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THE  
CANADIAN AGRICULTURIST,

AND JOURNAL OF TRANSACTIONS

OF THE

BOARD OF AGRICULTURE, AGRICULTURAL ASSOCIATION, &c.

VOL. VII.

TORONTO, MARCH, 1855.

No. 3.

*Agriculture, &c.*

GUELPH FARMERS' CLUB.

SUBJECT—ORCHARDS.

A monthly meeting of the above club was held at the town of Guelph in January last—the President, Col. Saunders, in the chair.

The attendance was better than usual. The subject for discussion was—"The advantages of cultivating orchard fruits, and the best mode of planting and treating them," which was ably introduced by John Caulfield, Esq., as follows:—

MR. PRESIDENT AND GENTLEMEN,—

The subject for discussion this evening is the planting and management of Fruit Trees, and the advantages of raising Orchard Fruit. The few remarks I wish to make are from my own observation and experience, and I fear you will find them very imperfect, and not of that importance the subject deserves.

Persons intending to plant Apple Trees, (as I suppose our remarks will chiefly relate to them) should see that their ground is in good tilth and well drained, either naturally or artificially, otherwise wait till it is so—as it is of no use trying to raise an Orchard unless the soil is in a good state of cultivation. If the land has been properly tilled previously, then dig the holes for the reception of your Apple Trees, 33 feet apart; of such dimensions as to admit of a layer of the top soil in the bottom of the holes, and that the roots may be spread out as they were in the Nursery-bed. After the holes are prepared, the great object is to get suitable Trees, and the best way is to go or send some competent person to a respectable Nurseryman to select good, thrifty, well proportioned Trees of good size; and leave the thriftless rubbish no matter how cheap you can obtain them—as the best kinds occupy no more ground than the very worst. Still, some prefer to purchase Trees from Tree pedlars, some eight or nine months beforehand giving them a written agreement to take their

Apple Trees, and giving them also ample time to buy up the refuse of the Nurseries wherever they can find them. If the pedlar cannot find Trees to suit his purpose he can sell his orders to the best purchaser. After the Trees are dug up, tied and labelled and well packed with straw, and a pailfull of water thrown over them to keep their roots moist, they should be removed to where they are to be planted as soon as possible. After putting a layer of the surface soil in the bottom of the hole plant the Tree with the best soil, treading it in as firm as the surrounding earth, but leaving the surface loose and the Tree planted about two inches deeper than it stood in the Nursey-bed, as the earth will settle a little. After the Trees are planted they require a little attention to ensure success, and about the beginning of June when the ground gets warm, take some coarse barn yard manure and litter the ground round the Trees to the distance of two or three feet, and if the summer is very dry and hot, water the ground three or four times round the Trees, and if they are not attacked by the *borer* they are almost certain to grow. The Trees ought to be pruned the following year, and there should be four principal limbs left to form the head, so situated as to balance the Tree equally, and I would prefer leaving three limbs sooner than five, although some persons who should know better, say that standard Trees ought not to be pruned. There is also a great diversity of opinion as to the proper time to prune Apple Trees and I have seen them pruned all the different months in the year, and each month has its advocates for pruning at that particular time. I generally prune in April, before the wood and buds get soft, and if small branches are cut off at that season, they grow over or nearly so the following summer, and if the Proprietor of the Orchard prunes his Trees regularly, he will seldom have to remove a large limb; if the pruning is done in June a favorite month with some people, the branches that are left to form the head of the Tree must be injured by removing those that are cut off at a time when the bark and wood are soft, and the young fruit forming. I would recommend the land to be kept under good cultivation until the Trees grow a good size, then when they begin to bear fruit the specimens will be much better than if grown on small stunted Trees. I suppose I need not remark that the orchard should be well fenced,

so as to prevent horses, cattle, and sheep from browsing on the young Apple Trees, which I am sorry to say is sometimes the case. But instead of this browsing trim your Trees neatly, once a year cut off all straggling unsightly branches, all diseased limbs large or small, and where two limbs interfere remove one of them, remembering to wash the Trees with soft soap in May. Any person of a little taste, by paying attention to their own orchard, and by looking into those orchards that are well kept, will soon acquire tact enough to manage their own fruit Trees.

The advantage of raising orchard Fruit is not the only advantage to be derived from planting an orchard, as I believe there is a large quantity of stony gravelly land that would be better if planted with Apple Trees, than if the land were left bare and exposed to the scorching rays of the sun. Last spring in pruning my Apple Trees, I cut several shoots out of the tops of the Trees of over three ft. long, and one of over four ft, although the previous summer was the driest season I ever saw in Canada, and the Trees that produced those shoots grew on the highest, most gravelly and strongest land on my farm.

If Fruit Trees improve the land, which I believe they do in some situations, it certainly must be an advantage to raise orchard fruit.

If we look at it in a lucrative point of view, it seems surprising, with such a soil and such a climate as we are possessed of, that good Winter Apples are now worth \$2½ to \$3 per barrel: and we in this neighbourhood by a little exertion and trifling expense might have in a very few years, the \$2½ or \$3 coming in instead of going out. There is scarcely an individual but likes to see good fruit and if they cannot eat it, still they like to see it grow; and although banished from the lawn there are few Trees more ornamental than the Fruit Tree in full bloom, in its white and pink dress or when loaded to breaking with its rich, mellow, delicious fruit, fit to tempt any urchin that sees them to a breach of the eighth commandment.

Fruit Trees are certainly an ornament to a farm and if we can raise a crop of roots, grain or grass, and a good crop of excellent fruit at the same time, which we can do,—it certainly must be admitted that it is an advantage to raise orchard fruit. Pear Trees seem to grow here as fast as the Apple Trees, but they do not seem to bear transplanting as well: but by taking a little pains—littering the ground round the Trees, and giving a few waterings during the dry weather, I think there is little fear but they will bear transplanting. Cherry Trees grow here, and generally grow too fast, and most people not content with their fast growing force them still more by manuring the soil, which causes them to grow an abundance of tender wood not solid enough to stand the severity of the winter. I have seen some fair specimens of Cherries here, but they are like the Peaches—rather a rarity.—If they were planted along the fences where the grass would check their growth and not cultivate the soil round them, I believe it would be an advantage. Plums seem well adapted to the soil in this part of the country, and I have seen some very fine specimens of the fruit, but we want more variety which may easily be remedied, as there are several new kinds in the Guelph Nursery for sale.

As I have unwisely got into this discussion on orchard fruit, I see I must reveal my secret of raising Peaches, and to make a clean breast of it I will let you know how I manage to raise Peaches of over nine inches in circumference and about half a

pound in weight. In the fall of 1847, I planted a few peach stones, a shoot from one of them came up very strong in the spring, and I budded it in the following August with a rare ripe Peach bud; when two years old I transplanted it to the south-east side of my house, and trained it to the stone wall; the soil is strong loam, and I dressed it in spring with unleached ashes. When it was five years old, it bore fruit of most delicious flavor, at least several said so that tasted it. In the very dry weather I litter the ground around it, and give it an occasional watering. I do not prune this Tree as I do my Apple Trees—I prune it three or four times through the summer, leaving the bottom of the scions three or four inches long, to bear fruit the next summer; when five years old this Peach Tree covered twenty feet in length of wall, and twelve feet in height, as I cut down that low. The frost does not seem to injure it and it has never been sheltered, excepting against one storm last spring, while in bloom. If we try, I am quite satisfied we can grow Peaches here, as they are grown by the 100 bushels within less than 30 miles of here.

Mr. President and Gentleman—I thank you for your attention while listening to these meagre remarks, and I shall feel a pleasure in hearing any gentleman present correct my errors.

At the conclusion of the address, the President warmly thanked Mr. C. for his able essay, with which, he said he heartily coincided.

In answer to a question from Mr. Wright, Mr. Caulfield said he considered the early part of spring the best time for transplanting.

Mr. Wright referred to the damage done to fruit trees by the shoots which usually spring up about the roots, and enquired what was the best time to cut them off.

Mr. Caulfield said they might be cut off at any time; and when cut off should be covered with earth.

Mr. Wright had seen orchards destroyed by a small insect about the 16th of an inch in length, called the "wood louse," which lay close in to the bark of the trees without exhibiting any signs of life, but which was a great destroyer of trees.

Mr. Caulfield said they could be destroyed by the application of soft soap. Mr. C. then referred to the culture of peaches. He said a gentleman from Dundas had been at his (Mr. C.'s) house a short time ago, who told him that he had raised 300 bushels of peaches last season, which he had sold at \$3 per bushel.

Mr. Harland said that as individuals they had thanked Mr. Caulfield for his essay, but he thought it deserved something more; he rose, therefore, to move a vote of thanks to that gentleman for his able address. There were a few remarks which he (Mr. H.) wished to make before he sat down. Mr. Caulfield had remarked that their orchard land should be in a good tilth, and he had been forcibly struck with a remark made

by Mr. Wright, viz., that the land should not only be in good tillth, but that it should also be well fenced. Mr. H. here made some humorous allusions to his own troubles with bad fences. He had found some difficulty in cultivating his orchard lands; when he ploughed close to the trees, the whippetrees knocked off the bark, if the ground was seeded down, the trees became stunted in their growth.—Latterly he had adopted a different plan—he had seeded down his orchard with grass, but had dug a space of three or four feet around each tree; he intended to turn in his sheep to graze; and in order to prevent the sheep and mice from doing any harm, he had surrounded each of the trees with a box. With regard to the address, Mr. C. had evidently proved himself a good *orchardist*; he had *pruned* his essay of all technicalities, so that every one could understand it; and he (Mr. H.) begged to move him a vote of thanks.

Mr. Wright seconded the motion. With regard to the essay, he thought it would, if published, be of great service to many a one.—Every one who had travelled must have seen the evils spoken of; this was especially the case with regard to bad fences. Mr. Caulfield had remarked that his orchard comprised some of the strongest and hardest ground on his farm, and had found the ground benefitted by planting. He (Mr. W.) had no doubt that such ground would be improved by being planted with fruit trees; for it would certainly yield more if shaded than if exposed to the full heat of the sun. He had been rather more successful than Mr. Harland; he had no trouble with whippetrees, for in ploughing his orchard land, he used oxen which needed no whippetrees. After going as close to the trees as he could with the plough, he dug the remainder. With respect to mice, Mr. Harland had adopted the practice of boxing his trees. Now, he thought Mr. H., in so doing, had made a box for the mice, for he would have to make holes in the boxes to admit the air, and the mice would run up and get in. He had tried other methods himself, but he thought the only remedy for the mice was the *cats*. He would like to know whether Mr. Caulfield had observed the “wood louse” on his trees, and whether he had found the soft soap a sufficient remedy: or whether he knew any person who had found it to answer.

Mr. Caulfield replied that he knew several.

Mr. Harland said he would like to reply to what Mr. Wright had said about his (Mr. H.’s) boxing system. Now, they all knew mice would

not exist where there was no grass, and by turning sheep into the orchard that would be effectually kept down.

Mr. Wright had seen trees killed by mice where there was no grass.

Mr. Caulfield said that in winter the mice would run under the snow. He had himself lost ninety trees by them. The only remedy he had found to answer was to plough the grass down well, for if the mice had nothing to eat they could not exist.

Mr. Kench had heard it remarked that trees were apt to be barked when ploughing orchard lands. This might be remedied by using a small plough lately invented, and which might be obtained in Guelph, by the use of which they could plough close to the trees.

Mr. McCrea had not much experience; but he had lost trees by all the means mentioned. He had an orchard one year which he lost by the gates being left open. This orchard was on a piece of new land, and he found it did not answer well; he accordingly left it for several years longer, and then got it fenced, took out the stumps, dug the holes for the trees, and mixed a compost to put in, instead of putting in a few shovelfulls of the subsoil. He thought it of the greatest importance that they should plant the *natural* tree, which would produce fruit in two or three years; if the fruit did not suit, let them take scions from trees in their neighbourhood, the fruit of which suited them. He thought Mr. Harland’s plan of boxing would not succeed. His own plan was to plough between the trees with a span of horses, as close as possible, then take one horse and plough across, the portion which the plough would not touch might be hoed. Grass, he thought, would not answer in an orchard—it would only harbor mice; and the only way to get rid of the mice was to starve them out.—He thought, therefore, the best plan was to keep the land in good cultivation. He had not much experience in growing peaches, but he thought the land in this part of the country too high for the purpose. The plum appeared to be a native of the country, the only fear being its over-productiveness; but this might be checked by nipping off a few of the blossom buds. Pears he had not tried, for he had never met with any in this part of the country that were worth growing.

Some desultory conversation followed; after which the club adjourned, to meet again the last Friday in February, when the “Best and most efficient mode of underdraining,” will be introduced by Mr. Thos. Kench.

## LONDON.—FARMING IN CANADA WEST.

We find the following account of London and farming in Canada West in a late number of *Moore's Rural New Yorker*, a spirited agricultural and family newspaper, published in Rochester, New York. The opinions expressed will no doubt be read with interest by many in Canada.

This London of the New World is the county town of Middlesex County, C. W., and contains a population of 10,000—English, Scotch and Irish, with a strong sprinkling of the "universal Yankees." Its streets are wide and regular and cross each other at right angles, which, as the place is on a broad table land and very level, appear very finely. The public buildings are the Court House, Royal Exchange, Covent Garden Market, City Hall, and some excellent Hotels, the leading one—Robinson Hall—being kept by a Down Easter. Few cities can boast of a better City Hall or Market. The town has recently been lighted with gas, and only needs a supply of good water to render it a first class inland city. Mercantile business is extensive, supplying a large extent of country, back to Lake Huron. Previous to the completion of the Great Western Railway the whole commercial business was done at Port Stanley, on Lake Erie, distant about twenty-five miles. The building of the railway has been of much benefit, inducing increased trade, additional and better buildings, and enabling the traffic to be continued through the winter months, heretofore impossible. The enterprising citizens have in course of construction the London and Port Stanley Railway, which will enable them to reach the Lake to some twenty-five miles, and bring them in cheap communication with Buffalo, with which city they now trade largely.

It is not the city alone that deserves mention, for around it, on every side is spread out a farming country of great beauty and fertility. Wheat, both winter and spring, is grown to a large extent and with good success. Some of the samples are as fine as the best Genesee. Farmers here are not particular in growing only one kind of wheat in the field, but mix the white and red together, to their own disadvantage when seeking a market. Good winter wheat commands \$1.50, spring \$1.25, oats 37½ cents. Very little corn is seen, from which it may be inferred that little is grown except for home use. Here, as well as elsewhere in Canada, attention is given

to breeding good cattle and sheep, and fine horses. The beef in market for the holidays is superior, and the fat mutton can hardly be excelled. The sheep most in favor are the middle-wooled, South Downs and Cotswolds, and their crosses, with the natives. Agriculture is still in its infancy, and many of the farms at the north are new and only partially cleared. The land toward Lake Huron is represented as very fertile and rapidly settling. Toward Lake Erie it has been long cultivated and is of a very superior character.

In some respects the Canadian farmers are in advance of those in the States. Having come from England, where high and systematic farming has received more attention, they the more readily adopt improvements which promise good results. They are large growers of the different root crops, and find them of great value. They have plows modelled after the Scotch, with which they plow deep and well far better as a general thing, than New York plowmen. Sub-soil plowing is beginning to attract attention and will be found very beneficial, as much of the soil is stiffly tinctured with clay. Draining is also receiving much thought. A company has been incorporated for the purpose of making and putting down drains, upon a large scale. It is proposed to do this upon a farm, and allow the proprietor to pay for the improvements made in annual instalments, with interest, something in the manner of a mortgage or lease upon the property. The head-quarters of the company are at Hamilton, and it embraces many of the influential and wealthy men of Canada West.

Horticulture receives very general encouragement, and few are the farmers of note who cannot boast of good fruit, and, indeed, choice and rare flowers and shrubs. Nor are these things neglected among the small farmers. Many a one, on his humble farm far away toward Lake Huron, is familiar with the best apples, pears, plums, and other fruit, and not a few have obtained the best trees of the celebrated nurseries of Monroe county. From Buffalo, too, they have drawn a liberal supply. Few countries of equal extent give better promise of the future than Canada West. It is dotted over with flourishing villages, and is fast being interlaced by well constructed railways, which, when completed, will greatly enhance the measure of her prosperity. We purpose to know her better, and say more of different parts of the province, at a future time.

### THE FARMER'S HOME.

WHAT signify all the improvements in agricultural processes, which are constantly urged upon the acceptance of farmers, if the farmer's *Home* is what it ought not to be?

Deep cultivation, draining, drawing, ditching, mulching, composting, &c, are all important, as a means; but the proper end to be accomplished is not the multiplication of dollars and cents—not the laying up in store of "much goods;" but that most desirable of all earthly ultimates, a pleasant, attractive, happy *Home*.

The farmer's *Home* should not be so much his castle, as his sanctuary. Over its threshold, disorders and discontents should never be allowed to step. Harmony, order, love and peace, as well as plenty, should reign within the farmer's abode, making it a paradise, as little marred by gross and corrupting desires as may be; where the intellect, the taste, and the affections may seek and find their appropriate and full gratification. What desolation, nay, what wants abound within those walls, where merely animal desires are cloyed with material profusion, to the exclusion of that higher food of the spiritual nature, which is, in fact, the "bread of life!" There, the physical man may grow, and fatten, and rejoice in its ease, and its indolence, with a sort of porcine satisfaction; while the inner life, and manhood, the God-spark, famishes, and dies.

The fields are the places where the head; aided by the strong arm, should triumph in material achievements. In the true *Home*, the heart, aided by the head, should emulate the industry of the bee, in storing its treasures, and like the treasury of the bee, those of the *human Home* should be of honeyed sweetness.

Wealth may build palaces to shelter gilded misery. Poverty, by making a true home in an unpretending cottage, hallows itself, and shames the power of gold.

It is astonishing with what facility the cultivated spirit changes even material objects into high spiritual individualities. A tree, a shrub, a flower, nay, a stone, may have its history—a history, the recital of which shall palpitate the listener's heart with joy, or blur his eyes with tears of sadness. Inanimate objects, (only so perhaps, to our thinking,) may speak a language which the heart shall hear, and feel, and answer. Around the true home, sacred as were held the household duties of olden times, cluster these

objects of man's aesthetic nature. They make him better, happier and wiser; opening up to him even here, a manifold life, and enable him to read sermons in stones, and to behold good in everything.

Verily, we are sorry to say it, but so it is, verily, the farmer's *Home* needs improvement more than his plow-shares, his threshers, or his reapers. It needs *more* than improvement; it demands a new creation, fashioned on a plan of such beauty and harmony, that it may be a temple worthy to be tenanted by beings who have spirits as well as bodies. Then, what follows in the way of even unlimited improvement in modes of material production, for the farmer's *Home* will be what it *ought* to be.—*Ohio Farmer*.

### PLAIN HINTS FROM A YOUNG FARMER.

Tis said—"a word to the wise is sufficient."

Always take one or more agricultural papers, for every number will give you information which will benefit you dollars.

Be admonished that a stitch in time saves nine, for the laying up one nail, or nailing one board may save the ninth repetition and unruly stock.

Colts must have a great deal of exercise.

Don't be afraid to plow deep. A few more oats in the spring, will make *many* more at harvest.

Early fruit trees should be protected from the frost by spreading straw around the roots, which will prevent the buds from starting.

Feed your fowls the year round if you would make them profitable.

Give your calves, which you intend to raise, a little fine hay; and as soon as possible turn out to grass.

Have a separate pen into which your pigs can go, and get shelled corn and milk.

Innovations upon old precedents should be rare.

Judge not hastily, but examine well before you decide.

Keep clear of Shanghais.

Lime should be accessible to poultry.

Make the most of everything.

Never half do anything, you may thus lose more in one day than a month can restore.

Often inspect your stock and keep a sharp look out for disease and accidents.

Pure water should be applied to everything.

Quality not quantity should be the maxim.

Read in your spare moments, rather than gossip. Salt in small quantities should be fed at regular intervals to your stock.

Turkeys, like turncoats, are a poor dependence.

Upon industry and economy does the success of life depend.

Very great care should be taken with your fruit trees: cultivation is necessary and will repay an hundred fold.

Watch carefully the clouds and the crows that you may not be caught unawares.

Xerxes boasted as a god. Remember thou, it is "God only that giveth the increase."

You can raise fine calves upon sour milk or whey after they are a few weeks old; when young they never should be fed on cold drink.

Zeno excelled in philosophy. Strive that you may excel in agriculture. L. C. *Charlton, N. Y.*

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#### AGRICULTURE IN COMMON SCHOOLS.

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The Legislature of VERMONT, at its recent session, passed the following:—

AN ACT to encourage the study of the science of Agriculture in Common Schools.

*It is hereby enacted, &c.*

SECTION 1. The Governor is hereby authorized to purchase one copy of "Waring's Elements of Agriculture" for each town in the State, and to draw an order on the Treasurer for the payment of the same

SEC. 2. One of these books shall be placed in the hands of the Superintendent of Schools of each town, with instructions to examine it with regard to its merits as a school book, and [he] shall report to the Clerk of the said town what number of copies, if any, is required for the use of the Common Schools of the said town.

SEC. 3. The legal voters of each town shall, at the next annual town meeting, vote whether or not the town shall purchase the number of books recommended by the Superintendent aforesaid, and the Town-Clerk shall report to the Governor of the State the result of such ballot.

SEC. 4. The Governor shall then order to be manufactured, in such style as he shall deem expedient a sufficient number of the books to supply the demand by the aforesaid ballot, and these books shall be manufactured in the State of Vermont, and they shall be deposited with the Superintendents of Schools in the various towns, and the payment therefor collected by the publishers or proprietors at their own expense.

Approved Nov. 13, 1854.

We have had some apprehensions for Vermont since we heard that gold had been discovered in her mountains, but this act allays them. Let her youth be well grounded in the

science which forms the base of practical Agriculture, and the discovery of mines of yellow ore in her soil even as vast and rich as those of California could not suffice to ruin her.

We have so often commended the study of Agricultural Science in Common Schools that we have little now to urge. The idea of using some cheap elementary work like Waring's as a reading book is perhaps the most feasible of any.— Nothing can be more absurd than dragging boys and girls of eight to sixteen years through such essays as make up the bulk of the English Reader and most other first-class reading-books used in the common schools of our boyhood. The great majority do not really comprehend them, and are little more profited by their perusal than if they were printed in Greek or Latin. But put into their hands reading books that tell them of what elements soils are composed, how those elements with others floating in the atmosphere are recombined in plants, how these again reappear in animal structures, and how trees absorb mainly through their leaves the carbon and water which form so large a proportion of their trunks and limbs, and they cannot fail to be deeply interested as well as instructed. Now they will read to learn, and will be better fitted for intelligent and efficient husbandry at the close of each term. They will leave the Common school better fitted for improving the half-exhausted lands they are destined to cultivate than are the graduates of colleges under the old system.

We do not know whether the town elections referred to in the act above cited have or have not taken place, but it is not difficult to guess that in most cases nothing will be done. But we think there will be some towns in which the farmers will know enough of the importance of Science in Agriculture to be willing to learn more; and if there be but ten such in the State, the soil of those towns will be more productive and more valuable ten years hence than that of those towns which treat Agriculture as a mere drudgery to be endured and not as an art to be studied and acquired. And those towns which begin with placing a work on the elements of Agriculture in their Schools will not stop there but will soon proceed to supply those seminaries with such practical treatises as 'Devoe's Muck Manual,' 'Harrison on Insects Injurious to Vegetation,' &c., until their youth shall be thoroughly grounded in the knowledge which shall form the base of their future thrift and usefulness. Let

Vermont but lead the way, even doubtfully and timidly, in this career, and her sister States will ultimately acknowledge a debt to her for teaching truths of more practical utility to them than would be the Annexation of the whole Continent.—*New York Tribune.*

### MAPLE SUGAR.

The season for making maple sugar will soon arrive, and a few remarks as to fixtures and preparations therefor may not come amiss. A few years since it could be purchased in our market at from six to eight cents per pound by the quantity; but within the past two years it meets with a ready sale at ten and twelve cents per pound and choice samples will readily command extra prices. From being an article of slow sale, it has, in consequence of the clearing up of our lands, become an article of luxury; and we do not, under ordinary circumstances, anticipate any future decline in prices.

The quantity, color and taste are materially influenced by the care taken in the various stages of its manufacture, the cleanliness observed in the gathering of the sap, and its evaporation to the graining point. By reason of the high temperature required in the last stages of evaporation unless great care be taken it is very apt to be burnt and acquires a bitter empyreumatic flavor, very different from its own peculiar aroma and taste.

To gather the sap in buckets from fifty or one hundred trees, and carry it by manual labor to the kettles, we know from experience is rather hard work, and we much prefer having previously broken out good roads, to let the conveyance be done in a barrel on a sled drawn by horses or oxen, than carry it ourselves. Much lifting may oftentimes be saved, if the place of manufacture be so much elevated on one side that the sap will run from the barrel or hogshead into the boilers in a steady stream by simply turning a faucet near the lower part of the cask used for its conveyance.

It has also been ascertained by careful experiments that the flow of sap depends more upon the depth of the incision than upon its external size—also that an aperture half an inch in diameter is almost equally as effective as one of double its size; but in the one case the wound readily heals over by the growth of the same season—in the other, the growth of several sea-

sons will hardly close the wound, endangering the vigor and health of the tree.

The experiment to which we refer was made under the direction of the Agricultural Club of Brattleboro, Vt., and is in substance as follows: "In the spring of 1850, a committee consisting of three persons, was appointed to ascertain by actual experiment the proper size and depth of the bore in tapping the sugar maple. They accordingly proceeded to test this question in the most thorough manner, using all sizes of bits, from half an inch to an inch and a half in diameter—each making his experiment independently of the other—and the result of all was, that no difference could be perceived—the half inch giving as much sap as any other. Each one also tapped several trees, setting two buckets to a tree, with a single spile to each, but bored to different depths, from one to three and a half inches, and the results in this case were in every instance, when the weather was sufficiently warm to thaw the tree through, that the flow of sap was in proportion to the depth of bore; and to make the matter more certain, on deepening the shallow bores subsequently, they immediately overtook the others in quantity.

These experiments were repeated in 1851 by a different committee, with the same general results."

The sap of the sugar maple and a few other trees only, yields sugar when taken from the tree before the expansion of the buds and blossoms from their dormant state;—what precise change is induced by the expansion of the buds, whether of cause and effect, we know not. We also know that clear bright days alternating with frosty nights give the greatest flow of sap; and that if mild weather ensues and continues for any length of time, we can only obtain an uncrystalizable syrup as the product.

Supposing your buckets are all in order and readiness—troughs made by the axe we would only use as a last resort, simply because they become such convenient receptacles of dead leaves, &c.—take your spiles or tubes of suitable diameter, with a hole through them of one-quarter of an inch in diameter, with an auger, bore about three inches into the body of the tree let the tube enter the tree only so far as will be necessary to ensure its permanent attachment; attach your bucket to a nail or peg driven into the body of the tree a little above the spout, and you may feel secure that a casual thaw will not perhaps upset your trough and spill the sap.



Below we give an account of the process adopted by Mr. Woodward, who obtained the premium from the State Agricultural Society, in 1846 for the best article of maple sugar. The statement says:

"In the first place, I make my buckets, tubs and kettles all perfectly clean. I boil the sap in a potash kettle, in such a manner that the edge of the kettle is defended all around from the fire. This is continued through the day, taking care not to have anything in the kettle that will give color to the sap, and to keep it well skimmed.—At night I leave fire enough under the kettle to boil the sap nearly or quite to sy up by the next morning. I then take it out of the kettle and stram it through a flannel cloth into a tub, if it is sweet enough; if not, I put it in a caldron kettle, which I have hung on a pole in such a manner that I can swing it on and off the fire at pleasure, and finish boiling, then strain into the tub, and let it stand till the next morning. I then take this and the syrup in the kettle, and put it altogether in the caldron, and sugar it off. To clarify 100 lbs. of sugar, I use the whites of five or six eggs, well beaten, about one quart of new milk, and a spoonful of saleratus, all well mixed with syrup before it is scalding hot. I keep a moderate fire directly under the caldron until the scum is all raised: then skim it off clean taking care not to let it boil so as to rise in the kettle before I have done skimming it; when it is sugared off, leaving it so damp that it will drain a little. I let it remain in the kettle until it is well granulated; I then put it into boxes made smallest at the bottom, that will hold from fifty to seventy pounds, having a thin piece of board fitted in two or three inches above the bottom, which is bored full of small holes to let the molasses drain through, which I keep drawn off by a tap through the bottom. I put on the top of the sugar in the box, two or three thickness of clean, damp cloth, and over that a board well fitted in, so as to exclude the air from the sugar. After it has nearly done draining, I dissolve it, and sugar it off again, going through the same process in clarifying and draining as before."—*Gen. Farmer.*

#### MODES OF PLOUGHING.

Mr. Levi Durand, of Cerby, Ct., makes some useful remarks on ploughing, in the *Country Gentleman*. The advantage of what he calls the "gee about" system are very considerable on some land. By the other mode of turning,—that is, turning to the left instead of to the right,—the team treads on the ploughed land, unless headlands are left to be ploughed after the body of the lot is finished. By turning to the right, the ends may be ploughed as the work goes on, saving the time lost in crossing the lands, and leaving the soil light and pliable, a matter of

great importance in soils liable to pack closely. Mr. Durand gives the necessary directions, as follows:

"A still better plan we think would be to commence in the middle of the field; this could easily be found by pacing and staking. Here plough a furrow, say two rods in length, then turn back another furrow the same length. After you have ploughed six or eight furrows this way, you could commence ploughing across the ends of the land. Ploughing in this way, you would of course turn your team to the right, a 'gee about,' and so on until the field was finished.—The particular advantage of ploughing in this way is, that your team is all the time treading on the sward or unploughed land, while ploughing the other way or 'haw about,' you are constantly driving your team on at the ends on to the ploughed ground. If you have 'double team,' as is often the case in ploughing a heavy sward, then the ploughed ground at the ends of the land becomes trod very hard, and the soil is made almost as unfit for cultivation as though it had not been ploughed at all.

"Another advantage of the 'gee about' system of ploughing is, you can plough your whole field without leaving any middle or dead furrows, which is quite an object of consideration, especially in ploughing sward land. In ploughing mellow lands, the dead furrows are not of so much consequence, as they can be easily drawn down by the harrow in cross harrowing. The same system of ploughing without leaving dead furrows, can be done by using the side hill plough, by commencing at the side of the field, and ploughing forwards and backwards until the field is finished, leaving the headlands to be ploughed last.

#### RAISING CALVES—A NEW METHOD.

WHILE on a short visit to the farm of M. Crowell, of this town, a few days ago, our attention was drawn to a plan of raising calves for early sale, which to us, in this section of the country, has the appearance of novelty, and seems worthy of the consideration of stock growers.

Mr. Crowell took his calves (all heifers) last spring, and commenced feeding on soar milk to a few days old, keeping them on the same kind of food during the summer, taking good care to feed them uniformly, but not very abundantly, so as to keep them growing thickly without for

cing them too rapidly. In the fall they were put in the stables, and fed on hay, and a little meal, increasing the quantity of the latter gradually, with a view of fitting them for "beef" in the spring at one year old or a little under.

These ten calves look like young oxen, and are estimated to weigh about 300 lbs, each, alive. They will probably be sent to market soon, say next month, when we shall see how such beef will sell, and it will be relished by the lovers of good eating. For ourselves we should hardly find it in our hearts to decline a dinner from one of the best of them. We understand from Mr. C., who is making this trial by way of experiment, that he is quiet satisfied thus far with the present attempt to raise beef in one year, that he intends to renew the experiment another year, when he thinks some improvement can be made. *N. Y. Farmer.*

#### FARINACEOUS ALIMENT FROM STRAW.

The attention of agriculturists in France has been recently directed to the discovery of a method of converting straw into a kind of bran.—This discovery has been claimed by two individuals. The first is a miller near Dijon, of whose name we are not informed, who, it is said, on trying the mill-stone of a new mill, discovered the possibility of converting straw into a nourishing food. The second, M. Jos. Maitre, founder of the fine agricultural establishment of Vilotte, near Chatillon.

This distinguished agriculturist, known for the purity and perfection of his breeds of sheep, conceived the idea of converting into farina, not only the straw of wheat, and other grains, but of hay, trefoil, lucern, sanfoin, &c. His efforts are said to have been perfectly successful, and his discovery arrived at—not by chance, but by long experiment and research. The aliment which he has produced is said to be a complete substitute for bran. It is given to sheep and lambs, who consume it with avidity, and may be given to all other granivorous animals, as a grateful and substantial food.

M. Maitre, with the view of bringing the process to perfection, has ordered a mill for its manufacture, and he is preparing to communicate a report to the Royal Society of Agriculture on the advantages in rural domestic economy to be derived from this preparation. We are not at the present moment informed of the nature of this

process. If it be a simple grinding of the straw or fodder, and a separation of some of its fibrous matter, we can easily imagine the advantages that may result from it. We know in this country that the mere clopping of straw adds greatly to its powers, by facilitating mastication and digestion. We may believe that a more perfect communication of its parts will produce a corresponding effect, and extend very widely, the use of straw and other fodder, as a means of feeding our domestic animals.—*Quarterly Journal of Agriculture.*

#### THE MANURIAL USES OF LIME.

The *Mark Lane Express*, an English Agricultural journal of marked ability, has an article in a recent number "On the Uses and Application of Lime to Soils," which, but for its length, we would copy entire for our readers.—Its substantial points may be condensed as follows:

1. Lime acts very powerfully in its caustic state in decomposing animal and vegetable matter in the soil. It retains a portion of its causticity in contact with the moist earth, and even when moderately diluted with water, and Prof. WAX thinks the best mode of applying lime would be to have it equally distributed over the soil in solution in water.

2. Lime acts surprisingly as a stimulant upon the dormant powers of the soil and the inert manures abiding therein. LIEBIG says, "Lime, in combining with the elements of clay, liquifies it, and what is more remarkable, liberates the greater part of its alkalies. The cerialia required the alkalies and the alkaline silicates, which the action of lime renders fit for assimilation by the plants. Ammonia and the phosphates are also indispensable, and with these we have all the conditions necessary to fertility."

3. Lime neutralizes injurious acids in the soil. Soils subject to flooding or stagnant water are said to be sour, as containing too much vegetable acid. Lime qualifies the vegetable and other soluble substances, and occasions their conversion by atmospheric action into food for plants. In this way it is useful in decomposing muck, and preparing it for a fertilizing application to loamy and sandy soils.

4. Lime is a powerful alterative of the nature and texture of the soil. By causing fermentation therein, its minute particles insinuate into

every crevice of the soil, causing its disintegration and separation, and the more rapid decay of vegetable matter, which eventually makes it mellow and pliable. Lime has power to decompose the mineral portions in various soils, and is thus the source of benefit by providing the constituents of magnesia, potash, and soda, so important to vegetation.

5. Lime applied in sufficient quantity *destroys* worms, slugs, beetles, &c., including most of the insects injurious to vegetation, which have for a portion of their existence a home in the soil.

Finally,—The free use of lime as an application to the soil “enriches the father but beggars the son.” It is the cause of a vastly increased produce; *it is not in itself a manure*, but its power and action upon the soil extracts the very “soul of vegetation,” converting not only manures but the ingredients of the soil itself into living vegetables.

#### FARM ECONOMY.

Economy, properly practiced, is one of the cardinal virtues. But true economy does not always consist in mere saving and stinting—it requires wide and far-reaching views, and a generous and self-reliant spirit, to decide practical questions upon that just basis which secures the greatest measure of success. Thus there is an economy of the farm which only the judicious and thoughtful take into account, and which the wisest cannot claim fully to comprehend. From the nature of his calling, and the wide and ever-varying range of influences acting upon it, the best instructed must necessarily remain in the dark upon many subjects which derange his plans and interfere with his success.

It cannot be denied, however, that light and knowledge with an important bearing upon the true Economy of Agriculture, still remains very generally unused and unheeded. Let us point out, briefly, some of the beacons kindled on the route of Progress—some of the truths established by the researches of Improvement.

True Economy works thoroughly and faithfully. It does not require a large area of land to exert itself upon; it glories in raising ninety bushels of corn upon a single acre rather than thirty—upon forty bushels of wheat rather than ten. It gives *much labor*—all the labor required to do the work in the best manner—*upon little land*. It leaves no fertile farm six inches be-

low its own, all untilled and uncared for; but remembering that its title-deed covers unlimited depth, however circumscribed it may be upon the surface, uses the soil as far down as the plants care to send their roots after supplies of that fertility which results in an abundant yield. It thus saves in the cost of the land, in fencing taxes, &c., and something in the labor of cultivation, and still produces more real profit than the contrary course. It is better to economise in land than in labour—and many a farmer, if he would sell half his land, and put his whole force and capital into the cultivation of the remainder would make money much faster than he now does.

True Economy does not expect to reap without sowing. Hence manure, to keep up and add to the productive power of the soil, is constantly supplied, and thoughtful care on this subject is ever characteristic of the farmer who succeeds. Read the reports of premium farms, of large crops, of profitable experiments in agriculture, and this ever seems the key and the explanation of their results. A judicious expenditure in the collection and preservation of manure, is always a paying investment. And there are a thousand sources of fertility now neglected which it is the province of true economy to discover and secure. We must feed, if we would take from the soil, and the more generous the husbandman the greater his reward.

True Economy does not stop with a mere glance at first cost. In farm stock, for instance, it costs little more to raise, to any given age, a good animal than a bad one, while one may be ten times as profitable as the other. The good may cost more at first, but they are sure to prove valuable—while the cheap are almost certain to be poor and dull of sale. The best breeds of animals—the best grains—the best varieties of fruit—all these are sought for by the truly economical cultivator of the soil. The subject is a very suggestive one—but the reader can take it up for himself, and follow it out practically in his own operations. We venture to assure him that it will not be a losing business, even under any seeming failure, if it incites him to a more extended and thorough study of the subject.—*New Yorker*.

The three great motive powers employed in all mechanical operations are water, wind and steam, the latter taking the lead of both the others at the present time.

# Horticulture.

## CATALOGUE OF VALUABLE FRUITS.

We noticed in our last the receipt of the proceedings of a convention of the American Pomological Society at Boston, which was attended by most of the distinguished Horticulturists, Orchardists, and nursery men of the Eastern and Northern States. Among other valuable information we find a catalogue of fruits adopted by the Society as being the best varieties now grown. The list will be useful to those who are about to purchase. Some of these fruits will no doubt be found less valuable in Canada, than in a more genial climate. But the difference between that portion of Canada, west of Toronto, and the states in which these fruits flourish is not very great. The purchaser should be careful to deal with nurserymen of established reputation.

**APPLES.**—*For General Cultivation.*—American Summer Pearmain, Baldwin, Bullock's Pippin, Danver's Winter Sweet, Early Harvest, Early Strawberry, Fall Pippin, Fameuse, Gravenstein, Hubbardston Nonesuch, Lady Apple, Ladies' Sweet, Large Yellow Bough, Melon, Minister, Porter, Red Astrachan, Rhode Island Greening, Roxbury Russet, Summer Rose, Swaar, Vanderveer, White Seek-no-Further, William's Favorite (except for light soils,) Wine Apple, or Hays, Winesap.

*New Varieties which promise well.*—Autumn Bough, Benoni, Coggswell, Genesee Chief, Hawley, Jeffries, Ladies' Winter Sweet, Monmouth Pippin, Mother, Primate, Smoke House, Winthrop Greening, or Lincoln Pippin.

**PEARS.**—*For General Cultivation.*—Ananas d'Ete, Andrews, Lawrence, Louise Bonne de Jersey, Belle Lucrative, or Fondante d'Automne, Beurre d'Anjou, Beurre d'Arenberg, Beurre Diel, Beurre Bose, Bloodgood, Buffum, Dearborn's Seeding, Doyenne d'Ete, Flemish Beauty, Fulton, Golden Beurre of Bilboa, Madeleine, Manning's Elizabeth, Paradise d'Automne, Rostiezer, Seckel, Tyson, Urbaniste, Uvedale's St. Germain (for baking), Vicar of Winkfield, William's Bon Chretien, or Bartlett, Winter Nelis.

*For Cultivation on Quince Stocks.*—Belle Lucrative, Beurre d'Amalis, Beurre d'Anjou, Beurre d'Arenberg, Beurre Diel, Catillace, Duchesse, d'Angouleme, Easter Beurre, Figue d'Alençon, Glout Morceau, Mong Green of Cox, Louise Bonne de Jersey, Napoleon, Nouveau Poiteau, Rostiezer, Beurre Langlier, Soldat Laboureur, St. Michael Archange, Triomphe de Jodoigne, Urbaniste, Uvedale's St. Germain, or Belle Angevine (for baking), Vicar of Winkfield White Doyenne.

*New varieties which promise well.*—Clarigeau, Beurre Sterkman, Beurre Superfine, Rran.le's St.

Germain, Brandywine, Chancellor, Charles Van Hoogten, Collins, Comte de Flanders, Doyenne Bussock, Doyenne Goubault, Duchesse d'Orleans, Beurre St. Nicholas, Duchesse de Berri, Epine Dumas, Fondante de Malines, Fondante de Noel, Howell Jalousie de Fontenay Vendee, Kingssessing, Kirtland, Limon, Lodge, (of Penn), Nouveau Poiteau, Onondaga, Ott, Pius IX., Pratt, Rousselle d'Esperin, Sheldon, St. Michael Archange, Steven's Genesee, Striped Madelein, Theodore Vans Mons, Von Assene, (Van Assche,) Walker, Zepherin Gregoire.

**PLUMS.**—*For General Cultivation.*—Bleeker's Gage, Coe's Golden Drop, Frost Gage, Green Gage, Jefferson, Lawrence's Favorite, McLaughlin, Purple Gage, Purple Favorite, Reine Claude de Bavay, Smith's Orleans Washington.

*New Varieties which promise well.*—Ive's Washington Seeding, Munre Egg, Prince's Yellow Gage, River's Favorite, St. Martin's Quetche.

**CHERRIES.**—*For General Cultivation.*—Belle Magnifique, Black Eagle, Black Tartarian, Downer's Late, Downton, Elton, Early Richmond (for cooking,) Grosfon (or Bigarreau,) Knight's Early Black, May Duke.

*New Varieties which promise well.*—American Amber, Belle d'Orleans, Bigarreau Montreuse de Bavay, Black Hawk, Coe's Transparent, Early Purple Guigne, Governor Wood, Great Bigarreau of Downing, Hovey, Kirtland's Mary, Ohio Beauty Reine Hortence, Walsli's Seeding.

**APRICOTS.**—*For General Cultivation.*—Breda, Large Early, Moorpark.

**NECTARINES.**—*For General Cultivation.*—Downton, Early Violet, Elruge.

**PEACHES.**—*For General Cultivation.*—Bergen's Yellow, Cooledge's Favorite, Crawford's Late, Early York, serrated, Early York, large, George IV., Grosse Mignonne, Morris White, Old Mixon Free.

**GRAPES (under glass).**—*For General Cultivation.*—Black Humburg, Black Frontigan, Black Prince, Chasseln de Fontainebleau, Grizzley Frontignan, White Frontignan, White Muscat of Alexandria.

*Open Culture.*—*For General Cultivation.*—Catawba, Dianna, Isabella.

*New variety which promises well.*—Concord.  
**RASPBERRIES.**—*For General Cultivation.*—Fastolf, Franconia, Knevet's Giant, Red Antwerp, Rellaw Antwerp.

*New Varieties which promise well.*—French, Orange, Walker.

**STRAWBERRIES.**—*For General Cultivation.*—Boston Pine, Hovey's Seedling, Large Early Scarlet.

*New Variety which promises well.*—Walker's Seedling.

**CURRENTS.**—*For General Cultivation.*—Black Naples, May's Victoria, Red Dutch, White Dutch, White Grape.

## GOOSEBERRIES AND THEIR CULTURE.

As a class, the small fruits, such as gooseberries, currants, strawberries, raspberries, &c., receive but a moiety of the attention which they merit. They all ripen at a season of the year when other fruit are scarce, and fill an important place in the luxury of a well furnished table.— True, almost every one has currants, small, acid things, the product of stunted and neglected bushes, and sometimes you will find a wild gooseberry bush transplanted into some fence corner, where, choked by grass and weeds, its fruit is even poorer than when in its wild state; or if the improved varieties are planted the want of care renders them unproductive, or they are destroyed by mildew, and hence many persons have come to the conclusion that they are not worthy of cultivation. But give them a good location and proper culture, and the sight of the bushes loaded with fine, large berries, would tempt the most unbelieving to give them a trial.

With good treatment none of the small fruits produce more abundantly than the gooseberry. It succeeds best in a deep, sandy loam with a northern aspect, but will thrive well in any soil provided it be made deep and rich. It should be trenched, or else worked two spades deep, and thoroughly enriched with any well rotted manure.

Many consider mulching absolutely necessary to prevent mildew, but that depends much more upon the situation and treatment than upon mulching. If they are fully exposed to the sun, as upon the south side of a fence, or in any soil with an unbroken southern aspect, nothing short of mulching, or *shading the ground around their roots* in some other way, will save them from mildew. But plant them on the north side of a board fence, hedge, or stone wall, two or three feet from it, work in a liberal supply of fine compost every spring, (if placed around them in autumn and turned under in the spring, so much the better,) and keep the surface mellow through the heat of summer, and there will be no trouble from mildew.

Like currants, they are easily propagated from cuttings and layers.—*R. N. Yorker.*

**TO CLEAN BRASS.**—Rub it over with a bit of flannel dipped in sweet oil; then rub it hard with finely powdered rotten stone, then rub it with a soft linen cloth, and polish with a bit of wash-leather.

## PRUNING.

PRUNING, properly speaking, is the judicious removal of encumbering and useless wood every year, so as to regulate the branches in every part of the tree, and thus give access to the sun and air to freely penetrate through the whole tree; this is necessary, for if the air and sun cannot get freely to the fruit and the leaves, they are imperfectly matured; the leaves cannot properly perform their functions, thus the sap is imperfectly elaborated, and both the wood and fruit are imperfectly ripened.

As to the time to prune, there is a diversity of opinions, whether it should be performed in the fall, after the leaves are off, or early in the spring before the buds break. This is immaterial; it is only a disagreement whether trees should be pruned at the beginning or end of their dormant state, but it amounts to nothing; pruning may be done any time during the dormant state of the tree; it should however, be performed before the sap begins to flow in the spring. In these remarks we allude to what is termed winter pruning—summer pruning is a different operation, of which we shall speak on a future occasion.

In pruning it is necessary to be well acquainted with the nature of the tree to be pruned; without this, it is impossible to prune to advantage. All trees are not alike in their nature; some produce their fruit on the young wood of the previous year's growth, others on spurs which grow from the old wood, and others on the young wood of the present year's growth; these points require attention by the operator, to enable him to perform the operation aright.

Apple, pear, plum and cherry trees bear principally on spurs which grow or arise out of the wood of two or three years' growth. These branches with spurs continue to bear for several years.

In pruning these trees, due regard should be paid to the production of these spur branches, by shortening the young wood on the main branches; the main branches should be regulated as to distance from each other, so as to give the tree a uniform appearance, and to keep it open for the admission of the sun and air.

Peaches, nectarines, and apricots, produce their fruit on the young wood of the previous years' growth; in pruning them, care will be necessary to retain the strongest and clearest

wood of the previous year's growth, cutting out the weak shoots, and such as grow in a direction in which they are not needed, being careful to keep the tree open.

Vines bear on the young shoots of the same season. In pruning these, all weak shoots should be taken out, retaining only the strongest rods or canes; these should be shortened according to their strength; the object to be aimed at, is to retain only such a quantity of buds as will break strong. Care will be necessary so as not to retain more rods than the space occupied by the view will allow of, and placing them in such positions as will allow free circulation of the air, and freely admit the rays of the sun.

Gooseberry bushes bear on the young shoots of the previous season's growth. In pruning them cut out all cross shoots, retaining only the strong straight shoots of the previous year's growth: of these retain only the best and most ripened wood. Gooseberry bushes cannot be left too open; if you allow the branches to get crowded, you cannot expect fine fruit; air must be admitted freely among the branches to obtain good fruit. The black currant also bears on the young wood, and should be pruned in a similar manner to the gooseberry. The red and white currant produce their fruit on spurs of old wood; in pruning them, care will be necessary to form an open bush, with the bearing branches, which should be stopped to induce them to bear, and all the other young wood should be cut back to two or three eyes, being careful to keep the bush open.

In pruning, it is necessary to cut clean and smooth with a sharp knife, and all young shoots that come where they are not needed, should be cut clean out close to the main stem, so as to leave no eyes to fill the tree with useless wood.

In giving directions for pruning, it is impossible to give directions which branch should be taken out, and which left in; only the principles of the system can be given in writing; the relative position of the branches can only be determined by actual observation; the operator, if he understands the principles and nature of the tree, will be able to determine on this point.—The above remarks will give him the requisite information on the principles that should guide him in the operation.—*Exchange*.

**WASH FOR THE HAIR**—Olive oil, half an ounce; oil rosemary, one drachm; strong hartshorn, two drachms; rose water, half a pint. Add the rose water by degrees, otherwise it will not amalgamate.

#### THE WREN, vs. CHERRY BIRDS.

The common house wren, which is known to everybody on account of his lively song and his pugnacious habits, is found in all parts of the United States, and is an indefatigable destroyer of insects, "The immense numbers of insects (says Alex. Wilson,) which this little sociable bird removes from the garden and fruit trees, ought to entitle him to every cultivator, even if he had nothing else to recommend him. But his notes, loud, sprightly, tremulous, and repeated every few seconds with great animation, are extremely agreeable." It feeds on insects and caterpillars, and while supplying the wants of its young, it destroys, on a moderate calculation, many hundreds a day, and greatly circumscribes the ravages of these vermin. The wrens are not confined to the country. They are to be heard on the tops of houses, in the central parts of our cities, singing with great energy. Scarcely a house or a cottage in the country is without at least a pair of them. It is said by a friend to this little bird, that the esculent vegetables of a whole garden might, perhaps, be preserved from the depredations of insects by a few pairs of these small birds.

The wren is often seen running over the fences and stone walls like a little squirrel, creeping in and out of holes and the crevices of wood-piles, hunting for various kinds of insects, particularly for spiders and moths, that lie concealed in these retreats. It is curious to observe the celerity with which he moves about on these hunting expeditions, running so unlike a bird that he is often mistaken for a mouse. The wren is very pugnacious, and will drive away other birds that intrude upon what he regards as his own premises. This trait in his character may be made to serve a useful purpose, rendering him guardian of our cherry trees during the ripening of their fruit. Place a wren box upon the cherry tree you wish to protect, in May, and it will seldom fail to be occupied by a pair of wrens.—These little birds, from that time regarding the cherry tree as their own property, will not only devour all the insects that infest its leaves and branches, but will also drive away every bird that alights upon the tree. When the fruit is ripe, no robin or any other bird that comes there to eat the cherries is allowed one moment's peace, and, by the pugnacity of the little pair who have built their nest upon the tree, the fruit is saved. *Hovey's Magazine*

## Communications.

### REPORT ON THE PRESENT STATE OF BRITISH AGRICULTURE,

BY WILLIAM HUTTON, ESQ.,  
*Secretary of the Board of Statistics, Quebec.*

[Concluded from our last.]

Another great improvement which I saw, was on the Model Farm of the Royal Agricultural Society of Ireland, near Dublin. It consisted in having the out-houses, feeding-stalls, calf-pens, hog-pens, stables, &c. built round one yard common to them all. In the centre of this yard was a new large cistern, closely covered, into which drains from all the sheds and pens emptied themselves, thus giving a very large supply of urine from the stall-fed and other animals. This was drawn out in water-barrels, with perforated hose or tins, and allowed to fall on the plants, either turnips or mangold wurzel, or clover and grass, or grain, and was found to have as good an effect as a dressing of guano—the properties that the urine contains being as efficacious as those of guano, and not of dissimilar effect upon the crops. The sewerage of towns is also receiving a great deal of attention, as being likely to produce a manure equal to guano. Mr. J. T. Cooper, the analytical chemist, has reported upon it, and says that “plans for deodorizing and reducing sewerage to powder have hitherto failed, in consequence of the preservation of the ammonia not having been made a sufficient consideration.” But a Mr. Stotherd has lately taken out a patent for deodorizing sewerage, by which the ammonia and other volatile principles are entirely fixed and placed in a condition most eligible for the food of plants. In this consists the superiority of the invention—“The liquid portion, separated entirely from the grosser matters, passes off from the precipitate in the form of water, as clear as crystal, and free from colour.” Professor Way’s experiments have long since proved that the filtration of liquid manure through clay land is quite practicable. It is fully expected that the prodigious amount of rich material in the sewerage of large towns will in a very short time be brought into universal practical use for the benefit of the world, instead of being allowed, as hitherto, to be a source of great inconvenience and annoyance.

Having visited some of the finest flax growing districts in the north of Ireland, it struck me very

forcibly that the farmers of Canada might avail themselves of the immense profits which the proper cultivation of this crop gives to those who understand its culture and the processes required to render it marketable. That the soil and climate are adapted for its growth in both provinces, has been already ascertained by the breadth successfully cultivated for some years. In the Lower Province, the census of 1851 returns 1,189,018 lbs., as the produce of that year; and the linen manufactured from it, 929,249 yards. In the Upper Province, there are returned 59,680 lbs. of flax, and 14,711 yards of linen, quite sufficient to prove that neither soil nor climate are unsuitable for its cultivation. Taking this for granted, the next question is, How are we to get its cultivation extended, so as to make it an article of export? At present there is none grown except for home manufacture, and that is cleaned by the hand, by the families of the cultivators, at a great outlay of time and labor.

It is not probable that there are any private individuals who would enter so largely into its growth as to erect the necessary machinery on their own account solely. It will, therefore, require to be done by association of some kind, or the aid of some association. In Ireland and other countries, it has been thought wise policy to encourage its growth and cultivation by public aid, and, in the former country, a Royal Society has been formed and in operation now for a considerable time with that view. The best plan for promoting its growth is perhaps a difficult question in Canada, on account of the great distance and paucity of the parties who would be willing to undertake its cultivation for export, whilst as yet it continues, for that purpose at least, to be merely an experiment, and not ensuring a certain return of profit.

The present appears to be an excellent time for encouraging its growth in Canada as an article of export. In consequence of the war with Russia and the stoppage of flax from that country, the flax-mills in Scotland are going on short time, and the manufacturers having more orders than they can execute on account of this deficiency of supply, the Scotch farmers are taking measures for more extended cultivation of it, and the cautious Scotch farmer scarcely ever undertakes what is unprofitable.

The total annual import of flax from Russia, according to the last published return, was 1,226,258 cwt., about three-fourths of all the flax

imported from all other countries; and the average annual quantity of flax seed imported by Great Britain was 5,426,744 bushels, being more than five-sixths of the whole flax seed imported. "It is, however," says the *Economist*, "by no means improbable that some of these products of the Czar's empire will find access to our markets by a round-about road through other countries, though at an increased price to the British consumer, and this will be more apparent when we remember what devices were had recourse to in the French war, such as bringing silk from Italy round by Constantinople and all through Germany to England. That the price of the article will however be generally enhanced cannot be doubted." In fact, the price of flax is at this very time so high that I heard, when in Ireland lately, of many farmers who had netted £25, and even £30 sterling per acre—the price ranging from 50s. to 80s. sterling per cwt., (about 5½d. to 9d. sterling per lb.) There are very many late North of Ireland, Scotch and Dutch farmers now resident in Canada who perfectly understand its culture and preparation for market—the difficulty is the want of machinery. Whilst in the Province of Ulster lately, I visited some of the very best flax-mills, of the latest and simplest construction. There was one especially in Comber, County of Down, that worked most speedily and efficiently, preparing the flax for market through all its stages, after being rotted and dried. It was turned by a small water-power, and the entire cost of its erection, materials, machinery and everything, was under £200 sterling. Mr. Andrews, of Comber, Lord Londonderry's agent, told me that there would be no difficulty in procuring a mill-wright to go over to Canada to erect similar ones, perfect in every respect, by paying him £100 sterling for a year's work, and that they would not cost £200, exclusive of the water-power. The mill was of course not large, but there was a shed adjoining for storing the flax and putting it through the first process—viz., straightening for the scutcher. The great matter for Canada would be to have a machine constructed that we could attach to our horse-powers, so many of which are now owned by our farmers in the Upper Province, or to the wind-powers of the Lower Province; but the simplicity and cheapness of water-power flax-mills may induce their erection by two or three private individuals uniting together for that purpose. The Agricultural Association would promote the interests of Canada very much indeed by offering so hand-

some a premium as would induce some of our mechanics to construct machinery adapted to the wants of our country. The premium ought to be of such an amount as would induce persons of small capital to spend time and means to effect its construction.

The cultivation of flax would be useful to us as farmers, not only on account of the direct profit which the crop, properly managed, would produce, even at the present high rate of freight, but that it would also add another crop to our *rotation*, and relieve the land from the eternal wheat-cropping which sooner or later—conducted as it is in Canada—must prostrate the energies of our soil.

Even supposing that flax is quite as severe a crop upon the soil as wheat, yet the very *change* would be beneficial, and the seed well made use of at home would entirely remunerate the farmer for the loss of straw. Mr. Roche, M.P. for the County of Cork, had 2,500 acres of flax on his estate, which would yield 7,000 barrels of flax seed, (2½ bushels per barrel), i.e., seven bushels per acre, worth 6s. per bushel here, being 7s. 6d. sterling in England.

It is not uncommon now to sow clover seed along with the flax, and the pulling of the flax is very beneficial to the growing clover plant, by moulding it and admitting the air. I saw very beautiful clover cultivated in this way.

At a late meeting of the Royal Society for the promotion of the growth of flax the Chairman, Sharman Crawford, Esq., exhibited two specimens of the flax plant, each upwards of four feet long, and in every respect equal, one being grown from Riga seed, and the other from home-saved seed of the first year's saving. Both were sown on the same field the same day, and treated alike throughout, "in order," says Mr. C., "that the result should satisfy farmers as to the value of home-saved seed."

There is great discussion at present in the flax growing countries about the best system of retting (sometimes called rotting). Mr. McAdam, the Secretary of the Royal Society for the promotion of the growth of flax, showed me a great many varieties of samples retted by different processes. The best was that done in good running water, suitable for the purpose; and the prevailing opinion appeared to be, that if good water was to be had, and a knowledge of the process withheld—the old-fashioned way, though the most tedious and protracted, produced the finest and best flax.



—supposing the fibre in all cases to be equally good. If well retted, 100 lbs. of flax straw will produce from 18 to 22 lbs. of flax, according to the quality of straw. In Canada there would be no want of good running water for the purpose, though in both Provinces it is the process of *dew-retting* which is adopted—that is, spreading out the flax thinly on the ground, and leaving it for a considerable time to be damped by the dew and rain, and have the influence of the weather, until the fibre separates freely from the stalk; the grass is allowed to grow up amongst it for a fortnight, and it is then turned and left for another fortnight. But flax is cultivated in Canada in small patches, and merely for home use. Were it cultivated for export, there is nothing to prevent the adoption of the proper system of retting. The machinery for preparing for market is what we very much require to encourage its cultivation. The expense of export would not be a great barrier to its growth, because a great weight and value for a large sum of money could be packed in a small compass, and even £2 10s. per ton, if it cost so much, would not be a very large item in £65, which is perhaps about the average price.

The subjects I have mentioned here appear to me to be those which were most prominently engaging the attention of the agricultural public in the old country—viz., the draining of land and the increased knowledge of its good effect; the forcing of cattle to early maturity, by the increased growth of succulent food and the use of linseed, &c.; the use of various descriptions of portable manures, and the means being taken to provide a supply of them; the adoption of novel methods for increasing the quantity of breadstuffs and of flesh-meat; and the extension of the growth of flax and flax-seeds, and improvements in the method of preparing both for market.

With regard to seed wheat, of which we require a change in Canada very much, that called Payne's Defiance seemed to be highly esteemed; the ears are very large, and it grows to a great height. It is this description which Mr. Mechi has chiefly on his farm at Tiptree, in Essex. On a late occasion, when he had 300 visitors to view his farm, some of them who went to explore a field of his (sown with this species) were at once "shut out of view by the waving and luxuriant mass of vegetation."

With regard to new implements of husbandry, their name is legion; but I did not see many

worthy of very particular attention, or in any way better than those which we have ourselves.—Fowler's draining plough, worked by steam, and which drains land four feet with ease, if it be free from stone, is attracting a good deal of attention; but, in fact, the best reaping and mowing machines, and many other implements, were from this side of the water.

For the *Agriculturist*.

### INORGANIC & PROXIMATE ORGANIC ANALYSIS OF PLANTS AND THEIR USES.

BY J. H. SALISBURY, M. D., NEW YORK.

Vegeto-chemical analysis are instituted for the purpose of ascertaining, either quantitatively or qualitatively the proximate and ultimate organic and inorganic constituents of the whole plant and its several parts. It is requisite, in studying the physiology of plants, that equal attention be paid to these three kinds of analysis, for there is a great distinction between the chemistry of inorganic and organic bodies; that, in the former case, the determination of the proximate principles can be inferred from that of the ultimate constituents, while, in the latter case, no such rule holds good. Hence, these methods of analysis must be conducted separately and distinctly. In the examination of any given plant, special attention should be directed to the per centage of inorganic matter, organic matter, and water, in the different proximate organs, as the root, stem, leaves, &c. separately and in the whole plant. This gives us not only the per centage of water, dry matter and inorganic matter in the whole plant, but also the per centage of these in the several organs individually.

To illustrate its practical bearing, suppose the plant in view is one commonly cultivated for food—for instance, maize. We determine in a fresh plant, when ripe, the aggregate amount of water, dry matter and inorganic matter which that plant contains. Suppose the average of each plant to be one pound, consequently one hundred plants would amount to one hundred pounds. These one hundred plants or one hundred pounds contain of water 15 lbs.; organic matter, 81 lbs.; inorganic matter, 4 lbs. Suppose one acre of land to produce six tons of plants, which is a fair yield, these six tons would contain, of water, 1,800 lbs.; organic matter, 9,710 lbs.; inorganic matter, 480 lbs. The per centage of inorganic matter interests us particularly in

this preliminary examination, because we know that the plants obtain it entirely from the soil.— There must be in the soil all the organic ingredients which we find in the plants, and the plants must derive all their inorganic matter which they contain from the soil. Hence, we must find in the acre of soil, after the crop is removed, 480 lbs. less of inorganic matter than it contained before the plants were grown upon it. If this acre be cropped with the same plant for a series of twenty years, without any organic matter being added, there will be removed 9,600 lbs. Hence, the soil will contain 9,600 lbs. less of inorganic matter than it did previous to the cropping; being an actual, though gradual, decrease of 480 lbs of inorganic matter annually. If we add, however, 480 lbs. annually to the soil, then it is plain it will not decrease, because we return yearly the amount taken away. But, in adding this inorganic matter, we may not furnish the precise ingredients to the soil which the plants have withdrawn, since we have not determined yet what these ingredients are. Our next step is, then, to determine accurately the composition of this inorganic matter. This will give us the amount of each ingredient removed. If we crop our soil for a series of years, and wish the cropping not to impoverish or exhaust its store of inorganic constituents, and consequently render it less productive we must add yearly that which will furnish it with the amount of each ingredient removed. This can be done, by adding in a soluble form, so as to be taken up by the plant, the fertilizing materials which will restore the exhaustion suffered. It is not intended to convey the idea, that inorganic matter is more important to the growth of a plant than organic, or vice versa. The fact is, both are necessary, and may be considered equally important. The inorganic matter is derived entirely from the soil, whilst the organic matter, so far as is known, is derived both from the soil and air. Therefore, the reason why we add a given quantity of each of the ingredients of the inorganic bodies before referred to, to the soil annually, is, that they are the bodies, the aforesaid quantities of which are removed by a single crop: and we add them simply for the purpose of restoring what has been borrowed. Hence, the inorganic analysis of a plant is made to throw light upon the proper mode of its cultivation, whilst the proximate and ultimate organic analysis is not made so much for this purpose, as it is for arriving at its nutritive properties, and

the bodies which it may contain, applicable to the arts and medicine, and to give us a better idea of its physiology. What has been said of maize, is merely to illustrate briefly the practical value of the analysis of plants in agriculture.

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#### THE MONTHS-- MARCH.

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Sturdy March, with brows full sternly bent,  
And armed strongly, rode upon a ram;  
The same which over Hellespontus swam;  
Yet in his hand a spade he also bore,  
And in a bag all sorts of seeds ysame,  
Which on the earth he strewed as he went.

SPENSER.

Among the ancients this month was regarded as the commencement of the year. The Romans called it MARCH, in honour of Mars, the God of War, who was considered the father of Romulus, their immortal founder. The natural characteristics of the month—fierce and blustering winds, with alternate storm and sunshine—are in these northern latitudes, at least, in striking accordance with its Roman designation. It was called by our Saxon ancestors *Klydmonath*, from *Klyd*, meaning 'stormy'; also *Lenct-monat*, or Length-month, from the circumstance of the lengthening of the days at this period. After our ancestors had embraced Christianity it was usually known as the *Lenct-monat*, indicating the ancient practice of fasting—hence our modern term of *Lent*.

ST. DAVID'S DAY opens the month, commemorative of the Patron Saint of Wales, who flourished at an early period of the Christian era, and is said to have attained the extraordinary age of a hundred and forty years.

The ancient practice of wearing the Leek on this day has its origin and significance involved in some obscurity. The probability, however, is that the custom was commemorative of some signal victory achieved by the ancient Britons over their numerous and powerful enemies.— Welshmen, we are informed, wore leeks as their chosen ensigns after the great fight of the Black Prince of Wales. Others suppose that the custom arose from the *Cynhortha*, which was somewhat analogous to our Canadian "*Bee*,"—a neighbourly way of rendering assistance to such farmers as, from sickness or other causes, were unable of themselves to perform the pressing operations of agriculture at their proper seasons. The practice has been thus described:—"At an appointed time they all met to assist a sick or

distressed neighbour in ploughing, or in whatever other agricultural service their help was needed; on which occasions they each brought with them a portion of leeks, to be used in making a general mess of pottage." As the onion was considered sacred by the Egyptians and the misletoe by the ancient Druids, so probably was the leek by the early inhabitants of Wales—the practice having at one time a mystic and religious significance—the custom long surviving, as in numerous other cases, although its origin had been forgotten.

The festival of *St. Patrick*, the Patron Saint of Ireland, falls on the 17th, and is commemorated by the people of the Emerald Isle and their descendants in every part of the world. As is commonly the case in matters pertaining to ancient times, considerable obscurity envelopes the early history of this celebrated personage, who conferred such signal and lasting blessings on the land of his adoption. Pope Celestine consecrated him a Bishop under the ecclesiastical name of *Patricius*, and sent him over to Ireland to convert the wild natives to the Christian faith. Upon landing at Wicklow, in 433, he at once unfurled the banner of the cross; but so opposed were the rude natives to the new doctrine, regarding it as an insult to their traditional and heathenish faith, that the good Bishop, it is said, was near being stoned to death, when he plucked up a trefoil by the root and asked, "Is it not as feasible for the Father, Son and Holy Ghost to be one, as for these three leaves to grow upon a single stalk?" So convinced, we are told, were these untutored people of the truth of the sacred mysteries inculcated by *St. Patrick*, that they came over to the new faith in countless multitudes, and received at the Bishop's hands the rite of Christian baptism, and thus became partakers of the blessings and privileges of the Church.

*Lady-Day*, or the festival of the Annunciation, occurs on the 25th of this month, and is the only day that calls for particular remark here. This feast is held in remembrance of the announcement of the birth of the Saviour to the Virgin by an angel. Happening, as it does, near the time of the Vernal Equinox, one of the natural divisions of the year, it has been regarded as a reckoning point in matters of business, and hence denominated *Quarter-Day*. It is still a common practise in many of the rural districts of England for domestic and agricultural servants to be hired for a year, from one *Lady-Day* to another.

Speaking of domestic matters, it may be remarked, that very much of the farmer's success in his calling depends upon the qualifications of his help-mate, and the manner in which she conducts the household establishment. The duties of a housewife, in arranging and disposing of in-door matters, which legitimately come under her control, are numerous and pressing; and the way in which these things are managed materially affects the order and comfort of a household, as well as the profits of the farm.—Girls should be early accustomed to house-work; and every sensible woman will regard her home as the peculiar sphere of daily rule and action which Providence, by the very necessity of things, has assigned her. Hear what old *Tusser* says upon this point; quaint may be his remarks, but they are full of interest and meaning:—

"Of huswife, doth huswifery challenge that name;  
Of huswifery, huswife doth likewise the same;  
When husband and husbandry joine th with these,  
There wealthiness gotten is holden with ease.

The name of a huswife, what is it to say?  
The wife of the house, to the husband a stay;  
If huswife doth that as belongeth to her,  
If husband be witty, there needeth no stir

The huswife is she that to labour doth fall,  
The labour of her I do huswifery call;  
If thrive by that labour he honestly got,  
Then is it good huswifery, else it is not.

The woman the name of a huswife doth win  
By keeping her house and of doings therein;  
And she that with husband will quietly dwell,  
Must think on this lesson, and follow it well!"

There is one duty in particular belonging to the farm-house that in most instances falls almost exclusively on females to perform, that of milking the cows and attending to the dairy. In these operations, order, punctuality and perfect cleanliness are essential to proper management and success. And what so likely to accomplish these objects as the personal superintendence of the mistress of the house? Males it may be necessary to employ occasionally as helpers, but the chief part of the duty of milking the cows and managing the dairy must necessarily devolve on the "housewife" and her maidens. *Bloomfield*,—the poet of nature and country life—referring to this subject, in his own native *Suffolk*, describes what he himself had been accustomed to take a part in, under the familiar appellation of *Giles*. After having driven the cows from their pasture to the homestead, for the purpose of being milked, he says—

"At home the yard affords a graceful scene!  
For Spring makes e'en a miry cow-yard clean.

Forth comes the maid, and like the morning smiles;  
The mistress too, and followed close by Giles.  
A friendly tripod forms their humble seat,  
With pails bright scour'd and delicately sweet,  
Where shadowing elms obstruct the morning ray,  
Begins their work, begins the simple lay;  
The full-charged udder yields its willing streams,  
While Mary sings some lover's amorous dreams;  
And crouching Giles beneath a neighbouring tree,  
Tugs o'er his pail and chants with equal glee;  
Whose hat with tattered brim, of nap so bare,  
From the cow's side purloins a coat of hair,  
A mottled ensign of his harmless trade,  
An unambitious peaceable cockade.  
As unambitious, too, that cheerful aid  
The mistress yields beside her rosy maid;  
With joy she views the plenteous reeking store,  
And learns a brimmer to the dairy door;  
Her cows dismissed, the luscious mead to roam,  
'Till eve again recall them loaded home."

In the more moderate climate of the British Islands, March is to the farmer one of the busiest months of the year. It is not so, however, in this part of the world; winter still lingers, and although there are certain indications of spring, in the lengthening day and increasing warmth and sunshine consequent thereon, it is seldom that much progress can be made in the important work of preparing the soil for the reception of the seed. In England there is a very old proverb, "that a bushel of March dust is worth a king's ransom;" indicating the important influence which the character of this month exercises on the results of the agricultural year. A cool dry March is considered most favorable to the sowing and germination of the different kinds of seeds, for spring crops;—the strong, drying winds so characteristic of this season, by facilitating evaporation, exert a most beneficial influence on the soil. Hence a cold, wet spring, in these northern latitudes, is always more or less unfavourable to the succeeding harvest.

The sharp and boisterous winds which are felt in this and the succeeding month are admirably adapted to aid evaporation, and thus prepare the saturated soil for the purposes of the husbandman.

"—These cruel seeming winds  
Blow not in vain. For hence they keep repress'd  
Those deepening clouds on clouds, surcharged with rain,  
That o'er the west Atlantic hither borne,  
In endless train would quench the summer blaze,  
And cheerless, drown the crude unripened pear." c

THOMPSON.

During the past month, particularly in the early part of it, we experienced a degree of cold seldom equalled in these regions. Frost, however, is a beneficial agent in nature, and is particularly

serviceable to the farmer in loosening the soil, and bringing it into a favourable condition for the purpose of cultivation. The expansive force which water exercises while passing from a fluid into a solid state is well understood. It would be difficult to assign a limit to its force. Cannons filled with water, and plugged-up so as to leave it no room for expansion, have been burst by this invisible agent. By expanding the small amount of water contained in the fissure of rocks, it effects their disintegration, bringing down the grand fragments of the lofty mountain cliffs into the valley below; thus originating and spreading abroad fruitful soils for the pasturing of cattle or the raising of grain. Similar effects are produced by freezing on the smaller fragments of disintegrated rock and organic matter, which unite to form the soil, from whence vegetable life derives a large portion of its sustenance. The soil being saturated with moisture during autumn and the commencement of winter, is heaved up, and pulverised by the alternate expansion and contraction of frost and thaw, so as admirably to fit and prepare it for the reanimation of the whole vegetable kingdom, on the return of spring.— This is indeed nature's ploughing; and one of the principal causes why the soil of Canada is, comparatively speaking, easily cultivated, is unquestionably to be traced to the valuable aid of frost. Hence it is found beneficial, especially on tenacious clays, to plough them roughly in the fall, so as to expose the largest amount of surface to atmospheric influences. Without this important action of alternate freezing and thawing, it would be next to impossible, by any appliances of art, to bring the heavier soils, which constitute a large portion of the earth's surface, under profitable culture.

Still, however, necessary and beneficial frost may be in pulverising the soil, it is occasionally injurious to young plants, when not protected by snow; especially to wheat in early spring; causing the roots to be uplifted by the alternate action of freezing and thawing. It is in most cases extremely difficult to correct this evil; the only practicable plan being to keep the surface close and smooth as possible, by mechanical pressure. It is fortunate that during the late severe weather the ground in most instances was covered by a thick carpet of snow, thereby preventing its heat radiating into the surrounding and much colder atmosphere. What a simple, yet effectual contrivance is this for protecting

tender plants from the otherwise destructive power of frost!

March is a month which demands the best attention of the farmer to his live stock. Proven-der often ruins short, and cattle consequently suffer more at this time than during even the depth of winter. As the weather gets warmer, those farmers who are happily supplied with turnips, mangels, &c., will find in those excellent roots a source of nourishment to their cattle, which their less provident neighbours can little understand. Uncooked roots given in large quantities to stock in extreme cold weather are comparatively of little worth, and sometimes even positively injurious; but during this and the following month—being the most pinching time of the whole year—they are an invaluable auxiliary. Sheep, too, require special care—particularly where ewes lamb early, both the dam and the tender progeny demand all the attention which the promptings of prudence and humanity dictate. To a short gleam of warmth and sunshine it often happens,

"That frosts succeed, and winds impetuous rush,  
And hailstones rattle through the budding tush,  
Then, night-fallen lambs reque the shepherd's care,  
And gentle ewes that still their burden bear:  
Beneath whose sides to-morrow's dawn may see  
The milk-white strangers how the trembling knee,  
At whose first birth the powerful instinct 's seen,  
That fits with champions the daisied green;  
For sheep that stood aloof with fearful eye,  
With stamping foot, now men and dogs defy,  
And obstinately faithful to their young,  
Guard their first steps to join the bleating throng."

BLOOMFIELD.

Such farmers as are favored with a "Sugar Bush" will eagerly embrace the first favorable opportunity afforded by warm days and frosty nights, of obtaining from the Monarch of the Canadian forest—the Sugar Maple—a plentiful supply of sugar for domestic use; and some good housewives may manage to dispose of a considerable quantity, after duly providing for their families—thus placing funds at their disposal for the increase of their domestic comforts. The success and profits of the farmer every where, more especially in newly settled districts, consist of the aggregate amount of a number of little savings. Strict and systematic attention to details, even the most insignificant, constitutes the success and soul of farming.

The thrifty farmer will now see to the repairing of his implements, and have every thing in readiness for the first opening of spring. Materials for fencing, prepared and hauled during

winter, will now be completed, affording to the coming crops all necessary protection. As the thawing of the snow proceeds, every facility should be given to the exit of the swollen waters, especially in wheat fields, by removing all obstructions that may appear either in the furrows or natural channels of drainage. Winter is now fast closing, and the season of joy and hope—of green fields and flowers—the singing of birds, and the entire re-awakening of nature, are again about to delight the eye and fill the heart with emotions of gratitude and delight!

#### CANADA PREPARING FOR THE PARIS EXHIBITION.

Our readers are already aware that France has invited all the civilised nations of the world to forward contributions of their skill and industry to the great Exhibition that is to be opened in the metropolis of that country, in May next.

It was late last fall before our Provincial Government took any definite action for having the productions of Canada represented in Paris; and it will be found quite impracticable to make either so good or extensive a collection as might have been obtained if a longer time had been given for such a purpose. A central committee was formed in Montreal and Toronto, in connection with local committees in different parts of the Province, for the purpose of collecting specimens. But so far as Upper Canada is concerned, it was not till the commencement of the year that any definite steps could be taken by the central committee towards accomplishing the object. The Executive Committee in Quebec previously issued their instructions, copies of which were extensively circulated, and all parties who had gained honorary notices or premiums at the London or New York Exhibitions, or first prizes at the two last Provincial Shows, were specially invited to send contributions for the Paris Exhibition, on the encouraging condition that all their articles should be taken and paid for whether they were sent to Paris or not. The result of the appeal and offer, as far as Upper Canada is concerned, has proved any thing but satisfactory. Parties not having been successful competitors at previous Exhibitions were likewise invited to furnish contributions, and in case their articles should be accepted, they were, like the others, to be paid for at their full market value. All articles from the Upper Pro-

vince, were required to be sent to Toronto by the 10th of February, with a view of arranging the collection, and opening it for the inspection of the public on the 14th, and two following days.

This accordingly was done, and the articles were received and exhibited in the Hall of the Legislative Assembly. In consequence, however, of the extremely unfavourable state of the weather, preventing several contributions from coming in, the Exhibition was kept open to the 25th, and was visited by a considerable number of people. A deputation from Montreal, consisting of Henry Bulmer, Esq., Dr. Lichfield and Mr. Ricard, was sent by the Lower Canada Central Committee, to assist in the selection of the articles, and the Toronto Committee are much indebted to those gentlemen for their attention and assistance. It was resolved to reciprocate the obligation, and three members of the Toronto Committee, viz. E. W. Thomson, Esq. Chairman; Mr. Sheriff Jarvis, and Mr. Armstrong, Esq., C. E. were appointed a deputation to attend the Lower Canada Exhibition at Montreal.

There were upwards of two hundred and fifty articles of all kinds, shown at Toronto; only about one hundred were considered by the judges as suitable for sending to Paris. It is proper however, to state that in consequence of the unfavourable state of the weather, and other causes, articles continued to arrive after the close of the show; and it was understood that anything really superior might have a chance of being sent, if it arrived before the collection was finally made up and sent off.

The agricultural department was by no means so full as we expected to find it—there were, it is true, several excellent specimens, but others were not above mediocrity. Mr. Fleming, seedsman, Toronto, had a rather extensive assortment of grain, grasses, &c., neatly put up in cases with a glass top; most of which was of superior quality. Captain Shaw, of Toronto, had two splendid specimens of Indian Corn, and a good sample of spring wheat, also some superior chicory. Mr. R. Wade, jr., Cobourg, sent some good specimens of different kinds of peas, an excellent sample of timothy seed, and four cans of excellent cheese. Mr. Platt, of Blenheim, had a barrel of very superior flour, which alone would speak well for Canada, at Paris. Mr. Lawson, of Toronto had a very good barrel of flour; who, with Mr. John Nasmith, of this City, exhibited a variety of biscuits, which would do credit to any country. Mr. Com-

missioner Widder, sent a sample of the Canada Company's Prize wheat of 1853, which was a splendid specimen, quite superior to the Company's prize wheat of this year, of which there were several bushels exhibited. Indeed the grain generally of 1854, was, in consequence of the heat and dryness of the season, of inferior quality to that of the preceding year. It was expected that several superior samples of grain would be received before the collection was sent away.

Mr. Bingham, of Oxford, furnished an Iron Swing Plough, of excellent workmanship, and quite up to the latest mechanical improvements of the day. Another plough, partly of wood, equal perhaps in mechanical construction, and of very superior finish from Mr. Switzer, of Palermo. Also a well made plough from Mr. Morgan, of Markham. Messrs. Helm and Wade, of Port Hope, sent their newly patented Post-Hole Borer, an implement of great utility and power. Mr. Parsons also had a specimen of his Patent Brick Machine, which is said to possess very great merits. The Messrs. Edwards, of Toronto, exhibited a beautiful hunting saddle; and Mr. Thalkeld's collection of whips was of a superior description. Mr. Jones, of Gananoque, had very excellent specimens of spades and shovels. But the *article of the Exhibition*, was unquestionably the large case of Mechanics' Tools by Mr. Date, of Galt. In whatever point of view that truly splendid collection may be considered, it will do credit to the maker and country that produced it, wherever it may go.—There was quite a large amount of cordage, string, halters, &c., of excellent finish and quality made by A. and D. McGregor, of Toronto, from flax grown by R. L. Denison, Esq., which obtained the *Canada Company's* liberal premium for that article in 1853. A centre table made by Mr. Bevis, of Hamilton, from several varieties of Canadian woods, elicited general admiration.—Several sections and planks of wood were shown, and we understand that it is the intention of both portions of the Province to make the collection of woods as complete as possible; an object most desirable and important.

There were a number of mechanical specimens, displaying both ingenuity and utility, as well as others in the department of Ladies' work and the Fine Arts, which we have not space to mention in detail. Miss Widder's fancy chair was exquisitely done. A large model of Brock's

Monument, now in course of erection, made of Queenston freestone, occupied a conspicuous position. Paul Kane, had four pictures, illustrating Indian life which elicited universal admiration. These pictures we understand were purchased by G. W. Allan, Esq., for the Paris Exhibition; thus adding another instance of the discriminating liberality of that gentlemen, who has been very active as secretary on this occasion. Mr. Armstrong's water coloured drawings of Canada scenery and ice-boating in Toronto Bay were much admired.

We have only glanced at those things which struck us as most deserving of mention; but we have no space to individualise others, perhaps, equally meritorious. The present instance pretty clearly proves that it is useless to expect a large assortment of articles on occasions like these, without offering premiums. It is to be hoped notwithstanding the disadvantages under which the collection was got up, that a sufficient number of articles of merit, will be found, in both sections of the Province, to give a fair and truthful exposition of the present state and future prospects of the industrial arts and resources of Canada, at the approaching World's Exhibition, in which the space allotted for their reception is necessarily limited.

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#### ANALYSIS OF SOILS.

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We publish in this number the first of a series of articles from the pen of Dr. Salisbury, of New York, late chemist to the New York State Agricultural Society, and of well established reputation in that department of science. We are glad to number Dr. Salisbury among our contributors, and from the plain, familiar style with which he treats his subject, we doubt not his papers will be interesting to most of our readers. Dr. Salisbury is connected with an agricultural and metallurgical laboratory in New York, recently established, which, from the reasonable charges for analysis, will probably be largely patronized by intelligent cultivators of the soil. While we deny the extravagant claims put forward by some writers in behalf of chemistry, as applied to practical agriculture, we admit the great advantage that may frequently be derived by a careful and accurate analysis of the soil. No one but a working chemist is able to make an analysis that can be depended upon.

The following is an extract from the prospectus of the Laboratory under the management of Dr. Salisbury:—

The object of the Proprietors in establishing this Laboratory is to furnish those interested in Commercial, Agricultural, and Metallurgical pursuits an accessible, ready, and reliable means for obtaining analysis of Commercial Articles, Soils, Manures, Marl Peat, Limestone, Gypsum, Coal, Ores, and Minerals of every description, together with all other information connected with the application of Chemistry to Agriculture, Geology, Mining, Engineering, and the Arts generally.

Surveys and Reports of Mineral Property, and other business pertaining to Mining interests, will receive special attention.

#### CHARGES FOR ANALYSIS.

|   |              |
|---|--------------|
| Quantitative Analysis of Coal or Peat, -      | \$10         |
| " " Soil, Lime-rock, Gypsum, Marl Manure, &c. | \$10         |
| " " Mineral and Spring Waters, -              | \$10         |
| " " Ore, and Minerals generally, -            | \$10 to \$20 |

The above charges to accompany Samples or Communications. No Analysis will be allowed to pass out of the Laboratory till paid for.

For Analysis enough of the above mentioned substances should be sent to make one pound, when dry; of Mineral or Spring Waters one gallon is required.

All Samples and Communications to be forwarded by Express, or post-paid, to Dr. JAS. II. SALISBURY, No. 3 Everett House, cor. of Fourth Avenue and 17th street, or presented in person at his Office, No. 1 Appletons' Building, over the Book Store, 346 Broadway, New-York.

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#### RURAL ARCHITECTURE.

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We have lately received several enquiries in regard to plans for Farm Houses and out-buildings, from which we infer that more attention is being given to this branch of the farmer's "improvements," than formerly. It is to be expected that as the "bush" is cleared away, and the old log house that answered very well during the first period of the "settler's" life, begins to settle out of shape and comfort, that a desire should be felt to replace the "venerable pile" with a more ambitious, and more comfortable structure. The man who intends "to build," can now find very good models in actual use in the older townships, but the variations of style are so diversified, and convenience of arrange-

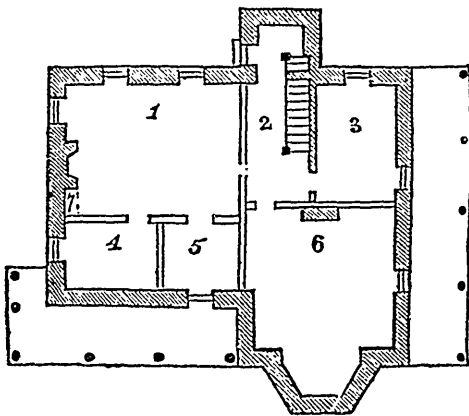
ment admits of so many modifications, that it is well to look about one before deciding on any particular plan.

The following design has been much admired. It is that of a cottage in the Italian style of architecture, and is well adapted for a farmer on a small scale, or for a village residence. We lately gave the design of a Farm House suitable for a large family. This will be found adapted to a different class of our readers.

“There is nothing” says Downing “that more powerfully affects the taste and habits of a family—especially the younger members of it—than the house in which it lives. An uncouth, squalid habitation is little likely to awaken that attachment to home, that love of good order, and that sense of propriety and elegance in social deportment which are so much developed by that home where a certain proportion, a certain fitness, and a sense of beauty are every where visible.”

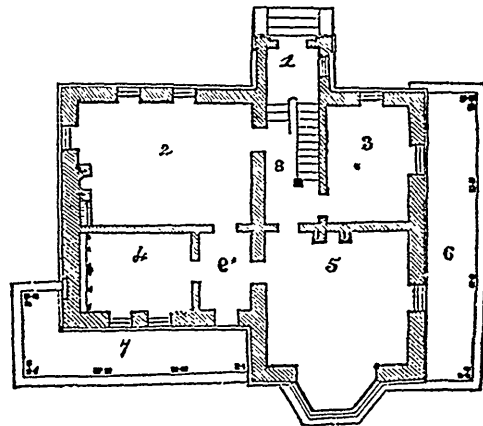


AN ITALIAN COTTAGE.



CELLAR APARTMENTS.

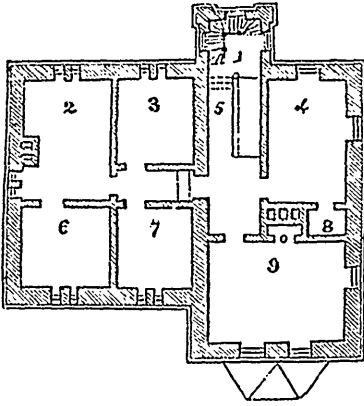
1. Kitchen,
2. Dining Room,
3. Bedroom,
4. Pantry,
5. Furnace or Store Room,
6. Cellar



GROUND PLAN.

1. Entry,
2. Dining Room,
3. Nursery,
4. Library,
5. Parlour,
6. 7. Verandah,
8. Hall.





BED ROOMS.

The arrangements of the third floor will be understood from the plan. It might easily be varied, but the plan is probably as convenient as any that can be devised.

#### A NEW ARTICLE FOR ROOFING HOUSES.

The *Rural New Yorker* states that Judge Smith, of Honeye Falls, a few days since, brought into his office a piece of board on which was spread, and perfectly united with it, an indurated coating as hard as stone. Judge Smith says that the composition is perfectly fire and water-proof, and admirably adapted to roofing and other kindred purposes. It may either be applied in the shape of a mastic immediately to wood, or it may be manufactured into sheets mixing it with paper pulp, and then laid on a roof like sheets of metal.

If the article proves as good as it promises, and as the inventor claims it will, it is an invaluable addition to the materials of the architect and builder. We copy below a paragraph from the *Washington Union* on the subject, from which it appears that the new roofing material has made a very favorable impression in the Federal City:

We have been shown a new article for roofing manufactured by James Smith of Honeye Falls. It is composed of a stone found at Gibsonville, Liv. Co., N. Y., reduced to a powder, mixed with paper pulp, and moulded into sheets like hand made paper, which, when sufficiently dry, are saturated with some kind of drying oil. These substances are said to combine and produce a sort of petrified sheet, which is both water and fire-proof, which forms a cheap, durable and safe kind of roof. The sheets can be made in size and thickness to suit the convenience of purchasers, and are laid and confined with great facility. A gentleman of this city has applied some of this kind of roofing upon a building,

and expresses entire confidence that it will be found to be as useful as the discoverer thinks it will. It is now white in an undried state entirely water-proof, and by exposure to the atmosphere will doubtless become petrified and fire-proof. We have seen this pulverized stone, which had been mixed with oil and applied in a thick coating upon a board, quite petrified, and as hard as common stone. In this condition it is unaffected by fire. The gentleman above referred to has so much confidence in this kind of roofing, that he intends to apply it upon dwellings next summer. Mr. S., the discoverer, has applied for a patent for this new composition of matter, and expects one will soon issue. From his account of the material it will prove a very useful discovery.

#### OVERHEAD PIPE IN THE SCHOOL ROOM.

It is common in school-houses, to use considerable overhead pipe from the stove, to increase the means for the radiation of heat. But, in my opinion, heat thrown out, overhead, is of no advantage in making a room comfortable, and does much injury to the health, producing a dull, irritable feeling of the head, successive returns of sick headache, loss of appetite for food, and a gradual decline in strength of body and vigor of mind. The sympathy between the head and stomach is such, that very few persons can be any length of time where heat is radiated directly upon the head, without the digestive organs being affected, and especially such as are predisposed to a dyspeptic habit. The feet may be kept warm, but the head must be cool, to enjoy health of body and vigor of mind. It is not uncommon for teachers and scholars to complain that their school labors wear upon their health; but it is not the study and teaching that impair it rather these, properly conducted, in a well regulated room as to heating and ventilation, may become auxiliaries to preserve health.

In my own school-room, the long reach of horizontal pipe overhead, I have had taken down and placed a short distance above the floor, extending from the floor to the perpendicular that goes up to the chimney. It has proved to add much to the comfort of the room, the oppressiveness that was before felt from the heated air, is now done away. Every school-room should be freed from overhead stove pipe, except what is required to reach vertically to the chimney.—*A Teacher, in Scientific American.*

MILK CLEAN.—The first drawn milk contains only 5, the second 8, and the fifth 17 per cent. of cream.

## Miscellaneous.

### LECTURE ON THE GEOLOGY OF CANADA.

A lecture on this subject was recently delivered by T. S. Hunt, Esq., before a very large and respectable audience at Montreal. The lecturer first observed, that a man who examined the soil would find it underlaid by solid rocks, and soon learn the fact that indeed the whole of the earth-crust consisted of solid rocks; he would proceed then to notice the different qualities of these rocks, distinguishing lime-stones such as we find in our quarries, slates, sand-stones, &c., in parallel layers sometimes horizontal, sometimes dipping at slight or sharp angles. He would perceive also that there existed a certain order in their arrangement. Thus he would find, in the vicinity of Montreal, going upwards; first sand-stone then lime-stone and lastly slates. Further above this he would find another class of rocks, without this stratified structure, such as granite, winstone, trap, and perceive that the beds of lime-stone contained the impressions of plants, shells, &c. If he examined the slates he would meet with impressions of other shells and plants, different from those on the lime-stone. Any one who had made all these observations, had already begun the study of the science of Geology, whether he knew the name of it or not.

The lecturer then intimated that the present boundaries of oceans and lands had not always existed. It was the sea only that was stable; the level of the earth-surface had been constantly changing. Thus upon the soil of Canada, we had at the present day the evidence of several elevations and subsidences. In a similar manner, the North-Western part of Europe was slowly rising, and the Southern part probably sinking. Coming up the Gulf of St. Lawrence we should find on the right hand side a chain of hills stretching along the water till we came to within thirty miles of Quebec, where they were seen stretching inland, till at Montreal they were thirty miles from the river. These same hills continued on the northern side of the Ottawa, crossing it above Bytown; they stretched across Canada West, skirted the shore of Lake Huron, and had been followed by Sir John Richardson to the Arctic Ocean. These, said the lecturer, were the oldest known rocks in the world.—They were crystalline, granite, gneissoid in their character, of which we could form an idea by examining those large boulders

brought down by the ice and scattered along the shore. These hills were in form of mountain ridges, running from north-east to south-west, rising from two to three thousand feet; they had constituted at a very early epoch the whole of the American continent. In the north of New York they had formed an island, or perhaps a peninsula. Similar small islands existed near the sources of the Mississippi, in Arkansas, in the north of Scotland, and in Scandinavia; and these were all the vestiges we had at the present day of the then continent. The rocks of this small continent had been called Laurentia rocks. In the ocean to the east, said the lecturer, there had probably been other lands that had now disappeared. Of these Laurentia rocks, the first deposits were found on the northern shore of Lake Huron, and upon Lake Superior, consisting of sandstone, slate and lime-stone. At the early period when these deposits took place, there had probably been no animal life on the earth, at least no vestiges of plants, shells, etc., appeared on the rocks. It was impossible to point out the time required for the formation of such deposits which had the thickness of several thousand feet, or to find a calendar to measure its years. While astronomers asked for unlimited space, the geologist asked for an unlimited time, (applause).—Mr. Hunt then showed that these rocks were the same as those that had been called Cambrian rocks in England, and said they were very interesting because they were the copper-bearing rocks of this region. At that early period, great volcanic disturbances had taken place. Out of huge fissures molten matter had flowed and covered hundreds of miles, having a thickness of about a hundred feet. These overflows had been covered with beds of sandstone, and other overflows had taken place until this great thickness accumulated. Veins could be seen in these rocks containing the ores of copper, silver, and iron. The interstratified traps had been intersected by other volcanic rocks in the form of dikes containing pure copper, where molten copper had been thrown up from the depth of the globe. After this began what was called the Silurian epoch. Upon the borders of the Laurentian and Cambrian rocks there had come deposits of sand, from the wear and tear of the older rocks, reaching the thickness of from 2 to 300 feet, and on them we found the first vestiges of animal and vegetable life. These remains consisted of sea-weeds and one or two species of shell fish. The principal genus was now called *lingula*, it was like a mus-

cle, attached by a stem to the rocks; and a similar species existed in the tropics. Mr. Hunt then observed that the lingula was a curious illustration of perpetuation, for, whilst thousands and thousands of animals had been created, whilst the mighty races of fishes and reptiles had disappeared, the humble lingula lived still in the present oceans, having outlived all these changes, (Applause.) The lingula shell was composed of matter similar to bones, and formed the connecting link between shell and vertebrated animals. On these layers of sandstone, even the ripples caused by the wind blowing in different directions had been preserved, and marks of rain-drops were likewise left up to the present day. A little higher we found the sandstone mixed with lime, and there we perceived the impressions of other shells and of somewhat larger animals. Upon the sandstones at Beauharnois there had been found the tracks of animal supposed to be a tortoise, by the late Mr. Abraham of the *Transcript*. A specimen had been shown by Mr. Logan to Professor Owen in London, who at first confirmed this opinion, but afterwards concluded that they were the tracks of some huge lobster or crab.—The length was from six to eight feet, and it had a long flexible tail. The distance between the feet was about 10 inches, and the animal must, therefore, have been of considerable size. These limestones had the thickness of from two to three hundred feet, and immediately overlaying them were the limestones of the Island of Montreal, having a thickness of 1200 feet.

Mr. Hunt then explained the mode of calculating their thickness, which, he said, could be calculated from their angle, the strata having been inclined from the movements of the earth crust. If we observed these limestones, we found remains of corals, shells, etc. The limestones over the whole of Canada and in the East of the United States, were characterized by the same kind of fossils, by means of which we could also identify certain rocks as of the same age as our Montreal limestones. Above these limestones we met with soft black slates one or two hundred feet in thickness, followed by a great accumulation of greyish, greenish and reddish slates, sandstones and limestones, which were seen spread over the region between the St. Lawrence and Yamaska rivers. Along a line running up the valley of Lake Champlain and stretching by St. Hyacinthe to the vicinity of Quebec, there was an axis of elevation which might be regarded as dividing

the fossiliferous rocks into two great divisions, the eastern and western. They exhibited, in a rude way, successive zones of rocks, sweeping around and dipping beneath basins of coal-bearing rocks. These, on the one side, were in Nova Scotia and New Brunswick, and on the other in Michigan and Pennsylvania. While in the East these rocks were very much disturbed and folded up into mountain-chains; those in the West were very nearly horizontal. Between those lower rocks and the coal-basins there existed two other vast formations, and, in each case, all of these must be crossed before we could arrive at the coal. The consequence was that the coal-bearing rocks were only met with in the Eastern part of Canada, where the base of them appeared in the Bay de Chaleur with the characteristic fossils of the coal and small seams of that combustible.

#### DAYS WITHOUT NIGHTS.

There is nothing that strikes the stranger more forcibly, if he visits Sweden at the season of the year when the days are longest, than the absence of the night. He arrived at Stockholm from Gottenberg, 400 miles distant, in the morning, and in the afternoon went to see some of his friends—had not taken note of time, and returned about midnight; it was as light as it is here half an hour before sundown. You could see distinctly. But all was quiet in the street; it seemed as if the inhabitants were gone away or were dead. No signs of life, stores closed.—The sun goes down at Stockholm a little before 10 o'clock. There is a great illumination all night, as the sun passes round the earth towards the north pole, the refraction of its rays is such that you see to read at midnight. Dr. Beard read a letter in the forest near Stockholm at midnight without artificial light. There is a mountain at the Bothnia, where, on the 21st of June, the sun does not go down at all. Travellers go there to see it. A steamboat goes up from Stockholm for the purpose of carrying those who are curious to witness the phenomenon. It occurs only one night. The sun goes down to the horizon, you can see the whole face of it, and in five minutes begins to rise. Birds and animals take their accustomed rest at the usual hours. The hens take to the trees about 7 o'clock P. M., and stay there until the sun is well up in the morning, and the people get into the habit of rising late too.

## USES OF THE ROSE.

Rose Water is distilled from the petals of pale roses, in preference to deep red ones, mixed with a small quantity of water, and in France those of the musk rose are preferred, when they can be obtained. This product of the rose was known to the Greeks in the time of Homer, and to Avacenna, among the Arabs, A. D. 980. It is more or less in use, in every civilized country, for the toilette, and on occasions of festivals and religious ceremonies. Vinegar of Roses is made by simply infusing dried rose petals in the best distilled vinegar. It is used on the Continent for curing headaches produced by the vapors of charcoal, or the heat of the sun. For this purpose, cloths or linen rags, moistened with the vinegar, are applied to the head, and left there till they are dried by evaporation. Spirit of Roses is procured by distilling rose petals with a small quantity of spirits of wine. This produces a very fragrant spirit, which, when mixed with sugar, makes the liqueur known in France by the name of *l'huile de rose*: it also forms the groundwork of the liqueur called *parfait amour*. Conserve of Roses is prepared by bruising in a mortar the petals, with their weight of sugar, till the whole forms a homogeneous mass. In the earlier ages, according to Rosembourg, in his "History of the Rose," published in 1631, the rose was a specific against every disease. It was much in use in the time of Gerard, and is still employed in the composition of electuaries, and many other medicines. Attar of Roses—essence, attar, otto, or, as it is sometimes called, butter of roses—is the most celebrated of all the different preparations from this flower, and forms an object of commerce on the coast of Barbary, in Syria, in Persia, in India, and in various parts of the East. In England, it is usually called otto of roses, a corruption of the word "attar," which, in Arabic, signifies perfume. This essence has the consistency of butter, and only becomes liquid in the warmest weather; it is preserved in small flasks, and is so powerful, that touching it with the point of a pin will bring away enough to scent a pocket handkerchief for two or three days. The essence is still procured almost in the same manner by which it was first discovered by the mother-in-law of the great Mogul, in the year 1612, viz., by collecting the drops of oil, which float on the surface of vessels filled with rose water, when exposed to a strong heat, and then congealing it by cold. Honey of Roses is made by beating up fresh rose leaves with a small quantity of boiling water, and, after filtering the mass, boiling the pure liquor with honey. This was formerly much in use for ulcers in the mouth, and for sore throats. Oil of Roses is obtained by bruising fresh rose petals, mixing with them four times their weight of olive oil, and leaving them in a sand heat for two days. If the red Rose de Provins be used, the oil is said to imbibe no odor; but, if the petals of pale roses be employed, it becomes perfumed. The oil is chiefly used for the hair, and is generally sold in perfumers' shops, both in France and England, under the name of *l'huile antique de rose*.

## WHY EPIDEMICS RAGE AT NIGHT.

It was in one night that four thousand persons perished of the plague in London. It was by night that the army of Sennacherib was destroyed. Both in England and on the continent, a large proportion of cholera cases, in its several forms, have been observed to have occurred between one and two o'clock in the morning. The danger of exposure to the night air has been a theme of physicians from time immemorial; but it is remarkable that they have never yet called in the aid of chemistry to account for the fact.—It is at night that the stratum of air nearest the ground must always be the most charged with particles of animalized matter given out from the skin, and deleterious gases, such as carbonic acid gas, the product of respiration, and sulphuretted hydrogen, the product of the sewers. In the day gases and various substances of all kinds rise in the air by the rarefaction of the heat. At night when this rarefaction ceases they fall by an increase of gravity, if imperfectly mixed with the atmosphere, while the gases evolved during the night, instead of ascending, remain near at the same level. It is known that carbonic acid gas, at a low temperature, partakes so nearly of the nature of a fluid, that it may be poured out of one vessel into another. It rises at the temperature at which it is exhaled from the lungs, but its tendency is towards the floor, or the bed of the sleeper, in cold and unventilated rooms. At Hamburg, the alarm of cholera at night in some parts of the city was so great that many refused to go to bed, lest they should be attacked unawares in their sleep. Sitting up they probably kept their stoves or open fires burning for the sake of warmth, and that warmth giving the expansion to any deleterious gases present, which would best promote their escape, and promote their dilution in the atmosphere, the means of safety were then unconsciously assured. At Sierra Leone, the natives have a practice in the sickly season of keeping fires constantly burning in the huts at night, assigning that the fires keep away the spirits, to which in ignorance they attributed fever and ague. Lately, Europeans have begun to adopt the same practice, and those who have tried it assert that they have now entire immunity from the tropical fevers to which they were formerly subjected. In the epidemics of the middle ages fires used to be lighted in the streets for the purification of the air, and in the plague of London, in 1685, fires in the streets were at one time kept burning incessantly, till extinguished by a violent storm of rain. Lately trains of gunpowder have been fired, and cannon discharged for the same object; but it is obvious that these measures, although sound in principle must necessarily, though out of doors, be on too small a scale, as measured against an ocean of atmospheric air, to produce any sensible effect.—Within doors, however, the case is different. It is quite possible to heat a room sufficiently to produce a rarefaction and consequent dilution of any malignant gases it may contain, and it is of course the air of the room, and that alone, at night that comes in contact with the lungs of the person sleeping.—*Westminster Review*.

## Domestic Economy.

**TO CLEAR COFFEE.**—When nothing else can be obtained, mix a little Indian meal with the coffee before putting it to boil.—*Ohio Cult.*

**SQUASH PIES WITHOUT EGGS.**—To make the best of squash pies (when eggs are 25 to 50 cents per dozen) use none, but put in the place of them soft crackers powdered fine.

**VEGETABLE SEASONERS.**—Parsley, celery, thyme, sage, onions, garlic, and other seasoners, should not be put into soups or stews until the soup is nearly done; chop fine, and put in five minutes before the soup is taken from the fire.

**BOILED ALMOND PUDDING.**—Blanch one lb. of almonds, beat them in a mortar to a smooth paste with three tea-spoonfuls of rose water. Add one gill of wine; one pint of cream; one gill of milk; one egg; one spoonful of flour.—Boil one-half hour.

**CHEAP LEMON FLAVOR.**—When lemons are plenty, procure a quantity, cut them into thin slices, and lay them on plates to dry in the oven; when dry put them into a tight bag, or close vessel, in the store-room, where they are both handy and agreeable for almost anything.

**TO IMPROVE TEA.**—M. Soyer recommends house keepers to place the tea pot with the dry tea in it upon the hob for a little while before making. This plan certainly improves both strength and flavour. Rain-water, when pure, is the best for making all infusions, including tea of course; since the solvent powers of water are in proportion to its freedom from earthy salts.

**MINT SAUCE.**—Many of our country friends do not know what a luxury they deprive themselves of, when they eat lamb either boiled or baked without mint sauce. Set a few roots of spearmint in one corner of the garden, and they will soon furnish an abundant supply. Strip off the leaves and chop them fine, add an equal amount of sugar, and cover the whole with vinegar. A small tea-cupful of the mixture is sufficient for a large family. Try this, and see if it is not preferable to gravies.—*Ohio Cultivator.*

Take nice sweet apples, pare, core and quarter them. Boil the cores and parings in a little soft water. Strain and add sugar to your taste for a syrup; then add the apples and cook them as long as you can without breaking; then a second lot, and you have a cheap sweetmeat.

**"SCRAPPLE."**—I observe a call for a recipe for making "Scrapple," and some other homely dishes. Here is one that has been a favorite, with two generations.

Boil two or three pig's "faces," a liver, chine-bones, &c., (or omit the liver, if you choose,) till the meat comes off the bones and will pick to pieces readily. Take out the meat, and half thicken the liquid with Indian meal, which allow to boil, whilst you pick the meat off the bones, and chop the liver fine; then return the meat &c., into the pot, and stir in buckwheat flour, till it is thick as thick mush. This done, season the mixture with pepper, salt and powdered sage, and put it into pans to cool. Next morning, fry it brown in slices, and see if your children will not decide that the "waste is the best after all."—*Correspondent of R. N. Yorker.*

**PORK CAKE.**—A Yankee lady has just handed me the following recipe with a request that it be published. Take 6 oz. pork (fat) chopped fine, pour on  $\frac{1}{2}$  pint hot water, 1 cup sugar,  $\frac{1}{2}$  cup molasses, two teaspoonfuls, saleratus, fruit and spice to your taste and flour to thicken. The above recipe makes a great saving, especially when pork is so cheap and butter so high.—*H.—Mill Plain, Conn.*

**EGGS, CONVENT FASHION.**—Boil four eggs for ten minutes, put them in cold water, peel and slice thin one onion, put into a frying pan one ounce of butter; when melted add the onion, and fry white; then add a tea spoonful of flour. mix it well, add about half a pint of milk, till forming a nice white sauce, half a tea-spoonful of salt, and a quarter ditto of pepper; when nicely done, add the eggs, cut into six pieces each, crossways, toss them up—and when hot through, serve on toast.

**DROPPED EGGS.**—Take a nice saucepan to a tinsman and have a tin plate cut to fit it. Then have a few holes cut therein, and a wire handle inserted in the centre. Pour hot water into the sauce pan and break your eggs gently into the water, placing them on the range till the whites harden. Then lift them out by the handle and place them on a plate without removing them from the tin. This may cost  $12\frac{1}{2}$  cents, and save many shillings worth of eggs in the year. Cooked thus eggs look neater than fried, and are more wholesome, and can be removed to bacon, pork or buttered toast.

**TOMATO CATSUP.**—One gallon skinned tomatoes, four table spoonfuls of black pepper, four table spoonfuls of salt, three table spoonfuls of mustard, one table spoonful of allspice, eight pods of red pepper. Contents ground *fine*, simmered slowly in vinegar in a bell-metal kettle three or four hours and strained through a wire sieve and bottled close. So much vinegar is to be used as to leave half a gallon of liquor when the process is over.

**BEANS FOR SOUP.**—The use of beans as an article of food, is not so considerable as it should be. Beans are the most nutritious of all kinds of food used by man. Chemical analysis, and the experience of those who make extensive use of them, demonstrates this. Besides they are the most economical food which can be used for the support of a family. Those who find the times hard are most respectfully invited to try the experiment.

To provide an excellent dinner—healthful, palatable and nutritious—take a pint of beans, with one gallon of water, and the beef bones we are accustomed to throw in the street. Boil all together (adding a few potatoes if convenient,) until the beans become soft—and salt and pepper to suit the taste, and dinner is ready. Such a dinner costs next to nothing; and will rest easier upon the stomach than venison steaks, quail or partridge, washed down with champagne.

A piece of fat beef thrown into the pot, will give a pretty good flavor to soup, porridge, or such a dish as I have named. But if you want the genuine flavor use bones—such bones as are usually thrown away. There is a flavor obtained from the bones, which is not obtained from the fat, which is not given from solid meat.—*N. Y. Jour. of Com.*

**TO MAKE BLACKBOARDS.**—An appliance for blackboards can be made by boiling 1 lb. logwood in water enough to cover it, and adding  $\frac{1}{2}$  oz. of green vitriol. This is superior to paint, as it stains the wood, and will not wear off, dries in a few minutes, and bears no gloss.

**SOAP.**—When preparing to make soap, add a little old soap to the ley and grease. This will greatly facilitate the labor of the making.

**To CURE EARACHE.**—Earache may be relieved by, dropping a little sweet oil and laudanum, warm, in to the ear, and applying hot salt in flannel bags so as to keep the part constantly warm.

**MEDICAL RECIPES.**—Irish remedy for worms—Garlic dissolved in good whiskey and kept in a bottle for use, is said to be a sovereign remedy for worms. Dose, from a tea-spoonful to a table-spoonful every morning.

**A GOOD SALVE.**—A friend who has tried it gives us the following recipe:—Boil hemlock bark until you obtain its strength, then strain the liquor and evaporate down to the consistency of molasses; to this add an equal part of lard. This is valuable for chapped hands, lips, &c.—*Maine Far.*

**LINIMENT.**—Mr. A. D. Burt sends us the following recipe, which he says is one of the best ever used for sprains, lameness, &c., of man or beast. Its constituents are certainly of the right kind, and the compound undoubtedly excellent:—3 oz. oil origanum, 4 oz aqua ammonia, 2 oz. tincture of opium,  $\frac{1}{2}$  pint spirits camphor; alcohol enough to fill a quart bottle. The liniment should be well rubbed in when applied.—*Rural N. Y.*

**WASHING RECIPE.**—The following recipe has been peddled through the country, and sold for one dollar. It saves one-third of the labor of washing:—Take one lb. of saltpetre, and dissolve it in one gallon of cold rainwater, and cork it up in some tight vessel. When you are going to wash, add three large spoonfuls to each pint of soap; make a suds with this, and soak the clothes 20 or 30 minutes; then rub them out and put them over the fire in clean cold suds. Let them come to the boil five minutes; then take them out and rene them.—*Ohio Cultivator.*

**FIFTEEN HUNDRED KNUCKLES AT THE TUR.**—The New York Correspondent of the *Charleston Courier* writes:—

“The latest invention is a new washing machine now in operation at the Astor House. It is called the ‘great knuckle.’ In the card of the owner it is stated that this new machine is saving from ten to fifteen girls a day in the wash-room of the Astor House.—A rival washing machine man at the Crystal Palace offered a cup valued at \$50 to any person who could produce anything that would beat his. The great knuckle washing-machine man will give a cup valued at \$100 to any one who will bring his machine to the Astor House and wash one dozen pieces while he is washing three dozen. He says that instead of using one pair of ‘knuckles,’ as old Eve commenced with, his machine is a combination of from 200 to 1500. Great are the merits of washing-machines!”

**SALERATUS.**—A writer in the Boston Journal thinks that of three hundred thousand children in this country, who died under ten years of age, at least one hundred thousand might survive, but for the effects of saleratus. He relates a curious story of a sickness in a boarding house at Williamstown, Mass., caused by eating biscuits, puddings, &c., full of saleratus. Out of fifteen boarders, thirteen were taken sick, and were confined a long time; two of them died, another barely escaped death, and the others recovered after severe sickness.—Prof. Tallock and Rev. Mr. Crawford, who ate but little of the food, escaped illness.

**LIQUID OPEDILDOC.**—Take two quarts of proof whiskey, or other proof spirits, warm it over coals, being careful to prevent a blaze. Dissolve in it a pint of soap; when cold, put it in a bottle and one ounce of camphor. It is then ready for use. This is an excellent remedy for sprains or bruises, and should be kept by every owner of horses.—*Tip. Farmer.*

**To KEEP MUTTON.**—As soon as your mutton is dressed, place it in some situation where it will freeze. When thoroughly frozen, remove it to an out building, or some other convenient place, where it will be in no danger from dogs or other animals, and having packed it in a close and compact heap, cover it carefully with the pelts. Secured in this way, mutton, or other fresh meats may be preserved perfectly sweet, and in possession of its juiciness, till late in the spring. We have known it kept so from November till the first of April. The pelts being a non-conductor, prevent its thawing.—*Ger. Teleg.*

**WASHING BUTTER WITH NEW MILK.**—A writer in the *Boston Cultivator*, over the signature of ‘Many,’ says he finds in a French work the following remark, and asks if any of the butter-markets in this country have ever tried it, and if so with what result. The remark is as follows:—To procure butter of an excellent flavor and extreme delicacy, it must be washed finally with new milk. The cream of the milk is incorporated with the butter and communicates to it its sweetness and delicacy.—*Ex.*

The practice of washing butter with new milk is not new, or common only to France; a large trade is carried on in and about London, in very choice fresh butter. The dealers purchase in the country butter that has been salted, but is otherwise sweet. This is churned in sweet new milk, and comes out in due time a very delicious article, which is sold daily at a very high figure. It is a capital process for renovating old butter.

**TOOL HOUSES.**—Provide yourself with a good tool house. Locate it in some convenient place, and whenever you have done using an implement for the season, cleanse and house it. Structures of this kind cost but little, and may be made the means of saving a great deal. The exposure of costly farming implements during winter, is a greater injury to them, as a general thing, than the use of them during the period they are wanted for active service in the field. The corrosion of iron by rusting, and the rending and warping of wood by moisture, frost and heat, are evils the extent of which few appreciate.—*Germantown Telegraph.*

**HOME MADE CHLORIDE OF LIME.**—Prof. Nash says, Take one barrel of lime and one bushel of salt; dissolve the salt in as little water as will dissolve the whole; slack the lime with the water, putting on more water than will dry slack it, so much that it will form a very thick paste; this will not take all the water; put on, therefore, a little of the remainder daily until the lime has taken the whole. The result will be a sort of impure chloride of lime, but a very powerful deodorizer, equally good, for all out-door purposes, with the article brought under that name at the apothecary’s, and costing not one-twentieth part as much. This should be kept under a shed or some out-building. It should be kept moist, and it may be applied wherever offensive odors are generated, with the assurance that it will be effective to purify the air, and will add to the value of the manure much more than it costs. It would be well for every farmer to prepare a quantity of this, and have it always on hand.

## Editorial Notices.

### DEVON HERD BOOK.

We would direct the attention of breeders of Devon cattle to the advertisement of the 2nd vol. of the Herd Book, which has just been issued, and may be had at Albany, N. Y.

### PURE BRED STOCK—MR. MORRIS' SALE.

Those of our readers who may wish to purchase pure bred stock of the best description would do well to attend the forthcoming sale, of L. G. Morris, Esq., the distinguished American Importer and Breeder. The importations of Mr. Morris have been made from the most celebrated herds of England. We intend to pay a personal visit to Mr. Morris' farm shortly, and will be able to speak more fully in regard to his cattle. His advertisement will be found in this present number.

THE ANGLO-AMERICAN MAGAZINE: Feb. 1855. Toronto: Maclear & Co.

Quite an average number of this interesting monthly. Its principal contents are;—The new Gauger, by James McCarrol; Early Rising; Spiritual Literature;—The Rivals, a story of Texas Border Life; Literary and Artistic Celebrities, No. 2; John Gibson Lockart, a most interesting paper;—Recollections of a Portrait Painter;—Siege of Quebec;—Uncle Philip's Last Voyage, by Mrs. Trail; Kirri Cottage, with a well executed illustration; Men of Letters among the Romans; The Forest Hut; Facts for the Farmer; with the Editor's Sianty, abounding as usual with sparkling wit and racy remarks, always however imbued with a generous spirit.

We are glad to hear that this native production is steadily making progress. It deserves a general and hearty support by the British American public.

### CHAMBERS' JOURNAL: January, 1855.

We have received the 12th monthly part of the new series of this well known periodical, from A. H. Armour, & Co., of this city, who supply subscribers with the genuine *British* edition, for the very moderate charge of two dollars a year. Chambers' Journal is surpassed by no similiar publication for the healthy tone of its literature, and the adaptation of its matter to the practical wants of life. The Edinburgh edition can be procured of booksellers in all the principal towns of the Province.

THE ELEMENTS OF AGRICULTURE; A BOOK FOR YOUNG FARMERS: By G. E. Waring, Jun. New York; D. Appleton & Co., 1854.

An excellent little publication, and well adapted to the end for which it has been prepared, viz., to initiate young people, whether at school or at home, into a comprehension of the leading truths and laws of scientific and practical agriculture.

In the first section the author treats of the plant, its structure, composition, and means of growth. Next of the soil; its nature, properties and distribution. Then follows the important subject of manures, with information on their economical application: a matter with which every farmer ought to make himself well acquainted. The methods of culture are there described, with some account of the principles and operation of draining, sub soil ploughing, &c. The work concludes with a few observations and directions on the subject of analysis.—The work will be found useful in schools as well as private families.

## Market Review.

CANADIAN, AMERICAN, ENGLISH & FOREIGN.

### TORONTO MARKETS.

|  | MARCH 3, 1855. | s. | d. | s.  | d.    |
|--|----------------|----|----|-----|-------|
| Flour—Millers' extra superfine, per bbl. | 37             | 6  | a  | 0   | 0     |
| Farmers', per 125 lbs.                   | 3              | 9  | a  | 37  | 6     |
| Wheat—Fall, per bushel, 60 lbs.          | 7              | 0  | a  | 7   | 6     |
| Spring, per bushel, 60 lbs               | 0              | 0  | a  | 0   | 0     |
| Oatmeal, per barrel                      | 33             | 9  | a  | 40  | 0     |
| Rye, per bushel, 66 lbs                  | 6              | 9  | a  | 7   | 0     |
| Barley, per bushel, 48 lbs               | 4              | 2  | a  | 4   | 6     |
| Oats, per bushel 34 lbs                  | 2              | 9  | a  | 3   | 0     |
| Peas, per bushel                         | 3              | 9  | a  | 4   | 6     |
| Potatoes, per bushel                     | 2              | 9  | a  | 3   | 0     |
| Apples, per barrel                       | 6              | 3  | a  | 8   | 9     |
| Grass Seed, per bushel, 48 lbs           | 5              | 9  | a  | 8   | 9     |
| Clover Seed, per bushel.                 | 30             | 0  | a  | 32  | 9     |
| Hay, per ton.                            | 109            | 0  | a  | 140 | 0     |
| Straw, per ton.                          | 50             | 0  | a  | 60  | 0     |
| Onions, per bushel                       | 7              | 6  | a  | 0   | 0     |
| Butter—1/2 lb, per lb                    | 0              | 9  | a  | 1   | 0     |
| Fresh, per lb                            | 1              | 0  | a  | 1   | 3     |
| Lard, per lb.                            | 0              | 7  | a  | 0   | 8     |
| Cheese, per lb                           | 0              | 5  | a  | 0   | 0     |
| Pork, per 100 lbs                        | 30             | 0  | a  | 37  | 6     |
| Fresh, per lb                            | 0              | 5  | a  | 0   | 0     |
| Beef, per 100 lbs                        | 25             | 0  | a  | 27  | 6     |
| per lb                                   | 0              | 6  | a  | 0   | 7 1/2 |
| Hams, per 100 lbs                        | 45             | 0  | a  | 50  | 0     |
| Bacon, per 100 lbs                       | 45             | 0  | a  | 50  | 0     |
| Firewood, per cord.                      | 25             | 0  | a  | 30  | 0     |
| Wool, per lb                             | 0              | 11 | a  | 1   | 1     |
| Sheepskins, fresh slaughtered            | 0              | 0  | a  | 2   | 6     |
| Calf-skins, fresh, per lb                | 2              | 3  | a  | 0   | 0     |
| Hides, per 100 lbs                       | 20             | 0  | a  | 0   | 0     |
| Coal, per ton                            | 50             | 0  | a  | 52  | 6     |
| Turkies, each                            | 3              | 6  | a  | 4   | 0     |
| Geese, each                              | 2              | 3  | a  | 2   | 10    |
| Ducks, per couple                        | 1              | 10 | a  | 2   | 2     |
| Fowls, per pair                          | 1              | 3  | a  | 1   | 6     |
| Eggs, per dozen                          | 1              | 3  | a  | 1   | 6     |
| Veal, per lb, by the quarter             | 0              | 4  | a  | 0   | 5     |
| Mutton, per lb, by the quarter           | 0              | 3  | a  | 0   | 4     |
| Bread (large loaf)                       |                |    |    |     | 1     |

REMARKS.

February 28, 1855.

The supply of Farmers' produce for the past month has not been very abundant. Wheat, especially, has not been plenty. Until within the last week, there was but little Flour coming in. But since the recent thaw the mills have been kept going, and there were several large lots in the market to-day. Farmers' Flour in bags brings from 33s 9d to 37s 6d, Millers' in barrels brings 37s 6d. Wheat has been bought readily during the month at from 7s a 7s 6d per bushel. It is now, however, bringing from 7s 9d to 8s 1d. This rise is mainly attributed to competition among buyers, and will not be of long duration. Money is not perhaps so scarce, but there cannot be much on hand. Pork has been plenty, though not exceeding the demand,—it is bringing \$7½ per 100 lbs. Lard 6½d, Potatoes and Oats scarce,—the former selling at 3s a 3s 4d, and the latter 3s. Peas 5s. Fresh Butter selling readily at 1s 1d a 1s 3d. The sleighing within a mile of the city is very bad, and it is almost impossible to bring in a heavy load.

NEW YORK MARKETS.

We have reports by mail as late as the 20th Feb. from which we cull the following:—

**FLOUR AND MEAL.**—With moderate arrivals of Western and State Flour, and a brisk demand, the market has improved, and still has an upward tendency; the inquiry is confined to the East and home trade; the low grades are not so plenty, and these have advanced; the better grades are held with increased firmness, and are in request; the sales of Western Canal are 7,700 bbls. at \$3 12½ a \$3 37½ for common to good State; \$8 62½ a \$9 for mixed to good Michigan, Indiana, and common to good Ohio; and \$10 75 a \$12 for extra Genesee. Canadian Flour is firm but not very active; the demand is mainly confined to the City trade; sales of 1,150 bbls. at \$3 87½ a \$9 in bond, and \$9 25 a \$10 duty paid. Rye Flour is quiet at \$6 25 a \$7 37½ for fine to superfine. Corn Meal is inactive, at \$4 37½ a \$4 50 for Jersey, and \$4 75 for Brandywine. Buckwheat Flour is plenty, and in limited demand, at \$3 50 a \$4 per 100 lb.

**GRAIN.**—The market is again better for Wheat; the demand is firm for milling. Sales of 5,500 bushels prime White Genesee, at \$2 55, and 2,000 bushels prime Red Long Island on private terms. Rye is firm and in fair request. Sales of 2,200 bushels, at \$1 28. Barley is inactive, at \$1 a \$1 29. Oats are more plenty. Sales of Jersey, at 52 a 53c. and State and Western, at 63 a 69c. Corn is decidedly lower; the arrivals are large, and the demand is fair for export at the inside prices. There is more doing for the East. Sales of 70,000 bushels, at 95c. for Southern Mixed; 95 a 96c for Jersey Yellow; 96 a 93c. for Southern Yellow; 97 a 99c. for Southern White. Old Western Mixed nominal.

**PROVISIONS.**—There is a fair enquiry for Pork, and the market is better. The arrivals are not so large. Sales of 909 bbls. at \$12 62 a \$12 75 for old Mess. \$14 37½ a \$14 60 for new Mess \$17 for Clear, \$12 37 a \$12 44 for sour Mess, \$14 60 a \$15 25 for Western Prime Mess, and \$15 75 a \$16 for City do. Included in the sales are 22 bbls. India Mess at \$23—the first sale of the season. Beef is quite firm, but not active. The arrivals are limited. Sales of 150 bbls at \$8 62½ a \$11 for country Mess, \$13 50 for Vermont do., 14 25 a \$15 for repacked Chicago, and 5 50 a \$7 for country Prime.

**BUTTER** is better and in request. Sales of Ohio at 15 a 20c, State at 22 a 27c, and Orange Co. at 23 a 31c. Cheese is firm and in fair request at 9½ a 10½c.

**SEEDS**—A fair inquiry for new Clover at 10½ a 11½c. Timothy is in request at \$3 for good Reaped. Rough Flax is in demand at 1 80 a \$1 85 per 56 lb. Linseed is very firm and in fair request, sales at Boston of 1,500 bags, to arrive, at \$2, cash and time, and 300 bags on the spot, at the same price.

Latest by Telegraph.

FEBRUARY 27.—There was but little doing in Flour, and nothing in Canadian. New York Flour was bringing 8 25 a \$8 75, and Western 8 9½ a \$9 31. Grain steady. Wheat \$2 25. Good sale for Pork. Mess selling at \$15 37. New \$15.

ENGLAND.

The English grain markets for the week ending Feb. 10th, the latest dates that had reached us before going to press, were rather declining, although prices were generally supported. The stocks held are described as security. At Liverpool the demand for Wheat was of a very limited character, and prices must be quoted 1d to 2d per 70lbs lower. Flour met only a very moderate sale, and holders had to concede some slight reduction. Indian Corn had been little dealt in, the shipments to Ireland having fallen off considerably, and all descriptions must be noted 6d per 450lbs cheaper. Oats had given way 1d per 45lbs, and Oatmeal 6d per load.

The Provision trade had not presented any material change during the week. The demand for Irish Butter continued exceedingly dull, being confined to the best brands of southern at barely late rates, while purchasers quite neglect the middling and inferior descriptions, although offered at lower prices. Select brands of Waterford, 102s to 103s sterling; Kilkenny, Carlow, and Wexford, 99s to 101s; Limerick and Sligo, 91s to 36s per cwt. Irish Bacon in moderate request without alteration in value. Very little old American in the market, but new is coming forward more plentifully. Lard inactive and prices rather easier. American beef and Pork for ships' stores in moderate request at late rates.

The following are the Liverpool quotations for American and Canadian grain and flour. The price is stated "per 70 lbs", instead of 60 lbs, and in sterling. To make a comparison with Canadian prices, convert the amount into dollars and cents at the rate of 24 cents to the shilling and subtract a 7th.

| WHEAT, per 70lb.                  | s  | d | s  | d  |
|-----------------------------------|----|---|----|----|
| Canadian, mixed and red.....      | 11 | 0 | 11 | 9  |
| white .....                       | 12 | 0 | 12 | 8  |
| United States, red.....           | 11 | 6 | 12 | 3  |
| white .....                       | 12 | 4 | 12 | 10 |
| Danzig, high mixed.....           | 12 | 6 | 13 | 0  |
| Pomanean & Meckenberg.....        | 12 | 6 | 12 | 0  |
| Odessa, Polish, red.....          | 10 | 4 | 10 | 10 |
| common.....                       | 10 | 2 | 16 | 6  |
| Egyptian.....                     | 8  | 0 | 8  | 9  |
| BARLEY, 60 lb.....                | 4  | 1 | 5  | 2  |
| OATS, Russian, per 45lb.....      | 5  | 9 | 3  | 10 |
| BEANS, European, per qr.....      | 41 | 0 | 45 | 0  |
| Egyptian, per 450 lb.....         | 40 | 0 | 42 | 0  |
| PEASE, Baltic, &c. white, qr..... | 52 | 0 | 55 | 0  |
| Canadian.....                     | 50 | 0 | 53 | 0  |
| INDIAN CORN, per 480 lb.          |    |   |    |    |
| American, white.....              | 44 | 0 | 45 | 0  |
| yellow.....                       | 43 | 6 | 44 | 0  |
| European, yellow.....             | 43 | 6 | 44 | 0  |
| INDIAN MEAL, per 196 lb.....      | 21 | 0 | 22 | 0  |
| FLOUR, per barrel 166 lb.         |    |   |    |    |
| Canadian sweet.....               | 42 | 0 | 44 | 0  |
| Western Canal, sweet.....         | 38 | 0 | 43 | 0  |
| Prime Vir. & fancy brands.....    | 14 | 6 | 45 | 6  |
| Ohio.....                         | 44 | 6 | 45 | 6  |
| Philadelphia & Baltimore.....     | 40 | 0 | 44 | 6  |
| New Orleans.....                  | 43 | 6 | 45 | 0  |



WHAT IS WANTED IN A HORSE.—This is well stated in the *Transactions* of the Onondaga Co., Ag'l Society, in substance as follows; Horses are wanted, first for speed on the road, second, for conveying heavy loads quickly. For the first they have no competitors among our domestic animals; for the second none but the ox and the mule. Either of these is kept at less expense, less risk, and less care. The horse compensates this increase solely by his *speed*. Ce cility and power united, sum up in two words the peculiar requisites of the horse.

THE CANADIAN AGRICULTURIST,

IS PUBLISHED MONTHLY, at Toronto, Upper Canada. I and devoted to the improvement of *Agriculture, Horticulture, Farm Mechanics* and to the advancement of the *Farmers' Interests generally*. It commences its SEVENTH Volume this year, 1855. Each number contains 32 large octavo pages.

The *Agriculturist* is illustrated with Engravings of Cattle, Implements, Farm Houses, Farm Buildings, &c. and is the only Agricultural paper printed and published in Upper Canada. Receiving as exchanges the leading Agricultural Journals of the United States and Great Britain, the Editors are able to select and lay before their readers every thing of value that may appear in these papers.

The *Agriculturist* contains, besides Editorial and Miscellaneous matter, Reports of Farmers' Clubs, Essays, Proceedings of the Board of Agriculture, Prize List of the Agricultural Association, Information and Hints to Agricultural Societies, &c. &c. It is strictly a CANADIAN work, and should be taken in by every Farmer who desires to improve himself, or who feels any pride in the advancement of his country.

Professor BUCKLAND, of Toronto University, continues to assist us Editor.

Some of the most intelligent Practical Farmers in the Province are contributors to this journal

The *Agriculturist* is not a second edition of the *Genesee Farmer* nor of any other foreign publication. It is a home production and asks no man's support under a false name. It is a true, not a spurious *Canada Farmer*.

TERMS:

Twenty copies or upwards, each ..... 2s. 6d.  
Single copy ..... 5s.

\* The *Agriculturist* is not liable to Postage.  
Newspapers inserting the above will do us a favor, and oblige themselves to a copy without exchange.

WM. McDougall,  
Publisher, Toronto.

January, 1855.

DURHAM BULLS.

THE SUBSCRIBER has several yearling Durham or Short-Horn Bulls for sale from the most renowned breeds ever imported into this country. Parties wishing to purchase will please call.

Nelson, 25th Jan., 1855.

P. FISHER.  
2-3

SHORT-HORN BULLS.

R. WADE, Junr., of Colburg, has Five Young DURHAM BULLS for Sale, and would be glad of a call from parties wishing to purchase.

Colbourg, January 1. 1855.

1-3

ENGLISH HORSES:

FOR SALE.

BY Order of the Executors of the late CHARLES COOPER. Two Superior Agricultural Stallions, imported by him, each three years old.  
For pedigree and particulars enquire of William Rowland, Centre Street, or of

W. B. CREW,  
Toronto Street.  
2-1f

Toronto, Jan. 15, 1855,

STALLIONS FOR SALE.

THE Subscriber now offers for sale TWO VERY SUPERIOR STALLIONS. one will be six years old next May he has taken nine premiums; took the first in Toronto at the Provincial Show, 1852; the other will be four next June he took the second in Hamilton at the Provincial Show 1853. They were both sired by the far-famed old Cayde, who when he was on the soil far surpassed any horse that ever came against him. Their dam is a very superior Mare. For further particulars apply to the subscriber

WM. WADDELL,  
Pickering, Clarendon P. O., C. W.  
1-3

Dec: 10th. 1854.

FRUIT TREES, EVERGREENS, &c.

T. C. MAXWELL & BROS., ask the attention of those wishing Trees and Nursery Articles the coming Spring, to a few Thousands each of Apple, Cherry Standard and Dwarf Pear Trees, and a good assortment of Peach, Plum, Apricot, and Quince Trees, and the smaller fruits. All very lofty and healthy.

25,000 Am Arbor Vitæ, two years in Nursery, fine plants for Hedges,  
60,000 " " " " " nicely rooted.  
10,000 Balsam Fir, 1 to 5 feet high,  
30,000 Norway Spruce, 1 to 2 feet high.  
1,000 Hemlock, Red Cedar, &c.  
2,000 Wet Ash large and cheap, and large Horse Chestnut, &c.

The above and many other articles usually grown in the Nurseries, we offer in lots to suit purchasers CHEAP.

Digging and packing done in the best manner.  
T. C. MAXWELL & BROS.  
Old Castle Nurseries, }  
Geneva, Ontario Co., N. Y. } 2-2

PURE BRED ANIMALS,  
AT  
PRIVATE SALE,

Mount Fordham, Westchester Co., 11 miles from City Hall, New York, by Harlem Railroad.

HAVING completed the sale of animals, as advertised in Catalogue of 1854, (excepting Short Horned bull "Balco" 9918), at prices highly remunerative, for which patronage I feel grateful, not only, to the public of almost every State in our Union, but to the Canadas, Cuba, and the Sandwich Islands; I will issue about the 1st of March, a Catalogue for 1855, of Short Horned Bulls, and Bull Calves (some of which belong to my friend, and part associate Mr. N. J. Bear) North Devon Bulls and Bull Calves, Southdown Rams, Suffolk, Berkshire, and Essex Swine, of almost all ages, and of both sex, now ready for delivery. This catalogue will be illustrated with portraits of my Prize Animals. Most of the original animals of my breeding establishment were selected by me in England in person, and strictly in reference to quality, in my judgment, best adapted for the use of this country.

L. G. MORRIS.

January 30th 1855.

DAVY'S DEVON HERD BOOK.  
SECOND VOLUME.

JUST PUBLISHED, and now ready for distribution at the New York State Agricultural Rooms, Albany. By enclosing B. P. Johnson (Corresponding Sec) \$1.50 he will forward the book to any address desired. The liberality in registering the animals of American Breeders, giving them equal advantages with those of the location where the breed originated, deserves the good feeling, and patronage of this country.

February, 1855.