves accidentally placed, for the legitimate rewards of merit ; and, in order to insure the permanent blessing of a superintending and approving Providence, we must not faint or fail in well-doing,—but must be encouraged, even in spite of repeated successes or reverses, to go on steadily and perseveringly in the honourable course of toil, from perfection to perfection—for our own honor and credit, and the lasting benefit of our fellow men. We must not, while still in our prime, be delivered over into a compulsory or luxurious sloth ; we must not hide our candle beneath a bushel, depriving ourselves and others of the generous light which a Higher Power has indulgently entrusted to our keeping ;—but

be quick to recognise our unmistakeable duty, in whatever sphere we may be placed, which undoubtedly is to exert our faculties and endowments to the utmost for the advantage of the Society of which we have been made to form, though not a solitary—yet but an insignificant unit. And although it takes many drops to form the ocean, yet we should not withhold our *petit possible*; but heartily, cheerfully, and confidently contribute our mite, however small, towards the great aggregate of Industrial Effort, which forms, alike, the pride and material wealth of every great and progressing commonwealth.

The approaching Provincial Exhibition is a great National Organization—having for its object the encouragement and reward of Industry of every description. It is clear, from the few words we have said, it merits the approval and encouragement of all classes. They cannot fail to recognise, in its object and intention a reciprocal interest, which ought to form the only true and lasting bond in every well-constituted society. The more frequent these demonstrations,—the more frequently and clearly will all classes be brought to recognise their mutual dependence, and the more frequently will they be brought to the tacit acknowledgement of the great truth that the hand cannot say to the head, nor the head to the hand—go to—I have no need of thee!

Come then—one and all. Join heart and hand in the celebration of our National Jubilee, in which one and all have an individual—ay, and a fraternal interest.

It is fondly desired and hoped that the Agricultural Exhibition will come up to—if it should not excel, all former years. The facilities for the importation of Stock from Foreign Countries, as well as every new species of Agricultural and Horticultural Seeds and Plants, and Models of improved Agricultural and Horticultural Implements, are now so numerous, that it would indeed be strange if advantage should not be taken of them to the utmost. Nothing shall be wanting on our part to keep our Agriculturists *au courant* of all that is going on amongst us in the way of noticeable and well tested improvements. Though we deprecate that insatiable itching for novelty,—that reckless desire for experimentalizing,—which, in truth, discourages and retards substantial improvement—by discrediting the propagation and adoption of that which is truly valuable; for by encouraging empty pretension and treacherous deception, in the same breath in which you laud valuable discoveries, praiseworthy adaptations or applications of practical skill,—you are deliberately and effectually, though, it may be, undesignedly, mixing up truth with error; thus heedlessly fostering and encouraging both at the same moment; and you are manifestly taking the most effectual plan to render thoughtful and judicious men distrustful of everything novel—tho', in many cases, its adoption might be productive of material and immediate profit. We may perhaps see occasion to recur to this subject at a future time.

J. A.

DRAINING, THE SHEET-ANCHOR OF THE INDUSTRIOUS AND INTELLIGENT FARMER.

During the past month and by snatches, during the present, and at other suitable times, we have leisure to make improvements on wet lands, unapproachable in some instances, before the month of August, and hay meadows, should at this sea-

son, be ditched and seeded down. There is still much hesitation with many about making the necessary outlay in under draining such lands as may be ploughed in August and September. Some still contend, and stick obstinately to the position, that open drains are preferable, inasmuch as they can be made at a tenth of the cost,—can be more easily cleaned, when temporarily choked up,—and they further maintain, that much can be done on low lands by ridging by means of deep dead furrows at little cost;—for in most cases, it needs nothing more than due attention in the proper turning of the furrows.

They will tell you, that low pasture lands, affording nothing but wild grass,—may be ploughed into such ridges as to render the soil fit to produce sweeter feed. That one, two, or three acres may by turned and seeded, about the season we have been speaking of without any need of cross fencing:—for by the time the grass makes its appearance, the cattle may be taken out of their summer pasture. There is no doubt this is the cheapest, and we had almost said, the best way of resuscitating worn out grass lands, if attended to at the proper season; as the warmth of August and the beginning of September would cause the seed to germinate, and get a good start, and be prepared to resist the frost of autumn. By this method, nothing is lost but the fall feed; and on land where the crop of grass is small, this is comparatively of little value.

There is some practical truth and much apparent economy in all this, of which we shall have much to say hereafter. But at the outset, let us turn to the other, and undoubtedly the truthful side of the picture.

How is it that, after so many years of incessant culture, a soil of no great natural fertility has been made to yield an acreable produce, at least double of the United Provinces of Canada? According to the Official Returns we find the averages of wheat, for Upper Canada, $16\frac{1}{2}$ Bushels, and for Lower Canada, $9\frac{1}{2}$ Bushels per acre;—while, from similar authority, we find, from England and Scotland, the approximate averages range from 27 to 30 Bushels on the same Area. Climatic influence could never cause so great a disparity; for the acknowledged superiority of the Canadian Grain abundantly testifies, to the rare adaptation of soil and climate. But it is confessedly accounted for in the judicious application of labour which characterizes the husbandry of the Mother Country;—thorough draining, subsoiling, manuring, and a well-ordered system of rotation are the simple agencies by which the British Farmer is enabled to reap such an abundant produce from an inferior and highly taxed soil.

Every well cultivated farm presents a systematized mesh-work of thorough and effective drainage. It is the ground work and basis of all other operations, and it is the object to which the attention of every new holder of land, whether proprietor or tenant, is first directed. It is well known that the plants intended by nature to grow in a dry soil, cannot subsist,—or, if they should, but in a languid and sickly condition, in a marshy situation. As well might we expect to find an inhabitant of earth subsisting comfortably in the depths of the lake, or under the waves of the Ocean. It is clear, then, that a primary duty, under a perfect system, would be for every occupier, according to his means, to proceed, without unnecessary loss of time, to remove from the cultivated surface all superfluous water. For its presence in superfluity, for the time, precludes the cultivation of the more valuable varieties; retards the progress of vegetation by impeding the fructifying influences of the sun; for the life giving warmth will be expended in evaporating the superfluous humidity, before it can possibly exercise any direct beneficial influence on the growing crop. Therefore such soils are in familiar language, appropriately designated *cold* as expressive of their distinguishing imperfection;—they are also denominated *late*,—for, on perfectly drained soil, the maturation of the crops is found to take place at least two or three weeks earlier. This is surely a consideration of material importance to

the Canadian Farmer, whose brief summer, too frequently prematurely closes on his fondest-hopes.

But on thorough drained lands the period allowed for field operations becomes extended; and the fertilizing substances applied to the soil are permitted to exercise their legitimate influence on the growing crops;—instead of, in many instances, remaining, either partially, or totally, unproductive for good, or what is worse,—not unfrequently entering into infertile and noxious combinations with other latent, inherent, fortuitous or imported principles, and exerting malignant and destructive influences on the crops of the season,

The advantages of thorough drainage may be summed up as follows.

1. Stiff soils are more easily and more cheaply worked.
2. Lime and manure have more effect, and go farther.
3. Seed time and harvest are earlier, and more sure.
4. Larger crops are reaped, and are of a better quality.
5. Valuable crops of wheat and turnips are made to grow where scanty crops of oats were formerly the chief return.
6. Naked fallows are rendered less necessary, and more profitable rotations can be introduced.
7. The climate is improved and rendered not only more suited to the growth of crops but more favourable to the health of man and other animals.

There is a very prevalent belief in this Country that surface drainage is sufficient, and that under drainage would be a needless and unjustifiable expense. But is there any good reason for supposing that under drainage in Canada would prove, *ceteris paribus*, less remunerating on similar lands than in the neighbourhood of Genessee or Albany? The testimony of the reliable farmers of the Union is distinctly in favor of the view that the results will infallibly justify the expenditure. The beneficial effects are limited to no district, soil, or country; and though productive of greater immediate benefit in some soils than in others, we believe it to be an undoubted fact, which will be readily recognized and acknowledged by all experienced judges, that by much the largest portion of the most promising agricultural soils in Canada are of that description which would most benefit by judicious expenditure on surface and especially under drainage. It has been distinctly proved in the state of New-York, so similarly situated to Canada as respects soil, climate, taxation, markets etc., etc. that thorough drainage has produced effects as satisfactory and promising as on the stiff clays and under the moist influence of a British Sky.

We shall return to this subject, from time, to time so as to make it interchange agreeably with other subjects of importance.

J. A.

SEPTEMBER.

THIS is the Month for completing the harvest work,—for Draining, and for putting the ploughed land in good order for spring working. Land intended for summer-fallow, many are contented with ribbing—making into drills, so as to half-plough the soil. This rots the surface; and it may be harrowed down in

Spring for cross-ploughing. Sufficient feeding, for a few weeks, at this season, will bring Cattle into tolerable condition before the winter commences, and when the pastures have failed from drought this is especially wanted. Much care should be taken to husband the produce during the next six months, so as to turn it to the best account; for stock too often suffer during the spring from the lack of a sufficient supply of nutritive food—the pastures not being sufficiently advanced to receive them. Care should be taken to select your seed wheat—if you intend sowing your own—from the finest portion of your fields. The excellence of the produce will much depend on the careful selection of the seed. See that it be thoroughly dressed and cleaned,—steeped and prepared—with a sifting of quick-lime, before sowing—applied on its being withdrawn from the Steep. Late sowing, that it may benefit in this respect from the autumnal frost, is by some recommended to prevent the ravages of the Fly. Surface drainage should be carefully attended to; and well cleared furrow drains judiciously placed; more especially when you do not enjoy the advantage of thorough drainage. Take care to cut your corn as low as possible, so as to save as much of the stem as may be, and desist from the improvident and slovenly practice of topping it. If corn should suffer from premature frost, collect all the hands you can bring together, and scythe it down before sunrise. The warmth of the earth and air will gradually thaw, and partially dry it; and as early in the day as it is fit to be removed, let it be gathered and properly secured. This will give it a chance of ripening on the stalk, or in the straw as it is expressed in Farmers' phrase—if it should previously, by good fortune, have reached a certain stage—and if the glazing process should have commenced in the ear it will not fail to do so. Some are so particular as to gather their seed from the stalk while standing in the field, in order to careful selection; and the greatest improvements in quality, and the introduction of new varieties have been obtained in this way. In selecting corn seed take only the uppermost ear. Take great care of your straw. It will go to swell your manure-heap, whether fed or littered. Have a sufficient number of hay-ropes prepared; and, as it comes from the Threshing machine, bind it up in bundles for use. If you have any spare apples, and dairy offal, you will find these, as in some parts of England and elsewhere, together, an excellent feed for fattening hogs. Such feeding affords the most delicate grain, and their efficacy is much improved by being previously cooked. Grain should always be given,—where convenience offers,—ground and cooked. It is economical to do so. The Farmer should try to find time to note particularly the rate of progress of his Cattle in the process of fattening;—weighing them occasionally if he should have the means beside him. He will, thus, by degrees, be enabled to frame for his own direction, a code of practical Rules—the result of his own observation—which will guide him in the most economical expenditure of feed as regards his own breed; and the publication of his careful experience and observation may be useful, besides, as a guide to others.

J. A.

AUGUST.

We have to report favourably of the crops in the Lower Province. There has been in some localities much interruption and loss in securing the Hay crop this season, owing to excess of moisture. It is of the last importance, in many situa-

tions to save it uninjured ; but heavy rains, occurring in the process of securing, deprive it of its most valuable qualities. We may state that the Agricultural districts, particularly in the West and in Canada, have only indeed now arrived at the worst. In many cases the crops are mortgaged for their full value, and in some cases for more ; so that the present harvest cannot do much to improve the state of matters ; for in the West the reports generally state the crops much below an average, and wheat in particular in many localities. Although large sums will undoubtedly be put in circulation when the crops come to market, yet it is probable trade will be dull throughout the country for a year to come ; though at the great centres of trade, where capital is ever most in abundance, and at low rates, the effects of the crisis may be expected to disappear sooner.

We are glad to be able to state however, that the reports from the Lower Province are generally satisfactory—although, in some cases, the hay crop suffered. Canadian peas have been a good crop, and they should bring a high price, as there has never been experienced such a universal failure in the pulse crop throughout England, arising from the universal drought and heat of the spring and summer.

Barley—this is a valuable crop, the best to sow grass seeds with ; and they should always be sown early. If the Barley crop should not be disposed of to the Distiller or Brewer, it can at all times, under proper management, be most beneficially employed in the feeding of stock on the farm. Wheat now is, and probably will continue to be, the principal crop with which to sow grass seeds in this country, although a heavy crop smothers their vegetation ; besides, affording, as it does, a safe asylum for the grubs of destroying insects. Very early and very late sowing have been both recommended as remedies for this evil ; but we shall have to treat this subject, elsewhere, more at large. Talking generally, we find that a high temperature and a dry season are necessary to secure an abundant wheat crop. There is a great waste in seeding in this country. The farmer is, too often, unnecessarily prodigal in the quantity he scatters ; although it is undeniable that from imperfect drainage and inefficient tillage much of the seed he sows is left to perish, which under an improved system might have been advantageously spared. Besides perishing by drowning, where the land has been rendered by superabundant moisture too long remaining upon the surface, hard and stiff and ill comminuted, lying, in farmers' parlance, in lumps and clods and rugged, —when the harrows pass along with a leaping, uneasy motion, leaving great part of the seed uncovered or partially exposed, it will be filched away by birds or vermin,—and, of what germinates, there will be a great proportion of sickly and feeble plants. Not to talk of the unnecessary and profitless expenditure of labour under the present imperfect system, the very loss in seed corn alone, in a brief succession of crops and seasons, would go far to defray the total expense of applying the effectual and permanent remedy for the evil—viz. a perfect system of thorough drainage. We have made a few introductory remarks on this most important subject in another page of this number.

Besides saving an unnecessary expenditure of labour, and preventing damage and waste to the crops in so many ways, drainage is also beneficial in a sanatory point of view. But more of this at a future time. We are seldom in this latitude, subjected to very prolonged, extraordinary, or injurious droughts ; and dry seasons are generally most profitable to the Farmer, everything taken into account. We believe that an early season generally shows heavier averages than a late in this country. To ensure an early spring-time, and to provide against the injurious induration consequent on a long continuance of superfluous moisture on the surface, and other kindred evils, we shall not fail to impress, from time to time, upon our readers the great importance of efficient drainage both in a pecuniary and a sanatory point of view. We shall also consider whether it be

possible to devise a scheme, adapted to the present and prospective necessities and requirements of this country, similar in its objects and provisions to the Drainage Acts in Great Britain and Ireland. We had extensive experience in the framing and practical working of these measures; and should rejoice could we find it practicable to render that experience of service to our adopted country.

The conviction is strong that the crops in the Western States will be decidedly short this season. The deluges of rain in June and July and the intense heats have wrought irreparable damage. For two or three nights we have had premonitory indications of early frosts—so that the Indian corn crop cannot fail to suffer severely. The Grain and Flour markets are consequently much excited. In Montreal the price for No. 1 suddenly rose from \$4 70 to \$5 dollars in about two days, and with a prospect of its being sustained and to go on increasing. Detroit flour, which would scarcely pass for fancy, could not now be had down here, including all charges, under \$5. Flour is in demand here at \$5 to \$5 05 for No. 1 and scarce; as are also the finer qualities. No. 2 is held at \$4 70. Fine at about \$3 90.

The potatoe crop has been injuriously affected in many localities. When the ground is dry, so as to provide the crop with a congenial bed, early planting should be the rule. We shall take occasion to dwell, at length, in future numbers, on the subject of the potatoe disease, and the general management of the crop with a view to escape or counteract the ravages of this fatal scourge.

As regards the turnip crop many remedies have been confidently announced for the fly, so fatal to this crop in its early stages, and we insert a remedy, from another source, in the present Number. We ourselves have been in the habit, of sowing occasionally, a row of early seed alongside the later and staple variety destined to stand for the crop of the season, in order that the fly might sate itself on the earlier thus securing impunity to the later variety. But we invariably found, in a very extensive and varied experience, the most efficient method to practice on a large scale was to stimulate, by every attainable means, the early growth of the plant, in order that it might speedily attain such a measure of strength and robustness as to place it beyond the possibility of materially suffering from the feeble efforts of its destroyer. We always steeped our turnip seed, as well as wheat, to serve the double purpose of purification, and early and vigorous germination.

Mangel Wurtzel, Carrots and Parsnips, particularly the first, were it not for the early sowing of the seeds, would be a desirable crop in this country. It has stood this season in England whilst the turnip crops in the neighbourhood have been rendered a veritable *caput mortuum* from the ravages of the fly. Its cultivation will be largely extended in that country next season in consequence.

The extension of the cultivation of root crops, under efficient tillage, is much to be commended and encouraged in this country. This is the foundation of perfect farming,—the basis of the most excellent rotations. With thorough drainage to precede it, you will thus secure the most perfect comminution of the soil, always a desirable object, the most economical application of manures, the earliest seed time and the earliest harvest, and you shall have taken the best means of deriving from your soil of whatever quality, the most abundant returns, besides having taken, at sametime, the most effectual precautions which experience affords to enable you to gather them into your garner without any unnecessary shortcoming, waste or damage. Let your lands be dry that they may be well prepared in the fall, that the spring work may be proceeded with early and without interruption or obstruction. For crops can scarcely be sown too early, if the land be in a proper state to receive them. Our growing seasons are sufficiently short in this country in the most favourable years, and we cannot be too diligent to prevent the waste of a single golden hour of our spring-time or harvest.

J. A.

Application of the Sciences to Agriculture.

AGRICULTURE IN ITS RELATIONSHIP TO THE SCIENCES.

IN order to furnish our readers, as far as may be, with the means of extracting alike from the most fruitful as the most obdurate of soils, the maximum produce, and in the accomplishment of which the application of science is so beneficially felt—we have deemed it our duty, in successive Articles, conceived in plain and simple language, intelligible to all, to attempt a popular exposition, tracing the intimate relation of the Natural Sciences to Agriculture and the Arts. There is no employment which permeates so thoroughly the kingdom of Nature; and nowhere is it more easy to point out their intimate relationship. Our earnest desire will be, while we are exercising and invigorating the perceptive and reflective powers of our readers,—to elevate and dignify this ancient and honourable occupation, by associating with it, by affiliation, the whole range of the Natural Sciences where they may appear to present anything in common.

AGRICULTURE IN ITS RELATIONSHIP TO GEOLOGY.—All soils, in their Organic structure, are derived from the rocks on which they lie, by the process of disintegration the result of elemental action,—rain, frost, air, &c., cleaving down and crumbling into minute fragments the solid mineral masses, and forming soils, differing in character and composition, by the comminglement, in varying proportion, of the debris of rocks differing in their chemical and mineralogical structure. Hence the existing differences in the soils of different districts; and hence the frequent and accidental variations. From Granite, we have a coarse, sandy soil, variously coloured; from Trap, a rich and fertile loam; from Slate rock, very frequently, an obdurate and impervious soil; from Sandstone, an open and unfertile soil. It is therefore true in the main, that a map, correctly indicating the geological structure of a county, indicates at the same time the peculiar superincumbent soils. Though this, in practice, will be found to vary; as in the case of alluvial and other soils, which are the results of natural displacement or transportation.

The general character of the soils of Canada must be recognised as standing very high.

SOILS OF CANADA EAST.—Of three samples examined from St. Charles, Mr. Hunt says—“In their virgin state, the lands of this Seigniorie consist principally of a light greyish or yellowish clay with reddish stains, often more or less mixed with sand and overlaid with a light black vegetable mould, averaging perhaps ten or twelve inches in thickness. The original growth was of hard wood, maple, elm, and birch, except upon small ridges of gravel occasionally met with, which are clothed with resinous trees. By tillage the soil gradually loses its blackness, partly from the decomposition of the vegetable matter, and partly from the intermixture of the inferior clay. Many of the farms have been cropped with wheat for thirty or forty years almost without alternation or fallowing, and owing to this, and to the ravages of the fly, have for a few years past yielded but comparatively inadequate returns. They produce, however, good crops of peas and oats, and the cultivation of timothy and clover has of late years been found very successful.”

Of the soils of St. Hilaire, he writes, “the clays which I saw in this Seigniorie seem much like those of St. Charles, but with a smaller admixture of sand.

Around the base of the mountain the *debris* of the decomposing trap, has made a band of gravelly earth well fitted for fruit and for those crops which require a light warm soil. The compact texture of these very heavy clays, washed by the waters flowing from the hill side, is such as to require thorough sub-soil draining, which has been effected in admirable manner by the proprietor, Major Campbell, to whose kind courtesy I am much indebted, and whose enlightened efforts are making his farm a model to the district. Thus drained, the clays are found to yield excellent crops of wheat and clover, with peas."

The soils of the Seignior of Chambly, Mr. Hunt says, "are principally of a reddish clay, which, when exposed to the air, readily falls down into a mellow granular soil. In the places where I had an opportunity of observing, it is underlaid at the depth of three or four feet by an exceedingly tenacious blue clay which breaks into angular fragments, and resists the action of the weather. The upper clays constitute the wheat-bearing soils, and were originally covered with a growth of maple, elm, and birch." Distinguished from these by its covering of soft woods, principally pine and tamarack, is a gravelly ridge, of which he speaks, thickly strewn with gneiss and syenite boulders much worn and rounded, which "yields good crops of maize and potatoes, by manuring." The extraordinary fertility of the soil is indicated by the fact that there are fields of which Mr. H. was assured by the proprietors that they had "yielded successive crops of wheat for thirty and forty years, without manure and also without any cultivation.

In relation to the lands of St. Dominique, where there is a great prevalence of peat—(one tract extending five or six miles in one direction by three or four in another, with a depth of from two to six feet, and, as is reported, in some places even eighteen)—it is stated that when brought in by repeated burnings, and plowings, "a rich mellow soil is obtained, which is unsurpassed for wheat, and yields at the same time fine Indian corn, peas, and grass. Such are many of the reclaimed lands of the Savanne, near to St. Hyacinth, where from an original peat of four or five feet, the finest farms have been made, yielding rich timothy and clover, alternating with wheat and peas." The peat ash is described by Mr. Hunt as being, from its composition, a powerful fertilizer. "It contains more than two per cent. of gypsum, besides the alkaline sulphates and chlorids, carbonates and silicates of lime and magnesia, all substances eminently conducive to the growth of plants."

The clays of Ste. Anne de la Pocatière and the adjoining parishes are "generally greyish or bluish, often stained with yellow or red, and crumble when exposed to the weather into a fine, mellow, and very fertile soil; they are often underlaid by a heavy blue clay, and sometimes by beds of gravel and boulders, furnishing a natural drainage."

"Over a large part of the district of Johnson, the almost horizontal strata of the calciferous sand-rock (passing in some cases into the overlying and underlying formations) are covered with a layer of earth, generally from a few inches to a foot or two in thickness, which, notwithstanding its scanty depth, forms a rich arable soil, covered with a fine growth of hard wood. It is a sandy loam, and appears to have been entirely produced by the disintegration of the underlying rocks, from which atmospheric waters have removed the calcareous cement."

J. A.

NATURE'S POETS.

(ORIGINAL.)

Ever, with a pen unstinting,
 On the rock and tree and sod,
 Nature's subtle hand is printing
 Pages of the book of God.

Yonder sky that bends in glory
 O'er the deep and silent sea
 Writes therein its own fair story,
 Reads its own biography.

Every solemn cloud is writing
 Tales of shadow on the hills ;
 Every summer breeze inditing
 Rippling stories on the rills.

Mountains hold within their keeping
 Legends of earth's primal day,
 Gather in a clasp unceasing
 Records of the past away.

Antique medals of creation,
 Seals that may not rust with age,
 Grand old sermons of mutation,
 Graven on a stony page.

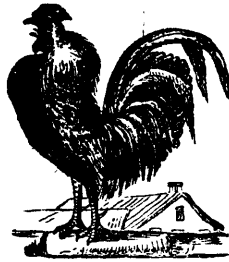
All around our rock-paved dwelling,
 Bending from its dome above,
 Sweetest oracles are telling
 Tales of wisdom and of love.

Voiceless, yet melodious, preachers
 Whisp'ring that we too may write.
 Earth awaits the poet-teachers
 Who shall read her books aright.

In the future's hidden pages
 There are leaves for us to fill ;
 In the volumes of the ages
 We record for good or ill.

Not a light and passing story
 Is our history sublime ;
 We may live a tale of glory
 Grandeur than the songs of time.

G. H. CROVALE.



Poultry Yard.

GOLDEN SPANGLED CHITTAGONG.

Ever since the first introduction of the Cochin China fowl, which originally attracted attention from having been patronized in the Royal poultry-yard, by Queen Victoria, and by being figured in the Illustrated News, it has advanced so rapidly in public estimation, that many importations of fowls have been made from India, China, and elsewhere, that are much superior in size, and in their general domestic habits to the common fowls of the country. Among the Asiatic fowls, the Shanghais have occupied, heretofore, a prominent position; not however as *the best* among us, as many have contended, but as a fowl in many respects superior to our common breed.

Some two years ago, while on a visit to Rochester, we found in possession of the late David Ely, a small lot of Asiatic fowls, which appeared to us as being far superior to any of the large breeds. On inquiring their origin, Mr. Ely informed us that he obtained them through a friend in New York, from a master of a vessel direct from China, and that they were called *Pheasant-colored Chittagongs*. He had bred them two years, and found them valuable as early layers and good mothers. He had at the time we first saw them, in his yard, nine pullets and one cock, and the ten he assured us weighed 90 pounds. They were as much alike "as two peas"—all seemed to have been cast in the same mould, both in form and color.

On leaving Rochester, a year ago last March, we obtained two clutches of eggs from Mr. Ely, and notwithstanding they were carefully packed in a basket, and carried most of the way in the hand, only five chicks were hatched, one of which was killed by accident, leaving us four, two of which proved pullets, and two cockerils. As they have no resemblance in form or color to a pheasant, we drop the *pheasant* and substitute the *Golden Spangled Chittagong* as being more appropriate.

However, "utility should precede beauty," and in the estimation of many, "handsome is, that handsome does,"—and here we think the Golden Spangled Chittagong fowl will not be found wanting. They are excellent layers, and arrive at maturity earlier than any other large sized fowl we know. By the term "maturity," is meant the age at which the pullets commence laying eggs, and thus perpetuate its race. We think them preferable to most of the other Asiatic fowls, for the reason that they have clean, yellow, medium sized legs, better feathered, very uniform in color and markings; their red combs and wattles, contrasted with their yellow bills and rich plumage, gives them quite a pretty appearance.

“ We praise the bridge that bears us safe over,” and by the same rule we must praise the Spangled Chittagong fowl, because after trying several sorts of the Asiatic fowls, we find them *equal* if not *the best* of any which we have had the opportunity of trying the same length of time.

The peculiar beauty of the Spangled Chittagong fowl, is certainly in their rich plumage, which renders them objects of attraction and interest to the most casual observer. For beauty of plumage, they surpass all other kinds of large fowls. Their general appearance has much of the Cochin China character. They are extremely docile and tame in their habits, and a three-foot fence is sufficient to restrain them within prescribed boundaries, on which account we most assuredly believe them one of the best breeds for the poor man and the farmer, considering them, as we do, not as *fancy*, but only of productive stock.

The figure of both cock and hen, as represented in the cut at the head of this article, with some exceptions, are very correct portraits. The crow of the cock, instead of being a clear, ringing, clarion tone, like the Game or Hamburg bird, heartily delivered, as if in defiance of every rival, like the blast of a bugle, is short, hoarse and monotonous, more like a croak than a crow. C. N. Bement-Springside, *Po'keepsie*.

Foreign Agricultural Intelligence.

ESTIMATE OF THE HARVEST IN ENGLAND.—The *Agricultural Gazette* of Aug. 7th, gives up-wards of 200 reports of the crops from all parts of England, Scotland, and Ireland. They generally declare the wheat crop to promise a full average yield though likely to fall considerably short of last year's extraordinary produce. Barley and oats are both exceedingly various; the former is not likely to yield a very good quality of grain, and both are probably under average as to quantity.—All late sown spring crops have suffered exceedingly from the unusual drought and heat of spring and summer. There is a singular uniformity in the gloomy accounts received of the crop of beans and peas. Perhaps there never was so universal a failure throughout the country as these two crops have this year exhibited. Swedes and other turnips have suffered from the drought and fly, and have to a large extent been resown. Mangold wursel promises a satisfactory yield—every year's experience leads to its increased cultivation, and the contrast which in south and midland England it presents this year to the turnip crop will no doubt tend again largely to extend its growth. Hay has been rather a short crop, but made in excellent order. The harvest is from 10 days to a fortnight earlier than usual. The entire breadth of the wheat crop was indeed on many a farm in Berkshire carried in July. Of potatoes, excepting one or two reports from Essex and Kent favourable accounts are received, and, if the disease appears at all this year, it will be

certainly much later, and we may therefore, hope less destructive in its attacks than it has been. The following figures describe the general characters of the reports which our contemporary gives :

Character of Rep'ts.	Wheat.	Barley.	Oats.	Beans.	Peas.
Over average,.....	101	20	15	4	4
Average,.....	92	97	85	36	12
Under average,.....	8	69	99	46	31
Much Under average,.....	—	—	—	45	57
Total reports,.	201	186	199	131	102

Critical Notices.

THE "WEEVIL" OR WHEAT MIDGE, by a Practical Farmer. Henry Rose, St. Francis Xavier Street, Montreal.

Any publication, at the present moment, professing to communicate a practical remedy for this wide spread and desolating evil, will be hailed by the Canadian Agriculturist with pleasure. The Author's view is simply stated, and his remedy cheap and easy of application. But we have doubts as to its thorough efficiency. He proposes and explains a method of destroying the insect in grub stage in the field in which it is generated ;—also the individuals adhering to the corn and straw ; and the portion remaining in the dust and tailings, &c., &c., from the threshing machine and threshing mill. It is usual, amongst experienced wheat growers elsewhere, to steep the seed, before sowing, in *chamber lye*, or other *chemical preparation prepared for the purpose*—technically called *the steep*—sifting on the grain when withdrawn therefrom, quicklime. The Author recommends simply the application of *water* for the purification of the seed. We think the other would be infinitely more efficacious, while it would tend to hasten and invigorate vegetation in its early stages. We refer our readers, however, in common justice, to the publication itself for a full exposition of the Author's views, to be had of the Publisher at the moderate cost 7½d.

Horticultural Journal.

DESCRIPTION OF THE CHERRY CURRANT.—It is not a distinct species of the genus *Ribes*—only a new variety of *Ribes Rubrum*, of which the red and white Dutch and many others are also varieties. It is, therefore, just as hardy as the common currant. The distinguishing properties of the cherry current are: Strong robust growth of the bush—the shoots being stouter, the leaves larger, and of a darker green, than the common sort. The blossom of the cherry currant is easily distinguished from the greenish yellow blossom of the red and white Dutch by its darker brownish color. But the greatest and most valuable distinction of the cherry currant consists in the uniformly great size of the berries. They measure from half an inch to five-eighths of an inch in diameter, all the berries of a bunch being generally of nearly one size, while the bunches of the common currant taper down to a very small berry at the end. Besides this, the berries are also distinguishable by their dark red color.

Another and very striking feature of the cherry currant consists in the manner the bunches are distributed over the branches. While with the common currant the fruit is rather thinly—at least by comparison—scattered over the branches, the cherry currants hang in massive clusters, so tight that the stems of the fruit strings can scarcely be seen. Branches of the bush of from one to three feet in length are often unbroken clusters of luscious fruit, which gives the bushes a charming rich appearance.

HOW TO GROW THEM.—Many farmers and market-gardeners seem to think their good qualities can only be brought out by very high culture, such as the amateur only can bestow on a few pet bushes. This is an error. I would say:—Manure, plow and hoe them as you do your Indian corn, and you will have them in as great perfection as the nurseryman.

As the bushes grow very strong, they should be planted not less than 4x4 feet, or, perhaps, 4x5 feet, apart, which will give 2,178 plants per acre. I prefer the latter method, and would plough only one way between them, allowing the branches to spread in the direction of the rows, so as to form something like a hedge. These rows should run north and south, to shield the bushes from the hottest mid-day sun. Shade to the fruit is indispensable to bring it to perfection; if too much exposed to the hot rays of the sun, the berries ripen prematurely before they attain their full size. Now, all the shade necessary to protect the fruit is furnished by the bush itself, if you do not disable it to do so by pruning and cutting away what was evidently intended for that purpose; and this brings me to the shape in which currant bushes should be pruned. I am aware that there exists a great difference of opinion among cultivators as to this point. Many believe that the tree shape is decidedly the best; others think the bush form, with several branches springing directly from the root, the better and most natural shape. I have tried both ways, but prefer the latter method greatly. The great advantage of the bush form, it seems to me, consists in the system of renewal which should be combined with it.

Suppose you plant young bushes with two prongs or branches. Plant them deep and allow the first year two shoots to grow up from under the ground. These shoots will at the same time send out their own roots and grow luxuriantly. If you allow, then, every year two more shoots to spring up from the root, you will, in the Summer of the fourth year have two branches each of

five, four, three, two and one years' growth. Six of these branches, that is the five, four and three year old ones, will be loaded with fruit, the two years' growth may have some berries, and those of this year's growth will only be straight shoots. The bushes will now be as large as they should be, and the two five year old branches may be cut out as soon as the fruit is picked; and henceforth, by allowing still two new shoots to come up every year, and by cutting out the two oldest branches after the gathering of the fruit, the bushes will be kept young and bear fine fruit for many years more. Of course this is only meant to elucidate the general principle. The practical cultivator will know how to modify the above rule for every individual bush.

PRODUCTIVENESS.—In calculating the profits of a crop, great caution must be used, and casualties must not be forgotten. Although I have seen four-year old bushes that bore nine pounds of berries to each, I would not think it safe to put down to average yield of a full-grown, five-year old bush, trimmed as above, at more than six pounds. This would amount to 13,068 pounds to an acre. The price of common currants in the New York market, generally very small, sour little things, varies from four to seven cents per pound at wholesale, which certainly justifies the anticipation of six cents per lb. for cherry-currants for many years to come, and this would make the value of the crop per acre equal to \$784.

EXPENSES OF CULTIVATING AND GATHERING.—Half a day of ploughing and three days of hoeing, by one man, will clean and stir the ground of one acre most effectually, which at ordinary wages of men and horse, will cost \$3 50, which makes four ploughings and hoeings cost \$14. Picking 13,068 lbs., at one-third cent per pound (about 15 cents per bushel), will be \$43. If we allow \$27 for manure every year, the whole expenses per acre would sum up to \$84, leaving \$700 clear, of which only the cost of bringing them to market would have to be deducted.

MR. ROBINSON continued—Now, Sir, suppose you take this as a statement of an interested nurseryman—a man who is just beginning to make it his business to propagate this new, that is new in this country, it originated in France a few years ago—this new variety of currants. What then? Why simply this, truth is immutable, and no matter by who uttered, it is truth still. And so far as what I can say will encourage the propagation of this fruit I will do it by endorsing every word in that paper. Nay, I will do more; and here say that the statement is not exaggerated, it is below the fair estimate that would be made by any sensible man who has seen, as I have seen, the bushes in full bearing.—*Prescott Farmers Club.*

THE CULTIVATION OF TEA.—The Washington correspondent of the New York *Times* says that the Agricultural Bureau of the Patent Office is making preparation to test the cultivation of tea in this country. The seed will be preserved in China specially for this purpose, planted in glass cases and shipped in October. By the time of their arrival here they will have sufficiently sprouted to be set out in beds. After being tested here, the plants, if successful will be distributed among the Southern States. An order for a great variety of seeds will also be sent to Egypt in a few days, through a house in London. This list includes wheat, barley, rice, clover, (*Trifolium Alexandrinum*,) &c., &c. Arrangements are also making to commence a nursery for the growth of ornamental trees for the public grounds of this and other cities. They can be supplied from a public nursery at one-twentieth their present cost. Such is the estimate of the Interior Department.

PROPAGATION BY CUTTINGS.

THIS is one of the most common and available modes of extending plants. A cutting is simply a part of a plant taken off and placed in a position to form roots, and become in all respects a living representation of the original from whence it was taken. The constitutional conditions, or special proportionate arrangements of the constituents of plants most favourable for the emission of roots, has not been determined. While, therefore, some will throw out roots under any conditions, others will do so very tardily under the most favorable circumstances.

Cuttings taken from extreme points of shoots will produce early flowering plants, and frequently a tendency to bushy and dwarf growth; those from side branches incline to horizontal growth, and in some cases it is only by securing an upright shoot from the base of such side growing plants that upward growth is obtained. These peculiarities are not constant, and are not considered important, although occasionally useful for particular purposes.

The formation of roots is dependent upon the previous or immediate action of leaves; the best shoots, therefore, for propagation are those possessing a considerable portion of the organized matter consequent upon maturity, but in which the processes of growth are still in full operation; in other words, those shoots that have commenced to mature, but are possessors of healthy, active foliage.

Cuttings of young and succulent shoots, are immediately dependent upon the simultaneous growth of stem for their successful rooting, the leaves must therefore be preserved in order to assimilate matter for root formation.

It is necessary to surround the cuttings by an atmosphere containing a uniform degree of moisture. All moist bodies, when placed in a dry atmosphere, lose moisture by evaporation. If the cuttings are subjected to aridity their contained sap will speedily be exhausted, and they will shrivel and die. Hence the practice of propagating in close-fitting frames, or covering with a bell glass to insure the required atmospherical temperature and contained moisture.

Light in excess is equally injurious, shading is requisite from strong sunlight; care is required, however, that enough light be admitted to maintain a healthy leaf action.

Every one who has experience in this mode of propagation is aware that under certain conditions, cuttings will grow and increase at the top without forming roots; while under others the same kind of cuttings will produce roots without indicating the slightest symptoms of growth by external buds. Heat is the great stimulus to the vital forces of plants, and when the atmosphere in which they are placed is of a higher temperature than the soil in which they are inserted, the branches are incited to growth. On the contrary, these conditions are reversed when the soil is a few degrees warmer than the air; roots are then encouraged while the stem may remain stationary. In propagating cuttings it is therefore a good general rule to place them in the lowest average atmospherical temperature that they will endure to retard upward growth, and, on the other hand to raise, by the application of artificial heat, the soil to the highest average temperature, in order to stimulate into activity the processes carried on in the vessels beneath the surface of the soil, and the more completely these conditions are secured, the greater the chances of success.—W. SAUNDERS in *Horticulturist*.

TO PRESERVE VINES FROM BUGS.—Messrs. Editors. After reading the many remedies to prevent bugs from destroying vines, in the last number of your paper, I would like to mention this simple remedy I tried last season with great suc-

cess. It is simply applying equal parts of common red pepper (powdered of course,) and plaster to the vines, when the dew is on. This remedy is so simple and reasonable that I think your readers will be induced to try it, and thereby be convinced of its efficacy. C. D. G. *Pine Hill, N. Y.*

REMEDY FOR TURNIP CATERPILLAR.—In describing the remedy for the Turnip Caterpillar in our last, we have, we find, misunderstood the plan upon which it is prepared. It is not a solution or fluid, as we supposed, but is sown upon the affected or injured turnip, in the form of dry powder. It is prepared as follows:—take 3 cwt. of lime shells or burned lime, and 14 lbs. of washing soda; dissolve the later in water, and shake the lime with this solution, when a white powder will be the result. Let this powder be put through a fine riddle, and afterwards sow by the hand in the usual way, at a time when the leaves are damp by dew or rain. If there is no dew or rain, let the plants be artificially watered immediately after the sowing; the lime attached to the bodies of the insects thus be, caustic, and destroys them immediately. This remedy is unquestionably effectual where the plant is not too far gone. The quantity stated above will suffice for an acre.

Mark Lane Express.

Ladies Department.

LEAD POISON.—All who use water, conducted into their dwellings by leaden pipes, are interested in the question, whether the lead, under any circumstances, can impregnate the water with poison? It is certainly so. No argument, beyond that of often ascertained facts, is necessary to prove this. But the water delivered to one family will cause a slow, wasting, and fatal disease, while the water from the same sources, introduced into the next house, is used for years without any appreciable ill results. The simple reason is, that in the fatal case, the flow of water is obstructed, either by a pebble or other indestructible impediment. Standing water will corrode lead. Simple dampness will corrode lead, and bring out its poisonous qualities. Obstructions to a flowing stream of water will arrest any particles in that water which are not the pure water itself; those particles are usually of vegetable origin; and as soon as a small portion of them are collected in any part of the pipe, or rather arrested by the obstacle, destructive decomposition begins; and the gases escaping in consequence of this process act upon the lead, and make it poisonous. Every man, therefore, who builds a home for himself, should understand that, if it is to be supplied with water by leaden pipes, his life, and that of all his, depends on the fidelity of the plumber; and as plumbers trust their work to apprentice boys, and

uninterested journeymen, the owner should watch the laying of every foot of pipe and not allow an inch of it to be but down during his absence; the points to which he should bend his most fixed attention are:

First. Let the pipe be laid as straight as possible.

Second. Let every joint be made perfectly smooth.

Third. See to it, that not an atom of anything be left inside the pipe which would obstruct the smallest particle of any substance, whether it be leaf, or wood or grass, or hair, or string or worm, or insect, or anything else.

We believe the only thing in Nature which does not corrode or diminish in bulk or lustre by exposure to dampness or earth, is glass. It is the most durable thing in the universe; it can be manufactured into any shape, and is perfect as a water conduit; the insuperable difficulty being, that it cannot be spliced or joined perfectly. We notice in the *Scientific American* of New York, that this difficulty is at last claimed, by patent, to be overcome. If so, another foot of lead pipe should never be laid, for the purpose of giving water to be drunk or used for cooking.

Meanwhile, as long as it is certain that still water corrodes lead, the most unthinking person will draw the practical inference, that the water from the hydrant should be allowed to run off for the first five or ten seconds after turning the faucet, to get a supply for drinking or eating.—*Hall's Journal of Health.*

INDIAN BREAD.—A lady contributor to the *Prairie Farmer* closes an article on various subjects with the following directions for cooking Indian bread:—

“Do you know how to make good, old-fashioned Indian bread? Yes! Well do you know how to cook it? I will give you my plan. When sufficiently light, place it in a hot oven; put into your tin or cooper boiler a pail full of clean water; place it over the fire; have made a wooden frame, fitting snugly into the boiler, on which to place your bread-pans. This must be high enough to prevent the water boiling into the pans. When your bread has baked three-fourths of an hour, place it in the boiler, cover tight and steam three hours. The water must not stop boiling until the bread is done. You will have a nice loaf without the hard crust formed by baking until done.”

SIMPLE CURE FOR DYSENTERY.—An old friend handed us the following simple receipt, for publication. It has been practiced in his family for many years, with uniform success, even in the most alarming stages of the complaint:—Take Indinn corn, roasted and ground in the manner of coffee, (or coarse meal browned,) and boil in a sufficient quantity of water to produce a strong liquid like coffee, and drink a teacup full, warm, two or three times a day. One day's practice, it is said, will ordinarily effect a cure.—*Middletown Republican.*

TO PRESERVE FRESH FRUIT, &c., IN CANS.—*Messrs. Luther Tucker & Son.*—I observed in the last No. of the *Co. Gent.*, you request information as to the best method of preserving fresh fruit, &c., in cans, and if you think the following worthy a place in your columns, it is at your service. It is reliable, for I have tested it some years, and find it every way superior to the old method of putting the fruit in the cans before heating, and then immersing in boiling water, &c. I have preserved in this way, tomatoes, peaches, cherries, pears, quinces, apples,

and pumpkin for pies, and find all to keep for two years as fresh as when put up.

Select good, sound, ripe fruit, and put it up as speedily as possible after it is gathered. Peaches, pears, sweet pumpkin for pies, tomatoes, and berries of all kinds, can be preserved fresh for years, if the following directions are observed:—

Prepare the fruit by paring, and stoning, or coring where necessary, and put it over a moderate fire in a brass or porcelain kettle, (the latter is best, as it does not discolor fruit,) with sugar enough to make sufficient syrup to fill all the cavities in the can when the fruit is in. Have ready your cans, and as soon as the mass is thoroughly heated through, skim out the fruit and put it in the cans quite hot, and pack it as tight as practicable. Then pour in syrup till it is a full as it can be, and permit the covering to be soldered on.

I use round tin cans holding about a quart each, with a round aperture in the top from two to three inches in diameter. I have circular pieces of tin cut a little larger than the aperture in the cans, with a small hole punched in the center of each piece. As soon as the can is filled, solder this piece of tin over the aperture, then a drop of solder over the little hole in the center, and the thing is done. I think the old fashioned tin cans, soldered as I have described, the most reliable—though it is, perhaps, a little more trouble to use them than some of the self-sealing cans, as they are called. The object is to have the article preserved, thoroughly heated through, and to fill the cans *full*, or as nearly so as possible; and if these two requisites are observed, and the can then sealed, I think the fruit will keep as long as the can remains *perfectly* air-tight. It is necessary, sometimes, when fruit is not sufficiently juicy to form syrup enough to fill the cans, to add a little water. Tomatoes need no sugar nor water. It is very convenient in filling, to have a very wide-mouthed funnel that just fits the aperture in the tops of the cans: and it is best not to use an iron ladle or kimmer to stir or dip out the fruit, as it will discolor peaches and some other fruits. G. W. C.—*Delaware*.

SOAP-SUDS FOR CURRANT BUSHES.—A writer in the *Indiana Farmer* says he has done well with currant bushes. He attributes his special success to the fact that he has made a liberal use of soap-suds and chamber-lye about their roots in the summer time. Some of his bushes are seven feet high.

PRESERVING GRAPES.—Charles Campbell, of Aurora, Cayuga county, N. Y., communicates to the *American Agriculturist*, the following method of preserving grapes:

“When they are fully ripe, suspend the basket by a strap or cord passed around the neck, thereby giving liberty to both hands for picking: with one hand hold the cluster, and with the other remove it from the vine; remove from the clusters all unripe or decayed fruit, and deposit them in the basket until it is filled. (I use a market basket that will hold about a half bushel.) Carry the grapes thus gathered to the place for packing. I use boxes about two feet square by six inches deep in the clear, with covers made to shut tight. In packing, lay a newspaper on the bottom of the box, then a layer of grapes, then a paper and second layer of grapes, which when closely packed fills the box; set in some dry, airy place, with the cover off and let the box remain open for ten days, or until the sweating process is passed; then close the box and set it in the fruit-room, cellar, or garret, any place where they will not freeze, or which is not extremely damp.

"Grapes packed as above directed, will open at any time during the winter or spring following as fresh as when packed. The only secret or mystery is, that the moisture which spoils the fruit when packed in saw-dust and other absorbents, passes off during the ten days that the box remains open, instead of being absorbed, and ultimately moulds and spoils them. So perfect has been my success that I have more confidence in the preservation of the grape than any other fruit. I use shallow boxes for packing grapes, that the moisture may more readily escape, and that the first layer in the bottom may not be crushed by the weight above."

PRESERVATION OF MEAT.—A Belfast (Ireland) paper, states that meat, first dried in a current of air, and then hung up in a close chamber and exposed for twenty or thirty minutes to the fumes of burning sulphur, will keep as long as required. The meat before packing, must be further dried and then covered with some impervious substance. Sheep killed in Algiers during the hot months of August, and passed through this process, were taken to Paris, and sold a month later. We have seen hams which, after pickling, were smoked a short time over burning sulphur, that tasted and kept well.

PICKLED TOMATOES.—Take small, smooth tomatoes, not very ripe; scald them until the skin will slip off easily, and sprinkle salt over them. After they have stood twenty-four hours, drain off the juice, and pour on a boiling hot pickle, composed of one pound of sugar to every quart of vinegar, and two teaspoonfulls each of cinnamon and cloves. Drain off the liquid, scald it, and pour it on them again, every two days for a week.

TOMATO CATSUP.—Take one half bushel of tomatoes, scald them, and press them through a common sieve. Boil them down one half; then add two table-spoonfuls of salt, one of black pepper, one teaspoonful of cayenne pepper, one-half of cloves, one half of cinnamon, and one half of mace. Mix well, and add one teacupful of vinegar. Bottle and seal, and set in a cool place.

HARVEST HYMN.

I.

God of the year!—with songs of praise,
 And hearts of love, we come to bless
 Thy bounteous hand, for thou hast shed
 The manna o'er our wilderness—
 In early spring time thou didst fling
 O'er Earth its robe of blossoming—
 And its sweet treasures, day by day,
 Rose quickening in thy blessed ray.

II.

And now they whiteh hill and vale,
 And hang from every vine and tree,
 Whose pensile branches bending low,
 Seem bowed with thankfulness to Thee ;—
 And Earth with all its purple Isles
 Is answering to thy genial smiles,
 And gales of perfume breathe along
 And lift to Thee their voiceless song.

III.

God of the Seasons ! Thou hast blest
 The land with sunlight and with showers,
 And plenty o'er its bosom smiles
 To crown the sweet autumnal hours ;
 Praise, praise to Thee ! Our hearts expand
 To view these blessings of thy hand,
 And on the incense—breath of love,
 Go off to their bright home above.

Meteorology.

MONTHLY METEOROLOGICAL REPORT FOR JUNE 1858.

BAROMETER.	
Mean reading of the barometer F inches corrected and reduced to.....	32° 29.771
Highest reading of the barometer	30° 002
Lowest reading of the barometer	29° 342
Monthly range.....	0 660

THERMOMETER.	
Mean reading of the standard thermometer.....	62° 21
Highest reading of the maximum do.....	97° 4
Lowest reading of the minimum do.....	44° 4
Monthly Range.....	53° 0
Mean of humidity.....	0° 756

Greatest intensity of the suns rays.....	108°	4
Lowest point of terrestrial radiation.....	48°	2
Amount of evaporation in inches	3	69
Rain fell on 13 days amounting to 8.656 inches it was raining 49 hours 51 minutes, accompanied by Thunder on 4 days.		
Most prevalent wind S. E.....		
Least prevalent wind N.....		
Most windy day the 5th, mean miles per hour.....	12	74
Least do do the 23 day do.....	0	00
Ozone was present in moderate quantity.....		
Aurora borealis visible on 1 night		

MONTREAL RETAIL MARKETS.

FRIDAY, September 10, 1858.

	BONSECOURS.				ST. ANN'S.					
	s.	d.	s.	d.	s.	d.	s.	d.		
FLOUR.										
Country Flour, per quintal	12	0	a	12	6	0	a	0	0	
Oatmeal, per quintal	11	6	a	12	0	0	a	0	0	
Indian Meal, per quintal	0	0	a	0	0	0	a	0	0	
GRAIN.										
Wheat, per minot	0	0	a	0	0	0	a	0	0	
Oats, per minot	2	2	a	2	3	2	a	2	6	
Barley, per minot	2	9	a	2	10	0	a	0	0	
Pease, per minot	4	3	a	4	6	0	a	0	0	
Buckwheat, per minot	3	6	a	3	9	0	a	0	0	
Indian Corn, yellow	4	0	a	4	6	0	a	0	0	
Rye, per minot	0	0	a	0	0	0	a	0	0	
Flax Seed, per minot	0	0	a	0	0	0	a	0	0	
Timothy, per minot	0	0	a	0	0	0	a	0	0	
FOWLS AND GAME.										
Turkeys, (old) per couple	7	0	a	7	6	10	0	a	12	0
Turkeys, (young) per couple	0	0	a	0	0	6	0	a	8	0
Geese, (young) per couple	4	0	a	4	6	3	6	a	4	6
Ducks, per couple	1	8	a	3	0	2	6	a	3	0
Ducks, (wild) per couple	0	0	a	0	0	0	0	a	2	6
Fowls, per couple	2	0	a	2	6	2	0	a	3	0
Chickens, per couple	1	3	a	1	8	1	3	a	1	6
Pigeons, (tame) per couple	1	3	a	1	6	0	0	a	0	0
Pigeons, (wild) per dozen	3	6	a	4	0	3	6	a	4	0
Partridges, per couple	0	0	a	0	0	0	0	a	0	0
Woodcock, per brace	0	0	a	0	0	0	0	a	0	0
Hares, per couple	0	0	a	0	0	0	0	a	0	0
MEATS.										
Beef, per lb	0	4	a	0	9	0	4	a	0	8
Pork, per lb	0	5½	a	0	6	0	6	a	0	6½
Mutton, per quarter	6	0	a	12	0	7	0	a	12	0
Lamb, per quarter	2	6	a	4	0	2	0	a	3	9
Veal, per quarter	5	0	a	15	0	5	0	a	15	0
Beef, per 100 lbs	30	0	a	45	0	30	0	a	40	0
Pork, (fresh) per 100 lbs	37	6	a	40	0	27	6	a	30	0
DAIRY PRODUCE.										
Butter, (fresh) per lb	0	11	a	1	0	0	11	a	1	0
Butter, (salt) per lb	0	7½	a	0	8	0	8	a	0	9
Cheese, per lb, skim milk	0	0	a	0	0	0	0	a	0	0
Cheese, per lb, sweet do	0	0	a	0	0	0	0	a	0	0
VEGETABLES.										
Beans, (American,) per minot	0	0	a	0	0	0	0	a	0	0
Beans, (Canadian) per minot	7	6	a	8	0	0	0	a	0	0
Potatoes, (new) per bag	3	0	a	3	9	4	0	a	5	0
Turnips, per bag	0	0	a	0	0	0	0	a	0	0
Onions, per bushel	0	0	a	0	0	0	0	a	0	0
SUGAR AND HONEY.										
Sugar, Maple, per lb, (new)	0	4½	a	0	5	0	4	a	0	4½
Honey, per lb	0	7½	a	0	0	0	7½	a	0	8
MISCELLANEOUS.										
Lard, per lb	0	8	a	0	9	0	8	a	0	9
Eggs, per dozen	0	8	a	0	9	0	8	a	0	9
Halibut, per lb	0	0	a	0	0	0	0	a	0	0
Haddock, per lb	0	4	a	0	0	0	0	a	0	0
Apples, per barrel	10	0	a	20	0	15	0	a	20	0
Oranges, per box	20	0	a	22	6	0	0	a	0	0
Hides, per 100 lbs	0	0	a	0	0	0	0	a	0	0
Tallow, per lb	0	4½	a	0	5	0	0	a	0	0
BREAD.										
Brown Loaf	0	11	a	0	0	0	9	a	1	0
White Loaf	0	0	a	0	0	0	0	a	0	0