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OFFICIAL SERIES.

THE FARMERS' JOURNAL,

AND

Transactions of the Board of Agriculture

OF

LOWER CANADA.

VOL : XII. MARCH, 1860. NO. 7.

CONTENTS.

(General.)

FARMERS' JOURNAL.—(*Editorial Matter*;) Application of the Sciences to Agriculture; Grazier and Breeder; Poultry Yard; Rural Architecture; Enquiries and Answers; Foreign Agricultural Intelligence, Obituary, and Critical Notices, &c.
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N. B.—Communications received before the 15th of each month will appear in the ensuing Number.

*"O! fortunatos nimium, sua si bona vorint,
Agricolos! quibus ipsa, pueri discendibus arvis,
Fundit humo facilem victum justissima tellus"*
VIRG. GÆO.

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MARCH, 1860.

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TRANSACTIONS OF THE BOARD OF AGRICULTURE FOR LOWER CANADA.

Progress and encouragement of Agriculture in Canada; illustrated by the provisions made for its encouragement in other countries—by James Anderson, F. R. S. S. A., &c., &c., &c., late of Petite Côte, County Essex, C. W. Editor of the Farmers' Journal.

M A R C H.

The chief business of this month, is to try every means to make the necessary preparation to forward the operations of April and May, so that the spring work may be commenced at the earliest moment without interruption. The cattle should be carefully attended to, as heretofore, so as to have them in as forward a condition as our means will permit for the summer pasture; as by neglect at present, they might be thrown back so far as to lose the beneficial results which ought to accrue from past care and attention, and debility might be produced which it might take the greater part of the summer to recover. Where the supply is ample, serve them with abundance of roots and cut fodder, with plenty of pure water: continue to feed your hogs abundantly, supply muck, leaves, and straw to encrease the bulk and value of the manure heap. Keep your horses in good working order, giving grain and roots to preserve health and plumpness. See that your working oxen do not get down in condition. Feed your sheep well, keeping your ewes just about to lamb in separate pens. Feed salt to all your stock; and it is of the first importance to carry your young stock through the winter in good condition.—Continue by every means to increase your stock of manure. Provide, as formerly, lime, crushed oyster shells and animal food to your poultry. If still neglected, go on selecting and preparing seed of all kinds against the busy season. Continue to repair buildings, and to collect materials for erecting and repairing fences. Complete your whole stock of wood for summer use. Admit air to the greenhouse every day;—keep bulbs near the glass, watering but sparingly, and change the water frequently, if in glasses. Watch your Camellias carefully, but do not wet the flowers.—Water your Chrysanthemums freely.—Put in any cuttings remaining over. Keep your Geraniums in an airy situation, fumigating perseveringly to keep the fly off. Destroy insects by tobacco fumes, washing, at sametime, with soap suds. Water and cleanse Oleanders, Lemons, and Oranges.—Sow for Hot and Green House and tender annuals for flower border.

Dispense with fire heat when the season will permit, but in our locality, putting shutters carefully in at night to guard against insidious frosts: as plants progress in growth, supply water freely. Admit air into Hot-House when the weather will permit, but with great caution. Keep up the succession of flowering plants, taking from the Green-House: give your Cactuses airy situations. Cleanse your plants carefully. Shift and repot Fuchsias, Pelargoniums, &c., &c. Temperature should range from 55° to 65° in no case exceeding 85° with sun heat. Watch carefully, and provide against the approach of insects.—*Communications from practical men will, at all times, receive our best attention.*

Publications Received.

We have to acknowledge the receipt of the following:—Abstract Returns of the Agricultural Society of Massachusetts—Transactions of State Agricultural Society—do. do. of Nantucket—do. do. of Middlesex County—do. do. of Norfolk County—do. do. of Maine Society for promoting Agriculture—do. do. Second Annual Report of Main Board of Agriculture. Our usual Exchanges with the exception of the *Genesee Farmer*. The Annual Circular of *The Rural Empire Club*—West Macedon. N. Y.—Dr. Van Courtlandt's (of Ottawa City) Pamphlet on The Building Stone of the Ottawa District, of which more hereafter. The Monthly Journal of the California State Society—The Shrewsbury Journal &c., &c., &c.

HEMP AND FLAX CULTURE.

We shall now again, from time to time, resume consideration of a subject, to which we gave attention several years ago in Canada, and had the satisfaction of receiving the thanks of the then existing Government. We still think that the growth of Hemp and Flax might be prosecuted to advantage on many of our rich soils. Hemp requires a deep rich mellow alluvial soil to insure perfect success. It should be cultivated as a green crop in the rotations. The land should be cross ploughed in spring, and harrowed, and cleaned, and pulverized, as if for Flax, or Potatoes, or any similar crop. But the young plant is very susceptible of frost; so, care must be taken as to the period of sowing. To succeed in the best manner, deep and thorough ploughing, with subsoiling, when practicable, should precede this crop; and not being remarkably hardy, nor well able to bear sudden and excessive changes, it should not be sown until all danger of severe frosts may be considered over. The seed of the year immediately preceding should be used, as older seed may not vegetate. Five pecks, to two bushels an acre are recommended. The sowing is generally done broadcast, but drill machines perform the work more rapidly, and will no doubt come into general use. The roller should be used after the seed is sown, as it causes a general and more even vegetation, and permits the stalk to be cut very close to the ground—increasing both quantity and quality of produce, the lint being heaviest near the root—one inch being worth *two* in the upper part of the stalk. On this continent, after the seed has been covered and rolled, there is seldom any other cultivation. When the drill culture comes into use, we can then pursue a more careful system of cleaning in the early stages. In the Middle States, Kentucky, Tennessee, Missouri and Indiana it is extensively sown; and when the operations connected with its preparation are conducted on the land whereon it grew, so much is returned to it, that Hemp cannot be considered an eminently exhausting crop. American Hemp was formerly considered of inferior quality—being all dew rotted. But new and improved processes of preparation have been

introduced ; and this ancient reproach has been withdrawn. It was formerly principally used for bagging, bale, rope, twine, &c., but is now coming into extensive employment for naval purposes. It will now stand a comparison with Russian. The fibre should be fine in quality, and uniform in texture, and with this view it is better sown broadcast, though it is more conveniently cultivated in rows, as certain processes of cultivation require the workmen to go amongst the crop while growing. But to procure a fine fibre the plants require to be set close together. The seeds are of a flattened obscular shape, greyish-brown in colour, of a fresh appearance, somewhat oily lustre, and feels light in the hand. You may prove the seeds by rubbing them between the palms, and if they suffer such treatment without breaking, and become brighter, they are of a good quality. The ground requires to be watched after sowing, and until the plants are in leaf, to keep off the birds, which are most destructive. Though sown broadcast, if the crop be luxuriant, the weeds are speedily overborne and smothered. Hemp *Cannabis Sativa*, belongs to the class and order *Diœcia Pentandria* of Linnœus, which have the male and female flowers on different plants ; and, on this account, it is unknown, when Hemp seed is sown, whether the plants produced will be male or female. It is of the order *Urticeæ*, of the natural system of Jesseu, and is closely allied to the common nettle. It is a native of the cooler parts of India, and is there cultivated, not for its fibre, but for its intoxicating properties, which are believed to be owing to the presence of a resin, which is not found in Europe. This resin exudes from the leaves, slender branches and flowers ; and when collected into masses, is the *Churras* or Cherris of Nepaul. Its odour is fragrant and narcotic, its taste slightly warm, bitterish, and acrid. The oil from the seeds is used in the lamp, and in coarse painting. And it is in some localities formed into a paste, and given to hogs and horses to fatten them. It enters into the composition of black soap, used in the manufacture of stuffs and felts, and is also used for tanning nets.

The composition of Hemp seed is as follows :—

(BUCHOLZ.)

Oil,	19.1
Husk, &c.,	38.3
Woody fibre and straw,.....	5.0
Sugar, &c.,.....	1.6
Mucilage,.....	9.0
Soluble Albumen (Casein ?).....	24.7
Fatty matter,.....	1.6
Loss,	0.7
	10.000

The composition of the ash of the Hemp seed is as follows :—

(JOHNSTON.)

Potash,.....	21.67
Soda,	0.66
Lime,.....	26.63
Magnesia,.....	1.00
Oxide of Iron,.....	0.77

Phosphoric acid,.....	34.96
Sulphate of Lime,.....	0.18
Chloride of Sodium,	0.09
Silica,.....	14.04
	100.00
Per centage of ash (Johnston).....	5.60

We shall recur to this important subject from time to time in "The Journal," and endeavour to repeat our views, showing the advantages which would result from the extensive culture and manufacture of Hemp and Flax, especially the former in Canada.

J. A.

R U R A L E C O N O M Y .

RAZOR STROPS.—Oxide of tin, as many know, has a fine sharpening quality, and is extensively used for coating the leather of strops. When they have lost their efficiency, rub them briskly for a short time across a tin vessel, and enough will be imparted for the intended purpose.

MARKING BAGS.—This is easily done by applying black paint with a brush through holes cut as letters, through a piece of pasteboard. But the pasteboard, unless inconveniently thick, curls at the corners after a time, and the letters are defaced. Tin plate is much better, but it is difficult to cut the letters in it.—Thick *sheet-lead* is, however, just the thing, and any person who can use a knife may cut the letters through it after they have been accurately marked.

BAD WATER IN NEW WELLS.—Water otherwise good, is sometimes made bad in new wells by dissolving impurities from the stones used to wall them. We knew a case of this kind, where in a few weeks the water became so foetid that no animal, however thirsty, would touch it. The cause was suspected and the well cleaned; the second filling of water was much better; the process was repeated, and after the water was drawn out the third time it became perfectly good. It has since, for many years, been noted for its excellent water.

QUALITY OF DIFFERENT KINDS OF WOOD.—The celebrated experiments of Marcus Bull of Philadelphia, many years ago, gave the following results, showing the amount required to throw out a given quantity of heat:

Hickory,.....	4	cords.	Pitch Pine,.....	9 1-7	cords.
White Oak,.....	4 $\frac{3}{4}$	"	White Pine,.....	9 1-5	"
Hard Maple,.....	6 $\frac{2}{3}$	"	Anthracite coal,.....	4	tons.
Soft Maple,.....	7 1-5	"			

PAINTING TOOLS.—Every farmer should keep a pot of paint and a brush ready for use in his work-shop. On rainy days, paint all tools, hoes, rakes, forks, plows, harrows, cultivators, spades and shovels. Be particular to apply the paint well at the cracks and joints, where moisture might penetrate. Repeat the process frequently. This will cost but little, and save many hard-earned dollars. A light-colored paint, as yellow ochre, will become less heated in sunshine than one of darker hue.

CRACKS IN STOVES, are easily and effectually stopped by a pastemade of ashes and salt with water. A harder and more durable cement for the same purpose is made by mixing iron filings, sal ammonia and water.

DRYING WOOD.—Every one who uses a wood stove, has discovered that there is a great difference between the value of wood that is well or poorly dried. The following may be given as a scale of the different modes of drying, the best being named first :

1. Kiln-dried.
2. Seasoned several years in a dry ventilated building.
3. Sheltered a year under a good roof.
4. Corded up in open ground.
5. Corded up in the woods and shaded.
6. Partly seasoned, soured by fermentation or water soaked.

Most kinds of wood cut in winter, and left in large logs in the woods, become more or less soured and injured. If wood could be cut and split in summer, when the weather would dry it rapidly, the wood would be greatly increased in value ; but as this is usually impracticable, the next best is to cut and split it in winter as fine as will be required, and then cord it up in a wood-house, well sheltered from rains, but admitting the free circulation of the air.

RULES FOR BUSINESS.

HOW TO SUCCEED IN BUSINESS.—Ricardo's rules were :

1. Cut short your losses.
2. Let your profits run on.

In order to this, one must have *experience*—and to avoid a too costly experience, begin small. Feel your way. Bonaparte had a quick and powerful mind ; we may learn from him, observing to do good with our knowledge, instead of evil as he did. When in Egypt, he and many of his officers were riding out in a dark evening on the sea beach, where it was very wide. Suddenly the tide came in rapidly, and the water grew every moment deeper where their horses stood ; they could not see which way was dry land, they became alarmed and bewildered, and destruction threatened them. Bonaparte seemed never to fail for an expedient. He ordered all to form a circle, with horses' heads outwards. They did so. He now ordered all to ride ahead ; if any found the water growing deeper, they were to turn about ; if any found it growing shallower, they were to ride on, and all the rest to follow. This brought them to dry land. It is so with business. Proceed cautiously in different directions ; if failure result, wheel about ; if success attends, go ahead. This is the way to carry out Ricardo's rules, " Cut short your losses—let your profit run on."

ANOTHER REQUISITE FOR SUCCESS.—*Principle*—stern, unflinching principle, is the best foundation for successful business. Those who have it not, can hardly carry out on all occasions the great law for comfortable, safe and prosperous progress through the world, namely, "Honesty is the best policy." A careful estimate has been made that on an average every dollar which a man makes by cheating, he loses at least twenty, and some say at least a hundred dollars, by the bad name which he sooner or later surely builds up for himself. If detected in fraud, his course is at once arrested ; if not detected, he goes on till some gross commission either sends him to prison, or imparts such an odor to his character that every man of integrity shuns him. We have known men of very moderate talents appointed to important and lucrative trusts, on account of their known faithfulness and honesty, when much "smarter" men of doubtful character, could get no employment.

GETTING RICH BY SPECULATING.—We once inquired of an old resident of New-York city, who had seen much of the active business men of that place during most of the present century, if he had known one who had pursued a business strictly of the character of the speculator for thirty years that came out rich. He said he did not know any. "All our rich men have accumulated their wealth by gradual and constant accessions." We have known many men who were pointed out as "immensely rich" through speculation, but in every case that we can recollect, they afterwards failed.

A RICH ESTATE.—The best legacy which a man can leave to his children, is *the ability to take care of themselves*. Fit them for active, responsible business, they have at once an income; but this income is as much greater in value to them than the same income left in money, as activity and useful employment are better than idleness and lounging and dissipation. Give a young man good moral habits and a good practical thorough school education, (which by the way need not necessarily be acquired at schools,) and he can secure a salary of perhaps two or three hundred dollars at first, and in successive years up to a thousand dollars. He is then worth a thousand dollars a year—the interest at six per cent, on over sixteen thousand dollars, his real value counted in money. But a poor young man who can make a thousand dollars a year, is worth far more than a young spendthrift who has sixteen thousand dollars, because he is more useful in many other ways, and is making himself happy instead of miserable.

D A I R Y E C O N O M Y .

WINTER BUTTER.—The different modes of treating the cream and milk in winter, to make good butter, are greatly inferior in their results to the effects of giving the cows themselves a regular supply of sugar beets or carrots, the latter, as we think, being much the best. They will nearly double the ordinary amount of milk, and increase its richness, while the butter it produces has that yellowness and fine flavor peculiar to that commonly made from pastures. It is always a loss of quantity for butter to come too soon by churning; but sometimes its gathering is too long delayed after the minute granules of butter are formed.

The process may be often hastened by dropping into the churn at this period, a small lump of butter, which serves as a nucleus around which these granules quickly coagulate.

DAMP STABLES.—A farmer discovered after taking possession of a newly purchased place, that his horses were becoming poor, diseased, and incapable of much labor. His cows became sickly, their milk diminished, the butter was bad, four lost their calves, and two died of scours. The dampness of the stable was the suspected cause. It was low, under trees, and with a northern aspect. It was replaced by another on a drier spot, when the difficulty ceased.

TO MAKE CATTLE THRIVE IN WINTER.—There are certain requisites to be constantly observed, namely, the following:

1. To feed *regularly*, and preventing fretting for expected meals.
2. To give enough, but never over-feed.
3. To feed often, and moderately at a time.
4. To furnish constantly a supply of good water.
5. To shelter from storms.
6. To rub them clean, and give clean litter.
7. To give them a portion of carrots or beets daily.
8. To keep their stables properly ventilated and free from bad air.

STABLES FOR COWS.—Different experiments show that stabling milch cows during an average of northern winters, increases their milk about *one-third*. In very severe weather the milk will be doubled; while in mild days less advantage results.

TO WINTER VILLAGE COWS.—One hundred bushels of carrots may be raised on ten square rods of *very rich ground* in favorable seasons, and in almost any season on sixteen square rods, or four rods square, one-tenth of an acre. They will keep a cow all winter in the finest condition in connection with some hay, and furnish rich milk and butter. A few square rods of sorghum will supply fodder nearly all the autumn, of the richest character, but should be cut short in a stalk-cutter.

WINTERING CATTLE.—Every farmer should reserve his best hay for the latter part of winter and spring. Let the animals rather improve instead of their falling away as warm weather advances. Let them enter the pasture in good condition. It is an old axiom, "cattle well wintered are half summered."

GREEN AND DRIED FODDER.—The results of experiments made many years ago in New-England, to determine the loss of weight by the drying of different grasses. They will prove interesting to graziers. The experiments were made in 1822 and 1823. The white clover of 1822 grew in the shade; that of 1823 in the sun:

	1822	1823
100 lbs. green white clover gave,.....	17½....	27
“ “ red clover,.....	27½....	25
“ “ herds' grass, (timothy),.....	40....	39
“ “ cornstalks,.....	25....	25
“ “ red-fop,....	46
“ “ Couch grass,.....	48
“ “ fowl meadow,.....	53

PACKING BUTTER.—Let the firkin contain as much as possible—that is, pack as *solid* as the work can be done.

FEEDING HAY TO ANIMALS.—Much fodder is sometimes wasted by giving too much at a time. The breath of the animals condense upon it in cold weather and render it unpalatable, and they refuse it. Feeding often and but little at a time is true economy.

UNDERDRAINING WITH THE MOLE-PLOW.

We find in a recent Ohio Farmer an account by J. M. Trimble of Highland, of quite an extensive experiment in underdraining prairie land by the use of open drains, and ditches cut with Emerson's Mole-Plow. Thinking it will be of interest to our readers, we condense the main portions thereof below.

The year's operations were confined to 230 acres of prairie land on the west bank of Rattlesnake creek. Mr. T. first laid out with an engineer's level 685 rods of open ditch, and 80 rods apart, varying from 4 to 6 feet, and in width from 6 to 8 feet, allowing for slope of banks 1½ feet, to one foot in height, which was let by contract at 65 cents per rod, and finished in October, 1858. The underdrains were cut in March, April and May; first laid off with the level, but more with the view of tapping the wettest portions of land between the open ditches, than a regard to straight lines, or thorough underdraining. In this way, with the ditcher, two yoke of cattle and two men, in sixteen days we put in

1,500 rods of underdrain, at a depth of three feet four inches, and a cost of \$65.

The account states that "at the time of running the mole plow, the surface of the ground was covered with water, from one to six inches deep. The surface soil to the depth of from one to two and a half feet, is a black clay, or loam, rather a compact, tenacious soil; the subsoil is a close, compact, yellow clay, to the depth of from three to five feet." The sod was then broken up, or turned over, from six to eight inches deep, harrowed (200 acres of it,) and then planted to corn, finishing the 200 acres on the 23d of May. On the memorable fourth of June it was up from 6 to 16 inches high, but on the morning of the 5th, all lay flat with the ground. It was then plowed up and replanted, and the product under these circumstances was 60 bushels per acre. The 30 acres planted last, on the sod and without culture of any kind, produced 40 bushels per acre. In relation to the working and success of the experiment, Mr. Trimble remarks:

"The underdrains all performed their work well up to the middle of July, when they began to fail, and by the first of August were perfectly dry. I have been on the farm from the 3d up to the 25th of November, during which time we have had several hard rains; and I have examined the outlets to all of the underdrains, which, without a single exception, are passing off large quantities of water. From a close observation during the summer, I am satisfied that the underdrains were quite as important to the growing crop during the drouth, from May to September, as they were in carrying off the surplus water in the spring; and I am equally certain that the increase of crop, resulting from draining is all of 20 bushels per acre, which would leave the account stand thus: Six hundred and eighty-five rods open ditch, at sixty-five cents per rod, \$145.25. One thousand five hundred rods of underdrain cost \$65. Use of ditcher, wear and tear, \$25.75. Entire cost, \$536. Cr. by twenty bushels of corn on two hundred and thirty acres, gives four thousand six hundred bushels at 25 cents, \$1,150; showing a profit of \$626 in favor of the mole plow in a single year."

In regard to other experiments which have proved failures, it is remarked:

"The mole plow has been condemned from the fact of improper use, not procuring sufficient outlet, running the ditches too shallow, and failing to reach the clay sub-soil with the mole. I have no faith in the use of the implement without a clay sub-soil for the mole to operate in. Otherwise the aperture made by the mole will cave, and fill up."—*Co. Gentleman.*

C L E A N I N G S E E D W H E A T .

JOHN JOHNSTON of Geneva, one of the most thorough and successful farmers in this country, as all our readers know, says he quit raising chaff *twenty-eight* years ago—by never sowing it. He has not raised a bushel of it in all that long period on his extensive wheat farm. Thirty-seven years ago he obtained eight bushels of chaff in every hundred of wheat. His mode of cleaning seed is the same in substance that we have practiced thirty years ago, but will bear repetition, and we therefore give it as recently described by him:

My plan is to take out the fanning-mill riddles; some call them screens; I call the lower one only a screen—it takes out mustard seed and cockle *in part*. After the riddles are out, take off the shaking rod, or at least the one nearest the wings or fans. Then let one man turn the wings or fans by the crank or handle, as usual; let another pour the wheat into the hopper from a basket or any other vessel—a tin-pail answers very well—let him pour the wheat in regularly and not very fast, if much chaff. Let the man turning keep up a steady wind; he

need not turn very fast. Have a boy, or a girl, or a man, or a woman if you choose, to take back the clean wheat as it comes down from the mill, and I will guarantee that every ches seed will be blown out. The man pouring in the wheat ought to be *boss*, to make sure that the man turning does not slack up too much, and that he don't stop turning until the wheat and ches are all out of the hopper, else it may fall down amongst the clean wheat. If the wheat is 60 lbs. to the bushel or over, very little, if any, will be blown out with the ches. As considerable will lay on the cockle and mustard screen, when that is going to be put down, it is safest to scrape back the upper part with the hand, because if there is ches anywhere among the wheat, it will be there. Now if this is done precisely as I direct, and if the wheat is not made entirely free of ches, unless three ches seeds are sticking together, which is sometimes the case with the top seeds on the main stalk, in which case there may be some left in the wheat; still a little more wind will blow them out. If any man will try it and cannot do it, send for me, and if I cannot do it to perfection, I wont ask them to pay my traveling expenses.

TIME OF HARVESTING WHEAT.—An Illinois correspondent of the American Agriculturist, incited by a statement of the advantages of early cutting, tried the experiment on a field of 50 acres last season. The bulk of the crop first cut, weighed 62½ lbs. to the measured bushel. The part of the field left until fully ripe before cutting, gave wheat weighing but 58 lbs. per bushel—making a different of nearly one hundred bushels on the whole field in favor of early cutting—from ten to fourteen days before full maturity.

TO MAKE FARMING PROFITABLE.

HISTORY OF JAMES WISEMAN.

EVERY beginner in farming by securing the following essentials, will succeed :

1. Buy no more land than there is capital enough to pay for, with one-third more surplus—for a small farm, free from debt, with plenty of means to stock it, enrich it, and carry on its work, will yield more than a larger one, encumbered with debt, conducted feebly in every part, with bad forces, poor implements, bony animals, weedy fields, and thin crops.
2. Lay out the fields in best order—so as to admit a systematic rotation, and to give ready access to every field at all times without passing through other fields.
3. Provide good fences and necessary gates—and valuable time will not be lost in driving out intruding animals, nor crops lost by their depredations.
4. Furnish good farm buildings, to secure properly the crops, and to afford shelter to animals.
5. Select the best animals and the best implements that can be secured for a reasonable price.
6. Bring the soil into good condition by manuring and draining, and keep it so by a judicious rotation.
7. Effect a clear and systematic arrangement of all the work, so that there shall be no clashing or confusion.
8. Employ diligence and energy, and adopt careful management.

We cannot do better in successive numbers than give the story of James Wiseman, as related by Mr. Joseph Reynolds, of Middlesex.

His history is not without instruction, and will probably read with quite as much interest as the same lessons conveyed in a more formal and didactic style. James was the eldest son of Johnathan Wiseman. He had two brothers and

one sister. Jonathan was a diligent, hard-working man, of good moral habits. He owed a farm of about one hundred acres, in one the towns of this country, and carried it on in the usual style in which farms were cultivated in this State, fifty years ago.

He brought up his boys in habits of industry and honesty. Indeed, as soon as they were large enough he kept them constantly at work on the farm. Some of his neighbors were disposed to think he made them work too hard; but as they were strong and active and always in good health and spirits, there was no proof that they were overworked.

They attended the district school two months in the winter and learned to read, write and cipher. James was thought to have quite a turn for mathematics, and by the time he was eighteen, he had mastered Pike's Arithmetic, and could measure a load of wood, and a stick of timber, and could survey a piece of land, provided it were inclosed in tolerably straight lines. He was his father's chief assistant, until he was nineteen years old. His next brother being then able to take his place, his father, by way of assisting him to an outfit when he should be old enough to commence life for himself, gave him permission to hire himself out to 'Squire Jones, who lived about three miles distant.

'Squire Jones needed a trusty young man to work on his farm, and agreed to give James twelve dollars a month and his board. He worked diligently through the year, and at the close of it, found himself in possession of a hundred dollars, a new suit of clothes, a gun and training equipments. The second year, 'Squire Jones gave him fourteen dollars a month, and made him his foreman, for he employed three through the summer, and two through the winter. At the end of the second year, 'Squire Jones gave him his note for one hundred and twenty-four dollars, which he preferred to cash. James continued in his service four years longer, at the same wages. He was now twenty-five years old, and had about seven hundred dollars in good notes. He now thought he should like to see a little more of the world: so in the month of April, he started for Boston, and from thence proceeded in search of employment to the good old town of Dorchester. There he let himself to a farmer, who was principally engaged in raising vegetables and fruit for the Boston market. Here he obtained sixteen dollars a month, for eight months. At the end of this time, having received his hundred and twenty-eight dollars, he returned home. He was now master of eight hundred and fifty dollars, and he thought it was about time to become settled in life, and to this he was the more inclined, as he found within himself a growing attachment to Miss Betsy Fletcher, the daughter of a widow who lived in the vicinity of 'Squire Jones.

About this time, there was for sale a small farm of about thirty acres, with a tolerably good house, and a small barn upon it, some two miles from the centre of his native town. This he purchased for twelve hundred dollars, paying down five hundred, and mortgaging the farm for the balance. The remaining three hundred and fifty, he expended in the purchase of a yoke of oxen, horse, two cows, a cart, plough, harness and tools, and went to work upon his farm in the month of March.

The farm was most of it good land, but had been rather severely worked. The fences were out of repair, and he set himself at work to put them in a safe condition, for he had observed, that among farmers, good fences are not only necessary for the security of the crops, but also for the preservation of good neighborhood. In the process of repairing his fences, he cut down a good many straggling trees, and collected stumps and roots, and brush sufficient for his year's supply of wood. He next scraped together what manure was to be found on the place. Finding the earth of an old coal pit on the field of a neighbor, who was willing to give it to any one who would remove it, he carted some

dozen loads of it to his barn yard and mixed it with the manure he had collected together.

He then prepared a patch for a garden, and planted some peas, and beans, and sweet corn, and a bed of beets, carrots, parsnips, and onions, and a few hills of cucumbers, and squashes, and melons.

He had learned while living at Dorchester, how to cultivate a garden, and that it was the most profitable part of the farm. He then ploughed four acres of his best land in a thorough manner. He ploughed it so deep, that one of his neighbors who observed the operation, told him he would spoil his soil, and get no crop. But he had picked up the idea, that when a soil had been pretty well exhausted on the surface, it would be well to bring up a stratum from below, that had not been exposed to the atmosphere, and in which elements had accumulated that might afford nutriment to his crops. Then he carted on his manure, and as he had but a small supply, he distributed it in the hills, and planted one acre of potatoes, two acres and a half of corn, and sowed half an acre of wheat. He then ploughed up a strip of soil by the roadside, where the wash of the road had been accumulating for a long time, and carted it into his barnyard and pig-sty, and purchased a couple of shotes.

While carrying on these operations, he managed to work a number of days with his team, for such of his neighbors as required his assistance. Sometimes he worked for cash, and sometimes exchanged work.

Thus he went on till hay time. He cut his own hay in good season, hiring a boy a few days to assist him, and then worked a month for 'Squire Jones, assisting him to secure his hay and grain. The last time he hoed his own corn, he sowed a plenty of turnip seed. After he had secured his crop of spring wheat, he dug a ditch across the lower end of his field, about ten rods long, and carted the mud and soil which he threw out, into his barnyard and pig-sty. That which he put into the yard he spread over the surface and ploughed it in with the soil, which he had placed there in the spring from the roadside. This process be repeated about once a week through the fall.

His sister was his housekeeper through the summer and autumn, and she took care of his small dairy. He harvested his crops in good season, and found he had three hundred bushels of potatoes, seventy-five bushels of corn, and seven bushels of wheat, and three cart-loads of turnips, and a good store of garden vegetables.

Of this crop, he sold two hundred bushels of potatoes for fifty dollars, fifty bushels of corn for thirty-seven dollars, and a hundred and twenty pounds of butter for thirty dollars. He also had a plenty of apples for his own use, and some forty bushels of poor apples, which instead of making into cider, he fed to his pigs. During the year, he had worked out with his team to the amount of somewhat more than a hundred dollars. He was able at the expiration of a year from the time he had purchased his place, to pay his taxes, the interest due, and a hundred dollars on the principal; and he had made several valuable improvements on the place.

On thanksgiving Day, he was married to Betty Fletcher, to whom, as we have before said, he had been long attached. She was an intelligent, industrious girl, of about his own age, and had accumulated, chiefly by her own earnings, about three hundred dollars, which enabled them to furnish their house very comfortably. Now we may consider James as fairly settled in the world. He determined in the first place to pay for his little farm, and at the same time to improve it as much as possible. His wife entered into all his plans, and assisted him with a hearty good will. She was willing to deny herself many present gratifications for the sake of permanent independence. He made his house as comfortable as he could, by such repairs as he could make

himself, and decided to lay out but little upon it until he could fairly call it his own. About four acres of his pasture lot, which lay a quarter of a mile from his house, had so much young wood upon it, that he thought it best to let it grow up to wood. The remainder, about six acres, he concluded to clear up, and bring into a more productive state. During the winter, after he was married, he cleared the wood and stumps and brush from about two acres, and thus, with the addition of a few apple trees, he collected wood enough for another year. In the spring, he procured a hundred young apple trees and set them out on a part of the field which he had cultivated the previous year. He had learned at Dorchester, that fruit was a profitable crop. He made a good selection of thrifty trees, and took much pains in their cultivation, and in a few years his orchard was considered the best in the whole neighborhood. In the spring, he laid out his work for the year, with much care and forethought. By the help of his pigs and his stock, and the compost material which he had provided the previous year, he had quite a pile of manure. This he overhauled and mixed well together. He laid down two acres of the field of the former years to oats and grass, and ploughed up two acres more. As soon as he had completed his planting. He set about collecting material for compost; indeed, he kept this object steadily in view the whole year. He scrubbed up his headlands, digging out the bushes, and throwing the soil into heaps, to be carted home whenever he had leisure. Twenty acres of his land lay in one piece, inclining a little to the west; a portion of it was cold, springy land. During the year he cut two more ditches, for the double purpose of obtaining material for his yard and sty, and of improving the quality of the grass. This year also, he worked out with his team to the amount of more than a hundred dollars. He had a fine litter of pigs in the spring, four of which he sold for three dollars apiece. This year he raised two calves, anticipating that he should soon be able to keep a larger stock of cows. His wife procured from her mother three hens, and raised three fine broods of chickens. At the end of the year he was able to pay his interest and a hundred dollars more of the principal, and purchase a horse, wagon and harness, and buffalo robe, and several tools which he needed. (*To be Continued.*)

MARVELLOUS INTELLIGENCE AND MEMORY OF THE SHEEP DOG.

One of these dogs performed a feat which would have been, excusably, thought impossible, had it not been found to be true. A large flock of lambs took a sudden alarm one night, as sheep are wont, unaccountably, and dashed off among the hills in three different directions. The shepherd tried in vain to recall the fugitives, but finding all his endeavours useless, told his dog that the lambs had all run away, and then set off himself in search of the lost flock. The remainder of the night was passed in fruitless search, and the shepherd was returning to his master to report his loss. However, as he was on the way, he saw a number of lambs standing at the bottom of a deep ravine, and his faithful dog keeping watch over them. He immediately concluded that his dog had discovered one of the three bands which had started off so inopportunately in the darkness; but on visiting the recovered truants he discovered, to his equal joy and wonder, that the entire flock was collected in the ravine, without the loss of a single lamb. How that wonderful dog had performed this task, not even his master could conceive. It may be that the sheep had been accustomed to place themselves under the guidance of the dog, though they might have fled from the pre-

sence of the shepherd, and that when they felt themselves bewildered in the darkness, they were quite willing to entrust themselves to their well known friend and guardian. The memory of the shepherd's dog is singularly tenacious, as may appear from the fact that one of these dogs, when assisting his master for the first time in conducting some sheep from Westmoeland to London, experienced very great difficulty in guiding his charge among the many cross-roads and by-ways that intersected their route. But on the next journey he found but little hindrance, as he was able to remember the points which had caused him so much trouble on his former expedition, and to profit by the experience which he had thus gained.—*Routledge's Illustrated Natural History; by the Rev. J. G. Wood.*

MUCK FOR BEDDING AND COMPOST.

We have given the method employed by some farmers in composting muck in cattle stables, leaving a trench four or six inches in depth, immediately behind the animals, into which the manure, liquid and solid, falls upon a deposit of dry muck, renewed and removed each day. The *Homestead*, after describing this plan, gives one pursued by the editor, involving less labor, and equally effectual in augmenting the amount and value of the manure heap. The floors are level, and the stalls constructed after the manner recently described by Mr. Holbrook of the *N. E. Farmer*, and copied in this paper of Nov. 3d. 1859.

A thick layer of muck or sods, cut from a salt marsh, and half a cord to a stall, is kept under and behind each animal. The account proceeds :

“The parts of this bed that become saturated, and the solid feces are removed every few days, as occasion requires, and the whole is replaced with sods and muck every two weeks. There is a trap door immediately behind the stalls, through which the compost is thrown into the cellar, there to be mixed with more muck and to undergo fermentation. We mean to keep the cellar bottom covered with about two feet of dry muck or peat. We consider the compost ready for use a month after mixing, though it loses nothing by lying longer under cover.”

“This method takes advantage of the animal heat of the stock for the purpose of decomposing the muck. This assistance is much greater than would seem at first sight, and must be tried before it will be fully appreciated. The muck should be dry when put in, and should have a covering of straw or litter. It makes a soft excellent bed, and agrees better with the hoofs of horses than anything we have ever tried. It also saves labor. The muck is put in at one time with the wheelbarrow, and not every morning with the basket, thus saving many, many steps. The quantity of manure made by this process is enormous, full four times as much as that made in the common practice, and if the quality is at all inferior, we have not been able to discover it in a close observation of six year's.

We would suggest that where one has no barn cellar, the manure should be drawn immediately to the field, and either heaped for further decomposition or spread at once upon the soil. If for the former purpose, a thick bed of muck had been provided, the heap would be ready with once turning, for application to any crop in the spring. The frost would very effectually break down and disintegrate all lumps and sods, so that the decomposition would proceed rapidly on the approach of warm weather, especially if lightened up by shovelling over as soon as fairly thawed out.

NEW GRADES OF SPRING WHEAT.

The Chicago Board of Trade have established new grades for Spring wheat, as will be seen, by the following resolution passed at their meeting on Monday last :

Resolved,—That on and after the 1st day of January, 1860, no Spring wheat shall pass as No. 1, that weighs less than 59 lbs. to the measured bushel : none shall pass as No. 2 that weighs less than 56 lbs. to the measured bushel, and none shall pass as rejected, that weighs less than 45 lbs. to the measured bushel ; and the inspectors under the direction of the Inspection Committee shall be instructed to reject any grain for any other cause (particularly when it is evident it has been mixed for the purpose of deception) even if it comes up to the required standard of weight.

The reason assigned for this change is, that it had come to the knowledge of the Board, that many buyers of wheat in the country tributary to the market, have been in the habit of mixing oats, rye, barley, and mill screenings with wheat sent there (still keeping the weight within the requirements of the present standard.)

“ WHAT BUSINESS SHALL I FOLLOW ?”—This question is often asked, and the proper answer may be, any useful and legitimate business. That is usually the best business for a man which he can perform best. He must be well fitted for whatever he undertakes. After that, success depends upon THE MAN, and not on the business. We have known some men of deficient energy and capacity who failed with the most favorable commencement ; and other who, under great difficulties, persevered without faltering until eminently prosperous.

But it is all essential to *stick to your business*. Several years are often required to attain a proper knowledge of all the ramifications of a trade. A man who was clearing five thousand dollars a year, remarked, “ for the first five years I made almost nothing”—by that time he had accumulated great experience. Another, a person of high capacity, changed his occupation eight times in fourteen years—he began rich and is now poor.

ARSENIC IN PLANTS GROWN ON ARTIFICIAL MANURES.

SIR,—The above is the rather startling heading of an article in the *Dublin Medical Press* of the 10th inst., which reviews a paper on the subject, by Mr. Davy, published in the quarterly journal of the Royal Dublin Society.

Being one of those who use artificial manures, I beg to draw your attention to the matter, with a view of ascertaining, first, if it be possible for plants to take up sufficient arsenic to injure health in man or beast. Secondly, if it is not possible that the small amount taken up may not be advantageous. For instance, a small quantity of arsenic will improve a horse's coat.—Yours, &c., X.

[We hope Mr. Hunt or some others will throw some further light on this very important question.]

LARGE ROOTS.

The progress and success of root growing in Ireland, a description of culture in which it is fast surpassing the products of English agriculture, are exempli-

fed in some singularly large and succulent specimens of beet root, grown by Mr. Robinson, the experienced and active steward, at Mount Shannon, the property of the Right Hon. the Earl of Clare, near Limerick. The specimens are at Mr. Abraham's seed warehouse; and one of them, a new description, the white topped mangel, weighs no less than $11\frac{1}{2}$ lbs., a weight seldom if ever attained in this country at this period of the year. It was cultivated in deep tillage, in which a turnip crop of similar excellence was also grown; and neither mangels nor turnips were aided by liquid manure. The former were planted 15 inches apart in drills 2 feet 6 inches asunder; and Mr. Robinson has ten varieties of the root in equal process of experimental culture at present. The value of mangels will, of course, be materially increased, and the collective weight per acre greatly augmented, if the new species so successfully grown by Mr. Robinson be found fit for several descriptions of soil, and make its way into general adoption, as, thus introduced and recommended by a scientific agriculturist of superior skill, is not improbable.—*Munster News*.

CHANGE OF SEED BENEFICIAL.

A writer in the *New England Farmer* says that his potato crop has increased nearly one-hundred per cent, by his procuring seed from a distance, and from a soil differing from that of his farm. We have so frequently seen the good results of changing seed that we have on several occasions advised farmers to adopt this plan. As the winter affords a respite from farm work, it is always an excellent season for obtaining an exchange of agricultural seeds. In doing so, it is necessary to be careful to select the very best that can be procured, and to make the transfer from a poor to a rich soil, and from an early ripening climate or country, to one that is colder and more backward. Potatoes, oats, barley, spring wheat, and corn may be improved by a change of seed, and farmers will have many opportunities of supplying themselves with the most approved varieties from a distance, before the ensuing spring.

CALIFORNIA PROLIFIC BEANS.

A new variety of beans to the Atlantic States has lately been introduced from California, which those who have grown them speak of very highly. L. Norris of Winsor, Ashtabula Co., O., says:

“This bean is of medium size; of a peach-blow color: very prolific. It requires only one, or at least two plants in each hill, and it produces many internal vines. It is a short runner; only from three to four feet in height. I find by planting them with corn, one bean in each hill answers the purpose well. By cooking these beans in the following way, they constitute a savory dish, and need only to be tasted to be appreciated. Having cleaned the beans, put them in cold water, add a little salt and boil until done, but not so much as to have the beans crack open. Have ready a fryingpan, with some lard, which heat until it nearly boils; then take the beans out with a skimmer and put them into the fryingpan, and fry them until they absorb nearly all the fat; then add about a pint of the bean liquor (of which you must reserve a plenty), then boil, or rather fry a few minutes, stirring it gently; but be sure the liquor does not all boil away, as it is this which gives the beans such a delicious favor. They are now ready for the table.”

MEXICAN SHEEP.

The common sheep of Mexico, whatever their origin, are now of little value, the average of their wool being only about one pound a head per annum. It is not much to be wondered at as they are allowed to run almost wild. An immense range of pasture, a shepherd and his dog are all that a Mexican sheep-owner thinks necessary for a sheep farm. There is no care about breed, or breeding season. Nature is allowed to take its course, and the consequence is a very coarse breed of sheep. That this long neglected breed is susceptible of improvement, however, is now fully proved by Northerners, who have gone into Texas and used some skill and care in breeding from American bucks and Mexican ewes. The consequence will be an improved breed, and large increase of wool; and Texas, in a few years, will probably produce double the quantity of all the States of Mexico. Already the best of the wethers, only three removes from the Mexican ewes, afford five or six pounds of wool at a clip, of better quality than the original stock.

CORN AND PORK—HOW MUCH TO A BUSHEL.

This question is still an open one. We have published several statements, and many experiments have been given by others; but it is still unsettled whether the breeder can afford to feed his pigs with anything more than the waste matters of the kitchen. The most satisfactory experiment we know of is reported by Henry L. Ellsworth, giving 12 lbs. of live weight for each bushel of corn fed, and that in warm weather, to a good breed of thrifty pigs, and the corn ground, and meal cooked. But take the average price in this city of live hogs, at seven cents, and it gives but 84 cents a bushel for corn; and that will not pay.

Samuel H. Clay, a good Kentucky farmer, conducted a careful experiment of feeding with dry corn, and got $5\frac{3}{4}$ lbs. of pork to the bushel. Let us take that at ten cents a pound, which is above the average price in this city, and it only gives us $57\frac{1}{2}$ cents a bushel for our corn. We suppose with the most careful feeding with corn meal to good pigs, in warm pens, and only two or three together, as Yankee farmers usually fatten their pork, that ten pounds to the bushel would be a very large allowance. Can we then afford to feed corn to pigs when it is worth a dollar a bushel? Does anybody know? Do people ever think of these little facts about pig feeding?

DRAWING WATER IN WELLBUCKETS

Where water is drawn from a well by a bucket and windlass, two ropes are better than one. Fasten by a staple to the center of the windlass and wind each way toward the ends, so that the ropes will be widest apart when the bucket is up. Instead of a bail, attach a short chain or piece of iron rod to each ear of the bucket, and set the ears low down, so that the bucket will tip easily. Cut a hole in the bottom, four inches across, and cover it with a block coated with soft sole leather, like the valve of a pump-bucket, which will open to let in the water as the bucket descends, and close as soon as it starts upward. To empty water easily, there are two ways: first, by a flat iron hook about eight inches long, fastened to the well spout in such a way that it may catch the edge of the

bucket as it is drawn up, and tip and empty. The other way is to have a pin in the spout that will strike the valve and open it when the bucket is placed upon the spout. A bucket with two ropes will work much steadier and easier, and in the long run cost less than with one, and the valve to fill, and hook to empty it, are great labor-saving fixtures.

SWEET POTATOES OF COMMON ONES.

Good common potatoes that will cook dry may be made a very good substitute for sweet potatoes, by taking them when boiled or steamed, and perhaps made still more dry by squeezing in a towel, putting in a hot place a little while to absorb the moisture, and then mashing entirely fine, and adding brown sugar enough to make the mess as sweet as a good Carolina potato. Let the mess get cold in a convenient sized pan, when it may be cut in slices to fry, or heat in the oven, and it makes an excellent breakfast dish. If taken when first prepared and mixed with an equal quantity of flour, whit a little additional sugar, if requisite, and milk and eggs, &c., it makes an excellent pudding.

ON THE PROPER PLAN OF ORGANIZING AND CONDUCTING AGRICULTURAL SOCIETIES.

MESSRS. EDITORS.—Believing this to be a subject in which many of your readers feel an interest, and believing the present to be a peculiarly fitting and proper time, I am induced to make the following remarks. I think the present too, a suitable season, because it is now that we can calmly and deliberately discuss how we can make our agricultural exhibitions most beneficial to ourselves, and most attractive to our friends; also, because at this time a vigorous effort is being made to put our County Society (one of the oldest in the county,) on a permanent and prosperous basis.

During the past six years I have taken an active part in the affairs of the New-Castle County Society, and although being considerably more of a gardener than a farmer, I have felt sufficient interest to visit all the State and County fairs that have been held within a circuit of 30 miles. By far the most prosperous and successful of these fairs, have been those of our neighboring county, Chester. Although the grounds of their society are in the immediate vicinity of a borough of some 5,000 inhabitants, and our fairs were held as near a town of 20,000, their attendance has been as four to our one. On inquiry I believe their success to be due to the following causes, Firstly, they own their fair grounds and the buildings erected thereon. A few years ago \$6,000 was borrowed by the society, and certificates of loan, in sums of \$10 each, were issued to members who chose to advance that sum to the society. These certificates bear 6 per cent. interest, and no person was allowed to take more than five shares until all the stock had been offered. Here is the grand starting point of success. Get a farmer interested to the amount of \$10, as your property increases in value he is in a measure enriched, and a man who as an ordinary member was inkewarm and cool, becomes active and energetic.

Another and an essential element of success, is to have the countenance of the ladies. Once have the female part of the community actively interested, and nothing can prevent the success of your fairs. The sun may shine, the wind may blow, or the storm may howl, but if you have the female department in proper hands, success will attend your efforts. Of this fact our friends in Ches-

ter county are well aware, as can be seen by reference to their premiums in the domestic department. Here you will find premiums of silver tea-spoons, cake baskets, etc., for the best varieties of bread, butter, cakes, all varieties—pound sponge, gingerbread, sweet cakes, tea-biscuit, rusk, all are named with their respective premiums. Then come the pies,—green peach, dried peach, green apple, dried apple, grape, pumpkin, custard, fruit pie, blackberry, and every earthly known variety of pie and tart is mentioned. Then come the preserves. I could fill half a sheet in simply naming the varieties for which premiums are offered—jellies, pickles, hams, dried beef, household and domestic manufactures, consisting of blankets, carpets, linen, cloths, stocking yarn, rugs, fancy needle work—at least 50 different varieties, and to a man totally incomprehensible, (of course none but ladies act on these committees.)—plain do., and each claim a fair share of attention from the fair. “To the numerous contributors to our late fair (say the managers in their annual report,) the society is under renewed obligations, and to the ladies especially, for their appropriate inauguration of our new Hall, by crowding its spacious area with the beautiful products of their household industry.”

The length this article is assuming bids me draw to a close by giving it as the opinion of one that has given the matter some attention, that to be permanently successful, the fair grounds and buildings must be owned by a joint stock company—the ladies must be induced to take an active part by liberal premiums for all articles of household economy, and the whole business affairs of the society must be managed by two or three responsible men who feel an active interest in the cause of progressive agriculture. Additional means and proper, are the offering of liberal premiums for fruits and flowers; these justly come within the scope of an agricultural community, and add much, very much, to the beauty and interest of the fair. Relying on these as the legitimate means of success, and eschewing all jim-craek humbugs, in the shape either of fat babies, steam fire-engines, or bearded women, (I have seen each at what were thought respectable fairs,) the cause of agriculture will be benefited, and a greater amount of success will attend our fairs than has ever been the case heretofore.

GEO. PEPPER NORRIS.

Wilmington, Del.

FENCE POSTS.

Opinions differ as to the best seasons for cutting timber for posts. For ourselves we prefer December or June, for if cut in either month they will season rapidly, a process which destroys to a great extent the power of absorption, and therefore renders them more durable. Chesnut timber if cut in June, and the bark stripped off immediately, the cambium becomes almost as hard and durable as the heart-woods especially for out-of-door use.

In splitting posts, commence by opening the heart at the top end of the post, and if the timber is any way passable, the split will follow the heart through the length of the stick. If it slabs off, it will be with much less loss of timber than if splitting is commenced at the butt end. In quartering commence in the same way, or if more convenient, start the wedge in the center of the length, regarding the heart as the center division. By the above methods good chesnut timber may be split of rail length almost fine enough for oven wood.

In the matter of setting posts, common practice is divided by two opinions—one is that the post should be set top down to insure durability, and vice versa. Under varying circumstances, either may be the best way. In our individual

practice, we have found them most durable by a third at least, when set top down. Others may have found it different, and of course they think the other way the best. So we can only say every one to his notion in this matter.—Wm. BACON. *Richmond, Mass., Jan. 6, 1860.*

MISS MARTINEAU ON DIET.

The greatest amount of nourishment of both kinds is contained in flour, meat, potatoes, and peas; milk, cheese, rice, and other grains, and sugar; while tea, coffee, and cocoa are of great value in their way. Such are the materials; but they may be so treated in the cooking as to waste what is most valuable, and preserve what is of the least consequence. It is possible to manage the making of a stew, so as to wash away the best qualities of the meat, and leave the vegetables hard, and drain away the thickening, causing a predominant taste of smoke and salt. When Miss Nightingale and her assistants undertook to cook in the Eastern hospitals, they made a pint of thick arrowroot from one ounce of the powder, while in the general kitchen it took two ounces to make a pint of thin arrowroot. It was the proper boiling that made the difference here. Again, two ounces of rice were saved on every four puddings. Such incidents show that it is not enough to have the best materials for nourishment; they must be husbanded in the preparation. It seems probable that, by sensible conduct all round, everybody might command enough of the best material for food; and it is certain that a very small proportion of the wives of Englishmen know how to do justice to the food they buy.—*Once a week.*

SELECT FRUITS FOR NEW-ENGLAND.

M. P. Wilder, President of the American Pomological Society, furnishes the following select list of fruits:

The following were recommended as the *six* best varieties of apples.

The Williams, Early Bough, Gravenstein, Fameuse, Hubbardston Nonesuch, and the Baldwin; and if *twelve* varieties were desired, the Red Astrachan, Rhode-Island Greening, Ladies' Sweet, Portar and Tallman Sweeting might be added.

For pears on their own roots, the following were recommended:

Best six pears on their own roots.—Bartlett, Urbaniste, Vicar of Wakenfield, Buffum, Beurre d'Anjou and Lawrence.

For the best twelve add—Rostiezer, Merriam, Doyenne Boussock, Belle Lucrative, Flemish Beauty and Onondaga.

FUEL—OAK VS. MAPLE.—One who has had much practical experience with fuel, criticises the table of comparative values of wood, lately published in THE TRIBUNE. He says: "White oak is put down in the scale at 84, maple 59, beech 65, white oak 77, red oak 69, which no man who has had any experience with American wood for fuel will believe correct." This is undoubtedly true. The table, which was taken from an English scientific work, is no doubt correct as regards English wood, but is not as to American. What we understand as red oak is about the meanest sort of fuel, while red beech, seasoned under cover,

is one of the best kinds ; so is rock maple. But we have a kind of soft maple, and also a white beech, that are not very good. And there is as much difference in the value of white-oak trees for fuel, as there is between hard and soft maple. Location, soil, climate, time when cut, length and method of seasoning, must all be taken into account in determining the value of wood for fuel. We very much need a well-prepared table, giving the comparative value of all kinds of American wood, in different parts of the country, for fuel and for charcoal. Such a work would be worthy of a Society that bears the name of the " American Institute," or of the " Smithsonian Institution," and would be of more value and more credit to the Agricultural Bureau of the Patent-Office than all the foul seeds, bought second-hand in Paris, that it has distributed.

PICKLED MUSHROOMS.—Select small mushrooms, commonly called *buttons*. Cut off the end of each stalk ; scrape, wash, and spread them out to drain. Take as much vinegar as will cover them, put into it some thick cinnamon, mace, cloves, allspice, and just enough salt to taste. Put the mushrooms in jars. Boil the spice and vinegar, and pour it over the pickles while hot. Cover them close, as soon as they get cold.—*Widdifield's Cook Book*.

CUSTARDS.—In making custards the greatest care must be taken that your pan be well tinned ; and always remember to put a spoonful of water into it, to prevent your ingredients sticking to the bottom.

TO COOK BEEFSTEAK.—A very good way for cooking beefsteak is to take slices of beef, hack it with a knife instead of pounding, and then lay it in a spider, add pepper and salt, turn and press it while cooking. When done, lay the meat on a platter. Add butter to the gravy, a little flour and water, stir it until it thickens, and pour over the meat. This is better than broiling, as it saves the juice and flavor of the meat.

TO DYE SILK OR WOOL AN ORANGE COLOUR.—Boil the skins of red onions half an hour ; take out the skins, and add one ounce of alum to one quart of dye : put in the silks, stir often for half an hour ; dry, wash, and iron quite damp.

SEA WEED FOR WADDING.—The Paris papers speak of a new industry that has arisen in France from the exigencies of the times, and one which is destined to supply one of the necessaries of war. Government has ordered the systematic gathering of the sea weed which is washed on the rocks of the coasts of Normandy and Brittany to serve as wadding for artillery—it being found to answer the purpose admirably—keeping the iron cool, and not liable to ignition—like the cotton wad hitherto in use.

FEEDING FOWLS.—In winter, the fowls of many farms, where they are well supplied with grain, suffer for lack of animal food. That they need such food, or at least have a natural appetite for it, is fully proved by the avidity with which they devour all sorts of bugs, worms, and grasshoppers, when running at large in Summer-time. Try them in Winter with any kind of fresh meat, cooked or raw, cut up in suitable bits for them to pick up, and see how greedily they will eat it, and how such food will make hens lay. The pressed cakes of tallow-

melted scraps make a good, cheap food for fowls in Winter, by merely soaking it so the hens can eat it.

THE APPLE-PIE MELON.—L. Norris of Winsor, Ashtabula Co., O., a well-known experimenter with new varieties of fruits and rare vegetables, speaks highly of the new variety of melon, known as the apple-pie melon. He says with good cultivation the largest will attain to 30 to 50 lbs. each, and if gathered carefully when ripe, and kept in a dry, cool place, will keep sound a year, and will always prove a good substitute for fruit for pies, sweetmeats, &c. To use, peel off the skin, take out the pulp, cut fine, and stew three or four hours, when the substance will resemble stewed green apples; to which add sugar and lemon juice, and it will make pies that cannot easily be told from those made of apples.

SOFTENING HARD WATER.—We have seen a statement that a well of hard water was permanently cured by putting four feet of coarse gravel in the bottom, where the water oozed in through the blue clay. We recommend that a space at least a foot wide behind the wall should also be filled with gravel, as high as the water comes in.

MAMMOTH MUSTARD is another new plant which Mr. Norris thinks should be more extensively known.

THE HONOLULU SQUASH is another new fruit, highly spoken of, as very superior for pumpkin pies.

YOUNG MEN LEAVING THE FARM, — There are two influences under which farming and rural life are adopted by young people. One is the *bleak necessity of making a living*, which is indeed repulsive enough if nothing is added to make home attractive. The other is the fascinations which a country life can give; a comfortable house *within*, with a share of time devoted to books, making drawings, arranging collections in natural history, performing philosophical experiments, &c.; and making it as interesting outside as trees, shrubbery, flowers, gardens, fruit trees, and the study of nature can accomplish. I admit that those who have no taste for those things cannot impart it to young people; but this taste may be acquired, and the studies carried on during the time otherwise spent in reading the unprofitable part of political newspapers. Those who cannot spare the time to their children for this purpose, may lose their services altogether on the farm.

FLAXSEED AND OIL CAKE.—The finely ground flaxseed is to be preferred for feeding cattle, to that only crushed; either contains more oil than linsced cake, and on that account should be given cautiously at first, especially by those accustomed to feed liberally with the cake, lest it render the bowels too laxative; it will also take less of it than the cake to ensure the same results, and therefore more economical in price and the amount required, than oil cake.

CULTURE OF FLAX.—The entire flax crop produced in Ireland does not average over 30,000 tons a year, while the consumption of flax in the linen manufacture, exceeds 100,000 tons. Scarcely one-third, therefore, of the raw material is

grown at home. Every flax spinner will admit the superiority of Irish flax: and every Irishman, at the meeting the other day, felt most strongly the necessity and propriety of extending culture in Ireland, and in proposing a company to develop flax cultivation in India. If the cheap labor and fertile soil of the Punjab produce a fibre that will compete with Russian produce, it will be a great blessing to India, and a source of increased prosperity to the linen manufacturers of Ireland and Great Britain. And why not to Canada?

BOTANICAL RESEARCHES IN CANADA.—Sir Wm. Hooker, the distinguished botanist, author of the "Botany of the Himalayas," a most valuable contribution to the science, recently published, has determined to take Canada as his share of the field of inquiry, in the publication at the Government expense of "A complete Flora of the British Colonies." The first number of Dr. Griesbach's work of the University of Dettingen, on that relating to the West Indies, has been issued.

STRAW AS MANURE.—Wheat straw, estimated by the value of its constituents, is worth for the purpose of feeding from 30s. to 35s. (\$6 to \$7) per ton. We would therefore prefer chopping it up, enriching it with a little mucilage of linseed cake, and feeding our cattle with it, to using it for bedding horses or cattle.

BRUISING OATS FOR HORSES.—The fact that oats are frequently undigested, and pass through the horse without change, should be sufficient to show the importance of bruising—for certainly no benefit can be derived from that which is undigested by the animal. Experiments made by the London Omnibus Company and others, show that a smaller quantity is required to produce the same ability to work, when the oats are bruised, than when fed whole.

LIVE AND DEAD WEIGHT OF CATTLE.—Eight lbs. out of every 14 lbs., or four-sevenths of the whole live weight of sheep and cattle, represents, when the animal is properly fat, the net weight of the four quarters, exclusive of offal—three-fourths of the live weight of pigs if fat, represents the weight when dressed, but pigs have frequently been killed of which the offal was only one-fifth their live weight and even less.

MOTIVE CALORIC ENGINE.—I am looking hopefully to Ericsson's caloric engine as the motor for farming purposes. I hope Mr. Ericsson or some other mechanical genius who has the means and energy sufficient, will construct a locomotive caloric if practicable, (of which I have no doubt.) It will possess great advantages over the steam engine, and can be made to do our plowing, harrowing, reaping, mowing, thrashing, and perhaps our hauling, &c. W. C. H. *Frederic Md.*

HOW TO LENGTHEN THE SEASON.—Farmers in the North often complain that the season for labor and growth is too short. They may lengthen it by underdraining Land, which under ordinary treatment must lie untouched in spring several weeks for the water to run off and dry up, is rendered dry in two or three days if well ditched, giving the farmer the control of his land and the privilege of working it from the opening of spring.

CARE OF CARRIAGES.—Those who would keep their buggies and carriages in good order, should place a wrench on every nut at least once a month. This will save nuts, save bolts, and prevent rattling, and wear and tear.

Monthly Meteorological Registrar,

St. Martins. Isle Jésus, Canada East, (nine miles west of Montreal,) for the months of October, November and December.—Latitude, 45 degrees 32 minutes North. Longitude. 73 degrees 36 minutes West. Height above the level of the Sea, 118 feet,

By CHARLES SMALLWOOD, M. D., LL. D.

Remarks for OCTOBER, 1859.

Barometer.

Highest, the 12th day, 30.160 inches.
Lowest, " 27th " 29.251 "
Monthly Mean, 29.779 inches.
" Range, 0.909

Thermometer.

Highest, the 5th day, 83 ° 1.
Lowest, the 25th day, 19 ° 4.
Monthly Mean, 42 ° 42.
" Range, 63 ° 7.
Greatest intensity of the Sun's rays, 105 ° 8.
Lowest point of terrestrial radiation, 14 ° 2.
Mean of humidity, .754.
Amount of evaporation in inches, 1.27
Rain fell on 6 days, amounting to 1.629 inches; it was raining 20 hours 51 minutes,

and was accompanied by thunder on 1 day.
Snow fell on 3 days, amounting to 2.30 inches; it was snowing 24 hours.
First snow of the season fell on the 20th day.
Most prevalent wind, E.
Most windy day, the 19th day; mean miles per hour, 21.81.
Least windy day, the 17th day; mean miles per hour, 0.29.
Aurora Borealis visible on 4 nights.
Lunar Haloes " " 2 "
The Electrical State of the atmosphere has indicated high and constant tension.
Ozone was present in moderate quantity.

Remarks for NOVEMBER, 1858.

Barometer.

Highest, the 7th day, 30.439 inches.
Lowest, " 13th " 29.180 "
Monthly Mean, 29.940 inches.
" Range, 1.249 "

Thermometer.

Highest, the 18th day, 57 ° 6.
Lowest, " 25th " 4 ° 6.
Monthly Mean, 29 ° 38.
" Range, 43 ° 0.
Greatest intensity of the Sun's rays, 96 ° 7.
Lowest point of terrestrial radiation, 5 ° 1.
Mean of humidity, 819.
Rain fell on 9 days, amounting to 7.822 inches; it was raining 73 hours 55 minutes.

Snow fell on 11 days, amounting to 15.73 inches; it was snowing 68 hours 20 minutes.
Most prevalent wind, N. E. by E.
Least prevalent wind, E.
Most windy day, the 3rd day; mean miles per hour, 23.06.
Least windy day, the 27th day; mean miles per hour, 1.72.
Aurora Borealis visible on — nights.
Snow Birds (" Phleetrophanes nivalis,") first seen on 3rd day.
Lunar Halo visible on 1 night.
The Electrical state of the atmosphere has indicated moderate intensity.
Ozone was present in large quantities.

Remarks for DECEMBER, 1859.

Barometer.

Highest, the 3rd day, 30.726.
Lowest, the 20th day, 29.410.
Monthly Mean, 29.971.
" Range, 1.316.

Thermometer.

Highest, the 1st day, 42 ° 1.
Lowest, the 29th day, 32 ° 6 (below zero).
Monthly Mean, 8.93.
Monthly range, 740.7.
Greatest intensity of the Sun's rays, 38 ° 0.
Lowest point of terrestrial radiation, 36 ° 6.
Mean of humidity, 808.
Rain fell on 3 days, amounting to 14.80 inches; it was raining 26 hours 20 minutes.

Snow fell on 14 days, amounting to 23.87 inches; it was snowing 150 hours 30 minutes.
Most prevalent wind, N. E. by E.
Least " " S.
Most windy day, the 4th day; mean miles per hour, 15.50.
Least windy day, the 28th day; mean miles per hour, 0.14.
Aurora Borealis, visible on 3 nights.
Lunar Halo, visible on 1 night.
Zodiacal Light visible.
The Electrical state of the atmosphere has indicated high tension.
Ozone was in large quantities.

THE FARMERS' JOURNAL.
MONTREAL RETAIL MARKET.

	FLOUR.		BONSECOURS.	
	s.	d.	s.	d.
Country Flour, per quintal	14	0	a	15 0
Oatmeal, per quintal	10	6	a	11 0
Indian Meal, per quintal	0	0	a	0 0
GRAIN.				
Wheat, per minot	0	0	a	0 0
Oats, per minot	2	0	a	2 1
Barley, per minot	3	6	a	3 7
Pease, per minot	3	7	a	3 9
Buckwheat, per minot	3	0	a	3 9
Indian Corn, yellow	0	0	a	0 0
Rye, per minot	0	0	a	0 0
Flax Seed, per minot	5	6	a	6 0
Timothy, per minot	9	6	a	10 0
FOWLS AND GAME.				
Turkeys, (old) per couple	5	0	a	7 6
Turkeys, (young) per couple	0	0	a	0 0
Geese, (young) per couple	4	0	a	6 0
Ducks, per couple	2	6	a	4 0
Ducks, (wild) per couple	3	0	a	3 0
Fowls, per couple	2	6	a	3 0
Chickens, per couple	0	0	a	0 0
Pigeons, (tame) per couple	1	3	a	2 0
Pigeons, (wild) per dozen	2	6	a	3 0
Partridges, per couple	0	0	a	0 0
Woodcock, per brace	0	0	a	0 0
Hares, per couple	0	0	a	0 0
MEATS.				
Beef, per lb	0	4	a	0 9
Pork, per lb	0	5	a	0 7
Mutton, per quarter	5	0	a	7 0
Lamb, per quarter	2	4	a	0 0
Veal, per quarter	5	0	a	12 3
Beef, per 100 lbs	35	0	a	40 0
Pork, (fresh) per 100 lbs	30	0	a	40 0
DAIRY PRODUCE.				
Butter, (fresh) per lb	1	3	a	1 4
Butter, (salt) per lb	0	10	a	0 11
Cheese, per lb, skim milk	0	0	a	0 0
Cheese, per lb, sweet do	0	0	a	0 0
VEGETABLES.				
Beans, (American,) per minot	0	0	a	0 0
Beans, (Canadian) per minot	7	6	a	10 0
Potatoes, (new) per bag	3	9	a	4 0
Turnips, per bag	0	0	a	0 0
Onions, per bushel	0	0	a	0 0
SUGAR AND HONEY.				
Sugar, Maple, per lb, (new)	0	4½	a	0 5
Maple Syrup per gallon	0	0	a	0 0
MISCELLANEOUS.				
Lard, per lb	0	8	a	0 2
Eggs, per dozen	1	0	a	1 3
Halibut, per lb	0	0	a	0 0
Haddock, per lb	0	3	a	0 0
Apples, per barrel	10	0	a	20 0
Oranges, per box	0	0	a	0 0
Hides, per 100 lbs	0	0	a	0 0
Tallow, per lb	0	4½	a	0 5
BREAD.				
Brown Loaf	0	11	a	0 0
White Loaf	0	9	a	0 0