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THE FARMER'S ADVOCATE

SUPPLEMENT FOR MARCH, 1874.

Reports of Farmers' Clubs.

MEETING OF THE FARMER'S CLUB COWANSVILLE, Q.

Muck as a Manure.

In the Cowansville Observer, Jan. 9th, we have a report of a meeting of the Farmer's Club. Their subject for discussion was the treatment of hog manure and muck. The result of the discussion appeared to be that the use of muck was only to be recommended when mixed with the manure, or to absorb liquid. Later in the evening various minor matters of interest to farmers were spoken of. Drainage was spoken of as the subject for the next meeting. The interest of the meeting of the club seems not to have abated, while the meetings are becoming more profitable. Although very little drainage seems to have been performed in the neighborhood those present seemed to have perceived its good effects in other places and acknowledge its value, generally in that hilly country surface draining was thought sufficient. Orchard cre chosen as the next subject.

Now if there be any one subject in farming more than another with which —S is thoroughly conversant that subject is the accumulation and value of farm manure prepared on the farm; having used for that purpose, year after year, large quantities of muck composed with other manures, and he will now very briefly say what he has learned on the subject from experience. The accumulation and care of manure sufficient for such a proportionate extent of land—20 acres of every one hundred—require some expenditure of time and money but labor and money expended on this object were well invested.

The value of muck or peat for manure varies very much. Some times it is found resting on a bed of marl or marley substances; it is then mixed with the muck in making up the compost heap. Peat of this description may be ranked A, 1.—it is of the best quality. When properly turned in a heap and exposed for some time to the influence of the atmosphere, it is without any admixture a valuable manure; however it too may be made still more beneficial by adding to it some of those elements of plant food of which it is deficient. Of carbon it is especially deficient, and consequently such manures as are richest in carbon should be added to it.

There is peat of another quality; it is light, and mossy, and of little or no value as manure. It is not worth what the hauling of it would cost. But there is peat, different from either of the above mentioned, and very valuable as manure when properly prepared. It is more or less alloyed with other alluvial deposit, and is improved by this admixture. It is dark and heavy and is only second to the marley muck in its value in the compost heap.

In the Autumn, cart the muck to the place designed for the compost heap; and there let it be thoroughly exposed to the atmosphere. Rain, dew, sun and frost will improve it, and add to its value. It will lose much of those qualities that detracted from its fertility as plant food, and will absorb those elements in which the atmosphere is so rich. The process of decomposition is by this exposure carried out, and it undergoes an almost entire change.

Having thus prepared it for the compost heap add to it the animal manure of your barn yard, turning it over and mixing it and it will become a mass of rich manure most valuable for the growth of grasses and roots. For the garden also it is of great value. By this admixture the needed carbon is supplied, and carbon as the heat producing element, is absolutely necessary for vegetable as well as for animal life. The addition of liquid manure will increase its fertilizing power, in proportion to the quantity added.

Year after year the writer experienced the advantages of muck heaps prepared in this manner—some of them composted in the field to which they were to be applied. One muck heap in the centre of the farm yard covered an area of 40 feet by 35, and measured in height from its base from 8 to 10 feet. The stables, cow houses, &c were on

each side of the yard separated from the manure heap by a car-way. The position of the heap so near to the stables made the labor of adding the animal manure less than it would be if at a great distance.

Lime was used extensively on the farm, 40 to 50 barrels to an acre being sometimes spread just from the kiln at the time of sowing the seed; and often mixed with earth collected from headlands, ditches, and drains. It was not in any instance mixed with the muck heap. Though it has an immediate and powerful effect on all vegetable soil, and of this muck is a variety; still was not mixed with the muck heaps as muck was known if so mixed to neutralize the chemical action of lime.

And now—we would add that we are glad to learn that, in Quebec as well as in Ontario, Farmers have their clubs, and discuss those subjects in which they have so deep an interest. Our Canadian farmers bringing with them to the New World the knowledge and experience acquired in Europe, and more especially in the British Isles, need only the necessary improvement required by the interchange of ideas, for which Farmer's Clubs give the best opportunity, that by their well directed labors, our country may become that which Nature designed it—the granary for millions in the Old World who are seeking from our fertile fields food and raiment.

Farmers' Clubs.

In our advocacy of all that tends to improve agriculture, and to raise it to that position in the country that its importance demands, we have not overlooked the great advantages of Farmers' Clubs—advantages that can hardly be estimated too highly. It is with much pleasure we hear of the reports of their meetings in all parts of the Dominion. In order to stimulate them in their good work, we devote some space in the ADVOCATE to a brief notice of sub-reports, preparing them with a brief article from an English Journal of the highest authority on all that pertains to agriculture.

IMPROVEMENT OF FARMS.

The *Mark Lane Express* in an article on farmers associations, says:—There is nothing more noticeable when reviewing the progress of agriculture during the last quarter of a century than the improvement which has characterized the conduct of our public or social gatherings. There was a time when the long clay pipe, the somewhat boisterous stove, and "hot stooping" were regarded as the chief inducements of getting farmers together. But these days have gradually passed away, and with some experience of other large assemblies, we are inclined to think that nowhere will men as a rule keep closer to the point to carry themselves more becoming than the occupiers of land where they draw into a focus at a Society's show or a club discussion. More information has been disseminated, more intelligence developed by such a means than through any cause which could be spoken to. By the further aid of a good, reliable report, this system of mutual advantage comes to be almost infinitely extended. Many a man who fights shy of a royal essay, although he found the pages "cut" to his hand, he will eagerly turn to see what his next door neighbor had to say or some more famous agriculturist to offer on the merits of the principle under consideration.

NORTH RIDING OF HERON AGRICULTURAL SOCIETY.

Abridged from the *Clinton Monitor*. On Tuesday evening last the annual dinner in connection with the North Riding of Heron Agricultural Society came off in Ross's Hall.

About eight o'clock the tables, capable of seating over one hundred persons—were filled, and fully as many more had to await a re-adjustment of matters before they could partake of the good things prepared. Mr. Clark being called upon expressed his approval of gatherings of this kind, and he was sorry to say few agricultural societies carried out the custom. The farmers as well as other members of society need to cultivate sociability, and should be less estranged and isolated from one another;

and meetings of this kind were calculated to make friends friendly, and give an opportunity of exchanging opinions with those of different ideas. Merry making and conviviality was good if moderately indulged, and all classes needed holidays. He said that farmers took too little recreation, and worked too hard, and reason gave way under the pressure; therefore meetings of this kind should be kept up. He showed that farmers did not take a sufficiently prominent position in the affairs of the nation, and were not as fully represented as they should be; but the evil was remedying itself, and when fully overcome there would be a great improvement in their interest in our Legislative halls. He suggested the propriety of loans being granted for the purpose of promoting drainage in this country as in the old country, especially as we were financially in a good position, and could make grants to railways, &c. Farmers had too little faith in farming, and invested their surplus money in bonds and stock, when they could employ it to greater advantage and profit to their lands, in underdraining and in other ways improving them. The country where we had to cast our lot, was a great and good one; he thought it was the first climate in the world, and passed an eloquent eulogy upon the seasons as they passed in grand procession, and, as a fruit country, Canada was the best in the world. He contrasted our climate with that of countries where they had no winters, and showed that with all its rigors it gave us advantages that were not possessed by them. He had travelled a good deal but did not know a better country than Canada in the world. The United States held out their vast prairies as inducements to immigrants, but young and old would only require to spend a few months on them to be convinced of the superiority of Canadian soil, and showed that the western farmer was unable to make farming pay, as they had too much to pay for the shipment of their grain, and their farms were as a consequence nearly all mortgaged. In many instances it costs them three bushels of corn to get one to market; while they were almost destitute of timber. The speaker dwelt a considerable length upon the difficulties to be met with in connection with farming in the west, and showed that the balance of advantages were on the whole on our side, and that erroneous views of Canada as a farming country were being dispelled. The rev. gentleman then dwelled on soils and manures, and gave some good information on these subjects, urging the composting principle, and the application of leached ashes as manure and better tillage of less land, as tillage was most equal to manure. Thistles and weeds should be exterminated; Mr. Sturton's thistle Bill was a move in the right direction, and if more farmers were sent to parliament, the interests of agriculturists would be better attended to, and evils of this kind would be remedied.

AGRICULTURAL SOCIETY.

The annual meeting of the East Nissouri Agr'l Society took place yesterday at Kintore, on Saturday the 10th inst., when the annual report was read by the Secretary, which showed a balance on hand of \$24.94. "In the Stock Department I noticed the greatest improvement at our late Fall Show. The show of horses was very fine, including two superior imported heavy draught stallions. Sir Colin was bred by Mr. Adamson, of Castlandhill, near Dunfermline, Scotland. Sir Robert Bruce was bred by Mr. Sanders, near Dunfermline, Scotland. They were imported to this province by their present owner, Mr. Thompson. The exhibition of carriage horses, double and single, was a fair selection of choice animals. The show of short-horns was the most interesting part of the show. The chief exhibitors in this class were Messrs. J. and Hugh Thompson. They exhibited some very superior cows and heifers. We regret that Mr. Hugh Thompson lately sold his fine imported Durham bull to Mr. Birell Johnston, of Pickering, for the sum of \$975. The sheep and swine were as usual. There were some good specimens and chiefly the same exhibitors. In the show of grain and roots there was a good display.

There is another point which I wish to speak upon, in order for farmers to compete successfully with their brother farmers, it is necessary for them to take an agricultural paper. The FARMER'S ADVOCATE, edited by Mr. Weld of London, should be encouraged, for it advocates purely the farmer's interests. By reading agricultural papers farmers become familiar with all new improvements and inventions of this progressive age.

Bury Farmers' Club, P. Q.

The Sherbrooke News gives an interesting report of the annual dinner of the Bury Farmers' Club, from which we give some abridged jottings. Nearly two hundred persons sat down to dinner. The toasts usual to such occasions were proposed and drank with enthusiasm.

The Hon. J. M. Pope took a review of the position of the country, and showed that, from all that man can see, it was destined at no very distant time to become in every respect a great country.

Then C. P. Mallory showed the importance of scientific knowledge to the farmer, and pointed out that by analysis of the soil, farmers of the old countries are enabled to tell the exact material, and the quantity required to make soil fertile. He hoped the Bury Farmers' Club would progress in scientific knowledge, and that other municipalities would join that of Bury in its endeavors to improve the knowledge and practice of farming.

Elma and Wallace Agricultural Society.

At the meeting of this society, held January 31, the subject was discussed, "By what means can our society do the greatest amount of good to the farming community?" On motion the following subjects were submitted, and prizes offered for essays thereon:—

"How best to promote health of the soil, including views on rotation of crops, and the best means of exterminating thistles and wild oats.

"How best to insure the greatest remuneration by the growth of flax.

"On the most approved assortment of machinery and implements for farming purposes.

"On the best method of manufacturing butter.

"On the best method of making factory cheese.

"On the best method of producing home-made cheese.

"On what system of stock raising is most profitable to the farmer."



The Chinese Northern Yam.

The above engraving shows the yam, the set and the tuber, described in Feb'y number. Those who wish to try the sets must send in one new subscriber to the paper.

They are not for sale this season. When you send your subscriber mention that you wish this prize; they will be sent by mail as soon as the season is favorable.—One tuber and one set may be sent to persons ordering packets of seeds to the amount of \$2, if asked for. Those who have sent in one or more subscribers, and have not been remunerated in any way, will also be supplied on application. Any one sending in two subscribers will receive three sets and tubers.

Granges.

It is our opinion that Granges will soon be established in all parts of this Dominion. They appear to us to be nothing but improved agricultural clubs, working together, embracing all that the clubs embrace and far more; they act in unity, and make a stronger band for uniting farmers than has yet been introduced, making the farmers a power that must be felt, having no objectionable points in its formation and many advantageous ones.

Persons wishing to know about them can apply to Mr. Eben Thompson, care of this office, as that gentleman is now in this vicinity preparing for organizing Granges in Canada.

The first Grange in Western Ontario was organized at Westminster, Feb. 27th, to be known as "Advance Grange," Wm. M. Beattie, Master, John H. Elliott, Secretary, Henry Anderson, Lecturer.

We are pleased to inform you that we have made arrangements with Mr. W. Rennie, of Toronto, so that we can supply some kinds of seeds or implements direct from Toronto as well as from this city. This, in many instances, may save expense in carriage to our eastern customers. We have also made arrangements with Mr. McBroom, of this city, to aid us in supplying seeds. They both issue good catalogues, and have as fine stocks of newly imported seeds as are to be found in Canada.

Kent's Improved Hand Corn Planter.



Mr. Kent was a resident of this city; his father still resides here. The son attempted to make his fortune in the land of corn, and invented this machine, which has succeeded beyond expectation. He now manufactures these implements by the tens of thousands. We procured a few last year. All those who have bought them are highly satisfied with them.

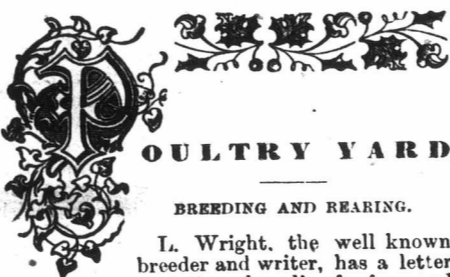
The corn is planted at a regular depth. The machine can be adjusted so as to plant small or large corn, and an even quantity in a hill. A person is but a very little while planting a large field with this machine. The corn is placed in the ground and covered at the same time. A person can plant as fast as he can walk. The price of the Planter is \$4. Dealers wishing to introduce them in their localities might be supplied with some of them if they apply early.

Bag Fasteners.

Mr. Wilson, of the firm of Wilson, Grover & Co., of Ingersoll, called at our office with a patent bag fastener. It is a very simple and useful little invention. It consists of a stout piece of wire, bent in a peculiar manner so as to hold the string that ties the bag. The string is attached to the wire, drawn twice round the bag, and fastened to the wire by a very simple and easy turn. The

bags cannot become loose or unfastened unless taken with the hand and pulled in a particular direction, while the other hand holds the wire.

We at once ordered a stock for our own use. We will send one of them as a present to any of our subscribers that send us a two cent stamp; so that you can judge for yourselves and order them if you approve of them, from us or from the factory at Ingersoll.



POULTRY YARD
BREEDING AND REARING.

L. Wright, the well known breeder and writer, has a letter in the *Poultry Bulletin* on breeding for form and size, which gives some good advice to poultry breeders and fanciers, from which we take the following extracts:

"But lastly, getting fine, large birds depends in a very great degree upon the treatment of the chickens themselves. The time in hatching has much to do with it. If hatched too soon, they get somewhat stunted early, having the cold weather to bear before they are large and strong enough to bear it. If, on the other hand, they are too late, the winter comes on when they have not nearly done growing, and the vitality that ought to go in making frame is expended in finding animal warmth. They are, too, very likely in the latter case to be attacked by cramp, leg weakness, or rheumatism, and perhaps are all the more likely to be so attacked if unusually fine or promising birds, since rapid growth is always liable to be accompanied by a deficiency of osseous substance. In England, taking the advantage of seasons, I am disposed to think, that early in February is about the best time to hatch cockerels, the middle of March or early in April for pullets. If hatching in May, as has been the case with me for sheer want of time the last two seasons, the chickens begin to be stunted in October, before they are more than half grown. In America the seasons would be somewhat different, and the climate is much more certain in any given time of the year than in Europe, which is so far a great advantage, and perhaps may account for the great size of American Light Brahmas and some other fowls. In England we never know what to expect; this summer we had no rain, while last year it poured down nearly every day, and this uncertainty is very awkward for rearing good stock.

"But perhaps most of all depends upon the feeding, which is very seldom properly attended to. I know this by personal experience. For a year or two, when I reared very few chickens, and my wife fed them herself, I reared enormous birds, cockerels weighing ten pounds, and even more, at six months old; but lately, when they have been fed by a servant, the difference has been great. The largest birds I know of at present are obtained by a man who stays at home and does nothing but looks after his fowls, by which, in fact, he makes his living. Most of us, perhaps, have to put the quantity of food judged sufficient in a dish and leave it; but this is not the way to get fine birds. The way is, having the food well mixed so as to separate in small portions, to throw it about to the chickens just as long as they will eat with any appetite, and then leave off, leaving none, and yet leaving no bird unsatisfied. Strong birds will always drive the others away, and if in giving dishes either too much is given, by which food is left and real appetite and digestion prevented, or some do not get enough, all which is prevented by scattering widely and watching to see how they eat it. But this takes time, which few can afford, and hence few chickens comparatively are reared as large as they might be. I speak advisedly and from experience, when I say that this watchful kind of feeding is the only way to get very fine birds.

"Another important point is to watch the general appetite of the chickens as they grow, and to change the treatment properly and judiciously. At first meals should be very frequent, but soon the number should be reduced and a great deal depends on making the reduction at the right time. Very young ones need food every two hours at least, if fed as they ought to be fed, leaving no food about; but this will soon come down to every three hours, then to every four, and so on till at about four months old they do well with their daily three meals. Again, a good rearer will watch carefully for any symptoms of flagging, and meet it, if necessary, by a change of food for a week or two, which will often work wonders. A judicious change of run will also do a great deal, though too much changing about only

worries the birds. But fresh ground is of great importance. The difference between a dozen chickens moved now and then to a run with really fresh grass, and the same birds kept on one run all through, which is so small as to get all tainted by their droppings, is enormous one set appears to go on growing, while the other seems to stop. Even if the yard be small, and have no grass at all, much can be done to secure this freshness and vigorous growth by spading the ground up at frequent intervals, digging as deep as possible; yet fresh grass is beyond doubt the most favorable condition of all for rearing 'fine' birds. All these things, it is true, give trouble, and hence many who could will not give it, while still more really cannot do so. But it is on such things as these that the size of a man's chickens greatly depends.

"I have felt some doubt as to writing about such things. That American Light Brahmas exceed the English in size is well known, and it proves that United States fanciers can learn little as regards breeding for size from this side of the water. I have in fact several times written to American breeders for their modes of treatment, hoping to get a 'wrinkle' or two, but am sorry to say no one has yet responded to the request. We would like to know over here how you manage to get average of fourteen pounds for Light Brahma Cocks; and we hope some one will tell us. Is it the climate? I am sure if those who rear the largest birds in America would give their methods of management and feeding, they would be glad I listened to by English breeders. I saw a hen the other day which came from Philadelphia, and weighed fourteen pounds. We can't do it, and I, for one, would like to know how it is done. It may be in the strain, since I have not found that American dark birds are larger than those on this side; still I can't help feeling that there is something to be learnt yet from these Light Brahmas with regard to breeding and rearing 'fine' fowls."

SALT AND CHICKENS.

In the *Rural New Yorker* of July 5 some person says salt is fatal to fowls, and some months since a lady (I think) recommended its use where hens lost their feathers on their heads from some unknown cause; that cause, though, I think to be the secondary effects of croup. The fowl's head seems feverish, and soon all the feathers come off. Mine were so, and I said I would kill or cure. So I mixed up a half pail of soft feed and put in a large handful of salt. I went out next morning to see what the result was, and all my hens were—what! Dead? No, but awful thirsty. So I gave them some water and the next evening more salt. My hens are all feathered out on their heads, and they stopped eating each other's feathers, a habit hard to break. Salt is a simple remedy for many things. It will cure sick-headache, make cream freeze, make the butter come, take ink stains out of cloth of any kind, kill weeds, kill worms, make the ground cool so that it is more congenial to celery, cabbage, &c., ease the itching pain caused by irritable skin diseases like hives, itch, &c., produce vomiting or stop when you like, and many other things too numerous to mention. Still, I once fed some potatoes to young chicks and turkeys that had been boiled with salt corn beef, and killed every one of them.—*Cor. Rural New Yorker.*

BLACK HAMBURGS.

Although the Golden and the Silver Hamburgs are well known among breeders, amateurs and fanciers of fine fowls, but little attention is paid to the best of all varieties—viz., Black Hamburgs. The good qualities of Hamburgs (Golden and Silver) as "everlasting layers" are known the world over; but, although the number of eggs produced by them from spring till fall can hardly be excelled, and notwithstanding their great beauty, they have their objections. Both the fowls and the eggs produced by them are very small, and, as a table fowl, they are inferior to almost every other class except bantams. With many a fowl that will produce a great abundance of eggs it is sufficient, while others desire that the fowls and eggs be profitable for the table. In the Black Hamburgs we have a combination of these good points. The number of eggs will not only be equal to the others, but, like them, they are non-sitters. Their eggs are nearly as large as those of the Spanish, while the fowls themselves are much larger, and are of fine flavor for the table. More attention is being paid to them of late, and we hope they will soon find a place in our poultry yard, which they richly merit.

Parties desiring information concerning the Ontario Agricultural Emporium, or who wish to obtain stock in it, will address this office.

Review of the Cheese and Butter Market.

Those reviews, which we purpose giving each month, will be compiled from the most authenticated sources, and will, no doubt, be of great interest to our readers. When this department becomes fully established, we will give more information, more especially local. We give the Toronto market, as it may safely be taken as the standard of Canada, and large shipments are made there. Prospects for a high price both in cheese and butter, seem rather flattering at present. There seems to be very little butter in the country.

CHEESE.
(English Markets.)

At the commencement of this review it was steady at 118-25c, and continued so until the 2nd inst., when it rose to 116-14-15c; on the 3rd to 116-4-5c; on the 6th to 17c; on the 10th to 17-1-2c.

TORONTO MARKET.

From the 16th ult., to the 6th inst. there was little doing. Small lots changed hands at from 13c to 13-1/2c. The advance in the English markets made little change in the prices here, but round lots were anxiously inquired for.

BUTTER.—(Toronto Markets.)

At the commencement of this review this article was very dull; very little offered, and very little needed. Good lots from 21c to 23c; box from 18c to 20c; pound rolls from farmer's wagons, 23c to 25c. At the latter part of the month business became a little more brisk, and large lots began to change hands at from 21c to 22c; very choice 24c to 24-1/2c; box 18c to 22c. Market firm.

Chicago Markets.

Chicago, Feb. 21.—Flour dull and unchanged. Wheat opened firm, and closed dull at the inside prices; No 1 Spring \$1.22 1/2 for soft, \$1.23 1/2 to \$1.24 for hard; No 2 Spring \$1.20; No 3 Spring \$1.16 1/2; rejected \$1.08. Corn active and higher; No 2 mixed 58c. Oats quiet and unchanged; No 2 at 42c to 42 1/2c; rejected 38 1/2c. Rye firm and scarce; No 2 fresh 84 1/2 to 85c. Barley dull and drooping; No 2 Spring nominally \$1.70; No 3 Spring \$1.54. Dressed Hogs dull at \$6.10 for choice. Pork in fair demand and firm at \$14.10. Receipts 10,000 bush flour; 124,000 bush wheat; 26,000 bush corn; 26,000 bush oats; 2,000 bush rye; 18,000 bush barley. Shipments—9,000 bush flour; 44,000 bush wheat; 4,000 bush corn; 16,000 bush oats; 10,000 bush rye; 10,000 bush barley.

Late Dairy Markets.

Utica, Feb. 16.—Cheese—The trade in cheese has not been so awake during the last week as the week before, but there has been no falling off in price, nor, indeed, is there likely to be at present. It is reported that exporters have held back a little in the face of the prices demanded, but the movement seems rather precautionary than with the idea of forcing a decline. Toward the close of last week the shippers began taking more stock at go. d prices, and there is little fear of a stoppage. During the week we have heard of several sales in the interior, closing out the stock in several instances. Reports from England continue to speak of low stocks, the amount of American cheese held at the different English centres being unusually small, and the demand active. These announcements have led the shippers to begin taking the lower grades which are at hand in the New York market. All indications are toward a complete clearing out before spring.

Buffalo Live Stock Market.

Buffalo, Feb. 20.—The receipts of cattle to-day have been 68 head, making the total supply 5,467 head for the week. The yards are clear of stock. Sheep and Lambs—The receipts of sheep and lambs to-day have been 200 head, making the total supply 19,200 head for the week, against 13,100 head same time last week. The market closed dull and heavy. No sales to report. Hogs—The receipts of hogs for the market to-day, including reported arrivals, have been 4,400 head, making the total for the week 15,500 head, against 22,300 head for the same time last week. The market was dull—no prime hogs offering. The bulk of fresh arrivals were through consignments. Yorkers were held at \$5.25 to \$5.50; heavy hogs were held at \$5.70 to \$6.10.

LONDON MARKETS.

London, Feb. 21.—The market was well patronized this day—the grain receipts, independent of many other commodities, were much more liberal. In grain—Dehil wheat \$1.95 to \$2. Red Winter, \$1.85 to \$1.85. Treadwell, \$1.87 to \$1.92. Spring, finding ready buyers at \$1.90 to \$2 per cental. Barley firm at \$2.75 to \$2.97. Peas steady at \$1.05 to \$1.06. Oats firm and slightly advanced at \$1.05 to \$1.10. Corn at \$1.08 to \$1.13. Clover Seed from \$5.50 to \$5.62 1/2 per cental; or \$5.10 to \$5.20 per bushel. Hay at \$13 to \$14 per ton. Dressed Hogs very few; rather better figures; \$7 to \$7.50. Roll Butter scarce and high; 28c to 32c per pair. Eggs 25c to 25c. Chickens 60c to 70c per pair. Potatoes from \$1.15 to \$1.25 per bag. Meats unchanged. English reports to-day showed a fall of 6d on flour; but the 1d lost on White Wheat yesterday was reversed and the market is described as firmer. Montreal remained quiet and unchanged. Chicago showed an advance of about 1c, closing at \$1.19 1/2 for March, and Milwaukee at \$1.21 7-8. Oswego was quiet on Barley. New York showed a rise of 1c to 2c on wheat, closing at \$1.51 to \$1.53 for No 2 Chicago.

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EMPORIUM SEED LIST.

FIELD SEEDS. SEEDS BY THE BUSHEL.

Cash with order. All expenses of bags and freight to be paid by purchaser. The prices are by the bushel measure and are all subject to rise or fall of the market.

Table listing field seeds: TIMOTHY, CLOVER, VETCHES, HUNGARIAN GRASS with prices per bushel.

SEEDS BY EXPRESS OR FREIGHT FROM AGRICULTURAL EMPORIUM.

Seeds ordered from this list will be sent by express or freight, as ordered by purchaser, ENTIRELY at the purchaser's risk and cost. When ordering, state your nearest express or railway office, and what railroad it is on. Cash MUST accompany all orders. No charge for bags.

Table listing seeds by express: FARROW WHEAT, MCCARLING WHEAT, SILVER-HULLED BUCKWHEAT, RENNIE'S EXTRA EARLY PEA with prices for 10, 50, and 100 lbs.

We have nothing particularly new or commendable in seed grain; even the wheats are not as plump as in other sections, but the cause was havoc committed by the Hessian Fly.

The following seeds will be sent BY MAIL, postage and all other expense PAID BY US, upon receipt of the prices named. Orders unaccompanied by the cash will receive no attention. No orders for less than one dollar's worth of seed will be filled.

NOVELTIES.

STONE'S WHITE SPRING WHEAT.—The finest Spring Wheat we have seen (see article on first page of ADVOCATE). We will send out this wheat in 4 oz. packages to SUBSCRIBERS ONLY, at 25 cts. per package.

THE MUMMY PEA—FROM EGYPT.—Continual bearer. For subscribers only, in packages of 4 ounces, at 25 cts. per package.

NEW POTATO—COMPTON'S SURPRISE—Very highly spoken of by the agricultural papers in the United States. Description will be given in April ADVOCATE. We will send them by mail, postpaid, at the following rates: \$1 per pound; 60 cts. for half-pound; 35 cts. for four ounces.

VEGETABLES.

The following seeds are put up in 5 c. packages; 6 packages for 25 cts.

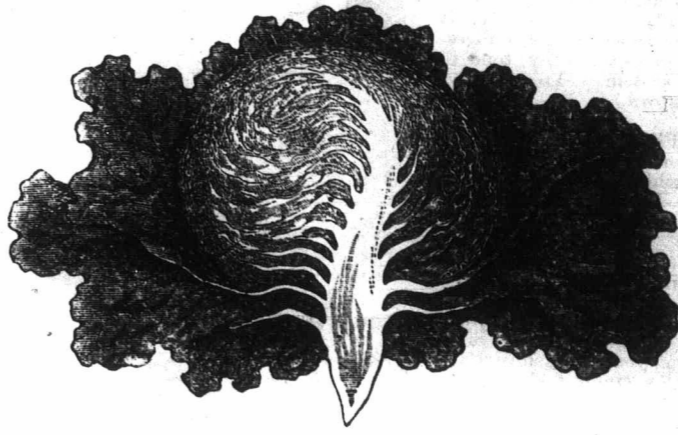
- BEET.—Red Turnip, Early Bassano, Long Smooth Blood, White Sugar, Dwarf Dark Red. BORECOLE, or Scotch Greens. BROCCOLI. CABBAGE.—Little Pixie, Early York Large, Winningstadt, Large Late Drumhead, Large Late Flat Dutch, Robinson's Champion Ox—very large, St. Denis' Drumhead, Red Dutch Pickling, Savoy Drumhead, Early York Dwarf. CARROT.—James' Scarlet, Short Horn, Scarlet Intermediate, Long Orange, Scarlet Altringham, White Belgian, Large Red Belgian. CELERY.—Cole's Crystal White, Self Blanching, Giant White. CRESS OR PEPPERGRASS. CORN—White Popcorn. CUCUMBER.—Early Frame, Early Russian—earliest in cultivation, Long Prickly, Short Prickly. ETTUCE.—Stanstead Park, Ne Plus Ultra, Giant White Coss, Drumhead Malta, Victoria Cabbage, Hardy Hammersmith. MELON, MUSK.—Fine Green Nutmeg, Yellow Cantelope, Skillman's Nette 1, Crossman's Early Prolific Nutmeg. MELON, WATER.—Long Island, Black Spanish, Ice Cream, Mountain Sweet, Cleron—fo preserves. MUSTARD.—White Tops. PARSLEY.—Moss Curled—extra fine. PARSNIP.—Hollow Crowned, Long Guersey, Sutton's Stunted. PEPPER—Long Red, Cherry Cayenne. PUMPKIN—Sweet or Sugar, Mammoth. RADISH.—Long Scarlet Short Top, Long Salmon, Scarlet Olive Shaped, White Olive Shaped, Black Spanish—winter, Red Olive Shaped. SALSIFY, or Vegetable Oyster. SPINACH—Round Summer. SQUASH—Hubbard, Vegetable Marrow, Venal, Crookneck. TOMATO—Large Smooth Red, Large Yellow, Feejee Island. TURNIPS—Early White Stone, Early Nimble Dick, Golden Ball. POT AND SWEET HERBS—Sweet Marjoram, Savory—summer, Savory—winter, Sage, Thyme.

The following seeds are put up in 10 ct. packages; 3 packages for 25 cts.

- BEANS—DWARF—Early Valentine, Refugee or 1000 to 1, Wax or Butter; Scarlet Runner. BEET—Egyptian. CABBAGE—Marble Head, Mammoth, Early Jersey, Wakefield. CORN—Moore's Early Concord. CUCUMBER—West India Gherkin. Monarch. MELON—Musk—Cassaba Christina. MELON—Water—Phinney's. ONION—Large Red Wethersfield, Large Yellow Dutch, Danver's Yellow, White Portugal, Silver Pickling Strasburg. SQUASH—Prize Mammoth, Marblehead. TOMATO—Trophy, Hathaway's Excelsior. CANADA VICTOR TOMATO 15 cts. per package.

The following seeds are put up in 25 ct. packages; 5 for \$1.

CAULIFLOWER—Very Early New Dwarf Erfort. LETTUCE, HANSON—Heads very large, solid, tender, crisp and of fine flavor; color, green outside and white within. Heads weigh from 2 to 3 lbs; we tried this lettuce last year, and found it very fine. Price, 25 cts. per package.



HANSON LETTUCE.

SUTTON'S TOM THUMB MUSK MELON—The smallest yet handsomest melon in cultivation; beautifully marked; very juicy, delicious flavor. MUSHROOM SPAWN.

FOUND PACKAGES.

PEAS—McLean's Little Gem, 30 cts. per lb.; Blue Imperial, 20 cts. per lb.; Champion of England, 20 cts. per lb.; McLean's Advancer, 25 cts. per lb.; McLean's Crimea, 25 cts. per lb.; Burridge's Eclipse, 20 cts. per lb.; Rennie's Extra Early, 20 cts. per lb.; Early Providence, 20 cts. per lb.

TURNIPS (FIELD)—The following are the prices when sent by mail. Parties wishing large quantities and paying express, will have a reduction of 10 cts. per lb. from these rates.—Westbury Improved Purple Top, 35 cts. per lb.; Skirving's Improved Purple Top, 35 cts. per lb.; East Lothian Purple Top, 35 cts. per lb.; White Swede, 50 cts. per lb.; Purple Top Yellow Aberdeen, 35 cts. per lb.; White Stone or Stubble, 45 cts. per lb.; Strap Leaf Stone.

FLOWER SEED.

The following flower seeds are put up in five cent packages. All are annuals except where otherwise designated. The commonly known names are given. For sowing see Minnie May's directions in the March ADVOCATE.

TENDER PLANTS.

ABRONIA UMBELLATA—Handsome trailing annual. CASTOR OIL BEAN—Beautiful foliage, 4 to 6 ft. high. SENSITIVE PLANT.

CLIMBERS.

YELLOW CREEPER—Annual. CONVULVULUS or MORNING GLORY—Various colors. CYPRESS VINE—Delicate scarlet flowering. SWEET PEA—Hardy low creeper.

EVERLASTINGS.

ACROLINIUM RESEUM—Half hardy annual, pink flowers, one of the best of everlastings. HELICHRYSUM—Good for winter bouquets; to be cut just before flowers expand; seeds should be started in boxes in the house. GLOBE AMARANTH. RHODANTHE MANGLESIT—Half hardy, rose colored. XERANTHEMUM—Double lilac.

STANDARD FLOWERS.

CANTERBURY BELL—Biennial blue. COREOPSIS—Hardy, continual bloomer; five colors mixed. DIANTHUS L. LARKSPUR—Mixed colors. PERENNIAL LARKSPUR—Hardy, easy culture. MARIGOLD—African and French. SUNFLOWER—Double dwarf.

FLOWERS FOR BORDER.

AGERATUM MEXICANUM—Half-hardy blue. AGROSTEMNA CÆLIA ROSA—Hardy pink. SWEET ALYSSUM—Hardy white. BARTONIA AUREA—Hardy bright yellow. BROWALIA ALBA—Half-hardy, free flowering towards fall, white. CANDYTUFT—Two colors, purple and white, hardy. CLARKIA—Free flowering, hardy, autumn, mixed colors. COLLOMIA COCINEA—Hardy scarlet. FORGET-ME-NOT—Half-hardy perennial, sky blue. LOBELIA—Sky blue, half-hardy. MARVEL OF PERU or FOUR O'CLOCK—Rank growers, flower in the afternoon. MIGNONETTE—Fragrant, hardy. NASTURTIUM—large, and TOM THUMB—Rank growers. NEMYPHOLA MACULATA—White blotched, require shade and dampness. POPPY—Several varieties. SALPIGLOSSIS—Half hardy, beautifully pencilled, does well in light sandy soil. SNAPDRAGON—Perennial, mixed colors. SANVITALIA—Good for border or baskets. SCABRIOSA or MOURNING BRIDE—Various colors. WHITLAVIA—Hardy annual, requires shade and dampness. POT MARYGOLD.

ORNAMENTAL GRASSES.

BRIZA MAXIMA—An elegant shaking grass, perfectly hardy, one of the best of ornamental grasses. BRIZA GRACILIS—Small, very delicate and graceful.

SEEDS IN 10 CENT PACKAGES.

ASTER—Best mixed German and China. BALSAM—Fine mixed double Camelia COCKS-COMB—Celosia Cristata and fine mixed. DOUBLE HOLLYHOCK. POLYANTHUS—Perennial, blooms May and June. PANSY—English mixed, very choice. PETUNIA—Centies of El'smere, blotched and striped and finest mixed. PORTULACCA—Mixed double. PHLOX DRUMMONDII—Deep blood purple and mixed. VERBENA—Choicest mixed. WALLFLOWER—Bright yellow.

PERSONS SENDING ON

Subscriptions for the Paper

During the Present Month,

CAN BE SUPPLIED WITH ALL NUMBERS FROM JANUARY.

EGGS FOR HATCHING.

Pure and Fresh.

BUFF COCHINS, DARK BRAHMAS, GREY-DORKINS, SILVER SPANGLED HAMBURGS, HOUDANS, LEGHORNS, GAME, AYLSBURY, AND ROUEN, DUCKS.

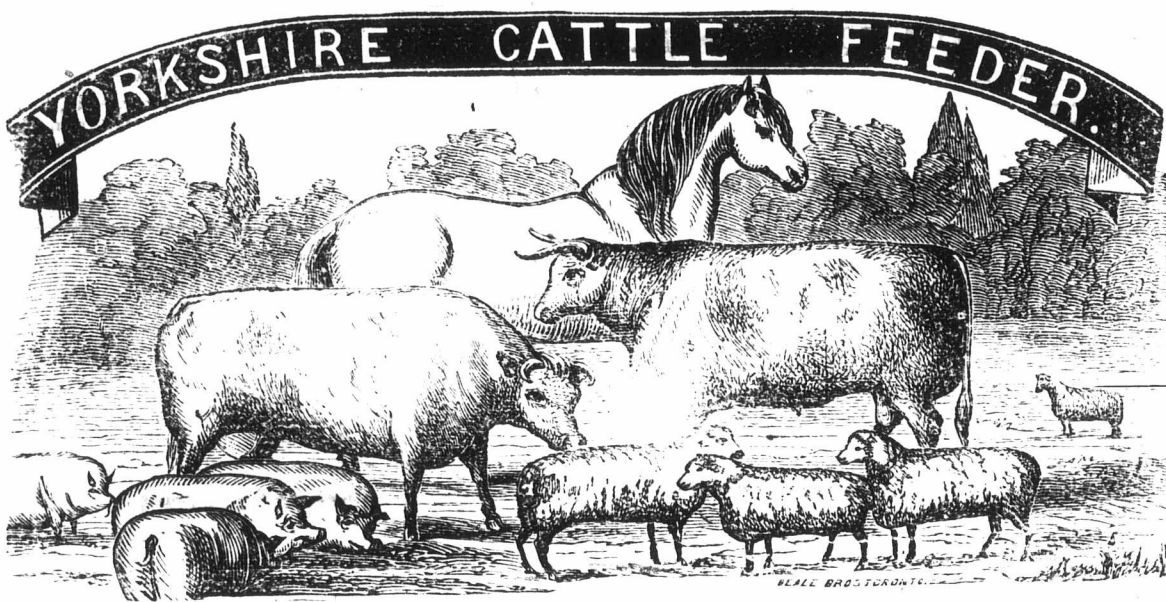
The above mentioned are all three dollars per dozen. Address JOHN WELD, LONDON, ONT.

TESTIMONIALS FROM THE HON. G. BROWN and others.

Bow Park, Brantford, 7th July, 1873: Messrs. Hugh Miller & Co., My Dear Sirs.—Your Yorkshire Cattle Feeder is all and more than it is represented to be; a table-spoonful daily works marvels; it sharpens the appetite, helps digestion, and gives a healthy tone to the whole system. Yours truly, GEORGE BROWN.

Bangor, Pickering, April, 1872: Hugh Miller & Co.—I have used your Yorkshire Cattle Feeder to cattle that I was anxious to make up quickly. It had the desired effect, and is the best thing I ever used. I strongly recommend farmers to use it. SIMON BEATTIE.

Landing, March 29th, 1872: Hugh Miller & Co., Toronto, Sirs.—After using your Yorkshire Cattle Feeder this winter for my stallions, I must say that it is a first-class article, not only as a feeder, but as a regulator of the system. I



have not had occasion to use any other medicine for my horses to keep them healthy. Independent of its feeding properties, which I think cannot be excelled by any other so-called Cattle-Feeder, I should advise all horsemen to use it as a regulator, as I believe it to be safe and efficient. I hope farmers and others will give it a trial; they will find it a great saving to them in fodder and doctor's bills. I am, yours respectfully, Wm. Long, Importer and Dealer in Entire Horses Landing O., Ont., Yonge St.

Prepared in Canada only by HUGH MILLER & CO., Agricultural Chemists, 107 King St. East, Toronto. A full supply kept on hand at the Canadian Agricultural Emporium, London, Ont. 25 cent packages contain 1 pound. Boxes of 5 pounds.



MARKHAM BELL FOUNDRY

No. 1 Bell, 15 inches diameter—yoke & crank...	\$ 8
No. 2 " " " " " " " " " " " "	10
No. 3 " " " " " " " " " " " "	16
No. 4 " " " " " " " " " " " "	23
No. 5 " " " " " " " " " " " "	50
No. 6 " " " " " " " " " " " "	70
No. 7 " " " " " " " " " " " "	120

There are about 1800 of the above bells now in use, and giving the best of satisfaction, costing only one-third the amount of ordinary bells, and are all warranted one year. Encourage home manufacture and purchase a warranted article. Farmers! throw aside those dinner horns, which cause the ladies to get swollen necks by blowing. JONES & CO., Markham P. O., Ont. W. W. & D. Agent, London.

AGRICULTURAL INVESTMENT SOCIETY AND SAVINGS BANK.

OFFICE DUNDAS STREET WEST. (Late Huron & Erie Office.)

The conditions of the Act amalgamating "Freehold and Union" with the above Society have been complied with, and the following officers elected:— President—Alexander Anderson, Esq., M. D.; Vice-President—Wm. Glass, Esq., (Sheriff Co., Middlesex); Inspecting Director—Richard Bayly, Esq.; Solicitor—David Glass, Esq.; Board of Directors—Richard Tooley, Esq., M. P. P.; Lieut. Col. James Moffatt, George Birrell, Esq.; A. T. Chipman, Esq.; John Wright, Esq. (of Wright & Durand); Adam Murray, Esq.; John Mills, Esq.; D. Regan, Esq.; James Owey, Esq.

BORROWERS Will be dealt with liberally, and money advanced with the least expense and delay possible.

THE SAVINGS BANK Is now open, and money will be received on deposit, in large and small sums, and interest allowed at the rate of 5 to 6 per cent., as arranged for.

JNO. A. ROE, Sec. & Treas. London, April 30, 1873.

CANADA LIFE ASSURANCE COMPANY.—Established 1817. Assets including Capital Stock 2 1/2 Millions. Cash Income about \$10,000 per week. Sums assured over \$11,000,000. Over \$900,000 have been paid to the representatives of deceased policy holders since the formation of the Company. The following are among the advantages offered:—Low rates of Premium; Canadian Management and Canadian Investments; Undoubted Security; Policies absolutely secured to Widows and Children; Policies non-forfeitable; Policies indisputable after 5 years in force; Policies issued on with profit system receive three-fourths of the profits of the Company; Policies purchased or exchanged or loans granted thereon. Premiums may be paid yearly, half-yearly or quarterly, and 30 days of grace allowed for payments of all premiums. Tables of rates for the various systems of assurance may be obtained at any of the Company's offices or agencies. A. G. RAMSAY, Manager and Secretary. R. HILLS, Assistant Secretary. Hamilton July 3, 1873.

\$5 TO 20 per day. Agents wanted! All sexes, young or old, make more money at work for us in their spare moments, or all the time, than at anything else. Particulars free. Address G. SIMONSON & CO., Portland, Maine.

THE AGRICULTURAL MUTUAL ASSURANCE ASSOCIATION OF CANADA.

HEAD OFFICE, - LONDON, ONT. Licensed by the Dominion Government.

CAPITAL 1ST JAN., 1871. \$ 231,242 25.

Cash and Cash Items, \$72,289 55.

THIS COMPANY continues to grow in the public confidence. On 1st January, 1871, it had in force 34,528 POLICIES.

Having, during the year 1870, issued the immense number of 12,319 Policies.

Intending insurers will note—

1st—That this is the only Fire Mutual in Canada that has shown its ability to comply with the law of the Dominion, and deposit a portion of its surplus funds for the security of its members,—\$25,000 having been so deposited.

2nd—That being purely Mutual, all the assets and profits belong solely to the members, and accumulate for their sole benefit, and are not paid away in the shape of dividends to shareholders as in the case of proprietary companies.

3rd—That nothing more hazardous than farm property and isolated dwelling houses are insured by this Company, and that it has no branch for the insurance of more dangerous property, nor has it any connection with any other company whatsoever.

4th—That all honest losses are settled and paid for without any unnecessary delay.

5th—The rates of this Company are as low as those of any well established Company, and lower than those of a great many.

6th—That nearly four hundred thousand dollars have been distributed by this Company in satisfaction of losses to the farmers of Canada during the last ten years.

7th—That the "Agricultural" has never made a second call on their members for payments on their premium notes.

8th—Farmers, patronize your own Canadian Company that has done good service amongst you.

Address the Secretary, London, Ont., or apply to any of the Agents.

J. H. WILSON, VETERINARY SURGEON, Graduate of the Toronto Veterinary College. Office—New Arcade, between Dundas street and Market Square. Residence—Richmond street, opposite the old Nunnery.

Canada Victor Tomato! I invite the attention of the public to extracts from more than a score of letters in my Catalogue for 1874, from Farmers and Gardeners in various States, who raised this New Tomato for the first time last season. These letters are all emphatic in their praises of the Canada Victor Tomato; 1st, for its surpassing earliness; 2nd, for its excellent quality, and 3rd, for its uniform solidity. I now offer to the public, Seed saved from selected specimens only, at 15 cts per package and \$1 50 per ounce. My Seed Catalogue, FREE to all applicants.

JAMES J. H. GREGORY, Marblehead, Mass. Feb & Mar

OCEAN PASSAGE.—Persons intending to take a trip to the Old Country, will find it to their advantage to go by the Steamers of the National Line large, safe and comfortable vessels. Fare low. Apply to F. S. CLARKE, next door to the Advertiser's Office, London.

GETTING UP CLUBS.

Great Saving to Consumers.

PARTIES inquire how to get up CLUBS. Our answer is—You should send for Price List, and a Club Form will accompany it, with full directions, making a large saving to consumers and remunerating to Club organizers. Send for it at once, to

MILLER'S GREAT TEA WAREHOUSE, 52 and 54, Front Street East, Toronto, Ontario. Local Agents Wanted. Toronto, April 26, 1872. 5-1f

MOLSONS BANK.

Paid-up Capital \$1,000,000
Reserve 60,000
Contingent Fund 13,000

THE LONDON BRANCH OF MOLSONS BANK, Dundas Street, one door west of the New Arcade, ISSUES DRAFTS ON LONDON, ENG.; NEW YORK, U. S.; ST. JOHN, N. B.,

And all the principal Cities and Towns in Ontario and Quebec. Offers unusual facilities to those engaged in the produce business. Deals liberally with merchants and manufacturers. Discounts for the Farming community. Buys and Sells Sterling Exchange, New York Exchange, Greenbacks, &c., at very close rates. Makes Advances on United States Currency and Securities on reasonable terms.

SAVINGS BANK DEPARTMENT Affords opportunity for safe and remunerative investments of accumulative savings.

JOSEPH JEFFERY, Manager London, Sept. 14, 1870.

COSSITT'S Agricultural Implement Works GUELPH - - ONT.

Manufactures all kinds of Agricultural Implements—CANADIAN SIFTER FANNING MILLS, PARIS STRAW CUTTERS, LITTLE GIANT STRAW CUTTERS, ONE HORSE SEED DRILLS, HAND SEED DRILLS, ONE HORSE PLOUGHS, TURNIP CUTTERS, &c., &c.

The attention of farmers and others is called to his superior HORSE TURNIP SEED DRILL, all of iron, sows two rows, and runs the canister with an endless chain instead of friction wheels, there fore is not liable to slip and miss sowing; and by raising a lever the sowing can be stopped at any time, thus preventing the waste of seed when turning at the end of drills. Orders from a distance carefully attended to and satisfaction guaranteed.

LEVI COSSITT, 4 tf Nelson Crescent, Guelph.

COTTON YARN.

WHITE, BLUE, RED and ORANGE. Warranted the very best quality. None genuine without our label. Also, BEAM WARPS for Woolen Mills. W. M. PARKS & CO., New Brunswick Cotton Mills, St. John, N. B. 4 tf

ABBOTT BROS., CARRIAGE BUILDERS Dundas Street, East of Wellington Street, LONDON, ONTARIO 9

GEORGE VAIR, LANDSCAPE GARDENER.

Plans given, selecting, arranging and planting fruit and ornamental trees. Address—8-1f TORONTO and BARRIE

1874. Better Than Ever. 1874.



Rural, Literary & Family Weekly

This famous Weekly, which has been the Leading and Largest-Circulating Journal of its class for over twenty years, not only "still lives," but purposes to render its ensuing (XXIXth) volume better than any yet published. Moore's RURAL is the Standard Authority in Agriculture, Horticulture and Domestic Affairs, and a choice, high-toned and popular Literary and Family Paper. No other journal in its sphere has such a large and able corps of Editors and Contributors, and none comprises so many Departments or so great a variety of subjects, illustrations, &c.—National in character and objects, and adapted to both town and country, it has ardent admirers in every State, Territory and Province on the Continent. Ever earnestly advocating the rights and interests of the industrial classes, MOORE'S RURAL NEW-YORKER has long been the

FARM AND FIRESIDE FAVORITE and to-day has no peer in its important sphere of journalism. Believing in fact, talent, and the discussion of such timely topics as are of paramount interest to producing people, it employs the ablest talent in the land, and furnishes the Best Paper for

THE FARMER, THE HORTICULTURIST, THE STOCK GROWER, THE DAILY MAN, THE HOUSEWIFE, ETC.

In the future no pains will be spared to render the paper indispensable to the rural and industrial population of the country, and a welcome guest at every fireside it may visit. The reading for the family and young people, with appropriate illustrations, will receive increased care and attention, while none of the practical departments will be neglected—our aim being to excel in every and all features, and to furnish the best combined Rural, Literary and Family Newspaper obtainable.

MOORE'S RURAL NEW-YORKER contains sixteen quarto pages, weekly, finely and profusely illustrated and neatly printed. Only \$2 50 per year—in clubs of ten or more, \$2 per copy. Now is the time to subscribe for 1874. Great Premiums or Cash Commissions to Club Agents Specimens of Premium Lists, &c., sent FREE to all disposed to contact as agents. Address

D. D. T. MOORE, New York City.

THE FARMER'S ADVOCATE.

Published by WILLIAM WELD, London, Ont., Canada. The leading agricultural paper of the Dominion. Subscription, \$1 per annum in advance; \$1.25 and all expenses of collection, in arrears.

ADVERTISING RATES—The regular rate for ordinary advertisements is twenty cents per line of solid nonpareil for each insertion. Special editorial Notices, 50 cents per line. Continued advertisements of farm for sale, farm wanted, and stock (single animal) for sale, or wanted, or township show notice, when not exceeding 20 words, will be sent at one-half will be charged for each additional word over twenty. These condensed advertisements are arranged under special headings—None others except the four classes mentioned above will be inserted at these rates.



We offer to as a prize for Apple Trees, and old trees that the world to be in this sent month.

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VOL. IX. {WILLIAM WELD, Editor & Proprietor.}

LONDON, ONT., APRIL, 1874.

{ \$1 Per Annum, Postage Prepaid. } NO. 4
{ Office—Dundas-St., Opp. City Hotel. }

Prize Essays.

We offer this month one of the chromos as a prize for the best article on Pruning Apple Trees, the article to treat on young and old trees and to show the proper time that the work should be done; the article to be in this office by the 15th of the present month.

To Our Subscribers.

We have promised to improve your paper as fast as we could afford to do so. We thank each one of you that has helped to add one name to our list, for your exertion; by your aid we have received a large addition to our list of subscribers. It is numbers that give us strength and money.

We have now made arrangements with the Hon. X. A. Willard and L. B. Arnold, the best writers and speakers on the dairy interest known in America, and we believe the best in the world. They have both now arranged to write for your paper.— One article will appear from each in alternate numbers.

Of course these gentlemen cannot be expected to devote their great abilities to your interests unless we give them remuneration. This is one of the ways in which we expend the money we receive from you, to give you the best information on any agricultural subject. Read carefully the article by the Hon. X. A. Willard, in this issue; show it to any of your friends interested in the important business of dairying. If the suggestions thrown out in this article alone were followed by our dairymen, it might tend to the increase of our wealth hundreds of thousands of dollars. Read also Mr. Arnold's useful article again, in the last issue.

Go to your friends and show them what we are doing, and send one more name in. Those who have never yet added a name to our list we hope will now do so.

The Granges.

Quite a commotion has been caused by the publication of our article on Granges and the arrival of Mr. Eben Thompson, the Deputy of the National Grange, into our country.

Several prominent members of the non-producing class have done their best to write down the great farmers' movement, holding forth on its imaginary evils, dangers of annexation, injury to traders, and every other evil they can devise, possible or impossible.

On the other hand, editors and writers who wish the farmers' success and the good of the country, have shown the subject in a fair, clear and truthful manner to their readers. Nearly every farmer we

have spoken to approves of the movement, and many are agitating the subject in their several localities. It has now such a hold on the farmers that its opponents cannot stay its progress. Already the Granges are being established in our midst, and many more are now organizing. We have spoken to several members of Parliament of both shades of politics, regarding this matter. We ascertained from those we spoke to that some on each side were in favor of the movement, and about an equal number were not quite as favorable to it.

The political position of either did not appear to be the cause of their opposing or favoring it. It was not on political points, but merely self stand points. One M. P. P. spoke of the probability of our being taken up for high treason for favoring such a movement, and said farmers should stay on their farms and should not assemble together! One Senator advised his friends to have nothing to do with the movement.

These members could not become members of the Granges, because their main interest is not allied in any way with agriculture. The members who are farmers are all in favor of the movement.— We would advise our friends and the friends of the farmer to be on the alert, and be the first to organize the Granges in their localities, as advantages accrue to the charter members that others cannot so easily obtain.

We have become a member and can speak from experience to both ladies and gentlemen. Rally and join the farmers' movement; do not be among the driven cattle; be up and among the foremost.— We shall have our Dominion institution as soon as 15 or 20 Granges are organized. There is no more fear of its leading on to annexation than the formation of temperance or masonic lodges.

All the ladies and gentleman that have joined the organizations are quite satisfied on this point, and all we have seen are well pleased that they have joined. There is nothing in this organization in any way objectionable to the ladies, but there are many pleasing, enlightening and advancing features in it that they will be pleased with.

Parties desiring information regarding the formation of Granges will address Eben Thompson, Deputy of the National Grange, Patrons of Husbandry, care of this office.

Markham Farmer's Club.

The monthly meeting of the Markham Farmer's Club was held on Saturday, the 7th inst. The Hon. D. Reesor gave an address on fruit—the prospects, market, &c. He considered the fruit business of

Canada was destined to be second only to the dairy interest in importance. He clearly explained the adaptability of our climate and soil to the growth of the apple; only a small portion of the States was found to be better adapted to the growth of this fruit than a very large extent of territory in Canada. The profits on raising it were large, and our apples were better for keeping than those grown further south, while the quality was of the best description. One fruit raiser near Montreal realized ten dollars per barrel for the Fameuse variety.

He thought it would be a good plan to form a company and plant 200 acres of an apple orchard in Markham, to show the profits. The object should be to plant such kinds only as would be most suitable for shipping to foreign markets, and open up and develop more fully this valuable branch of our resources.

A person should be employed to attend to the cultivation and marketing. Farmers in general could not devote the attention to orchards that they required; insects must be exterminated at a proper time. The pruning was too often neglected or improperly done by farmers who have many other labors calling their attention. The gathering, packing and keeping of fruit required special attention.

A specialty should be made of the business of fruit growing to make it most remunerative. The dairy interest was now developed because those engaged in it devoted their particular attention to it. Your humble servant being present, made a few remarks approving of Mr. Reesor's suggestions.

We were asked what time we thought the most suitable to prune trees. We replied that November was the best time for taking off large limbs, and whenever the knife was sharp for small ones. A question was also put to us regarding the Government pruning of trees at Guelph; also, whether we considered the Government had possession of the farm or the cattle.

Considerable discussion arose regarding pruning. This is a question on which some pomologists differ. Mr. Crosby gave his experience in pruning. We hope to draw forth an article on this subject.

Mr. Thompson, better known as "Jimuel Briggs," editor of the *National*, delivered an address on Protection vs. Free Trade.

We were called on to explain the object, working and intentions of the Order of the Patrons of Husbandry, after which some discussions arose. The real farmers were in favor of the movement.

Some persons that do not obtain their living from farming will be found to raise objections, and have some scare-crow to

show farmers who are well known to be tardy in looking after their interests, if a cent is wanted. However, the movement is set in fact, and nothing that middlemen can do will stop its progress.

Provincial Farm.

REPORT OF COMMISSIONERS—DEPARTMENT OF AGRICULTURE AT WASHINGTON—AGRICULTURAL COLLEGE OF IOWA.

The report of the Provincial Farm Commission has already been read by many of our readers; we therefore, instead of occupying some pages of our paper by reprinting it in full, review the subject very briefly. We need hardly refer to our declared disapproval of the project of the Agricultural College and Farm from the first broaching of the idea by the Government. We need not, to prevent our action from being misunderstood, say that we have at all times had and evinced a great desire for the increase of agricultural knowledge and the improvement of agriculture. That our opposition to it was not without some effect we have reason to believe, though the project is still to be carried out, though with as specious an appearance as may be. We believe, and not without good grounds for our belief, that the project was designed and carried out, not for the benefit of the farmers, on whom would fall the burden of its support, or for the improvement of agriculture, which its advocates professed to be the motive for its conception, but as a political engine, affording another store from which to reward political partisans, and in unjustifiable opposition to individual enterprise. The report before us, with even greater skill than the pleas of those who with ready pens and oily tongues, had been, on every opportunity, supporting the measure, professes the great object of the Institution to be, to conduce to the greatest possible benefit of the agricultural interests of the Province. Despite all this specious theory, however, the report itself confirms our objection to it as a political machine. The appointments to office will be in the hands of the Government, and the Honorary Council consisting of eight members appointed by Government.

One argument brought forward in favor of the project was the example of similar institutions in the United States. Now, we would ask has their working under the management of officials appointed by the party in power for the time, as a reward for their personal service, been such as to beget a confidence in the working of this institution, whose officials are to be appointed in like manner? Let us enquire still further into the working of similar institutions under similar powers of appointment, adding to the testimony heretofore given of their entire failure to carry out their professed designs. In the postscript to this article we give from high authority, the *New England Farmer*, proofs of the inefficiency of the Washington Department of Agriculture, such a Board as that to which our agricultural interests are to be entrusted. So many and great have been the complaints against the Agricultural College of Iowa for unauthorized and improper expenditure of the public money and for other malfeasances that a Legislative Committee of Enquiry was appointed, whose report is also before us. We make some extracts:—"It is abundantly proved that the

Board of Trustees have often appropriated the moneys of the College without legal authority. * * The practice of spending money without authority of law, we emphatically condemn, and believe that it is high time its continuance shall cease. When men accept and undertake the performance of a public trust, the people have a right to expect and to require of them, and each of them, that they perform that trust faithfully, and in strict accordance with the requirements of law; and a failure to do so, in our judgment, merits unqualified censure."

We had marked other paragraphs for extracts, but we desire to be brief, and extract but one more sentence:—"Your Committee also refer you to the testimony in detail as to what is and whether this is a model farm. The evidence is conflicting, and practical witnesses are diverse and somewhat irreconcilable."

The great argument in support of the projected College and Farm has been the establishment and working of similar institutions in the United States. In reply, we have by unexceptional testimony, shown that those institutions have been worse than failures—that they have not accomplished the purpose for which they have entailed enormous and unnecessary expense—that officials have been appointed solely from being useful political partisans—that by them expenses have been incurred and money squandered without due authority—that even the Agricultural Department at headquarters has been inefficient.

Is there not in this evidence sufficient justification for the course we have taken in giving no doubtful sounds of warning?

The staff of officials—Their rank, number, and emoluments must not be passed by unnoticed. They are the chief official of the Institution, styled the Principal, the official second in rank bearing the high-sounding title, "The Horticultural Director; the official third in rank with the title of The Live Stock Director; the Rector; over the Poultry, Bird, and Bee Department a foreman (the report does not deem the title worthy of bearing a capital letter.) In the Mechanical Department a foreman carpenter and a foreman blacksmith; a foreman in the department of the Principal; a foreman in the department of the Horticultural Director; a Housekeeper; one Veterinary Surgeon or more.

Once upon a time, in that summer season when all London is out of town, and the theatres were closed, a company of actors would try their fortune in a provincial town. The usual means to draw a house were resorted to. The evening—the hour—came. An ominous sound soon drowned the actors' voices—a hiss loud and prolonged arose from pit and gallery; but the troupe proved themselves equal to the emergency. The responding hiss from the stage entirely drowned that from the pit and gallery. The stage had a numerical superiority; the players outnumbered the audience. Will the episode be re-enacted at Guelph. Can it be that the Staff of Office will equal or excel the pupils in numbers. The Bank, the high-sounding titles who would be rude enough to object to? Are they not given by the Commissioners? The Sponsors, who promise such good things for this infant prodigy; and these high officials will have to hold grave consultations with the "Honorary Council and the Advisory Committees of the said Council." Let them then have high rank. And their salaries—who would inquire into such a paltry thing—as a matter of course high salaries must accompany high rank! But we are inclined to think that farmers who must pay for all these charges have a right to ask is there to be no limit to this lavish expenditure of their hard earned money.

POSTSCRIPT.—The *New England Farmer* says:—"For several years past, we have occasionally received from the Department of Agriculture, packages of garden and field seeds, for trial and experiment. We have planted them according to directions, when any directions accompanied them, but thus far have not received one single variety of plant worthy of special notice."

On most of the packages are printed slips, saying that these seeds are sent out at great expense to the government, for the purpose of experimenting with them in different parts of the country, and with a request that a report should be returned to the Department. We have rendered our reports, but hardly think they were ever considered, as another batch of the same kind of seeds we had condemned came the next year for trial, as being something new. Last spring we received several half pints of old and well-known varieties of sweet corn, such as we have raised by the bushel for years. Also, table beets, which were inferior to anything of the kind we had tried for a long while; garden beans, without description, which were planted as a bush variety and proved to need poles; oats, which blasted badly by the side of old varieties of our own that ripened bright and clean; and lettuce, and many other sorts of plants, which were a long way behind our old and well known sorts.

A similar experience seems to have befallen the *Farmer's Home Journal*, of Kentucky, with a sample of Lucerne, or Alfalfa, from the Department of Agriculture. The *Journal* says:—

"This is commonly known as Alfalfa, and is becoming widely celebrated as a forage plant and fertilizer. How it came to be called Chinese Clover we are not at present informed, but this is evidently the name by which it is known at the Department of Agriculture at Washington. A good many of our Kentucky farmers want to try this Alfalfa, so we wrote to Washington asking for some seed for distribution. It was not long before we received a response which informed us that 'the Department had none for distribution.' Now why is this? We know that the Department has facilities for obtaining an abundant supply; we know that it distributes the seeds of flowers and vegetables that are in every catalogue in the country, and yet it has no seed for distribution of a plant which our farmers really want, and which they find great difficulty in obtaining. We wish some member of Congress would look into the workings of the Department of Agriculture, and see if the birds that feather their own nests than on attending to their duties as public servants. The agricultural papers of the United States entertain but one opinion as to the condition of the Department of Agriculture as a whole."

The Manufacture and Marketing of Early or Spring Cheese.

Written for the *Farmer's Advocate*.

BY HON. X. A. WILLARD, PRESIDENT OF THE NEW YORK STATE DAIRYMEN'S ASSOCIATION.

By the time this article is printed and reaches the readers of the *FARMER'S ADVOCATE*, cheese-making will have commenced over a broad extent of country in the States and in Canada. Some suggestions, therefore, in regard to the manufacture and marketing of the early or spring make of cheese, will be timely.

But first, it will be well, perhaps, to take a general survey of the situation. During the past year, from January 1st, 1873 to January 1st, 1874, the exportations of American cheese have been the largest ever known, amounting in round numbers to upward of 104,000,000, of which Canada probably shipped 20,000,000 pounds. And yet with this immense exportation, and the increased production of cheese in the States and in Canada over former years, the markets both in Europe and America have never been more closely cleaned out, or short of American cheese than at present. This state of things makes it obvious that the new make of cheese going upon a bare market will command good prices, especially if the quality of the goods be unexceptionable in "meat and flavor."

Now, in the United States for the past three months butter has been scarce and high, and this will induce a large number of dairymen to skim more or less closely the early make of cheese, and hence, any good meaty cheese arriving in England with this "lean fodder-made" must be caught up eagerly by buyers at extreme prices. The inducements to make butter are not so great in Canada as in the States, and we advise our Canadian friends to take advantage of the situation, retaining all the cream of the milk in the cheese, and making an article rich and mellow, and one that will be sought after with avidity in the English markets. Perhaps no better opportunity will be offered to Canadian dairymen to get a reputation on their goods among the cheesemongers of England than by adopting the course we have suggested, this spring.

The English markets are comparatively bare of American cheese, and "fine things" are very scarce. The first shipments of new cheese from the States will be comparatively lean in quality, and if the first shipments from Canada be rich and meaty, it will take precedence in the English markets for a time at least, and this precedence at the beginning of the year will exert a valuable influence over the Canadian product during the whole season.

It is quite true that the early hay-made milk should not be deprived of any portion of its cream, if intended for cheese-making, for the butter in such milk is all required to make a good "full-meated" article; but in case such milk is deprived of any portion of its cream, manufacturers should remember that a larger proportion of rennet will be needed, and the ratio above the usual quantity required for whole milk should always be graded in proportion to the amount of

cream removed. In my recent address before the Dairymen's Association of Ontario, I showed how the butter or fat of milk was concerned in those changes which the milk undergoes during the process of cheese-making, and that in removing the fat we weaken to some extent the fermenting powers of the rennet, rendering it more difficult to break down the casein into a mellow, plastic article of food. Manufacturers, therefore, will do well to remember that the quantity of rennet should be regulated according to the quality of the milk, and that this point is as essential in producing fine cheese as some of the other and subsequent manipulations of the cheese-making process.

Again, we advise Canadian dairymen to sell or ship their early cheese just so soon as it is ready for market, since the highest price it will command will be reached, for this kind of cheese, early in the season. The factory shelves should be cleared of all the early make of cheese before hot weather, because the cheese then will rapidly fall off in flavor, and because prices almost invariably decline at this season. If the cheese, when ready for market, could be sold and shipped away from the factories weekly, it would be policy to let it go, taking the market price at the time. But, at all events, factories should try and make semi-monthly sales, thus getting the cheese to market when its flavor and condition are best, and, in addition, saving the shrinkage and the chance of its losing flavor or a decline in prices. The Herkimer Co., N. Y., dairymen have for many years followed the plan of selling the early cheese as fast as it is made for market, and they have almost invariably obtained more for their product in this way than other dairymen who have held their cheese for longer periods. Even if prices should drop, it is better to let the "hay-cheese" go, because it is an article upon which you cannot rely to improve by keeping. We say, then, sell the early cheese as soon as it is ready, and do not look for higher market rates than those ruling at the time, for if you do, "ten to one" the experiment of holding will cause you a loss. It may often be policy for factorymen to hold a part of the August, the September or October cheese. In that case you have flavor and quality, while the constant approach to cooler weather is in your favor and there is no danger of your goods deteriorating on your hands.

But for the early cheese, there is the hot weather to contend with, which of itself is a formidable enemy to flavor and success in holding. The best place for "hay-cheese" is in the hands of consumers. Let it go and be consumed before the nice rich "grass cheese" comes into competition.

At what rates will the market for new cheese open? This is a question which, of course, no one can predict, but the impression prevails in New York, among those best acquainted with the trade, that from 15c. to 16c. will be the ruling figures paid for cheese in the country markets at Little Falls and Utica. Prices for fine goods may range higher, but we can not expect these rates to continue long in the season, because as shipments begin to be made freely from the large number of factories in the States, stocks must be handled expeditiously, or they will accumulate on buyers' hands, and either of these conditions has a tendency to reduce prices.

Notwithstanding the area of cheese factories is extending in the States, especially in Maine, in Wisconsin and in the northwest, we do not apprehend the increase will sensibly affect the market, since many cheese factories in New York, in Vermont and other States are being converted into butter factories, and the increase of consumption will, it is believed, balance increase of production so that prices during 1874 ought not to average below those of 1873.

We think Canadian dairymen need have no fears that the business will be unprofitable, if they put upon the market a good, sound, useful article.

EAST ZORRA MAPLE GROVE FACTORY.

From the report of last year's operations we learn that the quantity of cheese manufactured was 91,253 lbs.; cash realized from sales, \$10,194.74; average quantity of milk required for pound of cheese, 9.85; average price for season, 11.17c. Mr. Masters, manager of the factory, stated that he would be prepared to conduct the business upon the same principle as heretofore, that is, two cents per lb. for manufacturing, and one dollar for drawing every 3000 lbs. of milk.

Prize Essays.

THE MANAGEMENT OF FARM YARD AND STABLE MANURE.

We received five valuable communications on the above subject; as they are all worthy of a prize, and showing different modes of management, which will well repay our subscribers' perusal, we have concluded to give a Prize to each writer, but which is the best, we leave our readers to decide. We will insert four of the articles, one in each month, April, May, June and July; in July, we hope some of our readers that are really interested in this subject, and in the prosperity of our undertaking, will send us a postal card stating which article they deem the best. We will then give the name of the writer who receives the most votes for the honor. Only four out of the five essays will be published, as the four will contain all the information contained in the fifth; the fifth would not gain the prize.

N.B.—The writer who signed his article M. F. T. must forward his name, otherwise we cannot forward the prize.

In compliance with your invitation in the *ADVOCATE* for this month, I will make a few remarks on what is in reality the Farmers' Bank, commonly called the manure heap, and also how it should be preserved to secure its substance.

In the first place, I allow and admire a good large dung heap, but I will never allow a dung pit, or to place it below the level of the surrounding surface. Now, the heap should be built up upon a firm, dry place, and it would be no trouble to build it up square and plumb as you would a hay stack, and be sure to add to it everything that will decompose or smell offensive; bury it in the heap and it will add greatly to the strength and value of the heap. I got my experience as follows:—

I had a field in England, 4 acres, and planted it in potatoes, after that barley and grass seed and a liberal supply of clover, and a good field of hay we had, and after the hay was taken off, the clover began to sprout beautiful, and we stocked it with sheep and cattle before it got too strong, for clover is almost sure to bloat or swell the cattle and cause death in a short time if let to get too far ahead before being stocked; but the cattle fed and done well on it, and after a while I saw the clover buds begin to appear on about $\frac{2}{3}$ of an acre, and all the rest of the field quite bare, and this $\frac{2}{3}$ of an acre above a foot high, and very thick and as straight as the drill was made when in potatoes. At last I thought of the manure that was used on the field when in potatoes, and perfectly well recollected that as far as the cattle had grazed it so bare was the manure that came from that carefully preserved heap, and the other was what lay in this pit, precisely the same grade of dung from the stable, but neglect on my part to put it with the rest.

Now who will say, after being so glaringly instructed by the dumb animals, whose smell and taste is very acute, and should make a man that has the care of them observe them closely and you may learn from them what you will not learn at college. But I fear Mr. E. you will say I have went a long way around to get to the point. Just walk across a pasture field and you will find patches cropped very bare, and others not so, and yet apparently of good quality, the better the quality of the manure the better will be the herbage. I do not mean to say the droppings of the cattle and nothing else should compose your heap; add peat or any other absorbent that you can get, and place it in such a situation as I have named, it will cut down in the spring like grease, and be good and all alike.

And now, Mr. E., there is one part of the farmer's business that has not had the attention paid to it that it deserves: that is a float pit, which should be about 40 or 50 yards below the stables, say 10 by 15, and 2 or 3 feet deep, to receive all that the rain may wash or might otherwise escape from the building. Now this reservoir should be sunk to the pan or subsoil to keep the liquid from escaping; it would be a trifling job to build a stone wall around such a small space, otherwise drive in stakes about 2 feet apart, and plat it with brushwood, and pack it well with very wet earth or subsoil, and when it gets dry it will be nearly as hard as brick, and have a fender or sluice gate, at the lower

side of court float the manure you mean to near a level a fall enough to up hill, for to and spread of to do this a farmer be in change the d 10 or 15 m reservoir with 8 or 9 inches you will find and strong; thing that you duce, and I its vitality, and will last

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side of course, and from thence direct your float the most convenient way to the field you mean to take it, then plough a furrow as near a level as you can, just giving the water-fall enough to run, always turning the furrow up hill, for that allows the float to escape and spread over the field. It is a good time to do this after a good shower, and let the farmer be in the field with a spade and change the directions of the float, say every 10 or 15 minutes, and keep a lad at the reservoir with a long pole and a bit of board 8 or 9 inches square, and keep stirring and you will find your float running down black and strong; by this means you have everything that your barnyard or stables can produce, and I am sure no farmer will dispute its vitality, and the expense is very trifling, and will last forever with trifling repairs.

You see, sir, I have been speaking pretty freely about the float pit, for I wish to see it generally carried out; I never saw a farm-yard in Devonshire but had it, and this country will soon find the necessity for it, and I have often wondered that you, Mr. E., that has such a keen relish for the farmer's welfare had not brought up the affair before.

I have said little or nothing of the article of peat as a manure, and as I coincide in most parts with what is written in the supplement for this month on peat, it would look too much like copying if I were to say anything on the subject; now, lime is a grand fertilizer if rightly managed, but the question for the present is not that, but of a matter of equal consequence, and must be reserved for future consideration.

Leeds. F. SQUIRES.

Surface-Soil and Subsoil.

The writer of the Ogden Farm papers in the January number of the *American Agriculturist*, speaks of the advantages of deep ploughing as a question of doubt. He thinks that on this important subject, theory and practice are quite opposed to each other. He writes—

"I applied myself during my recent trip to the obtaining of light on the much-vexed question of deep ploughing, one which has always had a prominent place with our writers, and about which no definite conclusion seems probable. It has certainly not been less talked about and written about and quarrelled about in England. When agricultural writing first commenced there it at once took a prominent position, and the columns of the British agricultural journals are to this day more taken up with it than any other topic on which opinions differ widely. Arguments on both sides are plenty—on either side, viewed by themselves, they seem convincing—and it is at least difficult to decide which has the best of the discussion. In practice, the deep plowers find comparatively few adherents, for there, as well as here, it is the almost universal custom to plow only to the depth of six inches. Personally, I have always sided with the deeper faction, and I am not now disposed entirely to abandon their position. At the same time, the more I investigate the matter the less I am inclined to urge the adoption of their recommendations. There is much force in the statement of a recent English writer that if by deep plowing you convert the upturned subsoil (by the aid of manure) into a surface soil, you by covering up the surface soil convert it into a subsoil, and place its greater fertility beyond the reach of the developing action of the atmosphere, and thus lose its effect. On the other hand, there is no getting around the fact that gardeners and nurserymen have great faith in the efficiency of "trenching," a process whereby the surface soil is completely buried beneath the upturned subsoil. In their cases, however, the quantity of manure used is much greater than is possible in the larger operations of the farm."

If the theory that deep ploughing is an essential part of good farming, be found, when put into practice, detrimental to the interests of the farmer, it must be cast aside, no matter how specious the arguments may be in its favor. But we do not think that in agriculture science and the experience of really good farmers can be opposed to each other when thoroughly examined. The theory of the advocates of deep ploughing is not that under all circumstances there should invariably be deep ploughing. In an article on this subject in the *Farmer's Advocate* a year ago, we showed that, while recommending deep ploughing as

the rule, there were certain conditions in which shallow ploughing would be more immediately advantageous. Since then we have read several contributions to agricultural journals telling of large crops raised from shallow ploughing, and arguing thence that that mode of ploughing was proved best. But all the instances given were exceptional cases, and form no general rule, nor can those isolated instances in which deep ploughing was followed by inferior crops, be regarded as decisive proofs. They are such as were to be expected from the following of a general rule, under every circumstance, forgetting that some crops will succeed with shallow tillage, and that under certain conditions of the soil ploughing should be shallow.

"If by deep ploughing you convert the upturned subsoil into a surface-soil, you, by covering up the surface soil convert it into a subsoil." (See extract above.) Let us inquire what is surface-soil as distinguished from subsoil? It is not to be determined by a given number of inches. The term "Surface-soil" must mean that soil, be it shallow or deep, which from previous cultivation is best suited to promoting vegetable life, and this suitability is produced by its exposure to the influence of the atmosphere, and is added to by vegetable matter from the roots of plants of preceding seasons. Now we hold that a surface-soil of eight or ten inches, and a surface-soil may be of that or greater depth, is more productive than one of four or six inches, as affording to the plant a greater store of food. This is one of the advantages of deep ploughing, when properly performed—not the converting of the surface-soil into subsoil, but the converting of some inches in depth of subsoil into a soil equally rich in plant food with that under which it had lain, and renewing and refreshing it when in part exhausted of some necessary element of fertility.

This increased depth of surface-soil is especially necessary for the successful growth of some plants. For some it is not so necessary as, for instance, Indian corn, while for others, as root crops, and above all, those that are tap-rooted, a good depth of cultivated soil is requisite to the production of good crops.

Beneath that surface-soil which alone is tilled in shallow ploughing, there is often a soil of some inches abounding in those very elements which would be of great service to the light surface-soil. These may have been part of its component character, or they may have been acquired by the permeations of heat and moisture through the tilled soil. Lime applied to the soil has a tendency to sink, and so have other manures; and such plants as Red Clover and Lucerne strike their roots deep even into the unploughed sub-soil, and decaying there afford easier ingress for rain and heat, the immediate agents of vegetation, besides enriching by their decomposition the earth from which they partly draw food. The sub-soil well stored from these sources, on being mixed, with due tillage, with the "surface-soil" of a few inches proves to be just what was needed to add to the productiveness of the soil.

Deep ploughing, as we have shown, adds to the quantity of plant food by increasing the depth of the surface soil. It is also a great protection against the evil effects of an unusual drought, enabling the plants to extend their roots to a depth that the drought has not affected. In a very wet season the advantages of deep ploughing are equally great, as the excessive moisture oozes away more readily and causes less injury to the maturing crops.

Only at certain seasons is deep ploughing for the purpose of adding to the depth of the surface-soil, done by judicious farmers. If by deep ploughing we turn down the old surface-soil beneath a large portion of subsoil previously untilled, and then sow the seed on the soil so prepared, expecting a good return, we would be disappointed. I always had this ploughing for adding to the depth of the surface-soil done in the fall, that the upturned sub-soil might be subjected to the ameliorating influence of the winter's storm. Frost and snow, as well as heat and moisture, are beneficial agents in the great work of agriculture—summer fallowing, where it is practiced, an increased depth of ploughing is given with great advantage. This deepening of the soil should be gradual, not going the required depth in one season, but year after year adding to the depth. In this too the old proverb is appropriate, "Rome was not built in a day." When a

good deep surface-soil is once formed, keep that surface-soil deep by deep ploughing.

In considering this subject we advance no mere theory, unsupported by the lessons taught by practice. I have had an experience of many years in some of the best agricultural districts in the British Isles, and knew the practice of some of the best farmers and ploughmen, and have been the more confirmed in my judgment of the great advantages of deep ploughing. For an immediate profit the ploughing may be shallow under circumstances such as we stated in an article on "Deep vs. Shallow Ploughing" some time since; but our own experience forces us to differ from the statement that "In practice the deep ploughers find comparatively few adherents." It was a general custom to plough to the depth of eight inches. I and many as well had our grounds ploughed ten, and in some instances not less than twelve, inches.

My rule—the rule of good farmers—was:—Have a rich, well-tilled, deep surface-soil. The crops, whether cereals or roots, will have an abundant store of plant-food, and they will thrive, even in a parching drought or in the wettest season. Good ploughmen get higher wages; good horses are bought at higher prices; good plows cost more than bad ones, but all these additional outlays are repaid with good profit.

Correspondence.

J. B. Turnbull, of Dawn Mills P. O., complains of a weed known by the name of Red Foot, and wishes information regarding the best means of exterminating it.

Mr. A. Poyart, of Derby, P. Q., enquires if we or any of our correspondents know what would be the shortest and cheapest method of destroying the one-eyed daisy, and if salt or lime would destroy them.—We have not been troubled with either of the above named weeds on our farm. Perhaps some of our readers will give the desired information.

A. Ritchie, of Inverary, asks information in regard to Hungarian Grass, the time to sow, how much seed per acre, and the kind of soil that suits it best? Light soil in good heart and action is best; sow from the 3rd to the 10th of June, from 20 to 30 lbs. per acre. If cut green it makes excellent feed, but if allowed to ripen the quality of fodder is no better than inferior straw.

FROM BRANTFORD.

SIR,—I have long been intending to write to your paper to let you know some of our doings in this part of the country. We have been establishing Farmers' Clubs through this vicinity; we have now got seven or eight in working order, and a county club formed by delegates from the smaller ones, to carry on business in a more united way and work for the good of the farming community. We do not mean to confine ourselves to this county alone, but hope that other counties and townships will follow in the good work we have commenced.

It is the general opinion among the farmers here that they are not well enough represented in Parliament, and are greatly imposed upon by town and city residents.—With these opinions we have taken up arms to fight for justice, and will not throw them down till we gain it. We intend our central club to act partly in the same manner as the Granges in the United States, excepting in not having any secrets about our meetings, but discuss our subjects and work for our welfare with open doors, and not exclude any one from our rooms.

I expect one of the first moves the club will take is the establishment of a cattle fair in our town, as we find that the farmers who sell their cattle at fairs realize better prices than buyers will pay in our own stables, and the buyers at fairs can afford to pay more, as they get all their cattle at one place, and have not to drive around two or three days and visit dozens of farms before they get the number they want.

Our subjects are various, embracing all that are of benefit to farmers, both in working our farms to the best advantage and also matters connected with municipal affairs, together with local grievances, which have been thoroughly discussed by all the clubs in this township.

I am glad to find that your paper, the *Farmer's Paper*, is steadily improving in its reading matter, and I hope in a pecuniary way to its proprietor. Some of the articles in the last issue are very good, and tend to do good to the farmers of Canada.

I would like to get a package of your white spring wheat, to try it. My opinion is that all these new seeds should be tried in different localities of the country and under different treatment; then they could be cultivated if successful, and dispensed with when otherwise.

I am well pleased to find from your paper that there are other farmers' associations in different parts of the country than just in this locality, and if we continue in the same way we will make our voice heard to some effect, and the farmers will take their rightful position in the country.

With best wishes for the prosperity of the FARMER'S ADVOCATE,

I remain yours truly,
A FARMER.
Brantford, 10th March, 1874.

TRAVELLING AGENTS.

SIR.—In looking over your excellent paper for this month, I noticed in a letter from some one signing himself "E. D.," a remark about travelling agents that I think both unjust and untrue, and, being one of that, generally speaking, hard working and much abused body, I beg to say a few words in their defence.

I think everyone will agree with me in saying (excepting, perhaps, "E. D.") that the farmers all over the Dominion, and especially in the newly settled districts, have the travelling agents to thank, and the travelling agents only, for many of their necessities and comforts, which, if it had not been for those "non-producing persons," they would never have had at all; for instance, such things as fruit trees or sewing machines, for scarcely a farmer ever goes to the nursery or manufactory for these absolute necessities, but infinitely prefer them brought to him by one of the "hindering persons," rather than incur the expense, time and risk of procuring them from a distance. I am perfectly aware that there are agents who do their business in anything but an honest manner, but they are easily detected, and if the farmer takes care only to sign an order which faithfully describes the article bought and the conditions on which it is bought, and insists on having a copy of the order, there is very little chance of his being swindled.

As to the charge of loquacity, every farmer surely ought to know whether he requires the article offered or not; if he does, let him order it at once, and not invite the agent to coax him, as so many farmers do; and if he is certain he does not want it, let him say so plainly, and the "talking person" will not stay much longer. As far as I am personally concerned, I have always met with kindness and consideration wherever I have been, and I am sure I have not been looked upon as a nuisance, but rather as a necessity, and I sincerely hope, sir, that only in the eyes of your correspondent am I

ONE OF THE "NON-PRODUCING,"
"HINDERING," "TALKING PERSONS,"
London, Ont., 6th March, 1874.

[Our readers may refer to "E. D.'s" article on page 34. As this question is an important one, we hope "E. D." may reply, and that other farmers may also send their opinions on this subject.]

ALSIKE CLOVER.

It is a common saying that but little talent is required to find fault, and as I do not boast of much talent, I have one excuse for taking my present position.

Having noticed several articles on this subject in agricultural and other papers, which do not accord with my own views, I propose to give my experience. Some five years ago I secured a small quantity of Alsike Clover seed, and sowed a little more than a half acre in a field that I was about to seed down with a mixture of red clover and timothy, for meadow. The soil was a rich clay loam, rather low—parts of it too wet to grow good cereals; a small portion of it, however, was elevated enough to be pretty dry.

Now for the results:
The first year I left the Alsike to seed, for the seed was valuable at that time; and as the other part of the field was cut first, I

did not consider it worth while to use the mowing machine, so I went at it with scythes, and I assure you, reader, that it was no child's play. In the low places it was heavy and tangled, but on the drier ground it was so short that the scythe could scarcely catch it. The part of the field seeded with red clover and timothy yielded two fair crops, which was chiefly red clover.

The next year the result was similar, except that the part of the field seeded with red clover and timothy was now nearly all timothy, and a much heavier crop than the preceding, while the alsike produced a still lighter crop and continued to do so each succeeding year.

What I have stated is neither an exaggeration nor an exception. The truth is, alsike clover will not flourish unless the ground is constantly moist, and is, therefore, not adapted for high land. A neighbor who cultivated it more extensively met also with a signal failure. I know of only one case in this vicinity where it has given satisfaction. In that case it was sown in the flats of a river.

This instance, together with the fact that it is to be found in nearly all the water runs on my farm, leads me to the conclusion that it may be cultivated with advantage on some low lands, but I would advise those who purpose trying it or any other new thing, to be cautious lest they be duped as I was.

MOSES PIERCE, JR.

Brinsley, Ont., March 6th, 1874.

SEED REPORT.

I purchased one bushel of your Farrow wheat last spring, and twelve pounds of the Late Rose potatoes. I am well pleased with them both; I sowed the wheat on quite a foul piece of ground, so grassy and thisty that I did not draw the swath next to the fence in, and the season was much against the wheat crop in this vicinity. Notwithstanding all these disadvantages, I threshed thirty bushels of better wheat than the seed was. It was twice as good as my other wheat in the same field. I could have sold all I wished to spare for double the price of ordinary wheat. It has paid me well.

The potatoes surpass anything I have ever tried for both quality and productiveness. I manured them in the field.

STILMAN W. HERRINGTON.

Mountain View, P. E. Co., Ont.

[Numerous reports from various parts of the country have been received, and the Farrow wheat has given more satisfaction than any other kind we sent out last spring. In some parts of the country it has succeeded no better than other varieties.—Ed. F. A.]

Mr. Thos. Fitcher, of St. Thomas, informs us that from two Light Bramah hens he procured two hundred and seventy-five eggs during the season of 1873. They commenced laying on the 10th of February. They set and hatched chickens, and cared for them until they could care for themselves, during the time.

ASHES AS MANURE.

SIR,—I noticed an extract in the Advocate, taken from the *American Agriculturist*, that wood ashes—leached or unleached—is a valuable fertilizer, and would pay better to be used by every farmer than sold to the ashman for 10 or 12 cents per bushel.

In consequence of such advice I have made many experiments without any visible effect for the better. I have driven out wagon-loads of unleached ashes, and spread it broadcast from a quarter to half an inch thick, on old meadows and pastures, without any benefit. I have applied it on corn and potatoes, leaving one row done and the other undone, throughout the field, but without any apparent difference between those that were ashed and those that were not. I applied it also on fruit trees with no better success, and likewise in the garden, on all kinds of vegetables, but without any visible effect whatever.

The Americans come here with barges from Albany, buy up all the leached ashes they can find, take them down along the Hudson, get all manures and combustibles from the cities, mix them all up together and then sell them to the gardeners.

Now, is this the way we must do, or is there any way we can supply them from the ash

house sufficiently? and what crops can be benefited as represented? A little information on this subject will be much appreciated by a subscriber.

P. B. WERDEN.

Picton, March 13th, 1874.

[We had some conversation with a good farmer a short time since, who had applied hundreds of loads of leached ashes on his farm, and applied it to different crops, but could see no benefit to his crops on the parts of the fields which had received the application. We should be pleased to have accounts from any of our subscribers that have used leached ashes and derived benefit therefrom in an unmixt state. We do not doubt that by mixing other ingredients with them they may be made very valuable. Perhaps our informants might mention the best ingredients to add to make them most beneficial.—Ed. F. A.]

SHADE TREES.

I see a proposal in your esteemed paper for a change of time of doing the road work, but I can't see that we could be benefited by it. I think, however, if we could have a law passed for the protection of shade trees along the highway, something that farmers would be encouraged to do as a portion of the statute labor, something to attract and catch the rain clouds and give us a shower now and then, it would be much appreciated, as they would not only be very valuable in our extreme drouths, but they would also protect us from the breath of the cold north-wester that so often destroys our vegetation and sets us a-shivering.

P. B. W., Picton.

[It is well for us to take pattern from our American cousins in anything that may be for our advantage. By their agricultural papers we learn that they set apart a day for planting trees. They call it "Arbor Day." The day they take in the west is the 20th of April. Last year we offered prizes to the boys and girls who planted out large numbers of trees, and many were the reports received of the numbers planted by both boys and girls. We again make an offer of two packages of flower and vegetable seed, one for the girl and the other for the boy that sends us accounts of the largest number of trees properly planted by themselves on or before the 20th day of April. We think that some of our legislators might with advantage introduce a bill for the extension and encouragement of tree planting along the roadsides.—Ed. F. A.]

AGRICULTURAL SOCIETIES.

Dear Sir,—The class of acts regulating these societies is perhaps the most important affecting the interests of farmers, and is freer from complication and bewilderment than many other acts of our one-house Legislature. I have long been of opinion that this is the most useful legislation in the country, as encouraging the most important interest, and it is therefore desirable that it should be as perfect as possible, and I venture to hope I can suggest some improvements which will tend towards that. I have two objections to the present system, and they are so involved that, after stating them, they will appear pretty much as a duplex objection. The first is the arbitrary sum of \$700, or any arbitrary sum, apportioned to a county or an electoral division; the second is the existence of county societies at all as such; indeed they are but a larger township society, possessing special privileges, located in a particular district, and not extending to even a considerable part of the county. They appear to have functions which I think inadequately performed, and they have advantages which are decidedly unfair as towards township societies. One township society I was connected with, one year raised the prescribed fifty dollars from fifty members, and being the only township society which in that year, became entitled to, and after some trouble received \$140, the county society appropriating to its own purposes, as allowed by law, \$560 of the Legislative grant. Another township society in another county, of which I was a director, collected its first year sixty-one dollars from as many members, and received from the

county society thirty-six dollars, that same county society retaining for its own use \$280, as allowed by law. Nothing need be said of such a state of things but to suggest a remedy, as anything more unfair cannot well be conceived.

The remedy I propose is to give a pro rata grant to county and township societies. To the latter I would give dollar for dollar for any sum of fifty dollars and upwards, subscribed by fifty or more members, for the general purposes of the society, and a special grant of fifty cents per dollar for the purpose of encouraging the purchase of improved live stock. This I think is a more judicious way of doing so than that mentioned in the Advocate some time ago as contemplated by Government of spending \$200,000 in the purchase of stock as a Government enterprise—an unwise and unfair one, of which more may be said sometime. I know nothing of the working of county societies but what I learn from acts of Parliament and official papers; but if they have functions to perform, and supply a necessity which I am unacquainted with, and which cannot be performed by township societies, I would make their grant one and a half dollars for every dollar, when a hundred and more was paid by a hundred or more members, and a special grant of dollar for dollar. But if, as I think, there is nothing required from county societies but what can be furnished by those of townships, there is no occasion for this difference, and certainly these latter deserve encouraging. They are all over the country in nooks and corners, and bring into play a class of men who seldom hear of county societies, and could not attend them if they did, but who are not less the bone and sinew of the country. One important duty of these societies should be furnishing correct agricultural statistics to Government. At present, this devolves on the county societies, who send forms to the townships to be filled up, sometimes after the date when such forms should have been returned—generally about October. This is quite too early; there is a large quantity of grain unthreshed then, and some roots are not harvested. Let the returns be sent in about the first week in February, when threshing is generally so nearly completed that a farmer can tell the result of his harvest. And let the forms to be filled up be sent direct from the Department of Agriculture to each society, not from one to another. A good secretary-treasurer would collect such statistics if he were paid for it; but it would require considerable time and diligence, and whether the directors would feel justified in paying for such extra work out of the grant, is a question. If all societies were put on an equal footing, the grant might be modified to meet this. "Whatever is worth doing at all, is worth doing well." These statistics would not be universal, as there are places where there are no societies; but they would be so general as to give a correct approximation of the whole. They would require to be verified, and this might be done by a magistrate or clergyman, or better, by the municipal council, under seal in form of a certificate, as the councillors living in different parts could speak of their knowledge. I object to an affidavit, as our acts of Parliament require. Such a multiplicity of oaths administered by such a variety of persons must tend seriously to lessen the sanctity of an oath. This is a grave consideration, and deserves the careful thought of all who value truth and confidence. A condition of the grant should be furnishing reliable statistics, and of the special grant a certificate that its object has been complied with. It may be objected that making these returns so late would embarrass the Government in providing the necessary funds, but a finance minister would easily calculate the requirements of this year from those of two or three past; besides, Government never steers so close as to be within a few hundred or a few thousand dollars. It is evident from the two facts I mention above, that the richer a county is in agricultural societies, the worse it is for those societies under the present system; and the poorer it is from want of spirit or means, the better are the societies paid, even to extravagance. This matter must be so interesting to farmers that perhaps some of your correspondents better acquainted with county societies will take it up.

In my letter in the March number, there is a formidable mistake, "3s. 6s. 11" should be 3d. 6d. 11.

Yours truly,
Cardiff, March 16. P. L. HARDING.

MARKET FEES.

DEAR SIR,—I cannot see why farmers should pay for the privilege to sell their produce. It is a piece of imposition on farmers that they have submitted to too long. I never found a person who could give a good reason in favor of the practice. Market fees go into the corporation treasury; the man who takes the fees is paid out of that. That is, the farmers pay him; he is a gentleman, who lives at the farmer's expense. Why should I pay to back a wagon to the sidewalk in the sun, rain or storm?

I suppose some would say, "Because the corporation law is such." The sooner unjust laws are removed the better. Farmers pay their taxes, why should they pay part of other peoples'?

Farmers, we call your attention to this subject, look at it, and if you think it right, support it, if not, we ask you to help to put it down. We, as farmers, should unite to enforce our rights and not allow others to run over us. It is not the man who wears the finest coat and perfumes the strongest who has done most to improve Ontario.

Clarke P. O. JAMES MCCULLOUGH.

THE HULLS OAT.

DEAR SIR,—You having invited information respecting Hulls Oats, I beg leave to state that my father, the late James Nisbet, got some of the oats in question from E. Wilson, Esq., late of North Sherbrooke, which grew freely and as easily as other oats; but both these parties found them useless as a crop, being not over half the length of straw, and not over the quarter of the grain, which was good what there was of it. The fowls eat it with avidity, which was all the use we ever made of it, although other stock would doubtless have made good use of the grain if it had been ground.

Mandaamin. DAVID NISBET,

M'CARLING WHEAT.

SIR,—I grew four acres of McCarty Wheat last spring, on sod, and it yielded thirty-five bushels to the acre, or one hundred and forty bushels in all. I consider it the best spring wheat in this part of the country. I had the Fife Wheat in the same field and the McCarty yielded about ten bushels to the acre more than the Fife. This is one of the many advantages I have received from taking the *Advocate*.

WALTON, Feb'y 26, 1874. THOMAS KELLY.

Veterinary.

INFLAMMATION OF THE BOWELS.

Inflammation of the bowels is usually brought on by sudden exposure to cold, or severe exertion on the part of an overtired horse, and colic neglected or wrongfully treated. The symptoms have been already described; it may be as well to add that fever, shivering and restlessness will be seen generally to precede the actual attack, the mouth being hot and the lining of the nose somewhat inflamed.

We are great believers in early and copious bleeding for this disease. Before the surgeon arrives give clysters, but never strong purgatives. For the injection mix half a pound of Epsom salts, or half an ounce of aloes in warm water or very thin gruel, and throw up plenty of the liquid. Give thin gruel to drink, and draughts, each containing two drachms of aloes every six hours, till the bowels are fairly opened. If no surgeon be near, a blister will be the next resort; the whole of the belly should be well blistered with Spanish fly. Let the legs be well banded, and be rubbed to secure good circulation; let the horse be warmly clothed in a well ventilated stable. Give green meat and mashes.

There will be found nothing so effectual in drawing out internal inflammation as a fresh skin (say sheepskin) just taken from the carcass and applied warm to the belly. The action of the fresh skin is marvellous. So rapid is the transmission from the inflamed parts of the horse to the disintegrating properties that are there proceeding, by capillary attraction to the skin laid on the outside, that in a few hours the skin will become perfectly putrid whilst if it had been left elsewhere, the sheepskin would have taken at least 24 hours to become in such a putrid state. It is thus apparent that the disintegrating process which has begun in the bowels or lungs is thus transferred to the externally applied sheepskin, causing it rapidly to putrify. When inflammation has left, the food must be very sparing, and gradually increased to a generous diet.—*Toronto Mail*.

INSECT.

The first of the natural cherry, but the apple tree is extremely injurious insect from eggs laid as early as the live eighteen moth deposited twigs from in August, distinguishing spring is the of this insect cluster of vigorous was state.

The next borer. This egg deposit and immed tree. The second beneath the beetle emer in cultivate them. This wire into t destructive ing the bod soap and eggs and be

The natural hon but he has emigrating sect was no but is spre beetles are ther. The crevices June. In the grub co wood. The years before What is ca the depre presenting oughly exa should be f thus mad borer will trees so as the trunks ravages. The coll of Europe eggs in the night time the month days, and the apple spins for it becomes tr But few state the winter perfect insu apples and orchard w the grubs are round spin their be remove Farmer.

A PRACTICE.

A fruit the follow trimming

We have been com and sever the tree. check the some fata One, or at usually su the tree branches, in reduci tree, or imbs, as i two to fo crowded i of the de

The tir summer, the shock ever, the cessary li tender st decidedly and the f the rema it. Be will not the sap i

Garden, Orchard & Forest.

INSECTS INJURIOUS TO THE APPLE.

The first presented was the tent caterpillar. The natural home of this insect is the wild cherry, but they have become naturalized on the apple tree. These are the first of the injurious insects to appear in spring, hatching from eggs laid the previous summer and often as early as the last day of April. They are extremely tenacious of life, being known to live eighteen days without food. The female moth deposits her eggs in rings around the twigs from the 20th of July to the same time in August. The bunches of eggs are quickly distinguished in winter, and then or in early spring is the best time to prevent the ravages of this insect by cutting off and burning the cluster of eggs. If this is neglected make vigorous war upon them when in the caterpillar state.

The next insect treated of was the apple tree borer. This insect is hatched in July from an egg deposited upon the bark near the ground, and immediately commences boring into the tree. The borers pass three years in the tree, the second winter being passed in the roots beneath the surface of the soil. The perfect beetle emerges from the tree in June. Trees in cultivated grounds are seldom infested with them. The first year they may be exterminated by digging them out with a knife; after this it must be done by inserting a flexible wire into their homes. Alkaline washes are destructive to the eggs of all insects. Washing the bodies of trees with potash water or soap suds once a fortnight, will destroy the eggs and be very beneficial to the trees.

The new trunk borers come next. The natural home of this insect is the white oak, but he has made himself doubly odious by emigrating to the noble apple tree. This insect was not known in Maine ten years ago, but is spreading very rapidly. The perfect beetles are active only in bright, sunny weather. The female beetle deposits her eggs in the crevices of the bark about the middle of June. In four or five days they hatch, and the grub commences to eat into the soft sap wood. These insects burrow in the trees three years before emerging in the perfect form. What is called sun-scald is frequently due to the depredations of these insects, and trees presenting this appearance should be thoroughly examined for the borer. The wounds should be immediately cut out, the wounds thus made not injuring the tree as much as the borer will, if allowed to remain. Pruning trees so as to form the heads low and shade the trunks would be a preventive to their ravages.

The codling moth is a true caterpillar, and of European origin. The moth deposits her eggs in the blossom end of the apple in the night time, during the latter part of June and the month of July. The eggs hatch in a few days, and the worm immediately burrows in the apple. In about three weeks it emerges, spins for itself a beautiful white cocoon, and becomes transformed into the perfect insect. But few pass through this transformative state the first season, the larger portion passing the winter in their cocoons and appearing as perfect insects in the early part of the following summer. By gathering up the wormy apples and feeding to swine, or pasturing the orchard with sheep or hogs, large numbers of the grubs will be destroyed. If bands of straw are wound round the trees, the worms will spin their cocoons in them, and then they can be removed and destroyed. - L. F. A., in Maine Farmer.

A PRACTICAL MAN'S WAY OF PRUNING APPLE TREES.

A fruit grower near Utica, New York, gives the following account of his experience in trimming apple trees: -

We have found in our experience, which has been considerable, that to remove large limbs, and several of them at a time, is injurious to the tree. The shock seems for a while to check the growth for more than a year, and some fatal cases may be attributable to this. - One, or at most, two large limbs at a time are usually sufficient, depending upon the size of the tree or upon the number of its large branches. We have had the very best success in reducing gradually the overgrown top of a tree, or where decay had affected the large limbs, as is the case with Spitzenburgs, taking two to four years to remove the cankered or crowded large limbs, starting new ones in place of the deceased old ones where needed.

The time for doing this is, of course, not in summer, when the tree is in full growth, as the shock will be all the greater. It is, however, the time to free the tree of small, unnecessary limbs and shoots; the latter, in their tender state, may be rubbed off, and that is decidedly the way to do it, as the work is easy and the further loss of wood growth is arrested, the remainder of the tree and the fruit getting it. Removing these small shoots and limbs will not visibly injure the tree, but will divert the sap into those parts of the tree where it is

wanted, and the wound will more readily heal over.

Whether large limbs are removed in the fall, winter or spring is not very material. Mr. Thomas, than whom there is no better authority, says, in his Fruit Culturist, that the time for removing large limbs should be deferred till toward spring. The reason is that the tree receives a shock to a considerable extent, even in winter, as growth is not entirely suspended, and the cold superadded makes the tree suffer still more. Hence, when the severity of the season lessens, as it does toward spring, and other causes seem to operate, it is the time to remove large limbs, or do the most extensive pruning at a time. March with us, is a good time. But a strong, hardy tree may be pruned at any time during the winter or late fall. If your tree is very thrifty and large, with a tendency to grow wood rather than fruit, trim in the fall. You may remove the large branches then, and the small ones in summer. We have practised this, and always with satisfaction.

Pruning apple trees is an art, and it is the main thing in the prosperity of a tree. Attendance to the roots—that is, the soil—is of importance, sometimes the greatest; but of great importance we deem attention to the top. We speak not only from experience, but the most gratifying experience. We have taken orchards in hand that were thought ruined, most of the limbs dead or in a state of decay, and by a gradual, careful course of pruning, starting new shoots in the place of old ones, where needed, have renewed the trees and have made them surpass their former state. There is a chance with old trees—which is of the greatest importance—to give spread or outward extension to the limbs. This cannot be too strongly insisted upon. You must have the sun and air and free ventilation of the whole tree if perfect fruit and the largest amount is to be realized, and also the best growth. Spread, therefore, the top, so that each large branch is distinct—a small tree by itself, as it were—giving chance for light and air between. But each branch itself wants to be thinned out, the whole well aired and exposed to the sky influence. Then every fruit will be colored and matured, limbs will be healthy, or healthier than if not thus treated.

Sometimes, however, it is difficult to prevent a tree by pruning from going to decay. This without the intervention of the borer or any visible disease. In such a case we have known the cause to be a hard, impervious soil—too much water present at times or habitually. - The remedy is ditching. Then the pruning will be efficacious.

THE KILLING OF ORCHARD TREES.

The Warsaw Agricultural Society, at its last meeting, had the above subject under discussion. It appears that the destruction of orchard trees in that vicinity the past winter was very great. The conclusion arrived at appeared to favor the sowing of blue grass in the orchard, in order to keep the soil moist and cool. That may do for that purpose, but a thick growth of blue grass will not load the trees with fine fruit.

It is now pretty evident that the death of so many orchard trees is chiefly due to the dryness of the soil during the winter. I found that in Colorado, where the land had not been wet down in the fall, the loss of trees was general. In Utah this has been pretty well understood, and water has been more freely used.

Out of several thousand apple trees, I lost but a few last winter, and part of these are set in blue grass. These were planted 28 feet apart, and do not fully shade the ground. - Those the least affected are 20 feet, and they not only shade the ground, but their leaves make a good mulch, and the soil is kept moist, as the evaporation is retarded. A block of snow apples with low heads suffered the least, and there the shade was the most perfect. - There has been an occasional orchard on the exposed prairie that has produced fair crops of apples this season, but all of these have been on moist soils, and did not suffer during the winter.

We may, therefore, attribute the loss of trees to the dryness of the soil, rather than to the severe cold of the winter. Our next study is how best to keep the soil in a moist condition. I certainly do not think that setting the orchard to blue grass is one of the best things. The plough, harrow and clover appear to promise better results.

The orchards set in grass will be benefited by a liberal dressing of manure during the winter, and then let the plough turn over this turf between the rows of trees early in the spring, to be followed by the harrow. Then the blue grass may in part recover, and this, with the crop of leaves turned under the following spring, will assist to keep up the fertility of the soil, and to keep it moist also. We have some things yet to learn in regard to prairie orchards, though we have made great progress. Because a few orchards on the prairie, fully exposed to the winds, have produced fine crops, it does not follow that shelter belts may be dispensed with. My best crop of apples this

year was on a part of the orchard closely planted and thoroughly sheltered. We may now account for the diversity of opinions in regard to hardy varieties—condition of soil having more to do with it than the tree itself.

NEWLY SET TREES.

We offer a new suggestion to those who may have set out young trees—not as new, but because the necessary care is apt to be overlooked or forgotten. There is a critical period late in spring or early in summer, when these often suffer severely and sometimes fatally, for the want of a little timely attention.

Trees set out in autumn are sometimes seriously injured by winds, which sway about the stem and form a hole in the earth by this motion. The air enters, comes in contact with the roots, and such trees frequently die. The remedy consists in throwing the earth away from the trees, applying fresh mellow earth, pressing it down firmly enough to protect the young tree from the wind. Sometimes it may be necessary to throw up a mound of earth as an additional protection for a few weeks until it becomes established. When the roots have been cut short in taking up, it may be necessary to secure the stem by means of an inclined stake, but staking is always to be avoided if possible. As a general rule, liable to exceptions, trees should never be so large when removed as to require staking; and if the roots have been carefully taken up and will spread out in transplanting, they will stand more securely. Sometimes it happens that a tree having a large top has retained a small set of roots, in which case the top must be freely cut back so as to render it lighter, and to equalize the top and roots. But if the buds have already started or partly expanded, the cutting back must be omitted, as nothing checks a newly set tree more than pruning too late in spring.

Hardy trees set out in autumn, would properly do better than spring set trees, if properly treated, the earth having become well settled about the roots and an early start given them. But it often happens that all these advantages are lost by neglect. In addition to the injury already mentioned, from swaying away by the wind, the hard crust which forms during the several months they have stood is a serious detriment, and care should be taken to break the crust, and to produce a fine mellow surface.

As hot weather approaches, all newly transplanted trees require mulching. In most cases, mellow earth forms the best mulch; and if a circle about the tree, several feet in diameter, is kept clean and well cultivated, and a fine growth will be the result. An additional mulching will be necessary only on very dry soils, or in an unusually dry season. Young cherry trees form an exception, and they should always be mulched before the hot weather of summer. After being well set out and commenced growing, the leaves often wither and the trees die under hot sands. Several inches of old straw or grass, spread thinly under the tree, will save it. The mulching should never be omitted with cherry trees the first year.

Watering trees should never be employed except in extreme cases. The practice destroys many more trees than it saves. If they are well set and the earth kept mellow, they will not need it. A neighbor set out 30 cherry trees and watered 15. Those not watered all lived; a large number of the watered trees died, in consequence of the hard crust which the watering formed on the surface, while none reached the roots a foot below. If water is ever applied to a young tree, the surface earth should be first shovelled away, so that it may at once reach the roots, and the mellow earth be replaced. But even here the intermitting supply thus given is not as good as the uniform moisture preserved by keeping a mellow bed of earth.

Young trees, and especially young pear trees, sometimes remain dormant for several weeks after setting out, and then gradually wither and die. They may be easily restored if treated in time, by cutting the head back sufficiently, encasing it loosely with straw, and keeping the straw wet. Before the leaves expand, the stem and branches must be watered; after they expand, the water must be given to the roots, for if applied to them sooner or before the leaves commence pumping through the stem, they will become water soaked and rot. Therefore water the stem only, while the buds are yet closed—and not the roots.

The preceding suggestions, it will be observed, apply chiefly to trees where there has been defective management, or where the roots are badly cut, or the trees allowed to become dry, or where they have been imperfectly set out, or where the soil is too hard or has been allowed to become so. Much trouble will be avoided by prevention, or by securing in the first place a good supply of roots in digging, and by setting out the trees on well prepared soil, and keeping it in good mellow condition through the summer. With such management, we have known our orchards to succeed well. - Country Gentleman.

Sales of Stock to Take Place During the Present Month.

R. J. STAUNTON, Thornhill, April 7, 21 head Shorthorns, 30 Cotswold and Berkshire Swine. See advertisement in this paper. JNO. SELL & SONS, Edmonton, April 8, 60 Shorthorns, Cotswold Sheep, Berkshire Swine. HUGH THOMPSON, St. Marys, April 9, 25 head Shorthorns, Clydesdale Stallions and Mares. J. S. SMITH, Ailsa Craig, April 10, 22 Shorthorns, Cotswold and Leicester Sheep.

We still hear some complaints of the non-receipt of papers by subscribers. Sometimes we hear complaints that subscribers have missed half of the year's papers. We have a most careful mail clerk; every subscriber's paper is mailed regularly from this office—still some of the papers do not reach the parties to whom they are addressed. We wish any one not receiving the Advocate before the middle of the month to write us at once; a one cent stamp is all that it is necessary for you to send. We have always mailed lost and missing papers, but we cannot promise to be able to send back numbers at the end of the year. Write at once and let us know if you have missed any number during the present year, and always write if you do not receive your paper by the 15th of the month.

Potatoes.

Our American cousins have done us a good service in introducing potatoes that have eclipsed the old varieties. The potato that appears to be creating the greatest noise across the lines is the Campton's Surprise, it is introduced by B. K. Bliss & Sons, the same gentleman that introduced the Early Rose. We quote the following from their catalogue:

COMPTON'S SURPRISE.

511 POUNDS GROWN FROM ONE POUND OF SEED.

"This wonderful Potato, wonderful for its fine quality, productiveness, size and beauty, is a seedling of the Prince Albert fertilized with the pollen of the Long Pinkeye. The first year from seed there were four Potatoes weighing one-half pound. The following Spring these were cut to single eyes, and planted on poor soil. The product of the half pound was three hundred and ninety-one pounds, sixty-two pounds of beautiful tubers being picked from the surface of a measured rod, as it is a peculiarity of this Potato that they often mature a crop on the surface under the foliage. The past season they were planted in soil from which a poor crop had been taken the previous year, and, although the season was very unfavorable, this seedling yielded six times more than the Rose and other old sorts planted by it, and remained sound, while the other varieties rotted badly. One-half bushel yielded seventy-six and three-fourths bushels of Potatoes, from which but one-half bushel of small ones could be sorted, the entire yield being at the rate of eight hundred and twenty-six bushels to the acre. These Potatoes are invariably sound to the center, a hollow one having never yet been found. It is a late variety, ripening with the Peachblow. Its shape is oval-oblong, eyes sunken, brow prominent, skin smooth, color reddish-purple, flesh white; grows to a large size. It is believed to be much the most abundant in starch of any variety extant, it retains its quality perfectly throughout the year, appearing on table like a ball of flour. The high quality of this Potato late in Spring may, perhaps, be owing to its tardiness in sprouting, remaining plump and free from sprouts when kept until June, and never having that wilted appearance common to early sprouts."

We still send these Potatoes out at the same price they are selling them in the States, namely, \$1 per lb., post paid, or a 1/4 of a pound as a present to any one sending us one new subscriber.



AGRICULTURAL

RECLAIMING WET LANDS.

We have more than once advanced the opinion that most people were altogether too shy of wet lands, as we find them in the unsubdued districts of Iowa. Some of these lands have been persistently neglected and shunned, but a few years hence they will prove to be among the most valuable possessions in the State.

The proprietor of Tiptree Hall farm, Mr. Mechi, has succeeded in subduing what in England is termed "bog land," and a recent writer in an English paper says:

It was a treat to go over the farm and hear what we may well call "the old man eloquent" expatiate upon the conditions under which he contrived to make a barren waste to "bloom and blossom as the rose." No merely figurative words are being used when we say this—they are sober truths, as a portion of the unreclaimed common at the other side of the hedges of one or two of the fields will show. From a swamp, over which snipe were wont to flutter and be brought down by the gun of the now owner some thirty years ago, an ornamental water has been formed, upon which a pleasure boat can row, where pike and roach and tench breed, and trout might have been kept but for that "fresh water snake," with the long nose, mentioned first. The draining of this bog relieved the adjoining farmers of their surplus water; it enabled Mr. Mechi, while doing a good turn for himself, to confer benefits upon others. Those who had too much water upon farms about him got rid of it; Tiptree Hall have greatly expressed their thanks for the surplus water his capital intelligently applied, distributed to them in dry seasons Tiptree Hall, where only a century ago furze and heather and weirs grew in no stinted way, is now surrounded by fine trees and shrubs of marvelous growth. It is as sheltered a nook as the most retired country gentleman could desire to occupy, and yet these umbrageous stems have been planted since the time the owner attained middle age. This shows what energy, a'ong with money, can accomplish in a short space of time. Mr. Mechi attributes this speedy development to deep cultivation, and to the manner in which he applied the manure to the roots of the trees. He shows, with justifiable pride, in his green house, a camelia of beautiful growth, whose bearing powers are as great as its dimensions, and he ascribes the merits of the plant entirely to the fact that he had taken care to see that the liquid manure applied had penetrated to the roots. Surface operations are not, in Mr. Mechi's opinion, of any account. The expenses of such applications are great, but the returns altogether unsatisfactory. More than eighteen centuries ago, a notion similar to that which Mr. Mechi now holds, was expressed. The roots of the tree must be cared for if the branches are to flourish.

To come more particularly to the farm, we must say that the cropping is as judiciously distributed and grown as skill combined with capital can make it. With the penetration, which has all along distinguished Mr. Mechi in his agricultural operations, he resolved to effectually drain the land he had acquired, and it was his wish that the farm should, if possible, possess the material advantage of a constant and unfauling supply of water. The system of irrigation, introduced into Tiptree, is very effective. Numerous hydrants are distributed over the farm, each of which irrigates eleven acres, and with the success that was the reward only of unceasing and expensive perseverance, Mr. Mechi has managed to extract from a cold marsh a stream of translucent water, which at present gives him a supply of no less than twenty-five gallons per minute. The field upon which this exceptional and valuable adjunct to the farm was discovered, was formerly bog land composed of twenty varieties of soil; at the present time it is bearing a very good crop of wheat. Mr. Mechi states that his mode of cropping is invariably to take barley after wheat. Last year, the average of barley was about six quarters per acre, and of wheat the product—in the previous year, a bad one—averaged five quarters per acre. The sheep are ultimately folded, after the wheat stubble, with Indian corn and cake, but if this is not done, home-made manure is put upon the land. Instead of taking barley after wheat on the clover hay, red wheat is taken after white wheat, because, as Mr. Mechi rightly surmises, "it would not do to take the same sort of wheat twice." In exceptionally favored years the yield per acre amounts to as much as seven or eight quarters—a clear proof, Mr. Mechi thinks, of the advantages of thin sowing and liberality in the use of manual substances. Rye grass is then sown in the barley, and after two years gives way to peas, which are sown very early

in the spring. Peas are followed, in the same year by the ordinary white turnips, fed often with sheep on corn and cake. In December wheat is again sown. Once in eight years Mr. Mechi takes red clover. In order to save as much time as possible—and it can easily be imagined that a fortnight will be of infinite value to the owner of Tiptree—the haulms of the peas are taken off the land to the cattle yards. While the land is being cleaned, therefore, the pea haulms thus undergo a process of hardening in the yards which enhances their value, and enables the land to be cleaned for the next crop. This year the crop of blue peas has realized Mr. Mechi £26 an acre net, the haulms going back to the land.

Subsoiling has been one of the great advantages which, Mr. Mechi contends, Tiptree received. Most farmers believed it impossible to extract any valuable ingredient from the under soil of a plastic clay such as Mr. Mechi's is; but they would, we imagine, be forced to admit that the subsoiler has effected an incalculable benefit to the poor land constituting this wonderful farm. The pan Mr. Mechi said, was hard and bare: "I broke up the gravel stuff and the hard pan, and the consequence was that things don't dry up and burn as they used to do. With drainage," the hospitable Tiptree farmer added, "the basis of my success has been the depth of cultivation." The subsoil plow in use is simply an ordinary iron implement without the moul board. The land is first ploughed with two horses, and two and sometimes four animals following in the track of the first plough, draw the subsoiler. —I. Homestead.

ONIONS FROM SEED.

To grow a good crop of onions from seed requires considerable care. The seed must be got in early, so that it can have the benefit of the cool, wet weather of Spring. The soil must be rich, clean and in good condition every way. The onion makes its growth early, before hot weather, and in this section if the buds are not well formed and the crops are not pretty well secured by the middle of July, it may be considered a failure. This shows the necessity of early planting, and a rich soil that will induce growth. The kind usually grown in this country for a general crop are the large red, a large, flat, dullish red onion bulbing well and producing a good crop, thought to be a little coarse, but a very good onion, and a few years ago about the only kind grown in this section. The large yellow, very much like the large red except in color. It was formerly called yellow Dutch. The Wethersfield red has somewhat superseded the large red. It is bright in color some earlier, and every way a good sort. The Danvers yellow is an excellent onion, smooth, pretty early, and growing bulbs readily. A white, foreign onion, white Portugal, is now somewhat extensively grown on account of its color. It does not usually bulb so readily as the others, though we have seen excellent crops under favorable circumstances. It has always been considered next to impossible to grow onions from seed in the South, the hot weather checking their growth before bulbs are formed. The usual method in the South is to grow from bulbs.

JUNE GRASS AND BLUE GRASS.

Some writers in the agricultural journals have been discussing the question of the identity of these two somewhat similar grasses. That they differ, is certain; and this difference is important practical, howeverslight it may be theoretically. Blue grass starts earlier in the spring than June grass does, starts more vigorously, yields more feed in a season for pasturage, and continues its growth much later. And for hay, it yields a larger and better crop. Moreover, it stands drouth better.

Aside from the difference in stem and seed stalk, and the difference in bulb and tuber, the Kentucky blue grass has a faculty of spreading by its roots, to the crowding out of all other grasses, not even excepting fine grass and quack. And, like white clover, it also has the peculiarity of coming in where it has never been sown. On the Western prairies, where the foot of man and his domesticated beast tread, little patches of green mats of blue grass mark bright spots of a peculiar green that one's eye may detect as far off as he would recognize a familiar friend; and that spot will spread and crowd out prairie grass and weeds, and other green spots will rise, far and near, to cheer and keepit company. Other grasses—even quack and June grass—don't do this.

But blue grass is significant in its name. The stalk near the base has a hue corresponding to this name, not found in the June or quack. On my own premises, within the same square foot, I have dug as intruding weeds, the past season, unmistakable quack grass, genuine June grass and veritable Kentucky blue grass, and no observing eye

could be at a loss to discern the difference and recognize each and all. The June grass and quack were old settlers; but the blue grass has never been sown or cultivated in the region, and is a new comer with me, without visible cause for its appearing, as it is found introducing itself into the West.

I would like to hear from *Rural* readers elsewhere on this unsown and unknown appearance of so welcome a stranger. Facts and not the theory that inaugurates it, are what is called for.

My soil is a shale or slaty clay—quite dissimilar to that of its native Kentucky or its adopted prairie aliment; and its peculiarities of early and late verdure and unrivalled richness for pasturage, and its driving out capacity over all inferior grasses, cannot fail to win for it the desire of dairymen and herdsmen to make its better acquaintance. —*Rural New Yorker*.

TWENTY YEARS' EXPERIENCE IN GROWING RED CLOVER AS A FORAGE AND RENOVATING CROP.

By Hon. A. A. Boyce, Loda, Wis.

For the last fifty years writers of agriculture, both in Europe and America, have given to red clover great prominence among farm crops, and within that time it has steadily increased in favor with the farmers of the United States. My experience with it, confirms me in the belief that red clover is the cheapest and best manure that we can apply to our lands—"the one thing needful" to restore the exhausted fertility of the grain fields of Wisconsin, and to those who intelligently cultivate and manage it, it will prove a mine of wealth.

Our yield of grain, the supplies of meat, wool, and dairy products, will depend largely on the clover plant and the place we give it among our crops.

The Hon. George Geddes, says: "There are two well defined and distinct varieties of red clover. The large clover is of slower growth. It does not start so soon in the spring. It has coarser stalks and fewer leaves than the small variety. It seldom produces two full crops in a season; that is a hay followed by a seed crop. This variety is preferred by many for pastures and manure. For a mixture of clover and timothy for meadows is preferable to the small variety, as it matures with the timothy.

The small variety of red clover commences its growth early in the spring; starts into growth so near after being fed off or being cut for hay. It has finer stalks with more branches and more leaves than the large kind. It blossoms nearly two weeks earlier, and when sown makes better hay than the large clover. It can be cut for hay by the middle of June, and after that mature a full seed crop the same season.

Quantity of Seed

The quantity of clover seed required to seed an acre depends much on the quality of seed and the time of sowing, but more on the condition of the soil as to fineness or mellowness so as to secure proper covering of the seed and perfect germination. The best results on my farm have followed sowing eight pounds of seed per acre; but thicker seeding is generally recommended and is advisable unless all the attending circumstances are favorable for perfect germination of the seed, and the protection of the young plants.

For several years I have practiced seeding with clover, nearly all the ground sown with wheat, oats and barley. I think it holds both the weeds and the chinch bugs in check, besides furnishing a large amount of cheap manure, even though it be ploughed under the following fall.

Value for Pasture.

The value of red clover for pastures is well understood. The only objection to it is that it occasionally produces hoven in cattle when turned on the fresh clover. To prevent or lessen the danger from hoven, the clover should be free from dew or wet when the cattle are first turned to pasture. Cattle should not be turned with empty stomachs. They should be gradually accustomed to the change of feed by keeping them in only a few minutes the first time, a little longer the next time, and so on till they are accustomed to the change. After that they may be allowed to remain in. I do not consider it safe at any time to turn cattle with empty stomachs on to fresh clover.

I know no other forage plant equal to red clover in nutritive qualities. The cheapest pork I ever made was from a lot of late fall pigs kept in thriving condition, and turned on the clover in the spring, pastured on clover entirely during the summer, fed corn a few weeks in the fall, and sold when about a year old. The cost of the pork was about three and one half cents per pound, calling the corn fed to the pigs worth forty cents per bushel.

Value of Clover Hay.

Writers on agricultural chemistry and the best practical farmers agree as to the superiority of the red clover hay, in nutritive qualities, over timothy or meadow hay. In most of the statements made they say that 75 pounds of red clover hay is equal in nutritive qualities to 100 pounds of meadow hay. These statements are disbelieved, especially by those who regard clover hay as a "humbug," and fit only for manure. But science and practical experiments in feeding have proved their truth.

Even greater difference in favor of the manure from clover hay over that made from timothy is given as the results of practical tests.

Joseph Harris, in one of his statements of the relative value of different manures says: "The manure made from a ton of clover hay was worth \$9.64; the manure made from a ton of timothy hay was worth \$6.43; and the manure made from a ton of corn was worth \$6.65."

Clover as a Renovating Crop.

The very great value of red clover as a renovating crop is admitted by all who have tried it. The system of rotation in crops that I have adopted with the view of increasing the fertility of the land, is to have the land in clover one year in three; follow the clover with corn, applying nearly all the manure made to the corn crop; follow the corn with spring grain and seed with clover; sometimes varying with two crops of small grain, wheat oats or barley after a clover crop.

When a crop of clover seed has been taken off with this system I think the land grows richer and the weeds are held in check by the frequent use of the cultivator and mowing machine.

HOW MANURES WERE COMPOSTED THIRTY YEARS AGO.

We are not too old to learn yet, and may ask some foolish questions, but perhaps our good friend J. M. Smith will excuse us if we do. I see he answers questions understandingly, and I do not believe it will be a very easy matter to swamp him by any questions we may ask.

I would like to tell how we used to make manure 28 years ago in the vicinity of Waltham, Mass., on a milk farm where there were kept 25 to 30 cows, 1 yoke of oxen 3 horses and from 4 to 6 of the best breed of pigs that could be found. Although we had no Poland-Chinas then, I think we had other breeds nearly as good. I will here say that farmers then, even in those days had farm buildings constructed for the purpose of making and saving all the manure possible. By the way, no man then was thought to be a farmer unless he had all the fixtures necessary to work the farm as to make farming pay.

Great quantities of muck were dug in the fall so as to be got at and hauled to the stables and yards in the winter months and mix with the manure. At the stables, yards and pens the manure that had accumulated through the summer and fall was all forked over and hauled out to the fields where wanted, and placed in large piles and heaps for use in the spring. The grounds under the stables and the yards were then covered from one foot to two feet in depth with muck so as to absorb all the manures from the stables.

The cow yard was made lowest in the middle so that all accumulations should be saved. The cows were stabled and fed in the summer seasons, that nothing in the way of manure should be lost. The profits from the pigs I should not dare here to estimate. They were kept in the cellar under the horse stable, fed regularly with two quarts of corn meal each per day and a pail of water. They were fit for the butcher at any time, and would weigh from 350 to 400 lbs. each at one year old, and then, what piles of manure were taken from the cellar, and that, too, of the best quality.

The question may be asked to what crops was the manure applied? It was applied to the corn ground, spread and plowed in. It was applied to the root crops, of which large quantities were grown. It was applied to grass grounds which in those days would produce from three to four tons of hay to the acre. It was applied to the orchard, seeded to clover, and that orchard of less than fifty trees would produce over 400 barrels of Baldwins and Greening apples that sold at that day in Boston market for \$1.00 per barrel. I will here state that no manure was allowed to be spread, or used upon the grounds or crops of that farm unless first composted with muck.

Large quantities of stable manures were yearly bought at the city stables at from \$4 to \$8 per cord and hauled to the farm and thrown upon the compost heap. The large Pennsylvania market wagon was not allowed to return home from the market empty.

I will here state that the receipts of that farm of 100 acres would foot up at \$5,000 yearly, of which amount the milk from 25 cows sold for \$2,000 at 6 cents per quart.

Now I have watched the farming operations of Ogden Farm, the Walks and Talks in the American Agriculturist, and the farming operations of John Johnstone, and some of the

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Hay. Chemistry and the question now is, what progress have we made? How far are we advanced in all the details of modern agriculture from what could be found in the New England States 30 years ago? M. A. H. Wis. in Western Farmer.

great lights of the great Northwest. The question now is, what progress have we made? How far are we advanced in all the details of modern agriculture from what could be found in the New England States 30 years ago? M. A. H. Wis. in Western Farmer.

MODIFIED ROTATIONS.

There is one important advantage in the permanent adoption of a rotation of crops on the farm, besides the benefits of the crops and soil, and the destruction or exclusion of weeds; namely, the facility with which every part of the plan is arranged and kept in regular order, like a smoothly running machine. The farm being divided into a certain number of nearly equal fields, and a well directed rotation, adapted to the farm, fixed upon, the owner can tell for twenty years to come just what any field shall have in it any year that may be named. He is not subjected to the trouble of planting every year what shall be in this field and what in that, nor the annoyance of discovering, perhaps that he has left one field or crop out of the arrangement, or placed it wrong; nor to confusion next year by what appears to be a good plan the present year.

And yet he shall ever be ready to alter his rotation whenever sufficient reason presents for a permanent change.

He will also find it very useful, without breaking up the general outlet, to modify the filling in as circumstances seem to require. For example, he may apply his manure to different crops; he may plough in autumn instead of spring; he may sow barley instead of oats after corn—and yet preserve the same general frame work of his system. The most commonly adopted rotation at the present day, in the Northern States, is—1, corn on sod; 2, barley or oats; 3, wheat and 4, meadow and pasture one, two, or more years. But the question, among others for example, occurs, shall we plow the sod in autumn for the corn the following year, or early in spring or just before planting? The answer must vary with circumstances. Just before planting is the most common practice, and it has the advantage of giving a fresh and moist soil for the seed, which generally springs up and gets the start of the young grass that follows. If ploughed two or three weeks in advance of planting, the grass might be two or three inches high by that time, and interfere seriously with the young corn. And yet there are some advantages in ploughing early. The sods rot sooner, and the decaying grass supplies food and gives an early impetus to the plants. If then, the farmer can afford a weekly mellowing of the surface of early inverted sod, thus keeping it mellow and clear of grass and weeds until planting time, he will be likely to have the best crop. But the work must be done right. A common harrow will not do it. It will not prevent the grass from springing up through the sod. But a good sharp steel tooth Shaver harrow will perform the work to perfection. A two-horse cultivator would answer, but the trouble is it will tear up the sod, unless it has been buried deeper than is good for the corn. No better preparation can be made for corn than sod ploughed early with its face kept clean and made mellow by Shares harrow, with the common harrow used between.

The kind of plough used has also something to do with the result. Some ploughs lap over the sod smoothly and beautifully, plastering its face with the moalboard as handsomely as a mason's trowel and (here follows the trouble), allowing it to dry as hard as a brick. Such a plow will not give good corn without a great deal of harrowing and pulverizing. There are other ploughs made in the country, and in different States, that possess the quality of thoroughly pulverizing the surface of the inverted sod in the process of turning it. These and no other should be employed for late ploughing, especially if the soil is strongly of clay. With light soils it is a matter of less importance.

Another question in connection with the time of ploughing is, whether it is best to invert the sod in autumn? This involves several considerations—one particularly, in relation to manuring. We find spreading manure in the autumn twice the value of spring manuring, as commonly performed. It may be applied and spread on the grass with greater facility than on the ploughed surface. After once spread, it should be left on the surface till spring, that rains and melting snows may carry down among the roots the soluble parts of the manure. If spread on a spring ploughed

surface, it cannot be so well diffused among the particles of the soil.

These remarks are all made on the supposition that the soil itself remains undisturbed, with its surface only pulverized for plastering. If the sod itself is to be broken up and made mellow, it will be best to plow in autumn, and the buried manure will be thus turned up and will intermix by the working in spring before planting time. We have tried breaking up and pulverizing the sod after early spring ploughing but there was not time enough for it to become well rotted, and there were too many lumps of dead turf left for convenience in planting and cultivating. The labor of the second ploughing is another objection, and we cannot recommend this practice for corn, however well it may sometimes prove for potatoes.

We should therefore "sum up" by recommending early spring ploughing, and subsequent working with Shares harrow, especially if a good pulverizing plough cannot be had, and the soil happens to be heavy; or later, with a light soil or with an implement that will give a mellow surface to the sod.

There are other modifications in the practice of this course of rotation which may be adopted according to circumstances. For example, suppose the soil has become by previous bad management infested with weeds. Many of these may be cleared out by a thorough and laborious cultivation of the corn, or the adoption of summer fallow after the corn, and to precede the wheat. Such a fallow is the cheapest most rapid and most thorough mode of rendering land clean, provided the work is closely attended to, and we have seen a field densely filled with Canada thistles, quack grass, milk weeds, and other perennials, as well as plenty of annual weeds completely extirpated in a single season by repeated ploughing and harrowing all the season through. It is true it might have been done with a hoe crop, but the labor would have been many fold to have had it done by hand; we have neither met with the farmer yet who would do it with sufficient thoroughness.

The summer fallow does not at all derange the course; it only leaves a blank between the corn and wheat, and the owner without his barley or oats.

The second crop in the rotation, that is the one following the corn, in common practice, is either oats or barley; oats, if the soil is rich and strong, or if manure can be applied after the oats are harvested, and barley, if the land is lighter. Joseph Harris, of the Moreton Farm, is very successful with a mixture of oats and peas, as a crop to precede the wheat. In some instances peas alone are sown, in others a crop of beans is raised. If it is feared the land is hardly rich enough for the wheat, it is an excellent and well-known practice to top-dress with rotted manure after the last ploughing in autumn, and before the wheat is sown; a given amount of manure thus going farther towards helping the wheat than in any other way, besides protecting it somewhat in winter, and assisting the germination and growth of the grass seed.

The course here given embraces five years, or it may be prolonged to six or seven years by allowing the field to lie longer to grass, as follows:—

- 1st year—Corn on sod, manured the previous autumn.
2nd year—Corn barley or oats, or oats and peas, or peas alone.
3rd year—Wheat seeded to clover.
4th year—Clover meadow.
5th year—Clover pastured, and manured in the autumn for corn.
This course will occupy five or six or seven years according to its modifications; or it may be changed and extended to eight years in the following rotation, which is nearly the same as that suggested by Mr. Harris in the Agriculturalist:—
1st year—Corn.
2nd year—Oats, barley, peas or fallow.
3rd year—Wheat seeded to clover.
4th year—Clover.
5th year—Clover ploughed in summer or early autumn, and fall fallowed.
6th year—Oats and peas, or barley, or peas alone.
7th year—Wheat seeded to clover.
8th year—Clover.—The Cultivator and Country Gentleman.

The Albany Country Gentleman says that the peach crop was destroyed in some parts of Western New York on the night of the 1st ultimo, the previous warm weather having swelled the buds.

LIME IN SOILS.

Lime is very abundant in nature, being found in all fertile soils; indeed, as it enters into the composition of every kind of plant, we may safely conclude that it is necessary to vegetation.

It is an oxide of the metal calcium, possessing basic properties; having a great affinity for moisture and carbonic acid, on exposure to the atmosphere it rapidly becomes a hydrate, and finally carbonate of lime, in which state it principally exists in soils, though it is also found as sulphate and phosphate. From the earliest time lime, either as carbonate or oxide, has formed an important dressing for all kinds of land; whenever new land is brought into cultivation, or old pastures broken up, quick-lime should be applied, whether the soil be stiff clay or light sand. We are better acquainted with the action of quick-lime than of the carbonate, owing to its having engaged more attention from the chemist; but it is reasonable to suppose that the action is similar in both cases, only much more rapid and effective in the former, and therefore its application is to be preferred. As much less is required, the expense of burning is compensated by the saving in labor.

Much difference of opinion still exists as to the action of lime; some chemists would limit its effects to vegetable matter only, others confine its action to the decomposition of mineral matters, while a third class look upon it principally as a manuring substance. We believe its value is due to all three causes. That lime has a most beneficial effect on inert vegetable matter is clear, from the advantages which follow its application to peaty soils; that inert vegetable matter exists in soils that have been long in cultivation and frequently manured is most certain; and that lime would in such cases prove as fertilizing as a dressing of manure seems reasonable to conclude; but of course as its effect is destructive, and in this case dependent upon the presence of vegetable matter, it can never be substituted for manure.

Its action consists in reducing to an available form those substances which have not been already absorbed by plants on account of their insoluble condition. This, it is now generally believed, is effected by the gradual reduction of the humus into its ultimate products, carbonic acid and water, and possible ammonia or nitric acid; the nitrogen of the atmosphere uniting with the hydrogen set free in its nascent state. During this process it is probable that various organic acids are formed, passing rapidly one into another without entering into plants as such.

Lime removes the acidity often found in vegetable soils, either by destroying the acid or combining with it to form an organic salt. Were the action of lime restricted to vegetable matter only, it could not fail to prove a most valuable application, but its relation to mineral matters in the soil is perhaps more important still. In most stiff soils the alkalies are found united with silica and alumina in certain proportions, mostly insoluble, and therefore, useless. Rain-water containing acid might gradually dissolve out portions sufficient for a natural condition, but inadequate to the artificial requirements of cultivation. Lime appears to possess the power of setting free the alkalies and magnesia from their insoluble condition, probably replacing them, and what seems rather extraordinary is that when these substances are added to the soil and would pass away too rapidly and be lost, by some means not yet clearly understood, some possess the property of fixing them as insoluble compounds, causing their union with those very substances from which it had previously displaced them. Any attempts at explanation of these remarkable changes would be out of place here; but should the present discoveries be confirmed by further investigation, a most important fact must follow, viz., the advantage of repeated applications of small quantities of lime, and the wastefulness of the old system of heavy dressings. Lime enters into the composition of most crops, and the quantity for this purpose is but small, and the natural supply in most soils so abundant, that we can hardly attribute the effects of its application to this cause.

From all these facts we should expect to find limestone soils a very fertile class, and when the other essential elements of fertility are present, such is the case. We are not certain that lime as carbonate acts in the same manner as in the caustic state; that its

application to soils, light and heavy, mineral and peaty, has been found beneficial is undoubted. Its influence may partly be ascribed to physical causes, making stiff clays more workable, sands more absorbent, and giving firmness to peaty soils.—Michigan Farmer.

OUR OLD PASTURES.

Few particular subjects are of more importance to the farmer than the renovating of old pastures. And although in some sections of the country considerable attention is being given to the subject; in others the farmers are not yet sufficiently awake to its importance, nor have they yet made much effort for the direct improvement of their old and exhausted pasture lands. It is however a branch of farming that, like a good many others, has been neglected too long—and it is now high time that neglected pastures received some care.

One great mania of the early settlers of this country was to cut down trees. They interfered with cultivation, they obstructed the view, they kept out the sun. So that the sharp axe did its work, and we are to-day mourning that our rough hill sides, unfitted for anything but the growth of forests, which it will take generations to replace, were stripped of their original growth to form pastures where our early farmers might graze their cattle. These old pastures that have been grazed for fifty years, are in many cases very rocky, full of cradle knolls, covered with moss and growing up with bushes, brakes and useless weeds. What are such pastures good for but to be left to themselves and grow up again to trees, that they may furnish timber and fuel for succeeding owners? The sooner they are set apart for such service, the better it will be for our farming, and the greater will be the benefit that the present will confer upon coming generations.

Something has been done, and much it is true may be done in the renovation of pastures that have been long grazed, by cutting out the bushes, by sowing on plaster, by pasturing with sheep, and other like means. And if efforts of this kind are spent upon an old pasture so rough and rocky that it cannot be ploughed, they had better be put forth in other directions. Pastures that cannot be ploughed and reseeded must certainly be left to other uses than grazing;—unless it be the grazing of sheep.

For many years the opinion was most vigorously maintained that pastures should never be ploughed, for if the sward was once broken it would never again become so compact as to form a good grazing turf. But this opinion has been found incorrect. Pastures may be broken, planted to potatoes, the fall the potatoes are harvested ploughed lightly, and the next spring sown to barley and seeded down to grazing—and a good sward at once obtained and maintained for many years. The grass in our old pastures are chiefly wild grasses, and have found their way in by accident rather than design. In re-seeding a pasture it is very important to have a large quantity of seed of those varieties of grasses that flower successively at different periods, and that are well adapted to grazing. The following mixture has been recommended:—Meadow foxtail, 2 lbs.; orchard grass, 6 lbs.; sweet-scented vernal grass, 1 lb.; meadow fescue, 2 lbs.; red-top, 2 lbs.; Kentucky blue grass; 4 lbs.; Italian rye grass, 4 lbs.; perennial grass, 6 lbs. timothy, 3 lbs.; rough stalked meadow grass, 2 lbs.; perennial clover, 3 lbs.; white clover, 5 lbs.;—or a total of 40 pounds of seed per acre, which would give the enormous number of 54,000,000 seeds, or eight seeds to every square inch of ground. Who doubts that this would, in a favourable season, produce a good, thick, permanent sward—and that cattle would graze from it in preference to the bound out turf of the old pasture?

With the extension of dairy husbandry, there is imperative need of better pastures and of more attention to the improvement, ploughing and re-stalking of our grazing lands. Cold, coarse grasses will keep animals alive, and may possibly make beef—but sweet, nutritious grasses are needed for the production of milk. And from the fact that cows yield milk, pastures fed wholly or chiefly by milch cows are sooner exhausted than those fed by other animals. It is necessary therefore that our farmers give more attention to this subject, and that their clubs and assemblies discuss the best methods of improving, renovating or re-seeding their pasture lands; and be ready the coming season to put the same into practical execution.—Main Farmer.



Poultry Yard

BUFF COCHIN FOWLS,—THE GUELPH POULTRY SHOW.

We paid a visit to the Show on Thursday, the 8th of March. The display of fowls was the best we have ever seen in Canada. We had not previously attended the Spring exhibition. The birds are now in their prime; no straggling dirty old feathers, or featherless spots are to be seen at the fall shows; the birds at that season have not the fresh, lively appearance displayed at the Spring exhibitions. The Show was held in the Drill Shed, being very conveniently situated, and well adapted for the purpose. The display of poultry was large; no one could pass through the exhibition without admiring some of the varieties. The coops were well arranged, and were of a uniform size. We understand that the townspeople of Guelph have subscribed \$700 towards getting up the Show. An entrance fee of 50c for each pair of birds was charged, also ten cents for coops; visitors were charged 25 cents admission, but the attendance was rather slim, we do not think that at any one period during the day there were more than 12 in at any one time, in the evening there might have been 20, we do not think we are under-estimating the number. We were informed that the previous day there had not been over 20 in the Exhibition at one time. The previous day visitors were hard to be found, we mean paying visitors. We think all the business, pleasure, &c., might have easily been condensed into one day—it would not have crowded it much either.

We think this show was like the mansparking with goggles on; he kept up a pretty good winking, and felt a love for the girl, but she failed to observe it. The Guelph people knew they were going to have a show, but scarcely any one else did, for the reason that they did not advertise it in the agricultural papers.

According to the rules of the Association, the price was attached to each coop of birds at the time of entering, thus any one could see the price demanded as they passed the coops. This plan appeared to give satisfaction, but most of them had very high prices affixed, many were marked \$1, \$2 and \$3 a pair, and some were marked above these rates, but no one purchased any at the above figures.

JOHN WELD paid the highest prices for any that were sold, he purchased the first prize Buff Cochins, and the Dark Brahma cock that took the first prize at the Provincial Exhibition.

The poultry men have formed a new Association; the charge for membership is \$2.

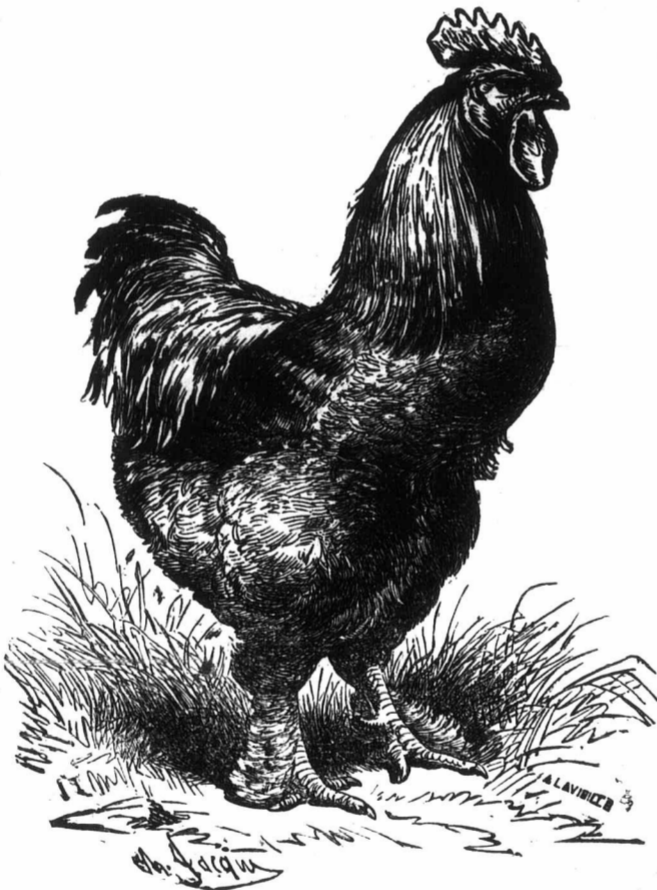
HENS EATING FEATHERS.

I very often find in our poultry and agricultural journals items on hens eating feathers, and find most of them of one opinion, and

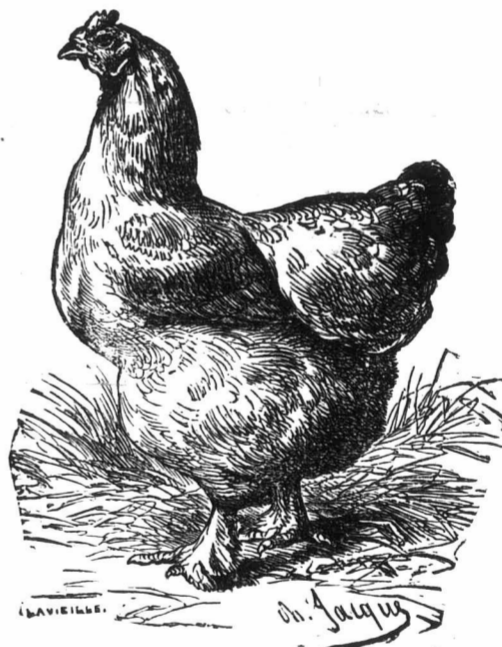
that is that they must have all the raw beef and liver they want, also green cabbage. The animal food is good for them, given in small quantity and not very often, and when shut up in the hen-house in winter they will eat. But neither animal nor green vegetable food is a preventative of feather eating.

You will never find a hen eating feathers if she has any employment. Give her something to do, and you will find she will not eat them; but confine fowls and give them no employment but to eat and drink, and you will soon find that they will get together in some corner of their house, and then, if you do not look out, they will commence picking feathers. I was troubled with it in my yard two years ago, and it was fearful to see how they would stand and allow their feathers to be picked off without any resistance. My birds are pure light Brahmans, and it was a great detriment to the sale of my fowls.

I commenced to experiment in a small way, and soon found a remedy—as follows: I must keep them employed, and to do so I got a load of sawdust and put about four inches on the floor, and then sowed oats on it and raked it into the sawdust, and it was not long before they found them out, and to work they went, scratching and picking, forgetting all about the feathers. Go into the hen-house when I will, I always find them



BUFF COCHIN FOWLS.



at work, and by this plan I made a cure of hens eating feathers.

Sawdust is an absorbent, and at the same time it keeps my Brahmans clean and white. I sow the oats on the sawdust every morning, and when it gets very dirty I renew it. If people who keep poultry would take a little pains of this sort they would not be troubled with feather eating.—Poultry World.

THE NARRAGANSETT TURKEY.

This is one of the largest and hardiest breed of turkeys. It is raised in the greatest perfection in South-eastern Connecticut and Rhode Island, a region famous for fine poultry. Turkeys do remarkably well along the seaboard, and almost every farmer remote from the villages has his flock. It is not uncommon to find flocks of from one to two hundred birds, the product of about a dozen hens, under the skillful management of a poultry woman or boy. Of course, they do some damage to grain; but this evil is counterbalanced by the enormous destruction of insects secured. From June to September they subsist mainly upon grasshoppers, crickets, and other insects, ranging for the most part in the pastures and woodlands. They are fattened in October and November, and it is not uncommon for a lot of early chicks to reach the average weight of fourteen

pounds, dressed at thanksgiving or Christmas. The common run of turkeys sent to New York market do not average more than eight or nine pounds. The Narragansett is a very large healthy bird, and has been bred for size for many generations. Most of the birds sold in Boston and Providence markets under the name of Rhode Island turkeys, or Extra No 1, are of this breed. The farmers are careful in selection of their breeding stock, taking young gobblers that will weigh from twenty-two to twenty-eight pounds, and hens that will weigh from twelve to sixteen. Where the birds are kept over gobblers will sometimes dress thirty-two to thirty-four pounds. For making poultry for market, the Narragansett have no superior. The prevailing colors are white and black with a large patch of white upon the wing bow, giving the general impression of a grey bird. They are not uniform in the shading, but with a little painstaking, could be bred to a feather.—W. Clift in Poultry World.

BREEDS OF POULTRY.

Isaac Lynde, of Ohio, writing to the Poultry World, describes an experiment tried by him last season. On the 1st of September he took ten pullets, each of five breeds, each within a week of being six months old, and placed them in yards forty feet square, with comfortable houses. For the next six months he kept an account of their food and egg production, with the following results:

The Dark Brahmans ate 369 1/2 quarts of corn, oats and wheat screenings, laid 605 eggs and weighed seventy pounds.

The Buff Cochins ate 406 quarts, laid 591 eggs and weighed seventy-three pounds.

The Grey Dorkings ate 309 1/2 quarts, laid 524 eggs and weighed fifty-nine and a half pounds.

The Houdans ate 214 1/2 quarts, laid 783 eggs, and weighed forty-five and a half pounds.

The Leghorns ate 231 1/2 quarts, laid 807 eggs, and weighed thirty-six and a half pounds.

It will be seen by the above comparison that the Leghorns laid the greatest number of eggs with the smallest weight.

THE BRAHMAS OF 1872.

L. Wright, the well-known writer on poultry, remarks on the poultry shown at the exhibition of the season of 1872 in an article to the London Cottage Gardener:—

"Do not let anybody laugh if I begin with my old pets the Brahmans, for they have now headed all classes in point of numbers, and are more kept than any other two breeds put together. I do not get tired of them, and I still think a cock of the best type to be the noblest in appearance of any fowl we have. He has the dignity of the Cochins and the grace and springy gait of the Game. Many will laugh at this, but I can call to mind more than one grand bird which, if you seized one of its hens, would be on you instantly, and which would certainly thrash any other bird but a Game cock, and I well remember once selling a fine young cockerel which killed a large rat in the roosting-

house the very first time he had arrived at his new quarters. I stick by my Brahmans, and grow fonder of them every year. With the Darks I must say that I have not been satisfied this year. The pencilling of the average prize pullets has not been what it was in 1871, and there has been a growing tendency in them to overhanging, twisted, shapeless combs and sour-looking heads, which to a true Brahma fancier are both abominations. Hens have shown these faults of comb still more plainly, and I would state for the warning of breeders and judges that my experience has proved conclusively that it arises chiefly from over feeding when young, especially with meat, in order to get more brute size, and I fear it will continue so long as mere size can win. I would not be misunderstood on this point. If size be really bred in a bird and attained by such feeding on good, plain diet as simply maintains perfect health and appetite, it is a great point; but size forced into any given bird invariably destroys all the finer points that very bird would otherwise have shown. It is not by extra feeding that the Americans produce their enormous Light Brahmans, but by carefully selecting breeders with large frames. In cocks, also, combs have been getting large, and I have also been sorry to see the heavy Cochins style of bird again increasing at various shows. The objectionable yellow color seems on the increase, and needs to be very carefully guarded against. The only remark I have to add is that it seems now impossible to win with any cocks but the Black-breasted. The tendency was plainly that way last season, but this year the idea seems quite fixed. I admit that these birds look more showy, but I regret, notwithstanding, this hard and fast line, for the very dark blue slightly mottled breasted birds, on the whole, it is, perhaps, combs that need more attention at present in this variety.

"Of the Light Brahmans, on the contrary, under compels me to chronicle a most gratifying and marked advance in quality.— I do not so much refer to prize birds, not having seen any hens or pullets superior to those Mr. Crook bred several years since, and which are still winning in other hands, but the improvements on the general run of the classes has been extraordinary—at least half the pens exhibited show now very fair fluff and cushion, and leg feather, too, is coming back again. The cocks, however, are not so good as the hens. The number of birds shown with disordered wings this season was frightful, and needs very severe measures, for the most beautiful bird, if he has this blemish (in most cases quite preventable when taken in time), is not fit to look at.

The male sex of this bird is also showing more of that disgusting dirty straw color, and the correct color in the hackles is, in my opinion, scarcer than last year. Still, even the cocks have gained in size, saddle and combs, and, with careful attention to the faults I have named, I shall almost expect to see a few cups wrested next season from the hitherto victorious dark variety. Size in both sexes has advanced perceptibly in this breed, owing, in several cases within my own knowledge, to an American cross, which I believe I was the first to recommend for that purpose. Here I may, perhaps, recall the fact that, when I stated large birds, weighing 14 to 16 pounds for cocks and 10 to 12 pounds for hens, were to be found in America, certain would-be authorities, who knew a great deal less than they pretended, very discourteously implied with sufficient plainness that my statement was a mere 'cram.' Well, within the last season, an imported cock, weighing no less than 18 pounds, and a pair of hens, weighing nearly 13 pounds each, have been shown, and perhaps that may convince those to whom my assertion was not sufficient. On the whole, size seems in a very fair way to be reached, and the points to be looked to in Lights at present are chiefly still more general leg feather in both sexes and greater purity of

white and I would agree that by the present being generally taken up by kept up be kept up fowl can be

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KEEPING

Colonel of Agriculture manure is Peruvian gains more a hen will kinds of g during the two bu-the 120 lbs. t enough to result of t bushels — pounds of from 100 f amount to the above safe, and suffi-cient be seen t fowls will for five a has been t plying to hill the m mixed wit portion of three part a better joining a experiment nary dress

COMPET

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While to wheat some like someha taken fro farmer in ago. He planted the prod second cr ferent pa small qu to determ

white and intensity of black in the cocks. I would again state, as I have done before, that by those who desire to keep Brahmas for their economic qualities, the Light is at the present on the average to be preferred, being generally a better layer of larger eggs. I have been glad to see how many have lately taken up this variety, and, where it can be kept moderately clean, no more beautiful fowl can be had."

BANTAMS.

The diminutive breeds denominated Bantams, from some totally erroneous supposition that they had been driven from the place bearing that name, have always been popular amongst poultry keepers, and the space before their pens is nearly always thronged at a good show. Many of them have their good point as layers, and for the food they cost, are by no means unprofitable to keep; but all have one conspicuous merit, at least—they can be kept in small places, and in neighborhoods where no large fowls could be kept at all. They are content with small space as well as small meals, and even their little crow does not annoy neighbors who would quickly repeat the teapot storm of the celebrated "great peacock case," did the amateur keep a sonorous rooster of the orthodox persuasion. And if their eggs are small—well, most delicious things are small.

KEEPING POULTRY TO ENRICH LANDS.

Colonel Waring, in his "Elements of Agriculture," says:—Poultry manure is nearly equal in value to Peruvian guano, except that it contains more water. If granted that a hen will consume, of the different kinds of grain, meat and vegetables during the year the equivalent of two bushels of corn, which weigh 120 lbs., then it is certainly low enough to place the excrement—the result of the digestion of these two bushels—as equivalent to fifteen pounds of guano. As the manure from 100 fowls during a year would amount to 1,500 lbs. of guano, taking the above supposition as at least safe, and as 300 pounds is ordinarily sufficient for an acre of corn, it will be seen that the manure from 100 fowls will make compost enough for five acres. The experiment has been tried by the writer, of applying to one acre of corn in the hill the manure of twenty one hens mixed with swamp muck, in the proportion of one part hen manure and three parts muck, and the result was a better crop than upon the adjoining acre, enriched, for sake of experimenting, with a good fair ordinary dressing of stable manure.

COMPETITION IN THE POULTRY MARKET.

Seth Green now proposes frog culture for food. He says: "We have many stagnant pools about the country that are useless in their present state, and, believing that there is nothing made in vain, I do not know of any other use for them than to make them in to frog ponds. I also believe it would make the man wealthy who could raise a million frogs and get them to market. All I would claim is giving him two years' experience in experimenting."

A NEW CEREAL.

A new cereal has been grown in Oregon which has puzzled the farmers, as it is unlike any grain with which they are familiar. From seven to ten stalks grow from one root to a height of about four feet, and these stalks, or straws, are thin and hard. The radicals are tough and spread widely. The heads are six inches in length and covered with a heavy beard, each filament being five inches long. The grain is double the length of a kernel of wheat, and instead of being firm and compact, is hollow, the cavity containing glutinous matter.

While the grain bears a closer resemblance to wheat than to anything else, the straw looks more like that of rye or barley. Its origin is somewhat peculiar, the first grain having been taken from the stomach of a wild goose by a farmer in Tillamook county, nearly three years ago. He was struck with its appearance and planted it, and the succeeding season sowed the product. He distributed a portion of the second crop among a few of his friends in different parts of the State, who this year raised small quantities. It will require another year to determine the value of the grain.

Patrons of Husbandry.

Hereafter we intend to devote a column to communications and other items of interest upon the Granges. Our space does not permit the publication of a full list of the officers. Let us hear how your Granges prosper, because if there is anything that can benefit the farmers of our Dominion we wish to know all about it.

Dunham, P. Q., March 9, 1874.

DUNHAM GRANGE—No. 7.

R. L. Galer.....W. Master
B. Terril.....W. Secretary

I see that you are aware that we have a few Granges organized in the Province of Quebec. Yes, we have, and are looking for the Order to start in Ontario, and flourish as it deserves. Ignorance and superstition is what we have to contend with here. In our individual Grange we can not boast of numbers, but it is a consolation to know that we

Danville, P. Q., March 9th, 1874.

SHIPTON GRANGE—No. 4.

T. Leet.....Worthy Master
R. M. J. Bernard.....Secretary

Our Grange has received a considerable increase of members, and I think will in a little time be as strong as any in Quebec Province. Our meetings are on each Saturday in the month, on or before the full of the moon.

Yours, &c.,
R. M. J. BERNARD.

Frelighsburg, P. Q., March 14, 1874.

Frelighsburg Grange is in a very flourishing condition, with a membership of thirty-five.

C. C. Abbott.....W. Master
Zeno Whitman.....W. Secretary

Yours truly,
C. C. ABBOTT.

Abbott's Corner, March 11, 1874.

Maple Grange was organized January 16th last; twenty-four members.

WINCHESTER GRANGE, WINCHESTER P. Q.

Jos. L. Holmes.....W. Master
Cyrus A. Cass.....W. Secretary

The Apiary.

KILLING BEES.

SIR,—I enclose for your inspection a specimen of—well, I don't know what name to give it, but I blame them for killing off my bees. The other day I found my last hive dead, and any amount of honey in it, also, plenty of these little animals (not moths, as you will see). The comb was much chipped, and many of the bees half or more eaten up. No mice got in, so these animals undoubtedly done it. When found they are generally in one of the cells, busy eating.

J. W. JOHNSTON.

Campbellford, March 2nd, 1874.

[We have shown the specimen to Mr. W. Saunders, the editor of the *Entomologist*. He informs us that it is a species of the Cricket tribe. If any other subscribers have had their bees damaged by this insect, we should like to hear from them regarding it. Mr. Saunders kindly furnished us the following description with a plan for their destruction.—Ed. F. A.]

This insect belongs to the order Orthoptera, and is a species of Biatta. It is nearly allied to the common cockroach, and may very possibly be the author of the mischief you refer to, although we cannot find any published account of any species injurious to bee-hives. Most of the insects in the family to which this belongs are noted for their destructive powers, eating almost everything that comes in their way.

A simple trap is recommended for catching these creatures, consisting of a small box with a hole in the top, of the size to take the neck of a small bottle. Within this box is placed some food attractive to them, such as sweetened bread and butter or cheese.—They enter by the hole and cannot come out again.

Agriculture in Ashantee

The accompanying illustration of the cultivator at work in Ashantee, will be looked on with greater interest, now that that far distant kingdom is associated with the most recent triumphs of British arms. Canadians will feel still more deeply interested in the country and the defeat of its warriors, because Sir Garnet Wolseley, the British General, has already distinguished himself in our own Dominion. From the point of debarkation on the

Gold Coast to Coomassie, the Capitol, is one continuous forest, principally marsh, the malaria of which was even more dreaded by the British soldiers than the forces of King Koffee, who lay in ambush along the route. After leaving the Capitol, the country improves, the land is cultivated, and good roads lead from the Capitol to large rich towns in the interior. This fertile arable country is the scene of our illustration. The question of deep ploughing is not thought of by the Ashantee farmer. Shallow ploughing for light soils, in a climate where heavy rains alternate with strong solar heat, is the native principal, and it is the correct one.

A REMARKABLE CROP OF GRASS.

Capt. McLean, the well known shipping master at the port of St. John, is a gentleman who takes an active interest in agricultural matters, and lives about a mile from the city. His place is five acres in extent, and he takes a good deal of pains to coax old mother earth to bestow upon him exceptional favors. One of these was conferred last year, it being four tons and fourteen hundred pounds of English hay to the acre. When the hay was cured and ready for storage it was sold to a party in the city, and weighed on the city scales.



AGRICULTURE IN ASHANTEE.

have some of the most intelligent and wealthy farmers inside the gate. The Grange is a sort of lecture-room, where the farmer can assemble with his wife, and his sons and daughters can come along with him. Here he can impart his farming experience to others, and in return receive theirs; bits of valuable information will thus be picked up that can be put to immediate use.

Two heads are better than one—so says the proverb—and if two, how much more two hundred; how much more two thousand, or better, all the farmers in the Dominion of Canada and the United States. One of the chief objects of the Grange is to disseminate agricultural information; to keep the farmer posted on new and valuable machinery, improved methods of tillage—in a word, to leave no means unutilized to make him a successful farmer. The watchword, then, is organize! organize!!

Let Granges be formed in every township in the Dominion. When we get thoroughly organized, from a Dominion and a Provincial down to the subordinate Granges—then witness the good effect.

H. H. Hibbard.....W. Master
Levi R. Whitman.....W. Secretary

The Granges in this vicinity are prospering finely, and we are looking forward, anticipating that a Provincial Grange will be organized; and if our neighbor farmers in Ontario will get their eyes open and throw aside this middleman, and assist us in organizing Granges, we will have a Provincial Grange without fail, and then the farmer will be looked up to (instead of down to) as the first man in the country.

Yours, &c.,
GRANGER.

GRANGES IN ONTARIO.

LONGUEUIL GRANGE, L'ORIGINAL.

J. F. Cass.....W. Master
C. A. Cass.....W. Secretary

ADVANCE GRANGE, WESTMINSTER.

Wm. M. Beattie.....W. Master
John H. Elliott.....W. Secretary



STOCK & DAIRY

N. Dickey, Ed.

—BY ALEXANDER HYDE.

It would seem that in this stage of the world's progress in agriculture, that the idea of breeding from any other than thoroughbred stallions, bulls, bucks, and boars, would be obsolete. But such is not the case. So far as horses are concerned, a good degree of attention is paid to blood. Horses are large animals, and their points are so prominent that a wayfaring man, though a fool, cannot mistake them. If a farmer wishes to raise a roadster, he does not put his mare to a jackass or a Percheron, but to a Morgan or Hambletonian. He sees—and seeing is believing—that the characteristics of the sire are transmitted with a good degree of certainty to the foal, and that the selection of the sire often makes hundreds of dollars difference in the value of the offspring.

As we descend the stock scale, we find that as the size and value of the animal descends, less regard is paid to the blood, though the thoroughbred principle holds just as true of the inferior as of the superior animals. Thus a scrub bull will be used by a man who would discard the idea of breeding from an ordinary stallion, and still less care is exercised with regard to bucks and boars. Whether this is the result of ignorance or heedlessness, we do not know, but it is all wrong. "There is a great deal in the breed," as a good old divine once said to us in our youth. He had reference to featherless bipeds as Plato defined men to be, but the maxim applies with equal truth to all animals, whether biped or quadruped, feathered or featherless, horned or hornless.

We would by no means advocate the doctrine that farmers should raise none but thoroughbred stock. The breedings of thoroughbreds is a trade of itself, and requires a degree of education, care and capital which we do not expect to find in every farmer. There would be some sorry failures if every farmer should undertake to do what Mr. Mali, of Stockbridge, Mass., is doing for horses, or what Mr. Campbell, of York Mills, is doing for cattle, or what Mr. Hammond, of Vermont, did for sheep. But what every farmer can do with great certainty of success, no matter what kind of stock he keeps, is to breed only from thoroughbred sires. These can be purchased from those who have capital and capacity, and who make a speciality of breeding thoroughbreds, or the mares, cows and sows can be driven to those who own full blooded stock. Grade animals for all practical purposes, breeding excepted, are often as good, and sometimes better, than thoroughbreds. It is astonishing how soon the character of the stock can be improved by using only full blooded sires. Some of the best herds of cattle we have ever seen never had a thoroughbred dam among them, but by the persistent use of the pure blood sires, have been raised to such a degree of excellence that a connoisseur would pronounce them thoroughbreds. Such notoriously is the case with the herds of the Messrs. Anderson and the Messrs. Wells, of Shelburne, Mass., and the excellence of many of our native cows, so-called, can be traced to a cross with some blooded stock. The effect of such a cross is often seen in the third or fourth generation, and very possibly may effect the thousandth. Theoretically, it doubtless does, but we might need magnifying spectacles of large power to discern it.

"If like produces like, why may we not breed from good specimens of native stock, or from good grade animals?" This is a question often asked, and has been often answered but the answer is either not understood or it fails to convince. The simple truth is that in order to be certain of the character of the progeny, the characteristics which we wish to propagate must have come down in a long line of ancestry. A grade bull of superior points may reproduce these points and he may not, but a thoroughbred is sure to impress himself upon his progeny. So settled is this principle, from the observation of many close observers for many years, that it is folly to question it. Nature sports sometimes, both in the animal and vegetable kingdoms, but the sporting rarely happens in regular lineal descent. It is only when the regular line is broken that we look for sports. Thus a thoroughbred wild cherry will reproduce its kind with the same certainty that the sun rises day after day; but plant the pit of a black Tartarian, and you may get this variety or some other, as it may chance. Now our native herds are a mongrel race. They are the result of the miscegenation of Downs, Durhams, Danish, Dutch, and we know not now many other herds, and of course, are greatly inclined to sporting, and is no wonder that in our native cattle we find all colors, red, white, and black, spotted, speckled and brindled, and all kinds of form, size and quality. Let those who will breed from such stock. A prudent man foreseeing the consequences, will select a thoroughbred when he chooses a mate for himself or a mate for his animals.

"How many generations does it take to produce a thoroughbred?" is another question often asked us. We must answer it, Yankee fashion, by asking another: How many years must a boy live to become a man? Precisely where the dividing line is between boyhood and manhood it is difficult to tell, and is equally difficult to say where the grade ceases and the thoroughbred commences. Mr. Anderson has been breeding from thoroughbred for nearly two score years, and his herd is splendid. He pronounces it thoroughbred. Others would differ from him. It is a safe principle to lay down that the larger the line of descent, the more thorough is the breed, and the more certainly can we rely upon its propagation.

We are pretty well satisfied that one great reason why farmers do not patronize thoroughbreds more is the cost of service. A progressive farmer purchases a thoroughbred bull, thinking that his neighbors will be glad give him some extra for the use of his extra animal, but he is generally disappointed. As long as they have a scrub of their own, or can hire one for a dollar, they will not pay two dollars for the use of a thoroughbred. This is a penny wise and a pound-foolish policy. The progressive farmer should not, however be discouraged. If he has only a moderate number of cows of his own, he will be sure of good interest on his outlay, and his neighbors will by and by be convinced that blood tells. In this town of Middlefield Hampshire County of Mass., one thoroughbred Durham bull, the Roan Duke, so brought up the character of the stock that its valuation was increased thousands of dollars, and after serving his day and generation in that town he did a similar service for the town of Shelburne.

What one bull has done another can do, and the same general principles of breeding hold good with all kinds of animals. A Suffolk boar, to our certain knowledge, will improve the character of the swine of a neighborhood, as a Durham bull does that of the cattle.—*N. Y. Times.*

STOCK BREEDING.—THE IMPORTANCE OF GOOD BLOOD AND GOOD MANAGEMENT.

BY T. C. JONES, DELAWARE, OHIO.

If anything can be regarded as settled in the theory and practice of American agriculture, it is that, except in the immediate vicinity of large towns and cities, and possibly on the cotton and sugar lands of the South, the business cannot be made profitable without including the growing or feeding of stock; which is found to be indispensable to the maintenance of the fertility of the soil and the success of that mixed system of husbandry without which we have no protection against the disastrous effects of low prices and unfavourable seasons upon particular crops or products. The opinion, therefore which so generally prevails, that stock growing must be abandoned in the older States, for the reason that their high-priced land cannot compete with the cheaper lands of the new States and Territories, is manifestly erroneous; because, whatever changes may be required in the practice of agriculture in the older sections, in view of the competition of the rich corn and grass lands which by a mistaken policy are being forced into occupancy in advance of the actual necessities of the people, it seems obvious that so long as the land is used for the production of crops, the grazing and feeding of live stock cannot be dispensed with.

This is demonstrated by the practice of the farmers of Great Britain, who notwithstanding the high price of land and of all varieties of tillage crops, pay more attention to stock-breeding than any other people in the world. The course of agriculture in our own country teaches the same lesson. I remember the time when the feeders of the Scioto, Valley grazed their cattle on the prairies of Illinois; and predicted that in a few years this great State, with its matchless soil, would be able to raise cattle enough to break down prices so as to render the business unproductive in the old States, just as we now hear the prediction that Texas and the Territories will soon grow the beef for the whole United States. But what have been the actual facts? Illinois, though surpassing the most sanguine expectations as a corn and grass producing State, had, according to the last census, less than one hundred and fifty millions of dollars invested in live stock, while the old State of New York had nearly one hundred and seventy-six millions. The live stock of Missouri is reported as worth eighty four millions, while that of the old Keystone State is set down at more than one hundred and fifteen millions, and Ohio at over one hundred and twenty millions. Texas, with all its advantages as a grazing country,

and an extent of country equal to a half-dozen of the old states, has only 37 millions in live stock, while Michigan has nearly 50 millions.

It is also to be observed that while the Western States, excepting Texas, are rapidly increasing in live stock, as in all other products of agriculture, the older States are also making very respectable progress. Thus, while Illinois between 1860 and 1870 added 77 millions to the value of her live stock New York during the same period added 73 millions. The increase of Pennsylvania was 46 millions, while in Missouri it was only 31 millions.

These facts are quite significant as indicating the prominence which this great interest has and must continue to maintain, in American agriculture. It is therefore safe to assume that in the future, as in the past, the prosperous farmer will be the man who handles most judiciously his live stock; for it is unquestionably true that while this branch of industry is, when properly managed, the most profitable, as it is the most interesting, connected with our vocation, it is the most disastrous unprofitable when the management is bad.

For example, a man who allows his growing stock, say cattle, pigs, or sheep, to run down during winter, so that instead of gaining, they lose in weight, will lose its entire winter's keep, because his animals are worth less in the spring than they were the previous fall. And so, the man who buys a lot of badly formed scrub cattle, because they cost less than good ones, will lose a heavy percentage, because they will not "lay on" flesh as well-bred cattle will on the same feed; and when brought to market they will have to be sold at least 25 per cent. less per 100 lbs. on account of their inferior quality and weight.

If for breeding or milk cows inferior animals and inferior blood are procured, the result will be still more disastrous. If we select a good cow that will give a fair quantity of good milk, and of such form and blood that her calves will be worth raising, and that can be converted into a good carcass of beef when no longer wanted for breeding or for milk, we shall have made the most profitable investment that pertains to legitimate agriculture; while a cow with qualities the reverse of all these will be the most unprofitable thing that could be selected. The same observations will apply to stock-breeding in all its branches. "Blood will tell"—if you give it a chance; but an ill-bred and ill-formed animal will usually "eat his head off" under the best management.

It was in view of this undeniable fact that the great Bukewell insisted that everything depended on blood. You must have a good sort, and having this, reserve only the best for breeding. Insist upon "the survival of the fittest" only for breeding purposes, and that if you feed well, so that your young stock, is always kept in a thriving condition, you will maintain the excellence of your stock and insure satisfactory profits from a branch of industry that is as interesting to men of the highest culture and refinement as it is essential to the daily wants of the world.—*American Agriculturist.*

BRAN AS A FEED.

Bran, (wheat bran,) is largely used as a feed for stock. It is largely used because it is largely (and cheaply) made and really contains some substance that benefits the animal, the real grain substance—in other words, flour in a coarser state. So far, it is good, and answers the purpose of grain, or better, meal. But the cost of the grain, which is a large portion of the bran, is of no use, only so far as it benefits the manure heap. It is indigestible. It is more; it irritates the stomach and intestines; sets the bowels in motion, ending, if continued, in the scours, great weakness, and sometimes death to the animals. Horses, which are the most sensitive in this respect, are oftenest the victims. Bran mashes given largely have resulted in this way. A cow is less susceptible, and hence will eat bran (in slop,) with comparative impunity, and with the benefit which is derived from the nutritive properties of the bran, which when taken in considerable quantities, has a favourable effect. Of course excess must be avoided. To feed largely of bran with roots or pumpkins will not do, as there is no chance for remastication, the fine material going at once to the fourth stomach; and the irritating effect of the bran will take place unhindered. But mixed with coarse fodder, there will be but little, comparatively, coming in contact with the

lining coat of the *prima via* in most of its course, being mixed with the bulking material, which will go through the regular process of proper retention and re-chewing.

Bran, then, given short of an injurious (over-loosening) action of the bowels, is a benefit—much more to cattle than to horses. It should not be used as a feed for horses at all, only medicinally, to give activity to the bowels, care being taken never to carry it to excess, as it is a characteristic of the horse to readily sink into weakness on the supervision of disease, and especially when the great central duct with its accompanying viscera is concerned. Where the bowels are inactive it certainly may be made a benefit by giving ease to the discharges and animation to the animal. But beyond this let it in no case be carried. When grain is fed somewhat largely, bran should never be given, as grain answers the purpose of keeping the bowels in good condition. Fed on early cut well-crushed hay, when there is lethargy of the intestinal functions, the necessary action will as soon be restored and sustained better than if bran or any other aliment or medicine be given. Such hay, when cut quite green, has the effect somewhat of grass, so that here in a regular, natural feed, a remedy is found superior to all specific drugs and washes put together. For sheep and young stock a little bran fed is well disposed of. There is material in it for forming the bones, muscles, &c. But it is best adapted to the milk cow fed with coarse fodder. An excellent way, and perhaps the best, is to mix with it cut straw or hay. If the whole is moistened and heated, or steamed, all the better. It also affords a cheap as well as nutritious feed, the more so if good hay is used instead of straw. In no case should bran be given to that extent that it produces the scours, as in this case it is doubtless brought on by mechanical effect resulting in inflammation making the case serious.—*Cor. Utica Herald.*

CUTTING FEED.

In reply to a correspondent, the *North British Agriculturist* says: "The expenses of chaff cutting and pulping, and subsequently mixing the dry food and roots, must vary greatly according to accommodation and appliances. Unless with tolerably commodious premises, with ample floor for mixing, with stock grouped in handy, convenient stalls, boxes, or yards, the advantages of the system are problematical. A good steam or horse driving chaff cutter will cut in a day ten tons each of straw and hay and five tons of roots. A man and two lads will do the cutting, and may besides undertake, in a suitable constructed place, the bulk of the mixing. Even allowing a fair amount of fuel and horse power, and wear and tear of machinery, the cost of the machinery is small. Properly managed there is less waste of hay. Faulty, over-dried, or mouldy stuff, which would otherwise be neglected by the cattle, is readily devoured when moistened and sweetened by admixture with the roots. The mixture, although not increased in nutritiveness is more easily digested. The straw especially is softened, and willingly eaten in larger amounts than when it is given whole. Some good managers chaff their straw as it comes from the threshing machine; the cutter is driven by a strap from the engine; a portion of hay at the same time is sometimes added; the cut fodder is carefully salted and trodden into barns or out buildings; a slight heating or fermentation sets in, and the mixture, even after several months' keeping continues sound and fully as palatable as freshly-cut chaff. Such a plan obviously effects considerable saving of time and labor in the moving of the straw. For sheep in pens on the open field we heartily approve of cutting the roots; the practice pays; there is less waste, and the sheep if properly attended to, especially in the early morning, thrive better; but long fodder appears preferable to chaff, which in the field is constantly blown about and much of it wasted; while in wet weather it is apt to become unpalatable before it is cleared up."

CATTLE AND CORN.

Knowing that your paper has a large circulation among that class of farmers who are extensively engaged in stock raising and corn growing, I ask the privilege of submitting to them, through the columns of your paper, some facts and figures, as well as a few suggestions relative to my text above. That the stock interest is now and must

continue to be the most important of all the pursuits of the farmers of the great West, does not admit of a doubt; hence any suggestions that may tend to foster that interest and render it more remunerative to those engaged in it, is quite legitimate for an agricultural paper.

The improvement of the breed is all important, as may be seen by noticing the sales of either fat cattle at our stock yards or the prices paid for blooded animals, as breeders, whether it is for cattle, horses, hogs or sheep—and I shall add poultry. You and every farmer are aware that it costs no more to feed this kind of stock, than it does to feed the inferior breeds; in fact, some of these slab-sided, cadaverous, long shanked animals are perfect cribs for stowing away corn and fodder. I used to have to feed some of that kind of hogs when a boy, and upon my honor I always found them eating or squealing, and often both at the same time. The improvement of this kind of stock has been very great, and will continue until the old breed, like the aborigines of this country, will be known only in history. The improvement in neat stock and horses is not so rapid; nevertheless it is onward.

Now, grass and corn are the greatest staple products upon which the great interest is to be sustained; neither of these will bear transportation to any great distance, especially at present rates of railroad freights; therefore would it not be found more profitable to put this gross cheap freight into good beef or pork, such as will sell at the upper figures—say 4 1/2 to 6 cents for beef, and 4 to 5 cents for pork—when corn is only 42 to 56 cents per bushel, and hay \$15 to \$18 per ton? Now as freight has to be paid according to weight, corn is not worth one cent per pound as a general thing, and hay only about 1/2 of a cent; hence either will not pay for shipping, except short distances, and by water; while beef and pork are over four times as valuable per pound, and are shipped at a low rate of freight.—Rural World.

WEAK LAMBS—FEEDING SHEEP.

A correspondent of the Utica Herald, commenting upon weak lambs, asks if it may not be owing to breeding from graded stock, and adds—This has an influence. Where sheep are well kept, not over-fed or pampered but kept on "good hay," with some grain, thus ensuring, with good care soundness and strength, a condition favourable to propagation results. At least we have been led from experience, to this conclusion. A healthy male, not overtaken, and of pure blood, whether old or young, avoiding the two extremes of age, is safe with a flock of sheep, the ewes strong and healthy, well taken care of and not worried, nor exposed to wet snows and rains. In such case and with care at the lambing time, keeping the ewes in warm, dry, sufficiently ventilated stables, success is to be expected, and it is, so far as our observation extends, generally secured. It is the weak, unfit sheep, exposed to the weather, hooked about by the cattle, and the lambs, when dropped, left to take care of themselves, save what the mother can do for them, that produces the weak lambs, and hangs the trees and fences with their carcasses, as has been so much the case and is yet to a certain extent, always among the negligent farmers.

Severe cold chills weaken a lamb, if dropped in a cold winter night, unprotected and unaided by the farmer. Sometimes they are found dead in the morning; sometimes very nearly dead, beyond recovery, and sometimes, by taken to a warm place, they can be saved. Cold has been a general slaughterer of these innocents. Hence it is that there is better success where the lambs come late, when the winter and the cold rains and the wet snows of spring are over. Lambs are not only then quite or nearly all sound, but, if dropped in pasture they grow at once and rapidly, showing in the fall equally a good stock for the butcher or to keep over as the early brought lamb.

From this let it not be inferred that we are in favor of late breeding. We are not, save so far as where care is relaxed, and sheep are not kept as they should be, but left negligently, to take care of themselves and their young. Where early cut hay, particularly clover cut in blossom and well cured, is fed freely, with grain to aid it if needed, roots substituted for grain at the lambing time to favor milk, and if good quarters are provided, not only during the winter, but the fall, and particularly late fall, the flock uncrowded, undisturbed and satisfied, with warmer

quarters for the mothers at the yearling time—when all this is done, as we set it among our best sheep men, it is better to have the lambs come, say in March. The growth then, with care, will go right on, and there will be lambs for the butcher early in the season when prices are usually at their best.

It has come to be so now, in the keeping of our stock, that winter is no more an impediment, or need not be. Our stables can be given a temperate climate, avoiding the two extremes of winter and summer, and hay cut when green and tender—grass dried—with the aid of the succulent root crops, (a summer feed,) and grain to strengthen when need be. In this way, there is even an advantage over summer, unless soiling is adopted, which is pretty much the same as the winter's keep, the feed now cut for soiling being more or less direct, the last views of respectable authorities favouring complete drying, as for winter hay, thereby securing greater concentration, which our coarse foddere will bear.

ON BREEDING SHEEP.

The larger a sheep of any given variety, the stronger and longer of its class must the wool be; and to accord with this greater length and strength of the wool there should be that squareness and size of carcass rendering the animal symmetrical, and ensuring a proper correlation of muscle, fat and wool. The weight and size of the animal must also correspond with the quality of the pasture. This axiom (for so it may be called) is also found in Allen's "American Farm Book." The quantity of wool and flesh will correspond with the quality of the sheep, provided always the farmer proportions the size of his flock to the amount of pasture. A large framed sheep with short, fine wool is an incongruity. Such sheep are more or less common when French Merino sheep were all the rage. Many seem to have the idea that the Spanish (or as Randall calls them the American) Merinos were too small for profit. They accordingly selected the coarse-boned, out-of-shape specimens of French sheep, and attempted to breed mutton and fine wool. On trial however, these sheep were found not to be healthy; they were of uneven size, and there yield of wool was not in proportion to the size. Those that bred them (I mean ordinary sheep farmers) soon got disgusted with the so-called French Merinos, and went back to the Infanzados again. Small carcasses, short or medium fine woolled-sheep, present normal conditions. They are always profitable in large flocks on dry lands, and given maximum of yield with a minimum of care and feed.

The Leicesters, as improved by Bakewell, were not perfect sheep, though of great value. As the saying went, Mr. Bakewell neglected to fleece. The fleece of the Leicesters, as he left them, was open; but this is easily accounted for. He bred almost entirely for flesh. The market for mutton was of far more value to him than the demand for wool. As the symmetry of the sheep was increased, the weight of fleeces lessened, but the quality was rather improved. Bakewell accomplished very much, although the Leicester as now bred, is not exactly the same Leicester left by him. The writer goes on to say:

"It is necessary to breed within a variety, or to persistently cross with one variety through many generations until the blood of one variety entirely dominates over and extinguishes that of the other, accommodating itself to the physical conditions of the locality, and creating a distinct class, or race, under this influence."

A cross or two for the butcher may answer, but cannot be continued without damaging results. Mind you, I cannot say that Cotswolds, Leicesters and Lincolns cannot be crossed properly, for they can and are every year, but it is only for the purpose of raising lambs for the butcher. But for breeding purposes, I claim that no cross-breeding should be allowed under any circumstances. Each breed (variety) has now its peculiar characteristics and good qualities, and the general rules of breeding hold good here as elsewhere; i. e., a cross-bred animal inherits the bad qualities instead of the good ones of its progenitor. And, if such animals are bred, the progeny is uncertain in size, quality and hardness.

Senior Alemas thinks that the Lincolns, Leicesters, etc., can only be reared profitably in a flat, low country. Our Canada farmers have proved to the contrary. They raise as fine and as large sheep as are raised

in England. But if a flock is examined it will be found that if the lambs are even in quality and size, and the sheep are healthy and hearty, the flock is either pure Leicester, or Cotswold, or Lincoln. Purity of blood in every variety is absolutely essential to pecuniary profit for the breeder who expects to keep or sell his lambs for breeding purposes. I do not know but I am saying too much on this subject, but I think it a matter of vital interest to our breeders. We now have excellent, profitable flocks of the different varieties of sheep. Let these be bred together, indiscriminately, and what sort of sheep would the next generation get? Such men as Bakewell would have their hands full, and such persistent, far-seeing men are few and far between.—Erie, in National Live Stock Journal.

FATTENING CATTLE GRADUALLY.

Every farmer who makes the feeding of animals an important part of his business, ought to know that their unremitting growth is the only true and successful way of treating them. This the course which the most successful pork-raisers pursue in feeding their hogs regularly and fully, through winter and summer, till they are sufficiently fat in the autumn. Many intelligent persons are accustomed to suppose that poor animals may, in a short time, be changed into fat ones by stuffing them with rich food. The more food they can make them take in a day or week the quicker they suppose they will become fat for the market. But this is a false opinion, as experiments clearly show. The over feeding is always wasteful; for after all the animals gain but little fat, and the owners begin to think that the fattening of them for market is an unprofitable business. An owner may withhold the proper quantity of food from his hogs and cattle, and even half starve them for months; and then may change his mode of treating them, and glut them with excessive food, and thus hope rapidly to put them in a fat condition; but the attempt will prove abortive, as the growth of the animals from the earliest period of their existence, and their increasing in fat and flesh must continue on without interruption till they are marketable. Careful observations prove that the profits of raising and fattening cattle and hogs are realized only when they are regularly fed from day to day with neither too scant nor too heavy feeding.

Some object to this mode of treating their animals. They wish to finish the fattening process in two or three months, and think it is too expensive to continue it for two or three years. This would be the case if their way of feeding was the correct one; but it is not, for heavy feeding is not requisite to keep up the continued growing condition of the animals.

We have in mind an observing farmer living in Central New York, who carefully weighed every animal he was fattening every week. To a fine steer he gave daily four quarts of barley meal, and he found the increase in its weight to be ten pounds per week. He then tried the experiment of feeding eight quarts per day, and he found that the weekly increase of weight was less than when four quarts were given. Twelve quarts were now given daily, and at the end of the week there was no gain in flesh. These facts teach all persons who feed domestic animals that there is such a thing as feeding their stock so largely or heavily that the profits will be less than if the stock were to receive smaller allowances. When a portion of the feed passes away without having been digested, it is a reliable indication that feed is not consumed as profitably as it should be.—Exchange.

SCOURS IN SHEEP.

For ordinary cases of diarrhoea in sheep, change the food and give the sheep all they will eat of a mixture of equal parts of Glauber salts (sulphate of soda) and common salt. This may apparently increase the difficulty at first, but will usually effect a cure. Where there are only one or two sheep affected, and is probably caused by weakness, give a pint of fresh milk made into a porrage with a tablespoonful of wheat flour once a day. If this does not effect the cure, give two ounces of Glauber or Epsom salts and 20 drops of laudanum, and in five hours give ten drops more of laudanum. If the sheep is very weak, give half a pint of warm ale with a little ginger or gentian.—Am. Agr.

BUTTER IN FRANCE.

If our dairymen need a spur, an eye-opener a lesson which speaks volumes in three words, here is one of the head of this article. Butter is actually brought from France and sold by the New York dealers. And this is thus because there is an actual scarcity in the market of good butter put up in attractive shape for small consumers. When we know that one dairyman gets \$1.15 a pound for his product; another \$1.60 and another 75 cents the year round, at his dairy door, it is easily seen that it will pay to bring butter across the ocean, from France, if it is only good and shapely enough to suit the fastidious purchasers who will have something nice whatever it may cost. All this butter is made from choice cows, choicely fed on clean sweet food; the milking is done in the cleanest manner. The milk is handled as carefully as though it was nectar; the cream is churned with the utmost care by clock and thermometer; the butter is worked with skill, and is made up in shapely cakes which do not require to be cut when brought to the table. Compare, then, this cake—hard golden yellow, sweet, fragrant, and tempting to all the senses—with an unsightly chunk, which is cut out of a greasy keg, and smells of old age and rancidity; and is made from ill-kept cream from cows filthily lodged and carelessly milked, and is churned anyhow, and the difference is amply accounted for.—N. Y. Tribune.

IMPORTANCE OF PURE WATER FOR CATTLE.

Dr. Jenner, who conferred that great blessing on mankind—the cow-pox inoculation—considered the giving pure water to cows of more importance than persons are generally aware. There were farmers in his neighborhood whose cows, while they drank the pond water, were rarely free from the red water or swelled udders, and the losses they sustained from these causes, together with the numerous abortions the cows suffered, increased to an alarming extent. One of them at length, supposing that the water they drank had something to do with producing their disorders, sunk three wells on different parts of the farm, and pumped the water into troughs for the cattle. His success was gratifying; the red water soon ceased and the swellings of the udder subsided, and the produce of the renovated animals increased both in quantity and quality. Other farmers followed the same practice, and in less than six months not a case of red water, swollen udder or abortion was heard of in the neighborhood.

SHEEP AND COWS TOGETHER.

A correspondent of the Practical Farmer writes:

I have been farming and keeping sheep eleven years. During the last seven years I have been keeping thoroughbred Southdowns, carefully selected from some of the flocks in the country. My lambs have averaged me \$10 apiece, and the wool \$2 for each sheep. I think I can keep one sheep and one cow to every acre, on a given amount of pasture land, just as well as to keep the cow alone. In regard to alleged injurious effects affirmed by some of keeping sheep and dairy cows in the same pasture, I will state that I have never observed them. And if there were any injurious effects resulting from the practice, it would be confined to the short space of time intervening between first turning to pasture and harvest, say from the middle of May to the first or middle of July. Sheep prefer and will cling to the old pasture, while cows are continually seeking and longing for new.

SHADE FOR COWS.

It has been contended that cattle graze more when there are no shade trees in the fields, and that, therefore, cows will make more butter, and cattle put on more flesh when exposed to the scorching rays of a summer's sun than when protected by shade trees. At the Ninth Annual Convention of the American Dairy-men's Association at Utica, Mr. Blodgett, in speaking of this, says that cows graze more when they have no shade trees to shelter them, but it is also true that heat affects their health and the quality of their milk. Mr. B. also contended that grain feeding improved the milk and butter, increases the quantity, improves the manure and enables the dairymen to keep more cows on the same number of acres and makes a better net profit. He recommended protection by shade and feeding meal or other food to avoid the necessity of exposure to a broiling sun to gather food.

The grasshoppers that invaded north-western Iowa last season, destroying the crops, and leaving the settlers destitute of the means of subsistence, also took in a few counties in south-western Minnesota, and there are said to be six hundred families in that section suffering for the necessities of life. The Governor of Minnesota has presented an appeal for State aid to the Legislature, which will doubtless be heeded. The Iowa Legislature will also take measures to relieve the destitution in that State.



UNCLE TOM'S COLUMN.

MY DEAR CHILDREN:

I have had a lively month of it. I have heard from ever so many of you, and had quite a time counting up the votes for the favorite niece or nephew, as well as reading the selections for my scrap book. I have awarded the prizes for selections—1st to Hattie Haviland, 2nd to Rose Widdfield, and 3rd to Maggie C. Miller, but the prize for the Favorite is not yet decided, as two of my nieces have an equal number of votes; therefore you must continue to send in votes during this month, so that we may decide who is winner. The vote stands as follows:

- Hattie Haviland, 19, Niece, Malbourne, 19, Cora, 10, Cora's Sister, 8, Willie A. Rutherford, 7, Lizzie Forbes, 6,

and a great many others received a smaller number of votes. In writing this month you can vote for any of the above six names.

Now for puzzles.

194. My first is in chair but not in seat, My second is in turnip but not in beet, My third is in dew but not in rain, My fourth is in loss but not in gain, My fifth is in cooked but not in raw, My sixth is in Indian but not in squaw, My whole is the name of a navigator, bay, strait and river.

CANADIAN CIFF.

195. Along the road in days gone by, It tolled so slow and wearily; What is it that I mean? Add but a simple letter, pray, Then see, it travel on its way With speed untired, I ween.

CLARA L. BOAKE.

196. My first is a part of your body Which often my whole covers o'er, My second is also a garment Which Joseph in ancient times wore.

C. L. B.

197. Two noted historical characters:

'Twas not on Alpine snows, But on homely English ground; Upward was their lofty aim, But low their fate they found.

'Twas not for fame they went, But at stern duty's call; They were united in their aim, Divided in their fall.

KITTIE HIBBARD.

Here are some conundrums from Clara L. Boake:

198. How many young ladies will reach from London to Brighton, a distance of 50 miles? 199. When is a clock like a discontented working man?

200. What relation is that child to its father who is not the father's own son? Maggie Manning writes me a very nice letter, and sends in two subscribers for a copy of the family picture. She says: "I am really proud of my Quebec cousins; they seem to be very attentive in writing to you."

A good many of my nieces have this month taken advantage of the offer of the family picture for sending in two new subscribers, but none of my nephews have as yet sent in. My little niece, Florence Baxter, is welcomed into our family. She sends some conundrums:

201. To a bird add what a horse does not like, and you will have a flower.

202. Half a carman and a whole country make a beautiful flower.

Almida Davis sends the two following:

203. Old mother Old stands in the cold; her children die with age, and she still lives and brings forth young, and every one without a tongue.

204. My tongue is long, my voice is strong, and yet I breathe no strife, and you'll me hear both far and near, and yet I have no life.

205. I am composed of nine letters: My 5, 6, 4 is a number, My 9, 8, 5 is a very useful animal, My 5, 3, 4 is a weight, And my whole is a county in Ontario.

MICHAEL STEELE.

Neil Gilmour and Francis Davis both send answers to puzzles and some new ones.

206. What animal has the greatest quantity of brains?

NELLIE V. MCGANNON.

Kilsyth P. O., March 12, 1874.

Dear Uncle Tom,

I have been intending to write to you for a long, long time. I was getting jealous of all the rest of the girls, and as I never saw my name in print, I thought I would write to you at last and send some answers, &c. I was sorry to hear of your house plants being frozen; some of our's were in the same fix, but we have some left yet.

We had a good time skating this winter; it was splendid fun to see those that were learning go slipping and sprawling on the ice. We had a splendid big, black cat, but he took to sucking eggs, so we had to kill him; we are so sorry. Dear uncle, I do love all my cousins (if I may count them as such), and if you will only let me be your niece I will do all I can for your column. Farewell.

Your affectionate niece, JENNIE.

P. S.—I quite agree with Cora that big brothers are a humbug, for I have plenty of them, and I can spare one for Hattie, since she has none, if she wishes. JENNIE.

HIDDEN ANIMALS.

207.—Do go immediately.

208.—Do not disturb earthenware.

209.—Span the roller.

WILLIE E. FLEWELLING.

ANSWERS TO MARCH PUZZLES.

183.—Herring. 184.—Salmon. 185.—Bass. 186.—Words very often pass between them. 188.—Lie, Eli. 189.—Addington. 190.—Ural. 191.—Ten. 192.—A penny. 193.—Bee, beer, beast.

Centralia, Exeter, March 10, '74.

Dear Uncle Tom,

My brother takes the ADVOCATE, and I like it very much. I hope you will allow me to be your niece. Perhaps you will not dislike to hear of a merry party that met together one evening in winter. I happened to call at the time, and, being in too cheerful a mood to refuse the invitation which was given me, I sat down among the light-hearted and laughing group.

It is not my business to tell of the nice things prepared for the young people, nor of the various amusements of the evening. All that I can undertake is to tell you of a "mysterious packet" which excited much wonder and furnished us all with much amusement. Though there were a few grown persons present, the party was formed for the amusement of the young people.

After tea various pleasant and innocent games had been enjoyed; but these were all over, and they were seated round a table well supplied with cheese, cakes, tarts and confectionery, in front of a cheerful fire, when a sharp rap was heard at the door; soon after this the servant appeared with a packet directed to one of the company. Every eye was turned to the packet, for the young person to whom it was addressed thought it very odd that a parcel should be sent from home to her, and who else but those at her own house could tell where she was.

One thought perhaps she might have forgotten something, and another supposed it might have something to do with the whole party; but she herself was evidently more surprised than any of them. When the cover was removed from the parcel, on an under cover the packet was addressed to another person. In this way cover after cover was removed, and direction after direction read, till the packet had found its way into the hands of every one of the party.

All began to laugh heartily, for everyone wondered what the packet could contain. On opening it a little farther, they came to a label on which was written "Mind not to break the bottle." Here the greatest care was taken in unwrapping the next cover, when another label was found—"Take care of your clothes," and now every one kept at a distance lest a bottle of aquafortis or something of the kind might be contained in the packet, though this was by no means likely.

Again it went round from one to another, according to the different directions given on the covers, and the party had nearly recovered their fright about the aquafortis, when another alarm spread among them, for they came to the inscription "Keep at a distance from the lamp." "Oh!" cried one, half in jest and half in earnest, "perhaps it is gunpowder!" You may be sure there was a general scuffle.—The lamp was put away, and the packet was laid by itself on the table, no one venturing at the moment to proceed further into the contents.

By this time so many covers had been removed that the packet had become considerably less. The wonder, however, as to what could be inside of it had considerably increased. Those who have never been present at the opening of so mysterious a packet will hardly be able to judge of the interest called forth.—After a while all were as busy as before in un-

sealing the different covers, their efforts being increased by some kind-hearted wish or cheerful message to every one of the mirthful circle. Good humor and laughter prevailed among them until they came to the very last cover. This being addressed to the oldest and gravest of the party, he stood up, and taking out of it a small piece of paper, read very distinctly the following lines:

- 1. And now from the husk-like And useless external, Let us see, my good friends, If we can't get a kernel. 2. This packet so huge, As blown up by the blast, Has turned out, as you see, But a cipher at last. 3. Yet if it should teach us Both early and late, Disappointment to bear, Whether little or great; 4. We shall never regret Our mirth, laughter and racket, Nor the pains it has cost us To open the packet.

This impressive and unexpected ending had a very salutary influence, for it gave a value to what would otherwise have been mere amusement. Every one seemed to feel that the whole had been turned to a useful purpose, and I do think that every one on that very account felt the better satisfied.

I hope you will forgive me for writing such a long letter, and I will try to do better next time. Yours truly, EMILY L. HICKS.

CONCLUSION OF A MERRY EVENING IN THE PROVINCE OF QUEBEC.

We had scarcely got over our laughing at poor Mrs. Smith, when Mrs. Brown announced tea, which summons was quickly responded to by a general rush for the dining room, where I am sure we did ample justice to the good things there provided.

After tea Mr. Brown said he would show us something if we would go back to the hall, which we did, and found that there was a magic lantern arranged at one end, and the room was partially darkened for the purpose of seeing it better. We spent an hour very merrily and pleasantly, looking at the different views, and when tired of being quiet so long, Mr. Brown took it away, so that we could have some more games.

Bob said we would play "Family Coach," so after getting our names Aunt Jerusha took a journey to the White Mountains, and I really thought she would never get there by the way she kept Ella (who was "white horse") spinning, and Bob, who was whip, kept continually having forfeits, until he declared he would not sit down at all; and we were sure the old lady would get killed by the number of trips out she got. There were a great number of forfeits to pay, and we thought each had better choose his own judge. The most amusing thing of all was seeing George chase Alice, who had been instructed to pick cherries with him; he ran until he was tired and then had to give up in despair because she was the smartest; he looked so downcast that I could not help thinking of the young man who was paying his addresses to a certain young lady who was very flashy, weighing about two hundred pounds. One evening he called to see her, and while sitting conversing he observed her occasionally turn her head away from him, he enquired the cause, and not feeling satisfied with her answer he got up to see, and picture his surprise on seeing another young gentleman sitting on the other side of her. He did not wait for ceremony, but left immediately. After the forfeits were paid we played Quaker Mutiny, which caused a great deal of amusement, seeing the young men with bows of ribbons on their hair, and young girls with massive chains and watches in their belts.

The next game was "I Admire You." The way it is played is to take a pocket handkerchief, tie it into a knot and commence throwing it at any person whom it may chance to strike, when the one who throws it calls out "I admire you," and the one that received the handkerchief asks "what for," then the first speaker replies something commencing with B, as for your beauty or your boldness. It is a pretty good game, and forfeits are taken if you cannot think of something that has not been said before.

We next played the "Scornful Lady." For the benefit of some of my cousins I will describe it: Commence with a girl sitting in the centre of the room, a boy leads up another boy and commences to describe his good traits—tells how much wood he can saw, and how much plum pudding he can eat at one meal, or anything that he can think of; but the girl turns scornfully away, declaring she would never marry a mil'er, or that she detests Englishmen. Well, the gentleman has to keep on trying to get one to please her until she says at last she guesses a bookkeeper will do; so she gives him her chair and she leads up ladies, and if he is as hard to please as she was it makes it all the

better fun. She tells him what nice bread one young lady can make, and what a good washer another is, until at last he gets one that will suit him, then he exchanges seats and commences his luck.

By this time we had got tired of games, and music was proposed. Some of the young ladies favored us with some very fine piano music, and Joe said for the life of him he could not keep his feet still. Alice sung us a song, and when she was about half through, Archie, who was so charmed that he could not keep still, but kept hitching in his chair, until at last the chair gave way and down went poor Archie on the carpet. Alice stopped singing, and silence reigned, except now and then a faint burst of suppressed laugh'er. Archie was assisted to a seat on the sofa, a better and a wiser boy.

We now reluctantly thought about going home, and after singing "God Save the Queen," and the boys giving three cheers for the Browns, we were undled into our respective sleighs, feeling that we had spent a very pleasant and jolly evening. NIBOR.

Uncle Tom's Scrap Book.

DEAR UNCLE TOM,—Thank you for adopting me. I'm late in sending off my letter, but our paper didn't come quite as early as usual, but I will write even with those dreadful words, "too late," ringing in my ears. Cora says I can have the fun of writing and getting snubbed; she merely wishes to say that she votes for cousin Hattie Haviland, and can I resist this first and probably last chance to vote?—I vote for Nina.

Here is a comical little poem which you might possibly like to insert.



Please excuse that blot do. However, as it is there, I will scratch my likeness on it, as you asked for my picture last month. How do you like it, Uncle Tom?

Yours truly, KITTIE HIBBARD, alias Cora's Sister.

MATILDA AT THE GATE.

Matilda, just you mind them hens, And shoo 'em out away from here; There's scratching all the garden up— Why, Tilda's gone—wa'al, wa'al, that's queer.

She ain't contrary as a rule, And gen'ly obeys my will; But though she heard me, off she put Why, there's Lorenzo Pettingill!

He met her and she's stopped to talk— Them hens will eat up everything— He's wanting her to take a walk; Wa'al, it's nice to walk in spring. He's took her hand—come, that won't do; She seems to stand uncommon still; I'd better let them know I'm 'round— Good evening, Mr. Pettingill.

He don't mind me—'tain't no use— Ah, wa'al, my time has been and gone; But then, I'd really no idee

How 'Tilda was a gettin' on, These gals grow up, and pretty soon They lay us old ones on the shelf. Lorenzo is a smart young man— I guess I'll tend them hens myself.

MY WIFE AND I.

We never fight, my wife and I, As other couples do; Our little matrimonial sky Is of the brightest blue. She never bears me in my den (My study I should say); She vows I am the best of men, But then—she has her way!

Some wives are never pleased unless They wring from you a cheque, Wherewith to buy some costly dress, Or jewels for their neck. My little witch ne'er asks from me The value of a pin; She is so good and true you see, But then—she keeps the tin!

"'Twas not!" "It was!" "It was!" "Twas not!"

Thus ever scold and fight Full many a luckless pair, I wot, From morning until night. If e'er we have a word or two The skirmish soon is past; These words are mild and very few, But then—she has the last!

JENNIE FINCH.

My niece, exceedingly selections.

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My niece, Rose, of Maple Grove, sends an exceedingly pleasant letter and some capital selections. Here follow a couple of them:

A VENTRILOQUIST'S JOKE.—We recently, says a brother editor, took a walk on the wharf with a friend who is a good ventriloquist.

Two hands of one of our steamers were engaged in rolling of a cask, when to the consternation and surprise of the persons engaged in performing that operation, a voice was heard, within the cask:

"Roll it easy; these plaguery nails hurt. I'd rather pay my passage than stand all this."

Holding up their heads, their visuals expanded to the size of two saucers, the laborers exclaimed:

"That beats the dickens!"

The mate coming up at this moment, and unaware of the cause of delay, commenced cursing them for their dilatoriness, when from within the cask the voice came forth:

"You'er nobody; let me out of this cask."

"What's that?" said the mate.

"Oh, don't you'll kill me," said the voice.

"Oh how these nails prick. Look out don't!" again said the cased up individual, as the men were turning it over.

"Cooper," said the mate, "head the cask and take the man out."

As the adze sundered the hoops, and the head was coming out, the voice again broke forth:

"Be easy now; is there any one about; I don't want to be caught."

Quite a crowd had now gathered round the scene of action, when a loud, guttural laugh broke forth, which made our hair stand on end, as the cask was filled with bacon.

"What does it mean?" said one.

"It beats my time," said the mate.

We enjoy the joke too well to blow, as we walked off arm-in-arm with the ventriloquist and magician.

Dear Uncle Tom,

How is it that we see none of your nephews' letters in your columns. You allow all the girls to come in and make fun of the big brothers. I don't think it fair, although I think a good deal of some of my female cousins. I send some selections for your scrap book.

A German being required to give a receipt in full, after much mental effort produced the following:—I ish ful; I wants no more money. John Swachhammer.

"Oh, Tommy, that was abominable in you to eat your little sister's share of the cake."

"Why," said Tommy, "didn't you tell me, ma, that I was always to take her part."

The last subject discussed by the Virginia debating society was, if you had to have a boil, where would you prefer to have it. The unanimous decision of the members was, on some other fellow.

A TALE OF HORROR.

"Old man, old man, for whom diggest thou this grave?" I asked, as I walked along, for I saw in the heart of London streets a dark and busy throng. It was a strange, wild deed!

but a wilder wish of the parted soul to lie midst the troubled numbers of living men, who would pass him idly by, so I said, "Old man, for whom diggest thou this grave in the heart of London town?" And the deep-toned voice of the digger replied, "We're a-laying a gas-pipe down."

"Sir, you are a fool!" "Do you call me a fool, sir?" "Yes, sir!" "You do, sir?" "Yes, sir; I would call any man a fool who behaves as you do."

"Oh, you would call any man a fool! Then I cannot consider it personal. I wish you good morning, sir." M. M.

I GUESS I'M THE MAN.

A farmer living in Oxford County, Maine, went down to town not a thousand miles from Portsmouth, for the purpose of purchasing a yoke of oxen, as he had been informed that there was a lot of very fine stock for sale by one of the wealthy land owners of that place.

Arriving in the best farming district of the Cumberland County town, our friend met a man driving an ox team, of whom he inquired:

"Can you inform me where Mr. Wall lives?"

"There are a number of Walls living around here. Which do you wish to find?" returned the stranger, who was a stout-built, keen-eyed man, habited in homespun, but bearing in general appearance unmistakable tokens of ease and comfort, so far as finances were concerned.

"I don't know what his Christian name is," pursued our friend, "but he is the owner of some very fine oxen."

"Well," responded the stranger, "they all own pretty fair oxen."

"But the one I wish to find has oxen for sale."

"As for that, sir, I guess they'd any of them sell if they could only get their price."

"But," exclaimed the Oxford County man, "the Mr. Wall I wish to find is quite wealthy."

"Yes; well, I reckon there ain't any of them very bad off," replied the other with a nod.

"Mr. Wall," continued our friend, hesitating, "has been represented to me as being close-fisted man, and not scrupulously honest in all his transactions."

With a curious twinkle in his eye, and a gentle pat upon the paunch of the near ox, he said, "To tell the truth, sir, I guess they are a close-fisted set all round, and I never heard that honesty run in the family. Isn't there something else?"

"Yes," replied the searcher for oxen, desperately, "they say he has been caught in the act of robbing his own brother's chicken-coop."

The stranger bowed and smiled.

"I guess I'm the man; come with me and I'll show you as fine a stock of cattle as you can find in the State; and if you know what oxen are, there is no danger of being cheated."



MINNIE MAY'S DEPARTMENT.
Minnie May's Cook Book.

LADIES, WRITE FOR MINNIE MAY'S COLUMN.

A witty writer says the way to a man's heart is through his stomach. Just try it, ye wives, and see for yourselves, if ye have not already found it out. Prepare a meal of heavy cakes and bread, half seasoned pies and poorly cooked meat. If he is a quiet man he never says much, but just watch his countenance and see if he does not act as though all was not right. Then prepare a good meal; have every thing just right, and see if you are not truly paid for it in pleasant looks and kind words. The editor has truly remarked that "men put great value on the housewife qualifications of their partners after marriage, however little they weigh them before."

When we know how to prepare a nice dish, we ought not to be selfish and keep it for our own benefit, but send it to the paper and thus, perhaps, be the means of some poor wife regaining the affections of her husband.

MRS. LORINDA McCULLOUGH,
Newtonville, Ont., March, 1874.

Here is a recipe for **LEATHER GINGERBREAD.**

1 cup of molasses, 5 teaspoons of lard, 7 of water, 1 of soda, 2 of ginger, and a little salt. **Mrs. L. McC.**

Hullett, Jan. 18th, 1874.

Would you or some of your correspondents be kind enough to tell me how I am to avoid pain and decay of teeth, as I am a great sufferer, and cannot find any cure for them.

Yours respectfully,
Mrs. C. McINTOSH.

Will some one be good enough to answer Mrs. McIntosh?

Rose Hill Farm, March 11, '74.

Dear Minnie May,—

I suppose you will receive me as one of your correspondents, as I wish to be useful. Here is a recipe for making

PUFF PASTE.

Take a pint of cold water and 1 lb. of lard, or half lard and butter; then take about a tablespoonful of the lard and the water, with sufficient flour to make it stiff enough to roll out. Then roll out and spread the lard on about 1/4 inch thick; then fold up and roll out again, and so on for three times. Do not have the lard too soft or too hard, and this quantity will be sufficient for four pies. This is all I have just now, but I will send you some more some other time.

I think you are very kind to help in making the *Advocate* a help to farmers' wives and daughters, as well as the farmers. Your recipes are very valuable indeed.

I am yours, &c., **MAGGIE MANNING.**
Bond Head P. O., Ont.

Dear Minnie May,—

The other day I spent three hours making up a nice pudding—something extra, and was thinking that I would send you the recipe, and now I don't do so. Why? you will ask. Didn't it turn out well? Yes, certainly, it was a beautiful pudding, fully up to my expectations, but the reason I am put out is this, and no doubt you have had the same trouble yourself. The pudding which took me three hours to make was all eaten up in 15 minutes, and nothing left but dirty dishes to clean up, and then start to work to get supper ready.

Now, you understand what troubles me. It is work, work, work, from morning to night, from night to morning, and no further ahead. What you spend your time over is swallowed up, and nothing remains to show for your labor. It is cook and eat and clean up, cook and eat and clean up, for ever.—Do you ever get discouraged, Minnie? Sometimes I quite give up, and put the family through a course of simples. Tea and bread for breakfast; pork and potatoes for dinner, and remnants for supper. Then John sulks and the boys grumble until I get back to fancy things again.

What am I to do? Must I always go on like the pendulum of the clock, tick, tick, tick, never stopping, never altering my gait, and be satisfied? It gives me the blues to think of it! Cannot some of your friends give me some advice, or cheer me on my way? Your wearied friend,

JENNIE R. JONES.
Goderich Township, March 16, 1874.

Jennie must be patient and hopeful.—Would the pendulum be any better off if it did stop? Does not its constant motion regulate the movements of the hands on the clock's face? and does not your work show on your husband and boys? It is the weights that do the work in making the clock go; the pendulum only regulates the motion, and although you work, do not your husband and the boys supply the material to work upon? Think of the many poor women who, from one cause or another, have no food to prepare for their children, or nothing from which to make clothing, and then be thankful. I hope some of my correspondents will send an answer to Jennie's letter.

MINNIE MAY.

Minnie May's Scrap Bag.

TO CLEAN BLACK CLOTH.

Half oz. white borax; pour on it one qt. of boiling soft water, and apply when cool with a sponge. **LIZZIE ELKINGTON.**

BLACK DYE FOR CLOTH.

Quarter lb. bogwood, 1/2 oz. sal ammonia, 1/2 oz. gelatine; boil 20 minutes in two quarts of soft water, strain and rub while hot with a sponge. **LIZZIE ELKINGTON.**

METHOD FOR MAKING HARD SOAP.

Having used several different recipes for making hard soap, and having found one very much superior to any other, I venture to send it to you.

Take 1 1/2 lbs. of lime, 3 lbs. washing soda, 2 gallons soft water; boil half an hour, and settle all night; then pour off the liquid into a brass or iron kettle and put into it half lb. of rosin and 3 lbs. grease; boil 1 hour, and put into your mould. It is ready for use when cold, but improves with keeping in a cool place.

This recipe I have used for a number of years, and it has never failed to give perfect satisfaction. I make it out of tallow, lard, grease arising from meat boiling, drippings from beef, mutton or pork, and always have a flood article.

For toilet soap I use perfectly pure, sweet lard or tallow and white rosin, and give it a little longer time in boiling, sometimes adding a little borax, or something healing to the skin. Of course perfume and coloring can be added also by those who like them, but I prefer the pure article. This soap I prefer for my own use to the finest articles that can be bought, not only because it is an excellent and beautiful soap, but also because I "know what is in it."

A FARMER'S WIFE.

TWO PRIZES.

A nice collection of flower seeds will be sent for the **BEST** and **SECOND** best letter received before the 20th of April, for Minnie

May's Department, either for the cookery book, or scrap bag, or flower garden, or all of them together.

Minnie May's Flower Garden.

WORK FOR THE MONTH.

Take up, divide and re-set clumps of perennials that have become too large. Flowering shrubs of all kinds may be transplanted and pruned. Transplant all kinds of deciduous ornamental trees. Uncover gradually the beds of bulbs planted last fall.

Sow your seeds, if annual, in boxes.

Finish up all preparatory work, spading, making paths, setting edges. Have plenty of roses, especially the ever-blooming sorts; cut well back at planting.

Towards the end of the month transplant hardy annuals. Continue to sow hardy annuals. Set out gladiolas, bulbs, &c.

HOUSE PLANTS.

The warmth of the sun will require more attention to airing and watering. Re-pot plants whose roots are crowding. Prune shoots that have done flowering. Give abundance of air, and set out the plants during warm showers.

FUCHSIAS IN THE SUMMER.

The fuchsia does well, even in our hottest weather, if put in a cool, shady place, and there are portions in almost every garden where nothing we are acquainted with will produce so fine an effect as a clump of fuchsias. On the north side of a fence or building they do admirably.

Supplementary Seed List.

ALTERATIONS AND ADDITIONS TO SEED LIST SENT IN MARCH NUMBER.

Since our last issue prices in clover and timothy seeds have materially changed.—Wheat has declined in price. Clover seed has risen 50 cents. The following are the new prices at which we can supply at the present time:

Clover seed (expected to rise).....	per bush. \$6 25
Timothy seed.....	3 75
Red River wheat.....	1 50
McCarling wheat.....	1 50
Farrow wheat.....	1 50
Black Tartar oats, from imported stock.....	50

per pound

Pea vine clover.....	15
White Belgian carrot.....	40
Red ".....	60
Altringham ".....	60
Westbury's improved purple-top Swede turnip.....	25
East Lothian purple-top do.....	25
Skirving's improved purple-top do.....	25
Purple-top yellow Aberdeen do.....	30
White Swede turnip.....	40
King of Swedes.....	30

The above prices are for seed shipped by freight or express, the purchaser paying all expenses of bags and carriage. State your nearest express or railway station, and on what railway, and say whether to send by freight or express. *The full amount of money for seed and bags must accompany all orders, or they will receive no attention.*

Price of Seeds by Mail.

All expenses prepaid at our office.

	per pound
Lucern.....	50 cts.
Pea vine clover.....	25
White Belgian carrot.....	50
Red ".....	70
Long Altringham carrot.....	70
Westbury's improved purple-top Swede turnip.....	35
East Lothian purple-top do.....	35
Skirving's improved do do.....	35
Purple-top yellow Aberdeen do.....	40
White Swede turnip.....	50
King of Swedes.....	40

ADDITIONS TO FLOWER SEED LIST.

	per package
Double Zinnia.....	10 cts.
Crimson Candytuft.....	10
Scarlet 10-week stock.....	10
Dianthus Heddwigii.....	10
" Chinensis.....	10

The Horse.

BOLTING FOOD.

Many horses are given to the habit of bolting their food. At first sight there would not seem any great mischief resulting from this practice. But it is mischievous, and should be repressed with care. It is not only necessary that the horse grind the food between the teeth and reduce it to a condition of fineness or minute particles before swallowing it, but it is also essential that this process be continued sufficiently long to enable a certain portion of the saliva of the mouth to become intimately mixed with the ground mass of food. The saliva is an active chemical agent. It consists of an alkaline fluid, and contains, potash, soda, lime, combined with an organic matter called ptiline, and various other compounds of these alkaline substances. This fluid has a curious effect upon starch, viz., that of changing it into sugar and dextrine. This is an exceedingly important process in the operation of digestion. Starch is an active chemical substance, but sugar and dextrines are really soluble and capable of absorbing into the system. As a large portion of the horse's food consists of starch, both in the hay and grain, it is manifestly important that the process of masticating the food be continued long enough to enable a sufficient quantity of saliva to become secreted and mingled with the food to enable the charge of the insoluble starch to be consummate. When the food is hastily or only partially chewed and swallowed, this needed quantity of saliva is withheld and the food is not fully digested. The consequence is either a large waste of food, which passes off undigested, and a resulting proportionate increased consumption, or a variety of ill effects from chronic indigestion. A bad habit of body, hiebound, colics, and various other troubles result, the cause of which is not often suspected. From motives of economy of food, and care for the health of the horse, this frequent habit should be discouraged. Horses addicted to it should never be fed on grain, either whole or ground without this mixture with it of hay or straw, cut or chopped. Nor should the hay be very finely cut a length of one or two inches being preferable to the shorter in length. A modicum of salt should also invariably be given with each feed for the reason that a small quantity of salt provokes a more abundant flow of the needed saliva.

WHAT IS THOROUGHBRED.

What we call a thoroughbred horse was created in England by the importation of mares and stallions from Arabia and Barbary, and by the judicious commingling of the foreign with the native blood. Thorough contests on the turf and the right kind of crossing, the horse was gradually improved or elevated to the high standard of existence and these improved horses were then recognized as the progenitors of an aristocratic race. Equine heralds has been made a science, and the birth and pedigree of each horse of high breeding has been preserved in the 'stud book.' Usage has decreed that any animal which can show an uncontaminated pedigree for five generations shall be classed as a thoroughbred; that is no drop of cold or coarse blood must appear in the veins the origin of which cannot be found behind five successive periods of reproduction. Five removes from a common parentage refines the blood and makes it aristocratic.—Turf, Field and Farm.

MANGE IN HORSES.

Mange is fortunately but little known in the United States, and is not usually troublesome except in pastures where horses are expected indiscriminately to board on grass. That other pest, however, hen-lice, is quite prevalent in some sections in the stables of careless horsemen. The Western Rural has called attention to the subject heretofore, and indicated the means of relief. We give, as supplementary, the following from Wilkes' Spirit of the Times. This will be found good for hen-lice or other parasites on horses or cattle.

Whale (sperm) oil, six ounces; oil of tar, three ounces; lacsulphur, two ounces: mix thoroughly, and apply by means of a hair brush. The skin should be thoroughly washed before the remedy is applied. At the end of the second or third day the ani-

mal is again to be washed and the remedy re-applied, as it is very possible that all the ova of the mange insect are not killed by the first dressing.

Mange being a contagious disease, it is essential that all animals suffering from it be isolated, and all objects with which they may have come in contact purified.

The clothing is to be boiled with a solution of soap and carbolic acid, and the harness, saddle and grooming utensils washed with warm water and soap, and dressed with a solution of arsenic or corrosive sublimate, in the proportion of ten grains to one ounce of water. After being so washed and dressed they are to be kept for several days exposed to dry air, washed again with soap and water before they are used, and before they are again put on the horse they should be sprinkled on the side next the horse's skin with sulphur. These may seem useless precautions, but in many cases the harness and clothing are lined with thick scabs coating the ova of the parasites, the vitality of which is so great as to almost defy all efforts to destroy it.

MEXICAN CORN.

The Ventura (Cal.) Signal says: The native population here, and new comers to a small extent, grow a kind of corn that, if not peculiar to this section of the State, is not known in more northern latitudes. The ears are of a size between the common large Western, and the small flint of the Canadas and the New England States. The grain is smaller than either, and not so hard as the one nor soft as the other. It is invariably white, and makes a meal almost like flour. When made into bread, mush, puddings, or cooked in other forms, it has, to us, a taste of rawness; but most Americans, and all natives, greatly prefer it to all other kinds, even to the finest flour, and will pay more for it. Whether it would flourish in a colder climate or not, we do not know, but it should be tried, as it is no doubt a valuable variety of the greatest of all American products.

BREAKFAST.—EPPS'S COCOA.—GRATEFUL AND COMFORTING.—"By a thorough knowledge of the natural laws, which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills."—Civil Service Gazette. Made simply with Boiling Water or Milk. Each packet is labelled—"James Epps & Co., Homoeopathic Chemists, London." Also, makers of Epps's Milky Cocoa (Cocoa and Condensed Milk). 72-1

British Corn Trade.

Abridged from the Mark Lane Express. From the commencement of March the weather has been unusually mild. No signs of any damage to the growing crops have been reported here, or in any part of Europe, and with the season so advanced, many think them out of harm's way. This at any rate seems to have been the sentiment in London. As a matter of trade, prices soon find their level, and though heaviness is the rule, there has been a check to the downward tendency of prices, and wheat is really cheaper, 1s. to 2s. per qr. for the week. We may indeed have an early equable spring, and a summer to equal it, but it appears to us that the stock of old wheat throughout the world are too low to be seriously affected in value by one early and beautiful gathering. Still, so long as they remain above a consummative range in any part, we must be liable to fluctuations from changes of view on the part of holders.

Current prices of British grain and flour in Mark Lane: Wheat 54s to 67s; Barley 38s to 46s; Malt 73s to 78s; Rye 42s to 44s; Malt 73s to 78s; Oats, English, 23s to 31s; Irish do 22s to 28s; Beans 38s to 51s; Beans 38s to 47s; Flour, per sack of 280 lbs., 38s to 50s.

MONTREAL MARKETS.

March 25, 1874. Flour receipts 900 lbs. Superior extra sold down to \$9.20; other grades unchanged. Grain, purely nominal, nothing changing hands. Provisions, consumptive, demand steady at about late rates.

NEW YORK PRODUCE MARKET.

March 25, 1874. Wheat Receipts—33,000 bush; sales, 29,000 bush, at \$1.40 to \$1.50 for No. 1 Chicago, \$1.53 for No. 2 Milwaukee. Oats—37c to 64c for mixed Western; 64c to 65c for white. Butter—67c to 50c for State and Pennsylvania. Cheese—11c to 14c for common to prime.

TORONTO MARKET.

Wheat, Fall, \$1.22 to \$1.30 per bush. Wheat, Spring, \$1.15 to \$1.16 per bush. Barley, \$1.40 to \$1.42 per bush. Oats, 45c per bush. Peas, 70c per bush. Rye, 70c per bush. Dressed hogs, \$7 to \$7.50 per 100 lbs. Hay, \$20 to \$25 per ton. Straw, \$10 to \$17.50 per ton.

LONDON MARKET.

White Wheat, per cental, \$1.90 to \$2. Red Wheat, \$1.80 to \$1.85. Barley, \$2.50 to \$2.75. Oats, \$1.14 to \$1.16. Peas, \$1 to \$1.08. Corn, \$1.20 to \$1.25. Buckwheat, \$1 to \$1.20.

PROVISIONS.—Keg Butter, 30c to 38c. Roll Butter, 35c to 40c. Cheese, dairy, 10c to 11c. Eggs, 10c to 15c per dozen. POULTRY.—Chickens, per pair, 60c to 70c. Ducks, 60c to 80c. Geese, each, 50c to 75c. Turkeys, 75c to \$1.50.

Potatoes, per bush, 75c to 80c; per bag, \$1.15 to \$1.25. Piece Wool, 30c to 40c. Hay, \$8 to \$12 per ton.

EGGS FOR HATCHING. Pure and Fresh.

BUFF COCHINS, DARK BRAHMAS, GREY-DORKINS, SILVER SPANGLED HAMBURGHES, HOUDANS, LEGHORNS, GAME, AYLESBURY, AND ROUBIN, DUCKS.

The above mentioned are all three dollars per dozen.

I have spared neither trouble nor expense in procuring the best fowls to be had, and will guarantee the eggs pure and fresh and packed in the most careful manner.

If the eggs do not hatch satisfactorily, others will be sent for half price.

N. B. Do not set the eggs in too dry a place, unless you damp them occasionally. Address JOHN WELD, LONDON, ONT

ABBOTT BROS.,

CARRIAGE BUILDERS Dundas Street, East of Wellington Street, LONDON, ONTARIO

GETTING UP CLUBS.

Great Saving to Consumers.

PARTIES inquire how to get up CLUBS. Our answer is—You should send for Price List, and a Club Form will accompany it, with full directions, making a large saving to consumers and remunerating to Club organizers. Send for it at once, to

MILLER'S GREAT TEA WAREHOUSE,

52 and 54, Front Street East, Toronto, Ontario. Local Agents Wanted. Toronto, April 26, 1874. 5-4f

MOLSONS BANK.

Paid-up Capital.....\$1,000,000 Rest.....60,000 Contingent Fund.....13,000

THE LONDON BRANCH OF MOLSONS BANK, 1 Dundas Street, one door west of the New Arcade, ISSUES DRAFTS ON LONDON, ENG.; NEW YORK, U. S.; ST. JOHN, N. B.,

And all the principal Cities and Towns in Ontario and Quebec.

Offers unusual facilities to those engaged in the produce business. Deals liberally with merchants and manufacturers.

Discounts for the Farming community. Buys and Sells Sterling Exchange, New York Exchange, Greenbacks, &c., at very close rates. Makes Advances on United States Currency and Securities on reasonable terms.

SAVINGS BANK DEPARTMENT

Affords opportunity for safe and remunerative investments of accumulative savings.

JOSEPH JEFFERY,

Manager London, Sept. 14, 1870. 10

COSSITT'S Agricultural Implement Works GUELPH - - ONT.

Manufactures all kinds of Agricultural Implements— CANADIAN SIFTER FANNING MILLS, PARIS STRAW CUTTERS, LITTLE GIANT STRAW CUTTERS, ONE HORSE SEED DRILLS, HAND SEED DRILLS, ONE HORSE PLOUGHS, TURNIP CUTTERS, &c., &c.

The attention of farmers and others is called to his superior HORSE TURNIP SEED DRILL, all of iron, sows two rows, and runs the canister with an endless chain instead of friction wheels, therefore is not liable to slip and miss sowing; and by raising a lever the sowing can be stopped at any time, thus preventing the waste of seed when turning at the end of drills. Orders from a distance carefully attended to and satisfaction guaranteed. LEVI COSSITT, 4 tf Nelson Crescent, Guelph.

THE FARMER'S ADVOCATE.

Published by WILLIAM WELD, London, Ont., Canada. The leading agricultural paper of the Dominion. Subscription, \$1 per annum in advance; \$1.25 and all expenses of collecting, in arrears.

ADVERTISING RATES.—The regular rate for ordinary advertisements is twenty cents per line of solid nonpareil for each insertion. Special editorial Notices, 50 cents per line. Condensed advertisements of farm for sale, farm wanted, and stock (single animal) for sale, or wanted, or township show notice, when not exceeding 20 words, will be set for twenty-five cents each, prepaid. One cent and one-half will be charged for each additional word over twenty. These condensed advertisements are arranged under special headings.—None others except the four classes mentioned above will be inserted at these rates.

IOWA & NEBRASKA LANDS

MILLIONS OF ACRES!

BEST LAND IN THE WEST

For sale by the

Burlingt'n & Missouri River R.R. Co

On Ten Years' Credit, at 6 Per Cent. Interest.

No Payments required on principal till FIFTH year, and then only ONE-SEVENTH each year until paid.

The SOIL is rich and easily cultivated; CLIMATE warm; SEASONS long; TAXES low, and EDUCATION FREE.

Large Reductions on Fare and Freights to buyers and their families.

Buy this Year,

And take advantage of the Premium of 20 per cent. for cultivation, offered only to purchasers during 1874.

For Circulars containing full particulars, and Map of Country, send to

GEO. S. HARRIS,

3-3t Land Commissioner, Burlington, Iowa.

Cheese Factory for Sale!

With splendid Spring and Implement ready for use—with or without 50 or 94 acres of the best land, well watered and in a good state of cultivation; situated in the VILLAGE OF HOLLIN, TP. MARYBOROUGH, an excellent country for pasture. Immediate possession will be given. Factory, Implements or Land will be sold separately. Terms reasonable. THOS. HENDERSON, HOLLIN P. O. 3-1t

THE Agricultural Mutual ASSURANCE ASSOCIATION OF CANADA.

HEAD OFFICE, - LONDON, ONT. Licensed by the Dominion Government.

CAPITAL 1ST JAN., 1871.

\$ 231,242 25.

Cash and Cash Items, \$72,289 55.

THIS COMPANY continues to grow in the public confidence. On 1st January, 1871, it had in force 34,528 POLICIES,

Having, during the year 1870, issued the immense number of 12,319 Policies.

Intending insurers will note—

1st—That this is the only Fire Mutual in Canada that has shown its ability to comply with the law of the Dominion, and deposit a portion of its surplus funds for the security of its members,—\$25,000 having been so deposited.

2nd—That being purely Mutual, all the assets and profits belong solely to the members, and accumulate for their sole benefit, and are not paid away in the shape of dividends to shareholders as in the case of proprietary companies.

3rd—That nothing more hazardous than farm property and isolated dwelling houses are insured by this Company, and that it has no branch for the insurance of more dangerous property, nor has it any connection with any other company whatsoever.

4th—That all honest losses are settled and paid for without any unnecessary delay.

5th—The rates of this Company are as low as those of any well established Company, and lower than those of a great many.

6th—That nearly four hundred thousand dollars have been distributed by this Company in satisfaction of losses to the farmers of Canada during the last ten years.

7th—That the "Agricultural" has never made a second call on their members for payments on their premium notes.

8th—Farmers, patronize your own Canadian Company that has done good service amongst you. Address the Secretary, London, Ont., or apply to any of the Agents. m-y

J. H. WILSON, VETERINARY SURGEON,

Graduate of the Toronto Veterinary College.

Office—New Arcade, between Dundas street and Market Square. Residence—Richmond street, opposite the old Nunnery.

COTTON YARN.

WHITE, BLUE, RED and ORANGE. Wanted the very best quality. None genuine without our label. Also, BEAM WARPS for Woolen Mills. WM. PARKS & CO., New Brunswick Cotton Mills, St. John, N. B. 4 tf

Card ne per year

BREE

WILLIAM tie and Cots

R. S. O'NE Sheep and S

J. S. SMIT Sheep and I

JOHN E ship, Breede

G. WELD Sheep.

GEO. JA Breeder of A

J. BILLI in Canadian good Horses

H. E. IRV Cattle, South shire Pigs.

N. BETH Horns, Berk and Leicester

DAWS & Breeders of

J. PINKI cattle.

WALTER hort Horns

JOHN CH Heavy Drai

RICHAR wold, Leices

W. LANG and Berks

A. PARK

J. FEAT Suffolk, and

GEORGE Short Ho and Berks

JAMES J Breeder of Berks

GEORGE and breede

JOHN SH ter Sheep a

THOS I Breeder of Yorkshir

BRODIE shire Pigs die, Rural Woodville, ville, Ont.

W. HOO

J. MIL Breeder of Berks

R. LEA Sheep and

G. MOR Cattle.

JOHN S of Short-H Sheep, and the Prince of his Cal 1871.

F. W. S and Breed Cotswold and York

JAMES Breeder of Essex Pig

J. R. H of Short H

FOR SA Catalogue S

THREE SALE.

JOHN E Breeder of

WM. AS Down S

THOS. of Arshir

PETER C Cattle.

EDW. Horns, L White Pi

EGGS! EGGS! EGGS

FOR HATCHING,

FROM THIRTY VARIETIES OF PURE-BRED FOWLS. Having during last fall and winter imported direct from a number of the best yards in England, some most grand Stook Birds, and at a very large cost, being some of their best birds, which have won First Prizes and Cups in England, I feel sure I can furnish eggs from some of the best birds in Canada, if not in America, as I have won First Prizes on them at all of our large Shows in Canada, last fall, and at the large Poultry Show held in Guelph this spring, and several First and Specials and Silver Cup at Detroit, Mich., last December, and at Buffalo, N. Y., in January, from nine varieties shown. I was awarded nineteen prizes, and with the strongest competition ever known in America.

Eggs packed with great care in new boxes and delivered at Express Office for from \$3 to \$5 per doz. List of prices free. Be sure and send for one before ordering elsewhere. Eggs not hatching satisfactorily will be replaced at half price.

Also, a few pairs of Fine Birds to part with yet this spring at living prices.

H. M. THOMAS,
BROOKLIN, ONT.

FOR SALE.

PURE-BRED MAGIE OR POLAND CHINA PIGS
and also

Eggs for Hatching,
FROM PURE-BRED LIGHT AND DARK
BRAHMAS, HOUDANS, & FROM IM-
PORTED BUFF & PARTRIDGE
COCHIN FOWLS.

Apply to
JOS. NIGHSWANDER,
MONGOLIA, P. O., ONT.

LIGHT BRAHMA EGGS
FROM PURE FIRST-CLASS STOCK.

\$2.00 Per Dozen.
E. E. MARTIN, Canning, Ont.

CANADA LIFE ASSURANCE COMPANY.—
Established 1847. Assets including Capital
Stock, 2½ Millions. Cash Income about \$10,000
per week. Sums assured over \$11,000,000. Over
\$900,000 have been paid to the representatives of
deceased policy holders since the formation of the
Company. The following are among the advan-
tages offered:—Low rates of Premium; Canadian
Management and Canadian Investments; Un-
doubted Security; Policies absolutely secured to
Widows and Children; Policies non-forfeitable;
Policies indisputable after 5 years in force; Policies
issued on with profit system receive three-fourths
of the profits of the Company; Policies purchased
or exchanged or loans granted thereon. Premiums
may be paid yearly, half-yearly or quarterly, and
30 days of grace allowed for payments of all pre-
miums. Tables of rates for the various systems of
assurance may be obtained at any of the Company's
offices or agencies. A. G. RAMSAY, Manager and
Secretary. R. HILLS, Assistant Secretary. 1y
Hamilton, July 3, 1873.

Spring Brook Poultry Yards

L. G. JARVIS, PROPRIETOR,
LONDON . . . ONT.

LIGHT AND DARK BRAHMAS,
BUFF AND PARTRIDGE COCHINS,
W. C. BLACK, GOLDEN & SILVER POLANDS,
SILVER, WHITE & COLORED DORKINS,
SPANISH LEGHORNS,
CREVE, COURSE, GOLDEN AND SILVER-
SPANGLED, HAMBURGERS.

Eggs, \$4 per dozen, all from my winning strains.
4-3t

LIGHT & DARK BRAHMAS

A Specialty.

Having bred this popular breed for several
years, and having secured some really fine
birds of the best blood, regardless of price, I
am now prepared to fill orders for eggs for
sitting, from the same birds that I am breed-
ing from myself, at

\$3 per 13 Sitting Eggs.

Boxed and delivered to Express. Will also
have a few fine birds for sale in the fall.

W. J. BAILEY.

4-1t London, Ont.

GREAT SALE AT CHISHOLM & CO'S.—
Whole winter stock reduced. Now for Bar-
ains at the Striking Clock.

GREEN GROVE FARM

FOR SALE.

The subscriber being about to remove to the
"Homestead," in Toronto Township, offers for
sale his farm,

CONTAINING 133½ ACRES,
in the

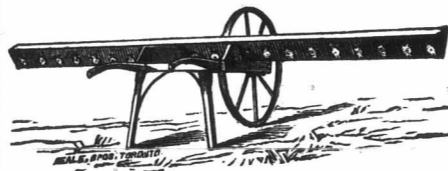
TOWNSHIP OF CHINGUACOUSY, CO. OF PEEL,
4½ miles from Brampton (the Co. Town).

on the G. T. R., ½ mile from P. O. Convenient
to school and churches of all denominations.
The soil is clay loam (excellent wheat land)
in a very high state of cultivation. Thorough
bred stock having been bred and raised on the
farm for a number of years past, has kept it
highly manured—it has never been exhausted.
Well fenced with cedar rails. Well watered.
Two good orchards.

The House is BRICK, containing nine bed-
rooms, parlor, dining-room, pantries, kitchen,
&c.; good cistern and ice house; good barn
and comfortable cattle stabling; splendid horse
stable, with stone wall and stone pavement,
with a carriage-house attached. Piggery, 70 x
28. Sheep-pen, 50 x 28. Immediate posses-
sion given. \$3,000 or \$4,000 down, balance in
annual instalments. For particulars address

JOHN R. CRAIG,
Green Grove Farm,
Edmonton, Ont.

GOWARD'S IMPROVED SEED-SOWING MACHINE.



I have great pleasure in calling the attention of
Farmers and Agriculturists to the Improvements
in my Seed Sowing Machine, as it STANDS UN-
RIVALLED throughout the Dominion.

This Machine can be set to sow any kind of
seed to any width, with perfect ease, by any
person; a boy can sow, with this Machine three
acres in one hour.

This Machine will also sow wheat and other
grain just as the operator may choose. It is
worked by a brush revolving inside; regulators
are attached to sow the quantity required.

SMALL FARMERS and others should purchase
one of these Machines, as a great saving of labor
and seed can be effected by it.

This Machine took First Prize as Grass Seed
Sower, and the Second Prize as Turnip Sower at
the last Provincial Fair.

JAMES GOWARD,
MACHINIST.

The above Machine may be seen and procured at
W. Weld's Agricultural Emporium, London.

PUBLIC SALE OF

Short-Horn Cattle,
COTSWOLD SHEEP AND BERKSHIRE
SWINE.

R. J. STANTON, Birchgrove Farm, Thorn-
hill, Ont. (12 miles north of Toronto by
Northern Railway), will offer by Public Auc-
tion, without reserve,

On Tuesday, April 7th, 1874,

at 1 p. m., (the day before Willow Lodge Sale)
his entire Herd of Short-Horn Cattle, con-
sisting of 18 Females and 3 Bulls, mostly im-
ported, or bred from imported stock. Some of
the younger ones are the get of the imported
Booth bull, "The Doctor," 13021, winner of
1st prize in his class, and sweepstakes as best
of any age, at Provincial Fair, 1872, beating
imported British Baron.

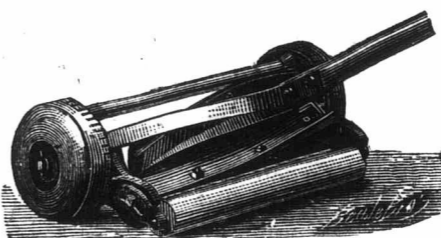
Thirty Cotswold Ewes and Ewe Lambs, and
some good Berkshires, bred from imported
stock.

TERMS—\$50 and under, cash; over that
amount, 6 months' credit on a proved paper.
Discount allowed at the rate of 8 per cent. per
annum for cash on sums over \$50.

The Farm is 3 miles from Thornhill
Station, 12 miles north from Toronto by
Northern Railway. Trains leave Toronto 7
a. m., 11 a. m.; returns, 3.55 p. m., 8.45 p. m.
Free conveyance from station to farm and
back. Catalogues now ready on application to

R. J. STANTON,
Thornhill P. O., Ont.

LAWN MOWING MACHINES!



I AM NOW PREPARED TO SUPPLY LAWN
Mowing Machines of the best quality, manu-
factured by myself, equal to any imported ma-
chines, and much cheaper. The trade supplied.

Address
LEVI COSSITT,
Agricultural Works, GUELPH.
Samples may be seen and orders taken at the
Agricultural Emporium, London.

HEATH & FINNEMORE,

WHOLESALE AND RETAIL SEED MERCHANTS.

SOLE AGENTS FOR McMASTER AND
HODGSON'S CELEBRATED LIQUID
ANNATTO.

RENNETS, SCALE BOARDS, CHEESE BANDAGES
and all other Cheese Factory requisites con-
stantly on hand.

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Mar, Apr & May

GRATIS, AND POST FREE McBROOM'S ILLUSTRATED SEED CATALOGUE

AND
Amateurs' Guide for 1874.

Sent to all who apply.

I mail seeds to all parts of the Dominion at
Catalogue prices, and PREPAY THE POST-
AGE. This enables all to obtain fresh seeds
from a RELIABLE Seed Establishment as
cheaply as if bought personally in my store.—
Parties sending me their orders will receive
the parcel in a few days at their Post Office
without further cost.

Send your address on a postal card for a
copy at once.

GEO. McBROOM,
Seed Merchant and Importer, London, Ont.
3-1t



W. BELL & CO., GUELPH, ONT.—PRIZE
MEDAL Cabinet Organs and Melodeons
Sole Proprietors and Manufacturers of "The Or-
ganette," containing Scribner's Patent Qualifying
Tubes. Awarded the only medal ever given to
makers of Reed Instruments at Provincial Exhibi-
tions, besides Diplomas and First Prizes at
other Exhibitions too numerous to specify. Cau-
tion.—As we have purchased the sole right of
manufacturing Scribner's Patent Qualifying Tubes
for the Dominion of Canada, we hereby caution
all parties from purchasing them elsewhere, as
they will be liable to prosecution. We have copy-
righted the name of the "Organette" for our in-
struments containing this wonderful improvement.
Any manufacturer infringing on this copyright
will be prosecuted. Illustrated Catalogues fur-
nished by addressing W. BELL & CO., GUELPH,
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VERBENAS.

Strong, healthy plants now ready for sending out,
being a select list of 75 distinct colors grown as a
specialty, are free from rust or disease; packed
and guaranteed to reach to their destination free
from frost, at all seasons. Price per set of 75 sorts,
\$3.50; per doz., \$1.50; per 100, \$4; per 1000, \$40.—
American Greenback currency.

Also, Greenhouse, Hothouse, Bedding and Hardy
Herbaceous Plants, Flowering Shrubs, Vines, &c.,
at lowest market rates.

Send for Wholesale Trade List. We make no
charge for boxes or packing Address
JOS. W. VESTAL,
Cambridge City, Indiana.

JAMES DUNN, SADDLE AND HARNES
Maker, Corner of King and Talbot Street,
London, Ont. 3-1t

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