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**To Our Subscribers.**

In our last issue we sent envelopes to all of you, whether your subscriptions were paid or not. Those that have paid are not expected to pay again until the proper time arrives. Accounts have been sent to all that are in arrears. Thousands of the envelopes are already returned, nearly all of which contained payment for the present year. To each of you we return our sincere thanks for your prompt remittances.

We are pleased with the numerous expressions of approval contained in many of the letters, and are doubly thankful to those who have added one or more names to our list. There are still many envelopes to come in. We well know that some are waiting to add a name or two with theirs; we hope you will all try this week to send us one more subscriber each, and if only half of you succeed it will give us power to vastly improve your paper.

There are some names on our list that are too far in arrears; to them we must again appeal for prompt remittance.—We do not wish to put them to costs, which would be heavier than they contemplate, unless we are compelled to do so, but in justice to ourselves and all punctual payers, we must now have our pay sent in. This compulsory step will not be enforced on those that are not over six months in arrears.

**Seeds.**

It has been one of the specialties of this journal to give information regarding new seeds that appear to be advantageous for cultivation. Many kinds that we have introduced have proved of very great advantage, and the demand is for more.

The great desideratum at the present time is a new variety of spring wheat that will prove better than the old varieties. The Fife or Scotch Wheat is not giving general satisfaction; in some sections it still does well, but in many parts it is almost discarded. The Rio Grande, the McCarling, and the Red River wheats are cultivated with but various success: from some parts we hear good reports, from others the most discouraging. The Baltic, the Siberian and the Morden varieties have all received praise from some and utter condemnation from others. The Farrow wheat, the most recent variety we have introduced, appears to share about the same fate as the others. It yielded a little better than the other varieties of spring wheat which we cultivated this year, but the sample is so shrunk that but few farmers would be satisfied with it if we sent it to them.

We therefore ask if any of you have any good variety or any really good clean seed of the old varieties that is pure.—Have any of you got the old China wheat? If you can send us reports of any good, clean, plump and pure wheat that is likely to be of advantage, please inform us, for we were never in a greater dilemma before.

We have tried all the varieties we have heard of not one of which we can confidently recommend. Price would be no object. One bushel of good spring wheat at the present time that would surpass the present worn out varieties, would be worth \$100 to us and \$100,000 to the country, it would net a fortune to any man that could introduce a really valuable variety at the present time.

There are and have been and will be numerous attempts to palm off inferior kinds, or even fine samples under false names. We know of a large quantity of fall wheat having been sold to farmers as spring wheat. We would caution our readers against being caught by chaff; is there is anything in the way of spring wheat that is likely to prove more beneficial than your old varieties, you may depend that we will hear of it and will give you information about it. You may aid us in sending any reports of really good seed of any kind, as we require them; also good, pure, clean oats and other seeds.

**Caution.**

We have received accounts of a pretended agent's taking subscription for our paper. The Hon. G. Brown informs us that he has received a dozen telegrams regarding one person; this individual in particular should be stopped; we do not know him to describe his appearance. He has passed himself off as a brother to your humble servant, giving his name as John Weld. We never had a brother of that name in Canada. He also takes subscriptions for the *Globe* and other papers. We have no agent connected with other papers.

**Prize Notice.**

As one of our subscribers enquires of us for the best means of destroying Wild Oats, we now offer a prize—one of Vick's chromos—for the best article on the subject, namely,

THE BEST MEANS OF EXTERMINATING WILD OATS,

the article to be in this office by the 20th of January.

CORRESPONDENTS must state their post office address, otherwise we cannot attend to them.

**Supply of Animal Food for Great Britain.**

The subjoined article in relation to the supply of animal food for the people of Great Britain, will be found of great interest to our readers. The day is not far distant when Canadian beef will be found largely in English markets, and contribute to the profits of the farmers of the Dominion.

"There is annually consumed in Great Britain and Ireland 12,000,000 tons of meat, or nearly 3500 tons per day, whilst, despite the enhanced price, the demand steadily increases. The artisan, mining and many other industrial classes now have butchers' meat several times a day, and the more thriving purchase beef and mutton at 10d to 14d per lb., and eschew bacon and pork at two-thirds the price. For our national prosperity it certainly augurs well that, with other commodities advancing in cost, we afford to spend about a hundred millions sterling in meat alone. These food supplies greatly conduce to the physical and mental health of the nation; they represent the fuel or raw material out of which is evolved the brain power, energy, and labor of our busy, hard-working people. Most essential is it that such be carefully cultivated and economized. A reduction of even one penny per pound amounts to an annual saving to the consumer of upwards of ten millions sterling!

"Enterprise and capital promise to bring within the reach of our meat-consuming population our inexhaustible colonial herds and flocks. Although the first cargo of Australian iced meat is reported to have been consigned to the Atlantic fishes, owing to the ice manufacture having somehow got wrong, cargoes of colonial beef and mutton may still reach us in good preservation.—The preserved tin meats are gaining ground, especially among the more frugal of the middle classes; female mill operatives in many localities find them palatable, economical, and readily prepared; many University men indulge in them for breakfast, lunch or supper.

"An extensive dead-meat trade is yet to be developed, drawing supplies from the great German grazing plains, and the extensive feeding sheds attached to the continental beet-root sugar factories, and the potato spirit distilleries."

It has been suggested that the shipment of meat in ice from the maritime provinces of our Dominion would succeed. The comparative shortness of the voyage and more temperate climate might ensure success, where the transportation from Australia has so far been a failure. There is much to commend the project; but in order to supply the meat the improvement of stock by judicious selection and liberal feeding must be more general. The example of our breeders and importers needs to be followed by our farmers, not in isolated instances, but generally. Let there be a good supply of the best beeves for the market, and there can be no reasonable doubt that means will be found to bring them to the English market, and they will command remunerative

prices. To ensure this supply the farmer needs to enrich the soil. A hungry, impoverished, or neglected soil will yield the food needed to supply good meat in the requisite quantity. Good farming is necessary to keep good stock in a profitable condition. A large stock well fed will make the soil fertile. The benefit to farm and stock is mutual.

This improvement in farming, while necessary for the profitable feeding of improved stock, will enable us also to increase the number of stock on our farms. It is well for us to compare our labor and its results with that of other countries, that we may see if there be a lesson to be learned from them. In the late census of the United Kingdom we find that for each one hundred acres of land cultivated the number of cattle is in England 15, in Scotland 26, and in Ireland a number about half way between these figures.

It may be said that the low price of meat in Canada does not hold out any inducement to feed a greater number than is fed at present. We advocate the feeding of beef for the English markets, which we have no doubt it will soon reach; and even now the prices of cheese and butter in our home markets is remunerative. Nor is the profit from dairy products the only profit from feeding stock. The increased fertility of the soil will amply remunerate the stock feeder for his expenditure of time and money.

The concluding portion of the article from the *N. B. Agriculturist* is equally worthy the attentive consideration of the Canadian farmer.

"But for some years to come the home grown article must, as now, constitute five-sixths of our meat supplies. These supplies which, like charity, benefit alike those that give and those that receive them, have not reached anything like their maximum amount. Even under the stimulus of brisk demand and remunerating prices, the cattle and sheep stock of the United Kingdom have not this year made an increment of more than eight per cent. on last year's figures. Various causes account for this tardy production. In no department of the farm does want of capital tell more disastrously. Common, unprofitable animals are kept for breeding stock; early maturity is not sufficiently regarded; often there is lack of money and enterprise, either on the part of landlord or tenant, occasionally of both, to provide that comfortable shelter which is absolutely essential for the economical rearing and feeding of cattle stock in this capricious, ungenial climate.

"There is, moreover, a disposition to depend too exclusively on home-grown feeding stuffs; turnips, straw and hay, costly though it often be to grow them, are given with no ungrudging hand, but seldom can the maximum profit be thus obtained. The more concentrated grains or cakes are needed to hasten growth, to save time, to enable the capital invested to be rapidly enough turned over. Throughout the Lothians and elsewhere, both in Scotland and England, are liberally managed holdings where the expenditure for purchased food exceeds the



rent, where for years handsome profits have been obtained; where increasing corn crops are readily raised, and where about £5 per acre is annually made from fat stock, instead of the meagre average of 32s., which is obtained from the country generally. Mr. Mechi recently particularized, as no solitary case in the well-farmed county of Norfolk, a farm of 1200 acres, on which, in addition to artificial manures, about 4000 pound was annually paid for linseed cake, producing probably about £3000 worth of fat meat, and leaving a proportionate amount of fertilizing manures. The more general adoption of such a system appears at present the most likely and general solution to the question at present so anxiously urged by agriculturists—How can we make farming pay?

The question—How can we make farming pay?—is one as anxiously urged by the agriculturists of Canada as by those of Britain, and for one the solution is the same as for the other. Thoroughly good farming will pay—bad farming is sure to be attended with loss and failure. The great object with the farmer must be to have his fields produce the largest possible amount of food for man and beast. In order to do this it must be kept in the highest state of fertility, and this can only be done by supplying to it in manure the elements of plant-producing food taken from it by previous cropping. Feed stock—feed them well—and your manure heap will be abundant. Then your soil will be rich and your fields crowned with abundant harvest.

And your stock should always be of the very best quality, for the dairy or the butcher, whether you feed for the dairy or beef. Inferior stock will not pay, while even if prices rule low in the market, good stock will be remunerative.

The shipment of live heaves to Europe, commenced by a Glasgow firm, has been abandoned for the present, as at present rates of steam freight it was found not to pay. Instead of shipping heaves alive, as they had commenced to do, they propose now to have them slaughtered, and shipped on board vessels furnished with refrigerating tanks, and by this means supply the British market with fresh beef. Whether this project be successful or not, the beef of north America will before many years be an article of commerce with Europe.

#### A High Standard of Agriculture.

There is nothing more directly opposed to good farming, and ultimately more detrimental to the true interests of the farmer, than the short-sighted policy so generally pursued of cultivating the soil merely for immediate profit, and raising almost entirely such crops as will bring in the quickest return, regardless of future crops. This has been so much the practice with farmers as to become a fixed habit.

In the earlier days of our farming in this new country, such a course was almost unavoidable. Then the immediate wants of families had to be supplied, and, above all, bread must be provided. Nor were successive crops of grain so injurious to the virgin soil as they are now, when much of the stores of those elements required for the successful growth of wheat and other grain crops. What was then a matter of necessity has become habitual, so much so, that farmers seem to think little of any profit from the farm other than the price obtained for wheat. Hence the scourging, impoverishing system of grain succeeding grain from year to year, till the innate strength of the soil is wholly exhausted.

This cannot be said to be peculiarly a Canadian system. The cotton plantations of the South have in many States ceased to be fertile. The farms of the more Northern and Eastern States have been so impoverished that a yield of from eight to ten bushels of wheat per acre has become general. This scourging system of farming, at one time so much practised in Europe, has entirely ceased there, and the result is that the average yield of wheat in England is from 24 to 28 bushels.

In Great Britain and Ireland the great efforts put forth by all immediately interested in the land of the country, has been to add to, instead of taking from the productivity of the soil. It is a generally recognized principle that at least as much of the elements of productiveness be given to the soil every year as has been drawn from it by crops. Only a given proportion of the farm is allowed to be under grain crops; and nothing grown on it is to be taken from it

but grain. The whole income from it is from the priced grain and cattle, and cattle products. All root crops, hay and straw are consumed on the premises, and restored to the soil in manure, in addition to the sums expended for commercial fertilizers, which are very large.

And yet English agriculturists are not content with the progress made. They say there is room for improvement greater than has yet been made. A writer in the *Agricultural Gazette*, a reliable English authority, says:—

"Great efforts have been put forth during the past generation by the English farmer to meet the pressure on the productive power of the land. The annual value of the produce of our fields and homesteads has reached £250,000,000 sterling, and by some is estimated at £300,000,000. Yet this enormous production does not suffice to feed the population."

"Notwithstanding the undoubted excellence of a good deal of the farming in England and Scotland, there can be no question that the produce of both animal and human food would be immensely increased. The Earl of Leicester, addressing a meeting of Norwich farmers some two years ago, remarked:—

"Since I last saw you I have travelled through much of England and through parts of Scotland, and taking into consideration the whole of the land I have seen under cultivation, I think I may safely state that the produce might be nearly doubled under a more perfect system of agriculture. Knowing, as I do, the greater part of the agricultural districts of England and Scotland, without concurring to the full extent in the opinions expressed by the noble lord, I am satisfied that our productions are susceptible of prodigious increase. If we estimate the possible increase at only one-third our fields and homesteads would yield more than they do by £100,000,000 a year."

To show what may be done in the production of meats, the great object aimed at by English agriculturists, the writer gives the following instance:—

"A leading farmer in the county of Norfolk realized in the past two years, by the sale of beef, mutton, and pork, no less a sum than £40,000, which was an average of from £15 to £16 per acre of his occupation. Deducting from this sum £23,000 worth of animals bought in, there remains a nett meat production of about £5 per acre, and this is by no means an uncommon instance."

He gives another instance of a farmer in Suffolk, the nett sale of whose meat reaches £7 per annum.

Our readers can see how high the aim of English agriculturists is. There is much to prevent us Canadian farmers from arriving or even aiming at the same standard for some time yet; but let us always have a high standard in view, and unceasingly advance towards it. We make one more brief extract:—

"Were the whole country brought up to the standard of the Norfolk farm I have named, the produce of meat alone in Great Britain, to say nothing of Ireland, would amount to from £150,000,000 to £160,000,000 a year—a quantity which, if the whole population could buy, it would find no little difficulty in consuming." —S

#### Conservation of the Country's Soil.

It is an old lesson this, yet it cannot be too deeply impressed on our minds.—For our own advantage as farmers, and also for the promotion of the prosperity of the country, it is needed that there be great and constantly progressive improvement in agriculture. This is the sure basis, the permanent foundation of the progressive prosperity of the nation.—Trade, commerce, the growth and wealth of our towns and cities, are all dependent upon the productiveness of the harvest. There is not, there cannot be antagonistic interests here; the merchant, the shipowner and the manufacturer have a direct interest in the farmer's well-doing. Their interest, their prosperity are mutual and inseparable. Agriculture is the basis of our country's greatness. The failure of one product of the soil, or a disease seriously affecting one variety of crop may thwart the designs of statesmen and bring about results of the highest importance to the social and political economy of a nation.

Hence the increasing attention paid by all classes to everything tending to agricultural improvement. In our literary labours for the furtherance of this great object we have had many co-workers, not only in the journals especially devoted to agriculture, but others also have given aid in the good work. In almost every newspaper published, even in many of the religious papers, there is a column or more bearing the popular heading, "Agriculture."

We propose at present taking abridged extracts from a review in the *Toronto Mail* of a treatise on Political Economy, which, though not, strictly speaking, agricultural, contains incidentally some good suggestions, more impressive, perhaps, because indistinct:—

"Two main truths are contended for, namely, That exchanges made at home are more beneficial to a nation than those made with foreigners; and that the exportation of grain from any country is virtually the exportation of its soil, the draining away of its life blood, as it were, which must end in poverty and subjection. The apparent truth of the latter argument is not now called in question by any one entitled to speak with authority on the subject, while its economic importance is rapidly being appreciated by the general public both in Europe and America. We may put the case briefly and correctly by saying that the teaching and the practice of this great truth respecting the conservation of the country's soil is the end and aim of all our agricultural and dairymen's societies. Every address to an agricultural society, recommending the extension of dairy farming, of the cultivation of roots and grain crops, and the reduction comparatively of the area under grain is, in effect, a practical exposition of the doctrine of the conservation of the country's soil."

This, no doubt, is the conclusion to which all our teaching on improved agriculture would finally lead us; but we are not prepared to go so far just now. Our country is yet young and sparsely inhabited, and our tens of thousands of acres of fertile land never yet opened by the plough-share, will enable us for many years to export immense quantities of grain. But we must, if we desire our prosperity as farmers, and the prosperity of our country, keep in view, in all our labours, the conservation of the country's soil. If we take largely from it in breadstuffs, we must restore to it with a liberal hand and in no stinted measure the elements of fertility we have taken from it. To do this in the best and the least expensive method, let us raise more roots and green crops and less grain; let us feed more cattle. Let our principal exports be meat, butter and cheese.

English farmers are every year decreasing the area of the wheat crop and proportionately adding to the area for stock feeding, so that the breadth under wheat is a quarter of a million acres less than it was five years ago. And in no country is there so good a market for breadstuffs, but they have learned that in order to keep up the fertility of the soil they must feed a large stock. By this they are enabled to raise a greater average yield per acre of wheat than any other country. In Ireland and Scotland, as well as England, there has been a continuous decrease of the area under grain cultivation, and an increase in cattle food and cattle. From the official return we learn that the number of cattle in Ireland had increased from 3,471,688 in 1863, to 4,151,561 in 1873. The number of sheep had increased within the same time from 3,566,050 to 4,486,453. This increase, we must remember, was within the narrow limits of an island.

It does not necessarily follow that by decreasing the area of wheat cultivation and increasing the stock feeding, the number of bushels of grain will be lessened. Ten acres of rich land well cultivated will give a greater return than fifteen acres impoverished and badly tilled. —S

#### Profits of Stock Feeding.

NOTES OF DAIRY HUSBANDRY.

The production of meat is the first object of British agriculture. One reason for this, no doubt, is that farmers find grazing the most profitable branch of agriculture. This, it is true, is owing to the high price of meats in the English market, a price very different from that of the markets of Canada. But in connection with this question we must take into consideration the heavy burdens borne by the English land-holder. He has a good rent to pay—not less than five dollars per acre, generally between five and ten. In addition to this he has to meet heavy taxes, including the poor rates.

Were our farmers to feed meat in the same extensive scale as in Britain, the difficulty of finding a food market for it would render it far from a profitable business; but for this, too, there is a better time, we believe not far distant, when the Canadian sirloin will be competing in the market of Smithfield with the beef of old England. But of this we have already said enough for the present.

We now refer to notes of dairy husbandry:—

#### A NEW HAMPSHIRE DAIRY.

Mr. W. L. Bridgman, of Hanover, N. H., says in the *N. E. Farmer*:

"Please find by express a sample of 90 pounds of butter, made from 8 cows, for the seven days ending October 23. My cows are five full blood and three grade Alderneys. All came in early in the season, and have had no feed at the barn except two quarts of corn and cob meal, and two quarts of bran each. From the first of May, 1872, to the first of January, 1873, the same cows made an average of thirty-four pounds, six ounces, to each cow per month. I have one cow that has made fourteen pounds and fourteen ounces in seven days, with nothing but what she got in the pasture, yet I don't think she will make 365 pounds in a year, like Mr. Crozier's."

#### A GOOD DAIRY.

The *Rural Register* gives an account of the milk farm of B. A. Avery, near Syracuse, N. Y. The main point of the article is to show the advantages of cooking food for stock. Mr. Avery has been very successful in cooking food for some years past.

He has a farm of 200 acres, of which 16 are waste land. He keeps an average of 60 cows, and young stock making up the number to over 100. At the time the account was written he had 65 cows, 18 two year old heifers, 18 one year old, and 9 horses—total, 110. As we understand the account he purchases no feed, and about 50 tons of hay are sold yearly. The principal crops were pasture 60, corn 25, hay 65 acres.

He turns off his cows at an early age, keeping few over seven years old. The average yield of milk per cow is 2,281½ qts. per year, or 6½ qts. daily. The cows have considerable Ayrshire blood. The milk sold annually amounts to \$5,000 yearly, and from \$1000 to \$1200 of cows are sold yearly.

#### A VETERAN DAIRYMAN.

The *Canada Farmer* says Harvey Farrington, of Norwich, Can., and his children are the managers of 17 cheese factories and branches. The milk of 6,200 cows is worked up, and this season the cheese product is estimated at 2,220,000 pounds. Mr. Farrington is said to have been engaged in cheese making 42 years. He is a native of Herkimer Co., N. Y.

#### WESTERN N. Y. BUTTER MAKERS.

At a meeting at Jamestown, N. Y., several dairymen agreed that 150 pounds of butter per cow per year was about the average product of dairies generally. The largest yield reported by any one present



Stock Feeding.

DAIRY HUSBANDRY.

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was 900 pounds from three cows selected from 15, and had 200 pounds per cow for his dairy. One with a dairy of 29 cows had the following average for the past four years: 175, 160, 156, 146 pounds. Another dairy of 17 cows had this year given more than 200 pounds each.

POUNDS OF MILK FOR ONE OF BUTTER.

In 1872 four factories in Franklin Co., N. Y., made 77,038 pounds of butter.—The average number of pounds of milk required to make one pound of butter varied in these factories as follows: 24.26, 22.30, 22.37, 22.61. The average for the four factories was 22.88 pounds. Four cents per pound was paid for making the butter, and the price obtained varied from 30 to 37 cents.

REMEMBER! In dairy husbandry, as in every branch of agriculture, it is the good farmer that is rewarded with such yield as makes the business really profitable.—We must not omit another source of profit from dairy husbandry. The young stock, if well bred and taken good care of, form no inconsiderable item in the credit side of the farm ledger. We give merely two items, and on this subject direct our readers' attention to the ready sales and good prices of good farm stock:

PRODUCE OF ONE COW IN ELEVEN YEARS.

A Canadian correspondent of the Country Gentleman says the Short Horn herd of J. R. Pettit, Grimsby Station, Ontario, have all been bred from a cow now thirteen years old, who had her first calf at two years old. She has had eight heifer and three bull calves. There are now 17 females in the herd, and 21 animals have been sold from it. This one cow has had 36 descendants in 11 years.

A GRADE DURHAM GAINS FOUR POUNDS A DAY.

I have a heifer calf, a half-blood Durham, which I call Dolly Varden. She was six months old on the 17th of September last. She was brought up to drink, having never sucked the cow after she was three days old, her feed being one-half new milk and one-half skimmed milk, with dry hay when she became old enough to eat it, till she was three months old. After that she had no new milk, and had a small allowance of skimmed milk till about the last of August. On the 1st day of September she weighed 410 pounds. Since then I have fed her a little better. On the 16th of September she weighed 430 pounds. On the 1st day of October she weighed just 500 pounds, having gained 90 pounds within the month of September, 70 pounds of which was gained within the last fourteen days, which would be at rate the of 5 pounds a day.—Her feed was six quarts of new milk and two quarts of Indian and barley meal a day, with as much dry hay as she would eat. Should not the Gen. Grant look to his laurels?—Otis Chase in Mirror.

Of the profit on manure it is unnecessary to dwell here. Every farmer knows its value. With one more extract we will leave the subject for the present:

CANADIAN CHEESE IN BRITISH MARKETS.

From Scotch papers of recent date we learn that Canadian cheese is not only attracting some attention, but is beginning to occupy a high position in the markets of Great Britain. This was particularly noticeable at the great annual cheese fair held lately in the west of Scotland. The number of entries was unusually large, upwards of thirteen hundred of the most famous dairies of Scotland and England being represented. The judges were selected from the most distinguished cheese factors of the Kingdom. Thus the specimens of Canadian cheese were placed alongside of the very best cheese produced in the world, and were tested by those who were most capable of forming an opinion as to their merits. It is interesting therefore to notice the remarks of Mr. Copeman, of the firm of

Yeats, Acocks & Copeman, of London, who with the concurrence of the judges, expressed himself as follows:—

"The general quality of the cheese shown was as good as ever he saw. As a stranger to the district, coming here quite unprepared to see such fine cheese, he thought there was the nucleus of this becoming the finest cheese producing district in the United Kingdom, because it was well known that the making of cheese in a number of dairies in Somersetshire was decreasing every year. There was some Canadian cheese as finely flavored as any shown." As we have already said, the other judges concurred in this opinion.

Farm Accounts.

We believe that scarcely one Canadian farmer in a thousand ever attempts to keep farm accounts, still they are very useful to refer to. We give a form which might aid any who contemplate making a commencement this year. You can procure a book, rule it yourself, and mark the different expenditures under the different headings; also a centre page to show the receipts.

Table with columns for months (Jan, Feb, March, April, May, June, July, Total) and rows for various farm expenses: Work, Repairs, Grain, Tools, Seed, Sundries, Total for each month, Total from the beginning of year to end of each month.

Farmers' Boots.

We find the following remarks in a publication; we think them well worth the space in your paper, as in our opinion they advise a plan that should be tried. We know from experience the effect of bees-wax, rosin, and tallow. Many may now be using that mixture and suffering from cold feet. If any of you know any thing better or have reasons against using castor-oil let us hear from you even about the dress of the feet, as we should attend to our feet, and make them comfortable these cold days. It is equal as much consequence to us to attend to ourselves, as to attend to the stock in our sheds. We hardly think the water can be so effectually kept out from the feet by castor-oil, as by the mixture of bees-wax tallow with rosin.

Why do farmers wear such hard heavy cow-hide boots. These are clumsy when the are new, and every time they are used in wet weather they get harder, and stiffer until they are as unyielding as so much wood. I frequently read in agricultural journals, directions for rendering boots water-proof, such as giving them a coating of rosin, bees-wax, tallow, etc., all of which makes the leather hard and stiff, when the great necessity is, to have it soft and pliable. If you want to have cold feet, wear thick, heavy boots coated with this mixture, and my words for it, you will be successful. In my younger days I followed this plan, and always had cold feet, and my boots were so stiff and hard, that it was necessary to warm them before the fire each morning before I could get them on, but for some years I have followed a different plan, and avoided this trouble. Get a pair of boots made from

what shoemakers term "runner," (or yearling animal,) have good, thick, double soles put on them. You may not be able to find a pair ready-made with soles thick enough, but you can have them made to order. They should be as heavy in the soles as ordinary stogas. Before wearing the boots, give the bottoms a good coating of tallow, and dry it well in, then oil the "uppers" with castor-oil about one tablespoonful to each boot, then oil them twice a week with the castor oil, when one teaspoonful will be sufficient.

If the weather should be rainy, or you are compelled to work in winter during the day, wash your boots clean at night, hold them by the fire until quite warm, and oil them while wet, and you will have no trouble from your boots getting hard and shrinking up, so that you cannot get them on. If the leather becomes red, give them a coat of ordinary shoe blacking before oiling. The effect of castor oil is to soften the leather, while it fills the pores, and prevents the water from entering.

I have stood in mud and water, two or three inches deep for ten hours a day for a week without feeling any dampness, or having any difficulty in getting my boots on or off. Of course, if they are kept constantly wet, they must be oiled every night. Some may think castor oil too expensive, but as so little is required each time the cost is trifling; fifty cents or less will furnish a sufficient quantity to last as long as an ordinary pair of boots, and they will wear much longer when this oil is used, than with anything I have ever tried.

Crop Report—Produce Markets.

We resume the subject of crop produce and prices, as these subjects, if any, are of more interest to the farmer. He is naturally anxious to know what remuneration he anticipates for his year's toil. The following report we have epitomized from the November reports of the U. S. Department of Agriculture in the agricultural journals of that country. They are always of great importance, as the United States always furnish a large portion of the breadstuffs for the European markets, and as prices always demand as much on the supply as on the demand, the abundance or shortcomings of the extensive field of our neighbors must always have an effect on our markets.

The wheat crop of the States is estimated in the report of 260,000,000 bushels. This is an increase over the crop of last year of 4 per cent., being fully equal to the largest crop since 1869. This is the more important as wheat is so much the most important and valuable of all the cereals. It is the principal for exportations, and it is in which we are to some extent their competitors, successfully in quality, though the quantity we can export is, as yet comparatively little.

CORN.—The November returns do not materially change the corn prospects, as indicated in October. The present returns indicate another "failure" (in the language of crop conversation and random crop report) a reduction of 233,000,000 bushels from that of last year. The percentage of the previous year was 78, or 22 per cent below a fair average. In Illinois the estimate of last year was 217,000,000. The present estimate is 132,000,000—a deficiency compared with the crop of 1872, of 85,000,000. The quality was poor in all the States except Massachusetts, Virginia, Florida, and Alabama. This was mainly owing to a wet spring, a summer too dry and short, wild rains in many places in early autumn, and early frosts.

The barley crop is 12 per cent. less than that of last year. The oat crop is 8 per cent less; The Rye crop is ten per cent. less than last year.

The hay crop is reported as 2 per cent. less than last year. The potato crop was very poor in some parts of the country to that of the previous years; so much so that throughout the whole country the crop was 15 per cent. less than last year.

Notwithstanding the light yield in the United States, as shown by their reports, and a demand larger than usual for breadstuffs in Europe, there is no fear of the supply being insufficient to meet the demand. There is no ground for taking from the statement previously made. The Western States and Canada are teeming with wheat. In our issues of November and December we spoke of the deficiency of breadstuffs in Europe, we now give some late reports of the grain trade.

The N. Y. Shipping List says of the Western Movement of breadstuffs:—The prospect of a fair movement in grain during the winter is encouraging. The stock of wheat in store is a trifle smaller than at the corresponding period last year, and of corn and shipping grades of flour, the supply is much lighter. But as an offset to small supplies, the railway facilities are much greater, while a steady foreign demand for whatever surplus we may have to spare, was rarely so well assured. During the close of navigation last season, or from December 1st to May 1st, the shipments from this port to foreign ports were in round numbers, 2,650,000 bushels of wheat, 4,270,000 bushels of corn, and 500,000 bushels of flour. During the same period this season, it is probable that the shipments of wheat will be at least a million bushels greater, of flour at least as much, and of corn somewhat less, though these estimates of course depend largely upon the contingencies of prices abroad, and the impediments to railway transportation, as there appears to be no lack of supplies in the primary markets of the Northwest awaiting transportation. All the elevators of that section are well filled, and the receipts at most points are large.

In a letter to the London Times, Mr. M. Kains Jackson gives a careful review of the present state of the European grain trade; we take from it the following extract:—

"As regards future value and supplies, any estimate must as a matter of course be submitted as individual opinion only and can be offered out as a point about which other opinions may form comparisons. With that object I remark that whereas frequently in the corn trade fluctuations up or down fail to promote business, yet at this date prices are so high that an advance of 5s. per qr. would scarcely attract increased supplies (present rates being enough to draw imports from all parts); yet, on the contrary a fall of 5s. would undoubtedly be inducement strong enough to send buyers into all the European markets and clear the stock of wheat and flour on offer. If this be a fact, it is a decisive and important one, showing that for the coming winter months existing value will be certainly maintained, while there is a likelihood of wintry weather, in arresting supplies temporarily, and realizing the present average 5s or 6s per qr.

"It is to be hoped, therefore, that the 50 to 60 wheatships now arrived off the coast, and the 20 to 30 steamers shortly expected, may be quietly absorbed at present currencies, since an increase to our stocks is the one prudent measure of safety to prevent any future inflation of value, and to insure regular and healthy trade through the winter months. The pursuance of this course is a serious matter, since primarily a bad rye crop on the Continent, a bad wheat crop in France, and deficiency of yield at home, do not permit the situation to be trifled with. Nevertheless there exists a general soundness in trade, and the prospects of supplies in spring are, in many respects, so reassuring that extravagant rates and fears of scarcity have no foundation, beyond such as may be given to them by interested speculators. Assuming that the twelve million quarters of breadstuffs, estimated as required in a former letter, be necessary, this autumn has shown us, notwithstanding monetary panics in New York and London, America alone shipped at the rate of one million quarters per month, and probably the spring and summer may see such gigantic scales repeated; moreover the rate at which imports have been received from all regions warrants the belief that the 12,000,000 qrs. will be obtained without special difficulty, so potent is the 60s per qr. range of value, which has now prevailed for several months, and thus advised all the world of our necessities. Australia by her quota of the past year's total imports must rank as one of the most important sources of supply to the English market, whenever value is sufficiently high to allow of costs of transit, as at present. As for the other and ordinary sources of supply, they appear likely to furnish, in the aggregate, much the same quantity as we usually reckon to receive. France, since harvest, has regularly purchased English wheat, week by week, but as the total is only about 200,000 qrs., the quantity is not serious; from the Black Sea, Spain, &c., the supplies this autumn into Marseilles have been large, and probably the winter supply of that country is under contract purchase; this is all the more likely as the French barley and potato crop will largely contribute to the deficiencies of wheat,



The following are the latest reports received of the Produce Market:—English quotations were entirely unchanged in the beginning of this week. Montreal markets were dull and unaltered. New York was one to two cents better on wheat. Chicago was rather higher at 1.17½ for January, and Milwaukee firm \$1.16½. The prices of Toronto were:—Fall wheat at \$1.25; Treadwell at \$1.20, and spring at \$1.12. Peas sold at 60 to 60.

So far the demand and supply, and the consequent prices of breadstuffs verify our expectations as expressed during those three months. Our farmers may expect good demand for their produce of the harvest of 1873, and at the same time European purchasers may rely on sufficient supplies at reasonable prices.

**Tolls or Free Roads.**

This subject will be a leading question in one county at least during the coming municipal elections. We believe it would be far the cheapest and best to have all the toll gates in the counties abolished, and pay a general tax for the construction and maintenance of roads.

There is at present a little difficulty in the way. A special assessment or special tax cannot be raised. The gravel roads have benefitted all lands adjacent to them to a much greater extent than land at a distance. If the law were altered or a new law enacted giving power to assess lands according to the increased value occasioned by the construction and repair of gravel roads, it might be advantageous and just to distant townships and farmers. By a general taxation farmers at a distance from the gravel roads, whose property may not be increased in value one cent by them, and who may scarcely ever wish to travel on them, are compelled to pay nearly as much as those whose lands are doubled in value by them.

A heavier tax should be paid for land along gravel roads, which should diminish according to the distance and advantage derived from them. New gravel roads might be constructed in the same way, or as drainage is now conducted.

**Agricultural and Arts Association.**

The last meeting of this Association for 1873 was held on the 10th of December, in the Agricultural Hall, Toronto. Nearly all the members attended. Accounts were passed, and the general business in connection with the Association was attended to and other business brought before the Board.

The reports of the ploughing matches were read and approved. The annual report which appeared very satisfactory, was also read and passed.

The Rev. R. Burnett suggested that the Dominion Parliament be memorialized as to the standard measure for a barrel of apples. It appears that some dealers are very fond of using barrels made to suit themselves: in such cases the barrels are not apt to be much too small.

Mr. Burnett gave notice to the Board that the American Centennial International Exhibition would be held in Philadelphia, in September, 1876, and suggested that Canada should be represented there.

Mr. Young considered that this subject should first come before the Dominion Parliament. The expressions were in favor of Canada being represented there.

A resolution was passed suggesting to the Dominion Parliament the propriety of taking the postage off agricultural papers. We have complained about having to pay four times higher rates than political papers. We do not ask for the removal of the postage; farmers are willing to pay a fair proportion for what they receive.

A prize that had been awarded to Mr. John Miller in 1872, but withheld by the Association on account of a protest, was ordered to be paid.

**Catalogues Received.**

Mr. N. S. Whitney, of Freleighsburg, P. Q., has sent a very neat catalogue of his Ayrshire cattle. Ayrshire cattle breeders should see it, as his herd stands second to none in the Dominion.

J. K. Craig, of Edmonton, sends an illustrated catalogue of Berkshire swine. His stock of hogs have gained more laurels for Canada than any other we are aware of.

Jas. Vick, of Rochester, N. Y., sends his Flower and Seed Catalogue for 1874, larger than usual.

The Annual Register of Rural Affairs, published by Luther Tucker & Son, of Albany, is at hand. It is a very useful little pamphlet, only 30 cents. It is issued from the office of that excellent agricultural paper, the *Country Gentleman*.

**NOTES FROM PAGE CO., IOWA.**

Once more you shall hear from Page county, one of the best counties in Iowa. Last spring was rather wet for good farming and the latter part of the summer rather dry for corn, potatoes, etc. Some pieces of winter wheat were good and some poor. Spring wheat the same, each average about fifteen bushels per acre. Rye was a fair crop; oats hardly an average; corn, about half a crop. Early Rose potatoes pretty good; all late kinds almost a failure.

The hog crop is only middling, and almost all that are fit for market, as well as a great many that are not fit, are gone to market. There are more cattle, twice over, being wintered in this country, than ever before, mostly Texans with their long horns.

I don't think this county will have any corn left, or in fact feed of any kind, by the time another crop can be raised. If grain and hay are not high here, inside the next ten months, I miss my guess.

**Garden, Orchard & Forest.**

**TWO CROPS AT ONCE.**

Strange as the statement may appear, we have "eminent" agricultural authorities who advise the growing of two dissimilar crops at once on the same ground. This has often been attempted through ignorance, cupidity, or carelessness, but it was never defended from the standpoint of "high farming" until within recent years. Certain fruits—the black raspberry in particular—will do well in the shade of trees when both are cultivated, but until the recent theory of planting fruit trees in grass was promulgated, it was probably never claimed that one crop benefitted the other.

The soil of the prairies may in some instances be too rich—too much like a manure heap—to grow healthy fruit trees. In such a case, grass, or even grain, or anything which will realize or absorb the excess of decomposing vegetable matter, may be of benefit, but it forms no rule for the treatment of orchards in the older States.

We always have a volunteer crop—weeds—but nobody has yet claimed that they are an aid to tree culture. And yet why not as well as grass? Their roots will penetrate the soil quite as deeply as grass, and will pump up fertility from below just as well, if there is any there; and if not it don't make much difference.

A young orchard in open ground, frequently stirred by the cultivator or horse-hoe, will suffer but little; there is but one set of roots to absorb the surface moisture, while the great stores of it down below are rendered up freely as long as no baked surface cuts the connection between the air above and the moisture below. The farmer who allows that to occur can reasonably expect disaster, and deserves it when he intentionally practices such a course. But if he wants to make the ruin a little more certain and complete, he can seed down his orchard. With millions or millions of thirsty rootlets draining the soil and the air of moisture at such a time, nothing more is needed to insure its certain though lingering death. An old orchard—one already well established and well fertilized—may escape without appreciable harm, but I would as soon burn my stock when it comes from the nursery, as to plant a young orchard in grass.

The case was well stated by a successful Pennsylvania horticulturist whom I met at the American Pomological Society in Philadelphia, in 1869. He had a splendid show of pears, which I found by questioning were grown in cultivated ground. To draw him out on this topic of grass in orchards, I intimated that he was disregarding high authority in not

seeding down, and inquired if he did not think well of the plan. His answer was, in substance: "No, indeed! he wanted no grass in his orchard. And his dislike of the 'grass theory' was so earnest that he refused positively to subscribe for the paper edited by the father of this theory, because that would be to encourage it to some extent."

"Good fruit-growers had long been trying to cure American farmers of the slovenly habit of attempting to grow fruit trees in grass, and were making some progress; and yet here was a man who, by his position, was accepted as more of an authority, and whose teaching tended directly to undo all their work." And that is the result. Why should a man be at the trouble of practicing eternal vigilance to fight off the vegetable robbers of his orchard if grass is a benefit? Does the grass bring them moisture or fertility? Of course not; on the contrary it absorbs both.

The great, pressing, absorbing need of farming is higher culture, greater thoroughness, more thought. This grass and two-crop theory is an advance backward, not forward. High farming is what we want—a system which appeals to energy and all the farmers' best faculties. This grass theory is little more than a return to an old, wasteful, slovenly system—a reproach to farming instead of a credit.—*Cor. Live Stock Journal.*

**PEAR BLIGHT.**

From the Report of the Committee of the American Pomological Society.

Pear blight assumes different forms and has consequently different causes for its origin.—One form attacks trees gradually; its approach is slow and may be detected for months and often during the preceding season of growth, before the tree is fully affected. This form, which may be termed gradual blight, is seen at all seasons during the period of active vegetation, from early spring until September. Its progress is usually arrested by a liberal top-dressing of liquid manure, so far as the roots extend, and a severe cutting back of the branches. This must be done whenever the tree assumes an unhealthy appearance. The cause, then, may be safely attributed to exhaustion, and the remedy consists in replenishing the exhausted supply of plant food. This form of blight is often noticed in orchards left unworked and where the annual or biennial top-dressing with fertilizing agents has been withheld.

Another, and this is the most fatal form, attacks a tree or a portion of it suddenly, causing the affected part to blacken in a few hours after the tree is struck; this is commonly termed fire blight. This form is periodical in its attacks and migratory, as it seldom remains permanent in a locality, but leaves an interval from ten to fifteen years between its occurrence. Its greatest intensity is on its first appearance, which occurs usually when the fruit has attained half its size; it decreases as the season of vegetation advances, but reappears again the following summer, with less of its previous intensity.

In the experimental gardens of the Department of Agriculture, at Washington, the following mixture is prepared:

Place a half-bushel of lime and six pounds of sulphur in a close vessel, pour over it about six gallons of boiling water, adding enough cold water to keep it in a semi-fluid state until cold. It is used as a wash and applied to the trees and branches as high as can be reached. It should be applied two or three times during the summer. Since this preparation was used no trees thus treated have been lost, although small limbs not coated with the mixture were attacked and destroyed. Carbolic acid had also been used without any perceptible difference in the result from the lime and sulphur mixture. Boiled linseed oil applied to the trunk and limbs has been tried near Norfolk, Va., with marvellous cures as reported. We mention this instance of the use of an extraordinary ingredient resulting in good effects, as contrary to what is usually the result when using this application upon the body of trees, its effect being to seriously injure the tree, if it does not destroy it.

Still another form of blight is doubtless caused by mechanical action, by the ruptures of tissues consequent to a sudden superabundant flow of sap. This attacks only our most thrifty growing trees, either in early spring, when vegetation first becomes active, or after a period of drought and partial stagnation of vegetation, when abundant rains suddenly force out a luxuriant growth; moderately vigorous trees are never attacked. It is often noticed in very vigorous trees that the bark of the trunk is split longitudinally; whenever this is apparent, such trees are always free from this form of blight, as the pressure upon the cellular and vascular tissues has been relieved. From a series of experiments commenced in 1857, it is demonstrated that trees whose bark had been longitudinally incised and divided never showed any signs of this form of blight.

Peculiar methods of culture undoubtedly influence the causes of blight; but upon this

there exists a wide range of opinion. Clean culture and repeated stirring of the soil, while it may in many instances be conducive to most beneficial results, will often cause a total destruction of a pear orchard. In seasons of zymotic fungoid or fire blight, highly cultivated trees fall early victims to the scourge.

**CONSERVATION OF FORESTS AND RIVERS.**

The change that has taken place in recent years in regard to the proper treatment of forests and rivers is very remarkable. We have frequently of late referred to the subject of forests, extent of our lumber supplies and kindred questions, and now we find forests and their relation to rivers have occupied the attention of a recent Congress at Vienna, which was attended by four hundred persons. The principal Governments of Continental Europe and also that of the United States were represented. In both the old world and the new the water supply is in many places falling off. This is as true of the Rhine as of the Ohio, and of the Hudson and of the Elbe. It is ascertained, moreover, that this decrease in the volume of waters in the rivers is closely connected with the disappearance of the adjacent forests. A New York contemporary groups the facts laid before the Congress, which are very striking.

Many rivers have entirely disappeared, or are shrunken to little streams. In Palestine the springs are dry. The Jordan is four feet lower than in former days. Greece has lost severely by the fall of her forests. In Hungary the drought is periodical. Sardinia and Sicily have lost their ancient fruitfulness. On the other hand, there were formerly but five or six days of rain during the year in the Delta of Lower Egypt, but since Mehmet Ali planted some twenty millions of trees, the number of rainy days is forty-five or six. Ismailia, upon the Suez Canal, was built upon a sandy desert, but since the ground has been saturated with water, trees, bushes and plants have grown, and with the appearance of vegetation the climate has changed. Four or five years ago, says the report, rain was unknown in these regions, but in the year from May 1868, to May, 1869, there were fourteen days of rain. So, also, near Trieste, a finely wooded region was desolated by the Venetians and twenty-five years ago rain had ceased to fall. But, to save the country from total abandonment, the Austrian Government planted several millions of olive trees. The very soil was conveyed in baskets; but, with care, the trees took root and thrived. It is stated also that the conversion of the desert of Utah into a blooming country has raised the Salt Lake seven feet above its old level.

The necessity of international action addressed to the cause of the evil was decided upon.

The Austrian Minister of Agriculture was president of the Congress, and he was authorized to communicate with other Governments to secure international agreement on the subject. The resolutions declare that only by such international action can the increasing devastation of the forests, with all its consequences, be stayed; that it is the mutual duty of civilized states to preserve carefully the forests that are of vital importance to the land, such as those at the sources and along the courses of rivers, upon sea-coasts and steep mountain sides; and that international principles should be laid down, to which the owners of such guardian forests should be subject. The Congress recognized that it had not as yet sufficient knowledge of all the evils resulting from this devastation, and demanded more copious and exact data. The importance of the movement is that it directs attention to a subject which has hitherto had no association and imposing presentation.

This matter and the general subject of forestry are matters which will be pretty sure to engage the attention of the Governments of the United States and Canada. Our forests are everything but inexhaustible, and they are now being shamefully devastated. Their being cut away affects the water supply of the rivers and plains, and hence the facts bearing on the case require to be carefully collected and published.

We agree with a U. S. contemporary that the agricultural papers and the cattle show orators could do no more signal service than to point out the reality and the reason and the extent of the evil. The Agricultural Department at Washington will, it hopes, think it worth some effort to keep the agricultural community informed of the action consequent upon the Congress, in whose deliberations it sees the dawn of a better day for the trees and birds, those two faithful and useful friends of the American farmer, which he has too long disregarded.

**WATERING HOUSE PLANTS.**

In most instances house plants and growing flower stalks do not receive one-half the necessary supply of water, while in some cases too much is applied. Every flower pot and box should be provided with some means of escape







## STOCK & DAIRY

### WINTER BUTTER-MAKING.

A farmer's wife thus gives, in the *Rural New Yorker*, the result of twenty-two years' experience:—

"Commence to heat the milk when the cows are first given corn fodder, which I manage in this way: Strain the milk in tin pans, filling only half full—a little more or less will make no difference; then, as soon as convenient, set the pans of milk on the stove, where let them remain until a roughness or wrinkled appearance on top of the milk is noticed (if the milk gets too hot the only harm will be less cream), then take it into the milk room or cellar, a cool place, till next morning, when bring it up into a warm room and let it stand till next day, when it is generally ready to skim. When treated in this way it will not do to skim much under forty-eight hours. My plan is to skim morning's and night's milkings both at the same time in winter. It does not hurt butter for the cream to sour—rather aids in churning, making butter come sooner. The cream-kettle I keep in the cellar until the day or evening before I desire to churn; then, if convenient, set near a coal stove or one that fire is kept in all night. In the morning, before churning, try with a thermometer; it should be at a temperature of sixty-two degrees. If not convenient to set the cream near a warm stove, setting the kettle in hot water will answer every purpose. Many object to heating the milk because it sometimes burns to the bottom of the pans. Set pans with water on the stove, and place the pans with milk in these, and the difficulty is at once avoided.

### QUALITY IN MILK.

Extracts from a paper read by Mr. T. S. Gold, at a meeting of the Vermont Dairy-men's Association:—

Cows differ almost as much in the qualities of their milk as they do in their external form and appearance. Breeds have general characteristics too well known to need description here. Individuals, also, have their peculiarities. A child, and there is no nicer judge of milk, fed upon the milk of one cow, often refuses that of another which may be offered to it.

The product varying so much in quality while the cows are in health, how will it be when disease supervenes to form another element in the calculation? Cows continue to give milk under local and constitutional disorders. The cow pox, the fowls, garget, disturbances of the alimentary canal, foot and mouth disease, and pleuro-pneumonia, though interrupting, do not always prevent the secretion of milk. The cow pox, even in its mildest form, often causes the teats to crack and bleed, and the exudation may drop into the pail. Harsh handling of the udder in milking or some injury, often causes one quarter to give bloody milk. And garget, when it does not stop the flow of milk, injures its quality in all degrees of violence. All the secretions of an unhealthy animal must be tainted, and milk is largely affected.

During the prevalence of the foot and mouth disease, numerous persons were affected with a similar form of disease from having partaken of the milk. The origin of some forms of disease we cannot trace, but physicians have observed that some diseases are at times unusually prevalent, and there are some that seem to follow in the track of pleuro-pneumonia in cattle, whether produced by the use of the flesh or milk is unknown, but we must admit that the secretions or flesh of diseased animals cannot be the best food.

The food of the cow has such an effect on the milk that we can make it rich in butter or cheese, or poor and watery, according to the food we give. But cows roaming their pastures are not always over-nice in their selection.

Garlic and onions, and in lesser degree, the cabbage family, embracing the turnips, give their peculiar odor to the milk.

Weedy pastures abound in vegetation of strong odors and taste, liable to be transferred to the milk. Drink as well as food may introduce impurities.

Out of 140 families supplied with milk from a dairy in Islington, England, seventy suffered from typhoid fever; one hundred and sixty-eight individual cases occurred in

ten weeks, and thirty died. An investigation showed that the cows drank water from an old under-ground tank, built of wood and much decayed. Here the cows remaining in apparent health carried the seeds of disease through the imperfectly animalized secretion to those who partook of the milk.

Even impure air breathed by the cow taints the milk. It is reported on good authority that the milk from a certain dairy in the State of New York, when brought to a cheese factory was found tainted, and on examination the cause was discovered to be a putrid carcass lying in the pasture.

Do the reeking odors of a fermenting manure heap or of an ill ventilated stable have no effect on the milk, even before it is drawn from the cow? But suppose our cows are of the best, fed upon the luxuriant hill side, amid the aroma of the clovers and the sweet scented grasses, drink of the pure springs that bubble from the rock, enjoying that equable temperature which so suits us that for the time we are not aware that there is any weather, unvexed by torturing flies in the field, and allowed to take their way at their own good time and sober pace to the milking yard, so far we are prepared to furnish good milk. But "don't whistle till you get out of the woods," is an old and wise maxim.

Good milkers carefully clean the udder and teats with the hand before using the pail, or wash them off in water provided for that purpose, and a rule should be made and enforced to that effect in every well managed dairy. Milking has to be done, too, in rainy weather, and often out of doors. The rain drips from the cow and some will fall into the pail. The only prevention is ample shed room, where all the cows can be sheltered in stormy weather and the wet allowed to dry off before milking.

As has been stated, milk most readily absorbs all odors to which it is exposed, yet milking yards or stables, where it first sees the light, are not perfumed with the spices of Arabia or Ceylon. There is room for much improvement upon the present arrangements, even with a view to pure air alone, to say nothing of grosser filth. All the pails, cans, pans, strainers or other vessels used about milk must not only be carefully washed and scalded, but must be well aired. It is for no useless show that the pails and tin pans of the dairy are exposed in the open air. Packed one inside of another in a close room, they become unfit to receive milk. Particularly do cans, set away with the covers on, become offensive, if they are washed and scalded ever so clean.

Wooden pails should not be used if the milk is for market, for with the most careful washing and scalding, particles of milk will remain about the joints to act upon the succeeding milk. The necessary ventilation shrinks the wood, exposing the joints to be filled again with milk.

### ON THE MANAGEMENT OF CATTLE.

To make the most money out of a given product, every care has to be used in the manipulation, from the inception to the perfect finish of the article. The same rule will apply to the raising and management of stock.

We must not expect good animals from calves that are allowed to get thin and weak every winter, until they are finally turned off to the butcher. We can not realize excellent beeves or breeders from calves that have had only skimmed milk from the time they were two weeks old until they were ten weeks old, with such grass as their hunger may have forced them to eat, although they have been thenceforth, through the summer, given good pasturage, and well fed through the winter. They will never thereafter be able to digest and assimilate the necessary quantity of food to make heavy beef. They will always be "runts." We can never get first class stock if the animal, of whatever kind, be allowed to shrink seriously from the time of its birth until it reaches maturity.

Too many farmers seem entirely to forget that the true object to be aimed at is the steady and progressive improvement of its growth. Growth is a constant process, and, if checked, it is at the expense of the animal itself, and can never be entirely resumed, for the flesh required is at the expense of a certain additional amount of food, whose equivalent has been wasted in the act of getting poor. Therefore to say nothing of the economy in many other directions that might be named, a certain amount of food has at least been lost.

There are various ideas among our farmers as to the best means of raising the calf; some contending that the animal should suck the

milk directly from the dam, others contending that equally good calves may be raised by feeding the calf new milk, warm from the cow, giving less and less milk as the calf increases in age, the decrease being supplemented with ground feed until the calf learns to subsist entirely without milk. Certain it is that good calves are raised by both these means, and that the calf by the latter plan learns earlier to eat. However this may be, if the calf have not an abundance of new milk during the first three months of its life, it will never make a satisfactory matured animal from a critical standpoint.

It may therefore be set down as an axiom that to get the best results possible an animal must progress constantly from its birth upward. The advantage gained in the first week or month must be supplemented by a progressive and continual advancement; to attain which not only the kind, quantity and quality of the food given must be looked to, but also the care and attention paid to the comfort and well-being of the animal.

### RAM SALES IN ENGLAND.

The following synopsis of the Lincolnshire ram sales of the last season is taken from *Bell's Messenger*:

"Perhaps the fairest test of the estimation in which the improved breed of Lincoln sheep is held is the average obtained by the leading ram breeders of the country. The highest average of Lincoln rams at a home sale was £35, 18s. Lowest average at a home sale, £11, 5s. At home sales 408 rams were disposed of at an average of £20, 3s., 5½d each. At public fairs 5272 rams show an average of £16, 14s., 6d. On the 1025 Lincoln rams sold at home sales and fairs, there is a general average of £17, 19s., 7½d. These averages, considering the extent of the lots, far exceed those obtained for any other breed of sheep, if we except Lord Chesham's lot of rams, of the Shropshire breed, sold at Shrewsbury on Sept. 11th, and producing an average of 33 guineas each (also Lord Polwarth's sale of Border Leicesters at Kelso). Of lettings, 61 rams were let at Huttoft, at an average of £18, 3s.; 50 at Aylesby (Leicesters) at an average of £18, 18s., and 110 at Ashby de la Sande, at an average of £16, 15s. According to this return, 221 sheep were let at an average of £17, 18s."

From these prices we see that high prices are not confined to Short-horns or any breed of cattle. English breeders do not hesitate buying any stock at what are called fancy prices, knowing by experience that good stock, and only good stock, will bring a profit.

### DAIRY STOCK.

From an address by Mr. Leander Wetherell, of the Boston *Cultivator*, at the first annual convention of the New York State Dairy-men's Association:—

Some dairymen select the Ayrshire, some the Devon, some the Holstein, some the Jersey, some the Short-horn, while others prefer the grades produced by crossing bulls of these different breeds on what they call good native cows, and others still prefer, as they phrase it, "the old natives," or "scrubs," meaning animals without any traceable pedigree beyond the fact that it or they "descended from a cow that my wife's father gave her as a dowry when she married me."

According to my observation over the Eastern and Middle States, the Short-horn blood has done more to improve the dairy and beef stock by the introduction of bulls of this blood, than all other breeds or varieties united, whether more or less fixed or permanent. The best milk cows in the dairy section of both New England and the Middle States, especially in Vermont, Massachusetts and New York, for more than a generation have been acknowledged to be grade Short-horns, descended from the best native cows, so-called, from time immemorial served by Short-horn bulls, thorough-bred so-called, and high grades both having been used.

Thomas Bates said of this branch of the improved Short-horn family:

"Wherever they are tried, their merits will shine forth in producing a greater return for the food consumed than any other breed of cattle that was ever known."

### DIARRHŒA IN SHEEP.

For ordinary cases of diarrhœa 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 it is probably caused by weakness, give a pint of fresh milk made into a porridge with a table-spoonful of wheat flour once a day. If this does not effect a cure, give two ounces of Glauber or Epsom salts and 20 drops of laudanum, and in five hours give 10 drops more of laudanum. If the sheep is very weak, give half a pint of warm ale with a little ginger or gentian.—*Ex.*

### SHEEP AS A RENOVATOR.

A soldier, while fighting under Stonewall Jackson, in Virginia, saw the benefit of sheep-raising to revive worn-out land. Impoverished in the fight for slavery, he began with only ten ewe sheep, which he put in a small field near his house that was full of briars and weeds. They soon ate up the briars, weeds and the grass in the fence corners. He gave them daily a little meal or bran, salted them often, and sheltered them in the winter, when they had swamp hay and a few roots. In the spring he had thirteen fine lambs, worth more than he gave for the ewes, and he said the wool and manure was worth more than the cost of the food.

He ploughed and planted the field to corn, and got over thirty bushels to the acre, while around the shed the yield was much larger. He now keeps sheep and grows, without the aid of guano or phosphate, fine crops of clover, corn, wheat and turnips. How strange that the Southern farmers so persistently neglect stock-growing, which is the only means by which they can obtain continuous crops of cotton.

A Yankee who farmed at the South was remonstrated with for neglecting to grow cotton. He replied that he sold corn and meat enough to buy all the cotton made in his neighborhood.—*N. Y. Times.*

### FATTENING CATTLE.

The following is from a prominent stock raiser in New York, and addressed to the *Drovers Journal*:—"The price of cattle fattened for market depends on the symmetry of the animal as well as the fat 'style,' as shippers term it. I want here to state that good blood is important, but not absolutely necessary, to make what is called a good seller. It is necessary in order to fatten a steer to bring the highest market price, that he be kept in a growing condition from a calf, and in no case allow to go hungry. It is the starving first and second winters which wilts and shivers up the steer, and causes him to be sold at a reduced price. No amount of feeding will make him a first-class seller, no difference what his color or blood. An animal well fed (I care not what the blood—Texas or not) from a calf until the spring he is three years old, will be smooth, with bones well covered, and will sell at a profit; while the half-starved animal becomes crooked in the back, bone projecting, and shrivelled up; takes the best part of the summer to get in condition to live, and will not be in condition for market until he is four years old, and then will bring a price which is unsatisfactory to the producer and to every one that handles him. This is no theory, but a fact deduced from close observation, as I have tested the plan for several years. It will and does pay to feed corn to calves and to yearlings. They start out on grass in the spring, strong and vigorous. You are then able to market your cattle the spring they are three years old, weigh 1,400 pounds, which is heavy enough to bring the first prize. The best steer I sold in 1872 was a common native. He had all he could eat from a calf, and was never hungry. He was a handsome animal, and was worth more per pound than anything I shipped in 1872. He weighed in Chicago 1,350 pounds.—age three years. I now have a steer calf eleven months old, from a very ordinary cow. The calf now (May 21) weighs 660 pounds. I think it will weigh, when three years old, 1,500 pounds. I do not wish it to be understood that I am not in favor of improving the blood as well as feed. I shipped two Texas steers this spring, which were three years old; they were smooth and nice, and I sold them with a lot of Durhams, four years old, at the same price, and they were worth as much per pound, and weighed better according to age. They were raised and fed by different parties. Mammoth, overgrown steers have had their day, and are now come down to the neat, compact well fattened animal, both in hogs and cattle. To accomplish this in cattle, good feeding from a calf is necessary."

Mr. JAMES J. H. GREGORY, of Marblehead, Mass., aims to supply one great want, which many a good farmer, when too late, has felt to his keen sorrow: Garden Seed that know how to come up; and when the crop is gathered proves to be just the kind the label said they were. Mr. Gregory is one of the few seedsmen in the United States who grows a large portion of the seed he sells, and he gets out a live Catalogue, as would be expected of the original introducer of the Hubbard Squash.—His advertisement will be found in this number. His Illustrated Catalogue will be sent free to all applicants.

A correspo- pea-straw as and wheat st good pea-str to be worth f unless it is c nitrogenous t straw, and sh value, in com of corn. She each per day straw than or ter plan is to of both pea a morning and night. But our correspon of feeding as ing, and pre peas were all and after cut heaps in the turning, and until nearly a composed or half the leav they left the damp conditi stand why "not tell the value of the have found pe of peas, care ble as clover-

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IS PEA STRAW GOOD FODDER.

A correspondent says he has not found pea-straw as valuable for fodder as good oat and wheat straw.—Very likely. And yet good pea-straw may be so cured and fed, as to be worth far more than any other straw, unless it is choice bean-straw. It is more nitrogenous than wheat, oat, barley, or rye straw, and should be fed, to get out its full value, in connection with a small quantity of corn. Sheep that have a pound of corn each per day will fatten more rapidly on pea-straw than on wheat or oat straw. The better plan is to let them have all they will eat of both pea and wheat straw—say pea-straw morning and noon, and wheat or oat straw at night. But we apprehend the trouble with our correspondent is not so much in the way of feeding as in the method of cutting, curing, and preserving the pea-straw. If the peas were allowed to grow till dead ripe, and after cutting were allowed to remain in heaps in the field day after day without turning, and were exposed to rains and dews until nearly all the soluble matter was decomposed or washed out of the straw, and half the leaves were knocked off them before they left the field, and they were stacked in a damp condition, it is not difficult to understand why "the sheep and the chemist do not tell the same story" in regard to the value of the straw. On our own farm we have found pea-straw from a luxuriant crop of peas, cured without rain, nearly as valuable as clover-hay.—*Am. Agriculturist.*

A SHORT-HORN CROSS.

I have kept them pure, crossed the short-horn cow with the Devon bull, and crossed the Devon cow with the short-horn bull. In either way they have made a large return, and paid for their meat much better than pure Devons; but by far the greater success has been to commence with the Devon or native cow and pure short-horn bull, and for ever after using the short-horn bull. I have used the Devon bull on the cross from the Devon cow and short-horn bull; but the progeny rapidly declined, and no trace of the short horn remained. In these days of great consumption and high prices, it does not pay to strike to stock the breed of which requires our or five years to mature; but I am firmly of opinion that if pure short-horn bulls were used on the native cows and their crosses in the different districts of the United Kingdom for a few years, our beef supplies would be doubled. Many farmers have a great horror of crossing their stock, whilst others admit that the first cross is all that they could wish, but after that "is all gone, goose" with the next generation. Of such I would ask, Have you ever tried? and if so, How! and, With what object in view. My theory has always been—and practice and observation have fully borne me out—that we can make almost anything we like of our flocks and herds in a few years, by full adhering to pure male animals of the kind we wish them to remain. If beef is our object, use a pure high class short-horn bull always; never by any chance or pretence use a cross-bred bull, even if he be the best animal you can procure, and if the cross were once a dozen generations back. It is the use of cross bred males or cross bred females that has made so many people distrustful of any but the first. I wish to lay great stress on the using of pure-bred short-horn bulls, by which I do not exclusively mean those fancy-priced beasts that figure so prominently in the agricultural periodicals, but ones selected from a good herd; where pedigree signs have been seen for the last twenty years on cows of undoubted short-horn blood, and that have not been artificially forced. It is not difficult to purchase hundreds of such at reasonable prices." *A Correspondent in Mark Lane Express.*

CATTLE DISEASE.

A malady has prevailed among cattle in Washington county, Kansas, which awakens much concern in that locality. The affected animals are first taken with foaming at the mouth, followed by spasms and paralysis; death supervenes in a few hours. The only remedy that has been found effective is a solution of common salt given in doses of a pint or quart. On dissection the mucus membrane of the stomach and intestines was found full of worms.

Mr. John Jackson has sold his three-year-old stallion, "Prince of Wales," to Mr. Draper, of Woodstock, for \$2000.

RELIEVING CHOKED CATTLE.

On an animal becoming choked with any hard substance that cannot pass the gullet, harsh measures should never be used until all others have failed. The practice of placing a block against one side of the throat and endeavoring to break the obstruction with a mallet, as is sometimes practised, is simply brutal. One of the simplest and at the same time most efficacious remedies is to give a half pint of lard oil or melted lard, by drawing out the animal's tongue, raising the head, and administering from a thick bottle. This lubricates the gullet, sickens the stomach, relaxes the muscles of the throat, and in coughing, the lodged substance will generally pass either up or down. If the choking has existed so long that inflammation of the throat has ensued, resort must be had to the probing—any flexible rod, either whalebone, vulcanized rubber, etc., with a sponge or soft substance affixed to the end. Introduce the soft end into the throat, holding the animal's head up, and the obstruction being reached, press it firmly down at any risk, for it is now a case of life or death.

To relieve the inflammation, apply a slip pery-elm poultice, keeping it in close contact with the throat by securing the folds in which it is placed by means of corals to the horns. Keep the animal on light soft food, assisted with linsed tea, until the inflammation is subdued.—*Western Rural.*

We copy the following remarks on this subject, made by a gentleman who has had ample experience in the manufacture of cheese, at a meeting of farmers recently held at Cobourg, and copied from the *Sentinel* of that town:—

In answer to enquiries, he said that the general yield of milk to a cow would be about 20 pounds a day; he had seen them yield 45 pounds. It took in summer from 10 to 11½ pounds of milk to a pound of cheese, but in the fall from 8 to 9 pounds of milk would make a pound of cheese. Last season, in their factory, on an average, 92-100 pounds of milk to a pound of cheese. Cows would pay from \$20 to \$30 each; he had known a cow to pay \$40 from the factory. A cow would produce about 289 pounds of cheese in a season. They found this difficulty, that farmers did not get their cows to come early enough in the spring, and very often took them out too soon in the fall, (for the purpose of making butter,) thus lessening the yield of cheese. He approved of growing feed for sorling cows; knew a case where a man kept forty cows, and had only about five acres of pasture; he fed them on vetches; oats and corn entirely, and his cows yielded a better average than any other sent to the factory. He thought that the house for making cheese and the house for cutting it was better to be separate houses than all in one building. The price realized were better than last year; their average this season was eleven three-eighths per pound.

PURECOLD AIR.

Don't be afraid to go out of doors because it is a little colder than usual. The cold air will not hurt you if you are properly protected, and exercise enough to keep the circulation alive. On the contrary, it will do you good; it will purify your blood, it will improve your digestion, it will afford a natural, healthful stimulus to your torpid circulation and strengthen and energize your whole system. The injury which often results from going into a cold atmosphere is occasioned by a lack of protection to some part of the body, exposure to strong draughts, or from breathing through the mouth. Avoid these and you are safe.

Don't be afraid to sleep in a cold room at night with the window open. Cold air, if pure, will not hurt you at night any more than in the day, if you are protected by sufficient clothing and by breathing through the nostrils. If you do not breathe thus acquire the habit as soon as possible.

If you wish to be subject to coughs, colds and fevers, shut yourself in close, hot rooms day and night. If you wish to be free from their companionship, always have plenty of pure air to breathe, night and day, take daily out-door exercise, regardless of the weather, except as to protection, and eat, and bathe as a Christian should.—*Good Health.*

Hog-skin and cowhide bags hold ten times as much corn as canvas bags do, and cost only about one-tenth as much to get to market.—The corn should be put into the bags before the skins are taken off the animal.

The Horse.

FEED FOR COLTS.

A correspondent of the *Maine Farmer*, who is a successful breeder of horses for driving, &c., gives that paper his method of feeding colts. He feeds all colts as many oats as they will eat up clean, feeding three times a day. He gives weanlings four pounds of oats per day, with eight pounds of hay; to yearlings, five pounds oats; two-year olds, six pounds; three-year olds eight pounds, with ten pounds of hay for each of the last three ages. The colts are all handled from their birth. Even in the winter the young colts have a half hour's gallop daily, while the older ones are regularly driven. A warm bran mash is given once a week, and also three or four pounds of potatoes, occasionally sheaf oats instead of hay, and in cold weather an occasional feed of corn.

CLACKING AND OVER-REACHING HORSES.

Clacking, or, as it is sometimes called, "forging," is the name given to the sound produced by the hind shoe striking the fore one in progression. It is usually heard at the trot, and seldom noticed in adult horses. It is most common in young horses out of condition, and especially noticed when they are tired. The noise is produced by the hind shoe striking the under surface of the fore one, just behind the toe, not at the heels. When the blow has been repeated so as to leave an impression, the marks are found on the inner edge of the fore shoe.—This is important, as it shows us that the length of the shoe is at fault, and it suggests the removal of the part where striking occurs. Removal of this edge is equivalent to making a shoe concave, instead of flat on the ground surface, and such a shoe is found to effectually prevent a recurrence of the objectionable noise.

The ordinary hunting shoe, especially the narrow one made in a "cress," is the best possible form. For harness horses, where more substance is required for wear, the ordinary shoe, seated on the outside instead of the inside, is usually sufficient. A case may be met with in which this alteration is not effective. We must then alter the hind shoes, making them square at the toe, with two clips—one on either side—and set back a little on the foot. The wall at the toe should not be pared off, but allowed to protrude a little.

Too often the hind shoes are the first to suffer alteration, sometimes of a very objectionable kind; for instance, we have seen the toe of a hind shoe made diamond-shaped and prominent, so as to come in contact with the sole of the fore foot instead of the shoe. This is a most irrational, and somewhat dangerous expedient. It leaves the offending part of the fore shoe untouched and favors the infliction of injury to the foot. Even when the hind shoe is only made short and placed back on the foot, there is a risk of the horn at the toe being unduly worn, and there is a shortening of the leverage of the foot, which must more or less effect the powers of progression.

If a horse "clacks," rest contented at first with altering the fore shoes as we have described; improve his condition and ride him up to the bit, but not past his pace.—Over-reaching is an injury to the heel of the fore-foot. It is sometimes merely a bruise but more often a lacerated wound, a small, round portion of skin being left hanging, nearly detached from the heel. The offending part of the hind shoe is its inner circumference or edge, so that the injury must be caused by the hind foot being in the heel, and the skin caught as the foot is retraced. The inner edge at the toe of a hind shoe becomes very sharp after a few days' wear, and will cut like a knife.

As in clacking, the indication for prevention is to remove the offending edge. This cannot be thoroughly done with a file, but when the shoe is hot the edge behind the toe can be cut out with the "fuller" so as to leave the shoe concave. If over-reaching is an accident peculiar to the gallop, it is well always to shoe hunters so as to guard against the occurrence. The neatest and best hind shoe for a hunter is made like a fore one, in a cress, and presents a concave ground surface and rounded edges.

When a heel is injured, it is always well to try and save the pieces of skin. It should not be cut off until it is certain that it will

not reunite to the tissues beneath. One good fomenting on reaching the stable is enough; after that use the simplest water dressing, and under no circumstances use poultices, which only increase the chances of a slough, and retard the healing process. Should healing seem slow, apply a mild stimulant, such as a piece of linen wet with a mixture of carbolic acid, one part, to glycerine, twenty parts.—*Scientific American.*

KINDNESS TO ANIMALS.

From the time the colt is born he should be taught to regard man, whom he is afterwards to serve, as his protector and friend. A human hand should first lift him gently to his feet, and direct his little mouth to the source of material nourishment. With the human touch he should thus early be made to associate caresses and a supply for all his wants. Instead of yells and oaths, the kicks and blows, he should hear only gentle, loving tones from the attendant's mouth, and pettings from his kindly palm. He should be taught to expect and watch for man's entrance to the stall or paddock where he is kept, as a dog waits for the coming of the master, as the season of joy and happiness. His little dear like limbs should be handled, and he be taught to yield them properly, and without fear, to the master's touch. In short everything that loving ingenuity can devise should be done to impress upon his mind thus early in life that man is his natural protector and friend, between whom and him an intimate companionship has been ordained by beneficent Nature, which insures that he shall be protected and cherished while he serves. The horse has a heart-claim upon us. The young colt is, in some sense a member of the family—one of the owner's household second in rank, and dignity only to the children. So the Arab regards him. The beautiful young thing, with its shining coat and gazelle eyes and sprightly antics; so full of bounding but docile life, is literally his children's play mate. He shares their food, and often their sleeping mat; and a blow dealt him is as promptly resented as if it had been dealt the only son, for whose service in peace and safety in the hour of battle, the young thing is being raised.—*From Mr. Murray's Book on "The Perfect Horse."*

STABLE FLOORS.

The colt only asks for room to stretch his growing limbs and a roof sufficient to shield him from the storm, undisturbed if he should see a star through the crevice above him, and feel the fresh breeze whistling through a crack by his side. He wants a well ventilated stable and a chance to get out of it whenever he desires to do so. And above all things, let him stand on the ground, if possible, while in his box; and, at any rate, in a yard in which his box opens. A floor, especially a wooden floor, is bad enough for a mature working horse; but to a colt it is almost destruction. I have no shadow of a doubt that we ruin thousands of horses' feet in this country by our plank floors. The wood when dry is a non-conductor of heat, and tends to keep the hoof above its natural temperature, and to remove from it all its natural moisture; and when wet it has a tendency to rise above the surrounding temperature by fermentation. Wet or dry, therefore, wood, whether in the form of a plank floor or sawdust bedding, is very injurious to the horse's foot. And so thoroughly convinced of this am I that I always provide brick floors for that portion of the stall which is occupied by the horse's fore-feet—a practice which has, with the aid of tar-ointment, protected me, for more than twenty years of hard driving on hard roads, from sore-toed horses, and has sent out of my stables a foot which every farrier in town recognizes the instant he puts his batrice into it. For the feet, then, of the colt and the idle horse, furnish the earth as a standing place: for the feet of the working horse, furnish a brick or stone floor. By such a floor can you secure your colt a good foot, a good leg, a well-shaped ancle, and a firm and substantial knee.—*Murray's "Perfect Horse."*

POTATOES AND PROTECTION.

It is reported, we know not with what truth, that, in consequence of the scarcity of potatoes, Congress will be petitioned to suspend the duty of fifty cents per bushel on imported tubers, so as to let them in from Canada, Nova Scotia and the Bermuda Islands.



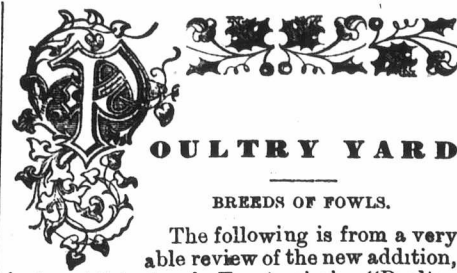
### The History of the Cheese Business in Oxford County.

We will have to go back to the time of joruroy roads, stumps, log cabins and forests wild, when Mr. Hiram Rannay, (now deceased) the pioneer in cheese making of this county, if not of Ontario, left his home in Vermont in 1831, to brave the toils and hardships of a new territory, and such a home in the then wilds of Canada. On his first removal from Vermont he settled in Dernham, in Lower Canada, where he remained four years, but somewhat doubtful of success there he again in 1835 took wing and started towards the setting sun. This last journey was no small undertaking in those days of lumber wagons and open stage coaches, but not being easily discouraged, he, together with his wife and family, started on the long tour of seven hundred miles. After several weeks they arrived safely at their destination, Dereham Township, County of Oxford, where he settled on fifty acres of land, and being acquainted with dairy business in Vermont, he concluded to try it in his new home, and was among the first to introduce into Canada what has since proved to be one of the great enterprises of the country. Like all successful men in new undertakings he commenced in a small way, starting with only five cows, increasing his dairy and adding to his farm in proportion, his market prices and reputation improving in the same ratio, till one hundred cows constituted his dairy. His first efforts were in making small cheeses from 15 to 20 lbs. each, and selling one or two in a place on the way, and in the towns of Ingersoll, London, Brantford and Hamilton, often on the road a week at a time in disposing of a load, sometimes bringing a portion of it back, unable to find sale for it in those days at 6 to 7 cents per lb, the markets being so limited that one small load was more than it required. But how changed is all this now, when buyers in the small town of Ingersoll alone stand ready to purchase their hundreds or

thousands of tons of the precious article at prices almost double those obtained when Mr. Rannay was making his first efforts in building up a cheese market in "this Canada of ours." As his dairy grew, so did his cheese, and he sometimes made what was then considered mammoths, weighing from one hundred to one thousand pounds each. At his death he left to his family what would be considered, for a farmer, a small fortune of some seventy thousand dollars.

Mr. James Harris, of West Oxford, whose residence is here shown, another of the pioneers of Oxford in cheese making, commenced, as his father-in-law, Mr. Ramsay, did before him, in a small way, and has been equally successful on a rented farm and dairy of nine cows in 1848. The ensuing year he purchased one hundred acres of land, going in debt for it, and afterwards year by year adding to his dairy and farm till the former comprised 60 to 70 cows, and the latter some four hundred acres. He made on the old dairy system for seventeen years, but in 1865, finding the demand increasing, he discarded the dairy for the factory system, and erected what is well known now as the Ingersoll Cheese Factory, one mile south of Ingersoll, it being one of the three first factories built in Canada. He was also the first to introduce the branch factory system into Canada,

having built in 1866 his first branch factory in Dereham. In 1867 he formed a joint stock company, the Canada Cheese Manufacturing Company, with a capital of ten thousand dollars, on the branch system. This company erected five factories, among them the Harrietsville Cheese Factory, in the county of Middlesex, which is amongst the best known and most successful ones in this country, making as high as one hundred and fifty tons per year. In the year 1866, Mr. Harris made the world renowned mammoth cheese. It took 35 tons of milk or one milking of 7,000 cows to make it. It weighed 7,000 lbs., and cost to manufacture, including value of milk, \$2,000. It was kept at the factory on exhibition for two years, and was visited by thousands there, who came to see the largest cheese ever made. It was exhibited in the principal cities in Canada and the United States. Mr. Harris sold it in New York to be shipped to Liverpool, where it created a great sensation, was escorted through the principal streets by a large procession, with bands of music, &c., and was exhibited in that and other cities in England, and on being cut proved of excellent quality. There is no doubt this Canada mammoth helped in no small degree to develop the factory system in Canada, and



### POULTRY YARD

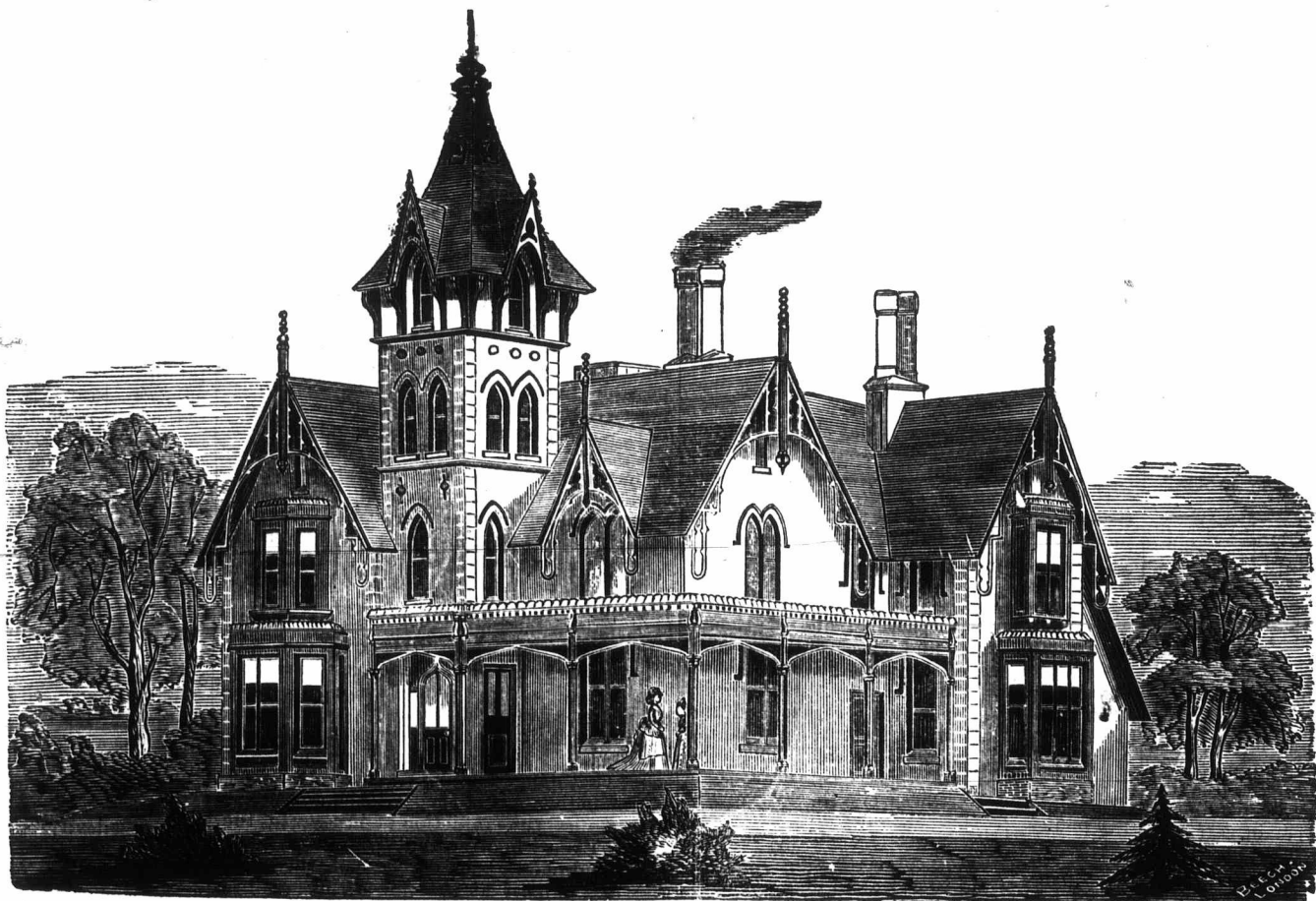
#### BREEDS OF FOWLS.

The following is from a very able review of the new addition, just published, of Tegetmeier's "Poultry Book," which appeared in the LONDON SATURDAY REVIEW for Sept. 20th:

"Assuming that, directly or indirectly, it is as for the table, for home consumption, or the market, the poultry are reared and fattened, it is not hard to glean from Tegetmeier's, with whose dicta most henwives and practical poulterers will agree which are the likeliest and least costly birds to keep. Two data on the subject are that 'a table fowl should be all breast, with short limbs and small bones,' and that fowls are only in perfection for the table before they have attained their full development. This guides us to the choice of birds of a broad full-breasted type, and also having an aptitude to ripen early and to repay attention to their keep. A good many sorts

in had a claim to consideration, but inquiry will prove that this is only for home consumption. Its yellow skin, its tendency to put on fat, and most of all its development of leg at the expense of the finer—though it should be said in extenuation, that the Cochins, a leg is much less tough than that of other fowls—disqualify it for a first class table fowl, though it has very high merits, such as hardihood, winter profligacy, docility and quick growth for household purposes. Mated with the large French fowls, the Cochins produce chickens of rapid growth and large size fine, fat, white skinned table birds though not of course admissible for exhibition, or for stock purpose. Of non-European birds, a category in which we may safely place the Brahmas, though it is a vexed question whether they are Asiatic or American in their origin, there can be no question that the most useful importation for all purposes has been the Brahma, the largest and finest of domestic fowls. With full broad, prominent breast, a back short and broad between the shoulders and across the hips, a curved or slender neck, and wings small and tight, the true Brahma is a good fattener, a first-rate table fowl, early ripe, and, at maturity, of enormous proportions. Whether tenderer or juicier than the Cochin, it is equally as docile, and will keep itself better.

It is also very hardy, will stand wet and cold, and is a good layer, especially in winter. Mr. Tegetmeier introduces into this addition a hint to the judges in poultry shows designed to avert the deterioration of this excellent breed. The tendency, it seems, is to award prizes to size, and not as the schedule directs to high condition, beauty of plumage, cushion and fluff above the thighs, purity of breed, and other characteristics. And if this be persisted in, the danger is that we may get, in the place of the true Brahma, a "gaunt, flat sided, tapered sterned, short feathered" creature, far removed from the ideal which has till recently been very nearly realized in the best prize-pens. A thorough John Bull will go in for Dorkins, and small blame to him. They grow very quickly, and put their flesh, as they should, on the breast, wings, and merry-thought. The



RESIDENCE OF MR. JAMES HARRIS, WEST OXFORD

to draw the attention of English shippers to our markets. All credit is due to the pioneers of this now fast becoming one of the great staples of our country. Contrast the early efforts of those beginners with the great cheese interests of the present day, when Canada alone ships this year four hundred and fifty thousand boxes. There was shipped at Montreal up to the close of navigation, 382,000 boxes, which will be almost if not quite equal to one-third of the whole shipments of cheese from the United States the present season.

#### TO MAKE HENS LAY PERPETUALLY.

Give your hens half an ounce of fresh meat each chopped fine, once a day, while the ground is frozen, and they cannot get worms or insects; allow no cock to run with them, and they will lay perpetually. Try it. They also require plenty of grain, water, gravel, and lime.

In Bandera county, Texas, the past season has been one of disaster to farmers.—Grasshoppers and early frosts are spoken of by one correspondent among the causes of this state of things. In Lampasas county great floods are reported; in Lampasas town forty houses were washed away and many greatly injured or destroyed.

may be put out of the question. The build of the Malay fowls, with their great height, long snaky neck, and elongated shanks, promises little in appearance; yet, because it combines a large and plump breast with a good flavor of flesh when killed early, it has some pretensions as a table fowl. The Spanish breeds, second to no fowls for great production of large eggs, limited however to summer season, are out of the question for table purposes, on account of their black legs, which the cooks and poultry dealers object to; though the Minorca breed, which is akin to them, and has taken strong root in Cornwall, Devon and the west of England, is a better and plumper table fowl, besides equaling its relations in laying. The game fowls have the drawbacks of the yellow skin, though their flesh, is well flavored; the Polish are a delicate race, very sensitive to damp, though useful as interminable layers; and the Hamburgs, though excellent in flesh and flavor, and having more flesh than you would expect from their size, are also somewhat delicate, and not what might be called an early fowl. None of these, though each has some characteristic merit, realize what we designate—"a large-sized, hardy breed, which will yield, without trouble or coddling, a good supply of large early chickens." At the first blush it might appear that the Coch-

colored breeds are best for size; but all the Dorkins, colored, white, or silver grey, are remarkable for delicate white flesh, symmetrical shape and equal distribution of fat. As they are apt to suffer from over-feeding, it is in their favor that they like a good large grass run, and do best with a fair amount of liberty. Where this is not feasible, the cross between a Dorking and a Brahma will be doubtly desirable, for the result will be very hardy, quick-growing chicks of great weight first-rate table quality, the Brahma introducing domesticity and adding stamina. Such cross-bred chickens are not equal to pure bred Sussex or Dorkins as first-class market fowls, but from the greater number that can be reared on an ordinary farm-yard, where no very special care is given to them, they will be much more profitable." But we must not forget the cream of the French breeds, the Houdan, worthiest of its fellows in rank with the Brahma and the Dorkin as the most meritorious of fowls. Larger, heavy, short-legged with small light bones, and a minimum of offal, like the colored Dorkin, they are hardy and quickly reared, and mature with rapidity. The chickens are fit for the table at four months, and the flesh is fine and white. The eggs, too, of the Houdan are numerous, and general fertile. It must be added that



consideration, but inquiry only for home consumption, its tendency to put all its development of the finer—though it is not so much as the Cochins, though that of other breeds for a first class table bird, very high merits, such as rofigacy, docility and behold purposes. Mated fowls, the Cochins prod growth and large size table birds though ble for exhibition, or for non-European birds, a may safely place the vexed question whether American in their origin, on that the most useful purposes has been the and finest of domestic road, prominent breast, l between the shoulders curved or slender neck, ight, the true Brahma first-rate table fowl. maturity, of enormous tenderer, juicier than ally as docile, and will keep itself better. It is also very hardy, will stand wet and cold, and is a good layer, especially in winter. Mr. Tegetmeier introduces into this addition a hint to the judges in poultry shows designed to avert the deterioration of this excellent breed. The tendency, it seems, is to award prizes to size, and not as the schedule directs to high condition, beauty of plumage, cushion and fluff above the thighs, purity of breed, and other characteristics. And if this be persisted in, the danger is that we may get, in the place of the true Brahma, "gaunt, flat sided, tapered-sterned, short feathered" creatures, far removed from the ideal which has till recently been very nearly realized in the best prize-pens. A thorough John Bull will go in for Dorkins, and small blame to him. They grow very quickly, and put their flesh, as they should, on the breast, wings, and merry-thought. The best forsize; but all d, white, or silver e for delicate white e and equal distribu- are apt to suffer from their favor that they s run, and do best with ty. Where this is not tween a Dorking and a tly desirable, for the hardy, quick-growing first-rate table quality, g domesticity and add. cross-bred chickens " bred Sussex or Dorkins wls, but from the grea- e reared on an ordinary ery special care is given much more profitable." get the cream of the udan, worthiest of its the Brahma and the meritorious of fewls. legged with small and minimum of offal, like they are hardy and mature with rapidity. for the table at four sh is fine and white. Houdan are numerous, t must be added that

they are indifferent hatchers. As they very rarely sit, it is well to keep a few Brahma or Cochin hens to hatch their eggs, which will not be confounded with those of the hatchers, as the latter are buff-colored. On the whole, as a few, hardy breeds are better than many of various merit and degrees of constitution, we should gather from Tegetmeier, as indeed from our own observation, that the Brahmas, Dorkins and Houdans are the best investments—taken all in all—for the poultry-yard."

A VARIED DIET FOR FOWLS.

There are no animals more omnivorous than fowls; fish, flesh, herbs and grains, being devoured by them with equal relish. We say equally, for though they commonly pounce upon meat with greater avidity than upon grain, this is generally because it affords a rarity, and a flock kept for awhile almost entirely on animal food will show the same greed for a few handfuls of corn.

Now, those animals accustomed to use a varied diet, should not be confined to an unvarying one. There are, indeed, some species which are naturally limited to one or a few kinds of food. Thus, cattle do well enough, although kept month after month on grass alone, and a tiger will thrive with nothing but lean meat upon his bill of fare. But with other animals, as with the human race, for instance, the case is different, for no person can maintain the highest efficiency when confined to one article of food. No matter how fond we may be of a particular dish, we lose relish for it when allowed nothing else for a number of consecutive meals, and the intense craving for variety indicates as its source something more than meat appetite. It gives evidence of real necessities of the system which is constantly varying with the changing circumstances of weather employment and other conditions. The fondness for variety shown by fowls is a significant of real needs as we have found it to be in ourselves. In purveying for them, a judicious variety, selected from the three general divisions—is at all seasons absolutely necessary for young and, old in order to make them perfectly thrifty. True they will not starve on hard corn and water, neither will they pay a profit so kept.—*The Poultry World.*

Prince Imperial

THE PROPERTY OF MR. JOHN R. CRAIG, OF EDMONTON—THE WINNER OF THE PRINCE OF WALES' PRIZE, 1873.

The Prince of Wales' Prize for 1873 was awarded for the best Durham bull and five of his calves, all owned by the exhibitor. The honor of gaining the above prize was strongly competed for by our principal breeders. A finer lot of young Durhams had never been exhibited before in Canada than the various herds that contended for this prize. In fact, it was the most important prize given at the last Provincial Exhibition. It was fairly and honestly won by Mr. Craig.

The above cut represents the bull that headed the herd. There were other herds so near in point of quality that they gave the judges considerable trouble to arrive at a conclusion.

We wished Mr. Craig to have the whole herd engraved, but the artist did not consider that calves looked as well as

grown animals when drawn; we yet hope to find this delusion dispelled by showing some engravings of young animals.

In improved Berkshire swine Mr. Craig also carried off the principal prizes, gaining the 1st for the best aged boar, 1st and 2nd for boar under one year, 1st for breeding sow, and 1st, 2nd and 3rd for sows under one year (despite the clumsiness of your editor in stumbling over a pail of milk prepared for their breakfast one morning when looking at the stock, thus depriving them of a meal, much to the chagrin of Mr. Craig's herdsmen and dilemma of your humble servant).

He also carried off the Sweepstakes for the best pen of Berkshires, consisting of one boar and two sows.

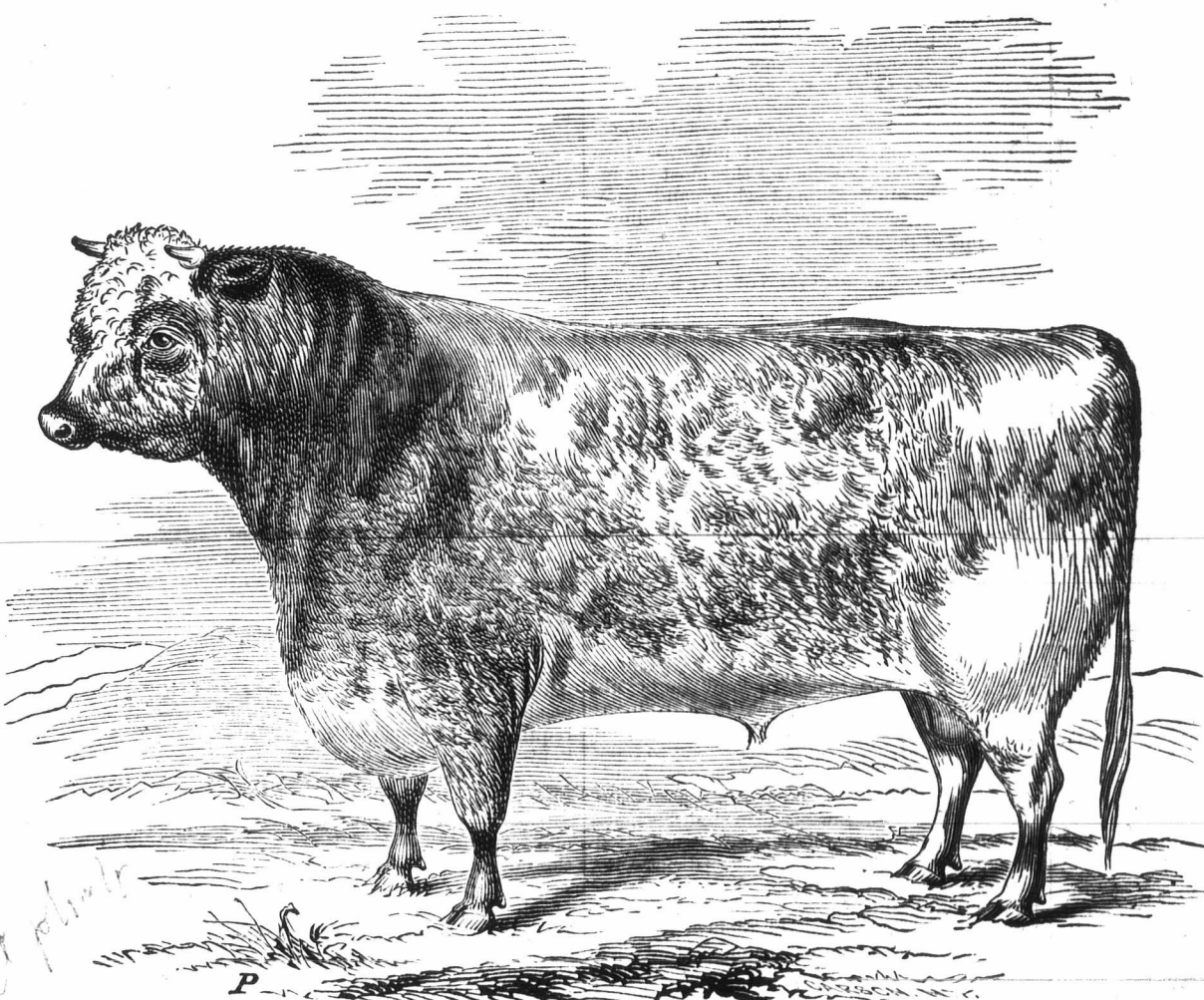
While carrying off the highest honors at our Exhibitions in Canada, and not being satisfied with these honors Mr. Craig divided his stock and sent some to the Exhibitions in the States.

The result was that on the same day that Mr. Craig carried off the principal prizes at our Provincial Exhibition, part

Mr. Craig is brother-in law to the Messrs. Snell; his farm is but a short distance from their's. From the very practical manner in which they conduct their breeding farms, combined with their knowledge of the different breeds, it is difficult for persons with more money to compete with them.

The Messrs. Snell carried off the first prize for the best three-year old bull in the Durham class, 1st for one-year old bull, 1st for the best cow, and 1st for the best herd of Durhams, consisting of five females and one bull, of any age, owned by one exhibitor. Also, in the Cotswold class they carried off the 1st and 2nd prizes for the best two shearing rams; 1st for two shearing ewes; 1st, 2nd and 3rd for best pairs of ewe lambs, and the sweepstakes prize for the best ram, best 2 ewes and best two lambs.

Such honors as these brought into the township of Esquessing, or even into the county of Peel, ought to make the other farmers in the township or county feel pleased to have been so well represented.



PRINCE IMPERIAL.

of his stock brought him about as great honors from our American cousins. He exhibited at the great St. Louis International Exhibition, taking the three grand sweepstakes for best boar of any age or breed, \$100; best sow of any age or breed, \$100; best sow and litter of pigs of any age or breed, \$100. Also, 1st prize on Cotswold ram, and Sweepstakes on Long-wooled ram, any age; 1st on shearing ewes, and sweepstakes on ewe of any age or breed.

Mr. Craig took over 150 animals to the fair at St. Louis; he made some fine sales. Two Berkshire sows under 1 year were sold for \$400, and many other swine were sold at from \$100 to \$200. He also sold one Cotswold ram and five ewes for \$1200. He has several fine young heifers and bulls now to dispose of. He has considerable of the Bates' blood in his herd, which very materially adds to the value of his stock. His imported Cotswold ewes com-peted against the best that had been brought into Canada or the States, and his stock came off victorious.

They might during the long winter season get up a spread in honor of their successful breeders, who have gained such honors for their county. Perhaps the county of Peel may never again be able to show such laurels.

It is really remarkable that Mr. Craig and the Messrs. Snell should have carried off such a lot of the prizes, when all the old breeders and capitalists are striving so strongly for these honors. We say, well done, boys; go on and prosper.

The Short Horn Breeders' Convention.

This Convention held its last meeting in Cincinnati, on the 4th of December. Of course the object of the directors is to maintain the highest position possible for the Short Horn stock.

Everything is discussed that may tend to that purpose. An article was used and is published in some of the American papers, estimating the greater profit on the beefing qualities of this class of cattle

very high. The figures show well, still we think the published account a very extreme case.

Attempts were made at the Convention to reject a very large number of the animals that are now entered in the herd books. The object was to elevate the choicest stock and enhance its value, and to deprecate the value of much that is now in the herd book. A very strong fight was made to carry it, but it failed.

A paper by A. J. Matthews, on the "New York Mills' Sales," was read by the Secretary, and elicited much discussion as to whether it should be printed in the proceedings or not. The paper endeavoured to prove that prices paid for Dutchesses at the sale were out of all proportion to the value of the animals.—The convention, by vote of 232 to 20, determined not to publish the paper, and not to give it to agricultural papers asking for it for publication.

We think publicity should be given to such, and allow all to judge for themselves.

ACCOUNT OF THE HARVEST.

CORN CROP.—The advance sheets of the Department of Agriculture for November say:—The November returns do not materially change the corn prospect as indicated in October.—This crop is so generally grown, its importance so great in the farm economy, that the reports are not only numerous, but more accurate than local estimates of the minor crops can be, and may be relied on as approximating closely the actual fact—possibly not so closely as census returns, perhaps in some cases a greater approach to accuracy. The so-called failure in 1869 was indicated before the crop was ripe. Instead of eleven hundred millions bushels, or even ten hundred, the estimates footed up eight hundred and seventy-four, and a large amount of soft corn was subsequently fed as forage, and not counted as corn gathered in the census. The gathered corn reported in the census was seven hundred and sixty million of bushels, an aggregate actually less by seventy-eight millions of bushels than the crop of 1859, reported ten years previously. The estimate was not a bush-

el higher than the actual amount of corn in the fields at the time, including the soft corn, not of equal value, but utilized for feeding purposes. There was a good corn crop in 1370, and the estimate was two hundred and twenty millions higher than that of 1869. The present returns indicate another "failure" in the exaggerated language of crop conversation and random crop reporting—a reduction of two hundred and thirty-three millions from that of last year. The percentage of the previous crop is 78.

Few plants can endure the high temperature and dry atmosphere of our living rooms. As much air and light as possible should be given, while the leaves should be sprinkled frequently. A spare room, or parlor, or extra bed-room is better for plants than a living room. If the green fly or aphid appears, wash with soap suds frequently, and occasionally with tobacco water, or a decoction of quassia chips. Burn a little sulphur under the plants to kill spiders, and in the event of worms appearing in the pots, a little weak lime is sometimes of benefit; also five drops of liquid ammonia to a gallon of water.







POTATO FARMING IN THE WEST.

The western papers, especially those in Illinois, are giving very discouraging reports of the potato crop. One of them says:— "The Colorado bug was so successful in its war upon this universal favorite that from all quarters a scarcity is announced. This causes prices to advance, and to-day in the principal markets of the country a bushel of potatoes cannot be purchased for less than \$1, and in Chicago a good article commands \$1.25. This places the potato practically out of the reach of the poor man. Other articles of food, under the influence of a stringent money market, have declined in price, but the potato has advanced. The supply is yet unequal to the demand, and further advances in prices must be expected. With potatoes at thirty to fifty cents, poor families could live comfortably, even with flour at \$10 per barrel and meats of all kinds at high figures; but when the potato reaches \$1 to \$1.25 per bushel, the poor man must resort to soup bones, and such other cheap methods of keeping soul and body together as he may be able to discover. But it will cost more to live—and he cannot live so well—in this manner, even with prices generally very much below those which have prevailed for several years. This is peculiarly unfortunate at this time, when work is scarce and the tendency of wages is downward."

WINTER AND SPRING WHEAT.

The distinction between winter and spring wheat is a difference in the time of sowing and not in variety. And spring wheat can be changed into winter, or winter into spring, merely by gradually changing the time in which either is sown. By gradually sowing spring wheat earlier every season, in a few years it can be sown in the fall, and become winter wheat. Or just before the close of winter sow winter and let it germinate slightly, then let it freeze up till spring, and next year it may be successfully sown in the spring. And as it is universally conceded that winter is better than spring wheat, it is a natural conclusion that the sooner wheat can be safely sown in the spring the nearer will it attain to the quality of winter wheat. The difference between red and white wheats, is not in variety, but is owing chiefly to the variety of soil on which it is grown. It is said that the hard wheats are all natives of warm climates, such as Italy, Sicily and Barbary. The soft wheats from more northern climates, such as England, Russia, Belgium, Denmark and Sweden. There is, however, one exception to this general rule, as the celebrated Polish wheat is hard, and from this reason it has been contended that it was not a native of Poland, but was introduced there from a milder climate. The English atmosphere is so humid that it is impossible to ripen any wheat hard, but in many cases it requires artificial heat to harden it before it can be ground into flour. Different soils and climate materially change the nature and variety of wheat.—*Ag. Dept. Report.*

POULTRY AS FARM STOCK.

The *London Field* has the following suggestions that, with some modification, will be applicable to our own poultry keepers:— "How many farmers might obtain plenty of new accommodation for poultry by simply making use of the buildings they already possess, and how many farmers consider fowls unworthy of consideration, because of some supposed difficulty or expense in erecting suitable houses. And worse than this, how many farmers try to make poultry pay without any result beyond continual vexations, merely from lack of ingenuity in bringing ordinary applications into play. "Why brother," they ask, "what is the use in raising chickens in cow-sheds and out buildings, when you can set out as many coops as you like on the grass of a paddock, the gravel of a stable-yard, or upon the scattered rick-yard straw?" Because, generally speaking, half your chickens die under common farm-yard treatment. They get wet feet and die of cramp; they drink the high-colored soak-water of manure heaps, of straw-yard drains and other filthy slops, and consequently sicken and die by dozens. We have a troop of adult breeding fowls loose in the farm yard, they pick up a large part of their living there. But they do not thrive so well and keep so healthy as other troops of breeding stock which we have stationed at houses properly erected in grass fields far from the homestead. For a very

small sum you may erect a square board house, tarred outside, lime-water inside, and covered with asphalted felt. Each of the four sides is in a separate piece, the roof (if of a gable form) in two pieces, all knocked together at the corners with staples and pins. So a house, say six or seven feet cubic, can be popped into a cart, and temporarily set up in a pasture, or on a stubble, or wherever there may be a good picking for the fowls. A couple of perches, a few nests, and a drinking-pan for the furniture, while the ground covered in by the house (for there is no wooden floor) is spread over with loose earth, ashes, and mortar. Such is the home for one and eight or ten hens and pullets during the breeding season, or the home of double this number of half-grown chickens. The house should be placed against a hedge, or in a corner where two hedges meet, so that a few poles or posts protect it against cattle.

There can be no good reason against grazing fowls as well as other "animals" and the farmer who tries it for the first time will be surprised at the amount of "grub" (literally, perhaps,) which the active scratchers and pickers will find in a grass field, in and under the droppings of sheep and cattle, among hedge-posts, upon ditch sides, and so on; only a small amount of grain being necessary twice a day. We wish that many farmers would take our advice—procure what hardy sort you must fancy, Cochin or Brahma, that endure close quarters; game that are strong old English birds; Dorkins that like dry chalk and gravel countries, or, if you are in a low or wet neighborhood, on a tenacious soil, put a Cochin cock to Dorking females (no cross breeds allowed for parents, mind, but get good blood and pure breeds) and you will have hardihood in your chicks, as well as weight and quality in your couples for market.

CERTAINTY AND UNCERTAINTY IN FARMING.

From a correspondent in the *New York Tribune*, in reply to a city man asking advice about going into farming:—

One more point raised in the letter before me demands notice. "I have heard some people say," writes the city young man, "that no money is made at farming, but evidently this must be an error, and I presume failure in it must proceed from a lack of knowledge and management." Most truly have you solved the difficulty, and in fact answered much of your own letter, and your summing up is so good it is worth printing. "Is it not," you ask, "on an average more certain to give a good living, and at least moderate wealth, than almost any other pursuit?" Yes, to those who know how; but to those who do not know how to manage a farm it is a much faster method of wasting a fortune than it is the means of acquiring one, in the wisest of farmer's management. For farming is at once the most certain and the most uncertain of all kinds of business. This may appear to be paradoxical, but it is a true saying. If we look at general results and periods of years, the business is most stable, as is shown by the general average of crops. Even a single—if we look at the whole of our own country—will show that the deficiencies of some unfortunate districts are generally compensated for by the surplus of the more fortunate sections, and generally each particular section will have its fruitful years to make up for the lean ones. So, a mixed system of agriculture will in some degree cause a well-conducted farm to equalize each year. The wheat may be a poor crop, and the corn make up for it by an abundant yield or an extraordinary price. So wool may be low, and grain bring a good price to compensate. These illustrations might be made much more full, but enough has been said to indicate how it happens that, in periods of say ten years, things come around about as certainly in farming as in any other business. Though it does sometimes happen that a year may be behind the average—even in farming, the most varied—and two or even more such years may come in succession, such successive lean years try the farmer's courage, and his purse too, and if he is in debt, may result in great misfortune to him, but all branches of business have their periods of depression, and times where expenses are hardly met by the best management. The farmer, during these times of short crops or low prices, feels still a degree of safety unknown in most other businesses. His farm cannot be stolen by clerks or cashiers, and all the past teaches that soon the fruitful years will come. So in grand

results, farming is a wonderfully safe and stable business.

But however safe the general results may be, the case of a single crop is very different. One of the best farmers I was in the habit of consulting in my earlier years, said he never calculated on a growing crop as a means of meeting a liability. For such were the uncertainties attending the growth and harvesting, that until the crop was safely harvested and in the barn, where it could be insured, he never ventured to call it property, except in expectancy, and not as safe as the basis on which to contract debts whose payment must depend entirely on the success of the crop. However well a crop may be put into the ground, it cannot be safely counted upon as even paying for the labor bestowed upon it and the same is true of farm stock. The uncertainties of life there come in, and when the calf is in the course of being taught to eat his food, the owner looks forward many years, with all their uncertainties, for his compensation. Every branch of the business, thus looked at in detail, will be found to be wonderfully uncertain, though in the aggregate so sure. The chances here, as elsewhere, are found to work less against the men of skill, than against such as are the followers merely of such practices as may have been established by customs handed down from past times, or perhaps imported from unlike climates; and the advances made during the last third of a century may most readily be discovered by observing the precautions now taken in the direction of what is called "high farming" against the many uncertainties that, though they still, and always will remain, are vastly lessened in their injurious effects—so that it will be observed everywhere that the highest grade of farming escapes much of the injurious results of the unavoidable perils that all classes must encounter.

MINNESOTA'S MARVELLOUS MERITS.

I would say a few words in regard to Minnesota in general, knowing that, if all the advantages that it presents to those seeking a place to get rich in were generally known, everybody would live there. The advantages that it presents to stock raisers are unequalled by any other State of which we have any knowledge. Cattle will live and do well, provided they have a good tame pasture to run in from the middle of June until the first of August in each year.

Winter never commences here before the middle of Oct., and generally is over by the first of May. This year it held off until Oct. 22nd. Now, Oct. 29th, we have good sleighing. And then the weather is so mild and unchangeable. The mercury seldom goes above 110 in summer, and not often gets lower than 45 deg. below zero in Winter in the shade.

Agriculture pays better than any other business, all get rich that follow that vocation; but the most profitable branch of it is raising wheat. Those who confine themselves strictly to raising it have more money than they know what to do with. Some complain that raising wheat does not pay very well. But, if a man comes here with money enough to buy a quarter section of land, and ready cash to stock it with four good horses, wagons, harness, cows, pigs, reapers, mowers, and all things necessary for a prosperous farmer to have, including of course a good house and barn—if he be a man with a constitution that will admit of his working from four in the morning till nine at night all the year round—if he and his wife will both economize a little by going barefoot in summer, and, when he must have something to cover his nakedness and keep him warm, in the place of going to the store and buying something for that purpose, let his wife go to his old bags (if he be fortunate enough to have some bags), and, out of them make him a suit of clothes,—if he will do all this he will soon find he will be able to make both ends meet.

But when the wives stand in need of anything in that line—well, I don't know what they will do. That is their look-out. But should there be any children in the family, and they should ever want clothes, I see no other way than to make them from their mother's old ones.

It would be a great help also if the wife would do the chores, such as milking the cows, feeding the pigs, making and tending the garden, planting and hoeing the potatoes, husking the corn, driving the reaper and mower, help stack hay and grain, and

many other little chores that a woman that is at all observing will notice, without having to be told about them every day.

If these suggestions are followed, I see no earthly reason why he cannot lay up money enough each year to pay his taxes, and buy his wife a new calico dress for Christmas, and once in two years may put on his himself by wearing of a Sunday a pair of brogans. But if any one should conclude to come here who has not the means to open up a big farm, the most profitable business he can go into is to buy a few acres of timber near Dundas and go to chopping cord wood to sell to the prairie farmers, or get himself nominated on some of the numerous tickets as a member of the Legislature. U. T. East Castle Rock, Minn.

NOTHING NEW.

LARGE POTATOES.—The *Farmers' Union*, Minneapolis, Minn., says:—At the State fair, there were on exhibition some immense potatoes raised by Mr. Andrew Holes, of Morehead, on the line of the Northern Pacific railroad. The largest one—an Early Rose—weighed 4 lbs. and 14 ozs., while all of them were much heavier than any beside on exhibition. Upon asking Mr. Holes how he managed to grow them to such size, he responded as follows:—That the land was broken in May last, and shortly after he took his spade and raised the green turf enough to put under a few potatoes of the size of butternuts. Nothing more was done to them whatever during the season. The potatoes grew and threw out tops between the openings, but he hardly thought the yield would be anything until he opened the first hill in the fall. Every seed he had planted had multiplied itself, in an astonishing degree, into potatoes of the largest size, and several bushels were taken from a small piece of ground.

The work of planting potatoes here described is nothing new, though to Mr. H., and to most scientific Agriculturists it is a strange, unheard of method. Like many other practices long obsolete, it is now a new discovery. This method was very general in Ireland till within this half century. A field of pasture intended for a potato ground was plowed shallow, six inches in depth, and the scows of a uniform width, in ridges of six feet wide. In planting, the green turf was raised enough to put under it at the back of the spade raising it one seed. They were planted in this manner in straight rows across the ridge, eight inches apart each way. The yield in favorable seasons was very large, amply repaying the large quantity of seed used. Forty barrels of potatoes have been produced by one rood, plantation measure. The barrel of potatoes is 280 pounds. The plantation acre was in proportion to the statute acre as 14 to 11.

When the potato plants were just beginning to appear over the earth the ridge was covered with a couple of inches of earth from the furrow; this completed the labor till the time of taking them from the ground, unless it might be the pulling of a few weeds. This method of planting potatoes was long since discontinued. Planting in drills has become almost universal, the plough, as in most instances where practicable, superseding the spade.

NATURALIZED WEED.

The *New York Tribune* says:—Two hundred and fourteen of our weeds have been introduced from foreign countries, and chiefly from England. In 1837 only 137 foreign weeds were enumerated in our catalogues. In 1672, a book entitled "New England Rarities," gave a list of 22 plants, which the author spoke of as having sprung up since the English took possession. Among these, the plantain, "the white man's foot," is mentioned. In 1758, the toad flax, or butter and eggs, also then known as the "Raustedweed"—from the name of the gentleman who introduced it into Pennsylvania as a garden flower—had overrun the pastures of that province, and had caused many anathemas by the farmers against the unlucky introducer. The common chickweed is said to have been first sown in South Carolina as food for canary birds, and the presence of the Scotch thistle is accounted for as due to the *amor patrie* of an enthusiastic Highlander, who brought it hither as an emblem of the pugnacity of his countrymen. Another record says we have the carelessness of a clergyman who brought hither a bed of thistle down, and on changing it for feathers, spread it and the seeds it contained broadcast over the country.





### MINNIE MAY'S DEPARTMENT.

#### Minnie May's Cook Book.

##### WHAT TO DO WITH THE BUTTERMILK.

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

##### TEA CAKES.

Take of white flour, 2 lbs.; bi-carbonate of soda,  $\frac{1}{2}$  oz.; sugar, 2 oz.; sour buttermilk, 20 oz., or 1 pint. Rub the soda, sugar and butter well into the flour, and mix with the buttermilk; roll out and make into cakes of any convenient size, and bake in a moderate oven 20 minutes.

##### LUNCHEON CAKE.

Take of white flour, 1 lb.; bi-carbonate of soda, 2 drachms; sugar, 3 oz.; butter, 3 oz.; sour buttermilk, half-pint or 10 oz.—Mix as above, and bake in a quick oven in a tin, one hour.

##### SCOTCH BUNS.

Take of white flour, 2 lbs.; bi-carbonate of soda, 2 drachms; salt,  $\frac{1}{2}$  oz.; sour buttermilk, one pint or 20 oz. Mix and bake the same as for tea cakes.

##### LEMON BUNS.

Take of fine flour, 2 lbs.; bi-carbonate of soda, 6 drachms; sugar, 8 oz.; butter, 4 oz.; eggs, 2; buttermilk, three-fourths of a pint or 15 oz.; essence of lemon, 12 drops. Mix the same as tea cakes, and bake 15 minutes. The addition of 6 oz. of currants would make these an excellent plum bun.

##### PLUM CAKE.

Take of fine flour, 1 lb.; bi-carbonate of soda, 2 drachms; currants, 4 oz.; eggs, 2; sugar and butter, each 3 oz.; sour buttermilk,  $\frac{1}{2}$  pint or 10 oz. Mix the flour, soda, currants, sugar and butter well together, then beat up the eggs and mix with the buttermilk. Mix the whole together and bake in a tin  $\frac{1}{2}$  hours.

##### PASTRY FOR TARTS, ETC.

Take of fine flour, 1 lb.; bi-carbonate of soda, 2 drachms; butter, 6 oz.; buttermilk enough to bring it to the consistence required. This paste is much superior to that made in the common way.

##### COOKING APPLES.

I do not think that house-keepers have cooked apples nearly as often as they should. There is nothing more wholesome for desert than apples baked in various forms. They should be cored, put in a dish with a little warm water, each with a teaspoonful of sugar over it; bake until soft and serve cold, with cream or good milk. Or make an apple float by taking a dozen tart apples, stew and prepare them as for sauce; when cold, add the whites of two eggs, beaten; then beat the whole until quite stiff, having made previously a soft custard with the yolks, using about a pint of milk. Or make an apple pudding by filling the cored apple with nutmeg, sugar and butter; make a batter of one egg, flour and milk, and pour around the apples. Or pare, core and spice say ten large tart apples; bake until nearly done; put away to get cold; then prepare icing as usual. Pour off the juice, lay the icings on the tops and sides as thickly as you can; then return to the oven to just harden and set. To be eaten with cream, but if you haven't that, as the article is scarce nowadays, good milk will answer, if you can get it.

**CHEAP CAKE.**  
1 cup cream, 1 cup sugar, 2 eggs, 1 teaspoon soda, 1 teaspoon butter.  
Bella E. Hess.

ALL kinds of poultry and meat can be cooked quicker by adding to the water in which they are boiled a little vinegar or a piece of a lemon. By the use of an acid there will be considerable saving of fuel, as well as shortening of time. Its action is beneficial on old, tough meats, rendering them quite tender and easy to be digested. Tainted meats and fowls will lose their bad taste and odor if cooked in this way, and if not used too freely, no taste of it will be acquired.  
HARRIET K. JONES.

A PIECE of red pepper the size of your finger nail dropped into meat or vegetables when first beginning to cook, will aid greatly in killing the unpleasant odor arising therefrom. Remember this for boiled cabbage, green beans, onions, chickens, mutton, etc.  
J. L.

##### POP CORN PUDDING.

Pop one pint of corn, crush with the rolling-pin and grind in a coffee-mill, mix with four pints sweet milk, warm and soak two hours; then add two eggs, sugar, raisins and spice. Boil a few minutes, stirring all the time. Bake one hour and eat hot.  
HATTIE COOK.

##### POTATO PUFF.

Two cups of cold mashed potatoes; stir in it two tablespoons melted butter, beating to a cream; add two well beaten eggs, one cup cream or milk; pour into a deep dish; bake in a quick oven.  
MARY JACKSON.

##### FRIED CAKES.

1 cup cream, 1 cup sugar, 2 eggs,  $\frac{1}{2}$  teaspoon soda; fry in lard.  
Bella E. Hess.

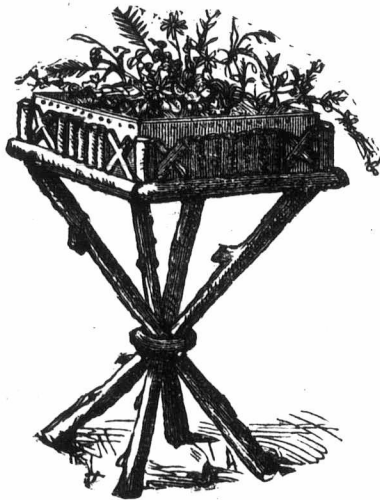
##### JELLY CAKE.

5 eggs, 1 cup sugar, a little nutmeg, 1 teaspoon saleratus, 2 cups sour milk; beat the eggs, sugar and nutmeg together, dissolve the saleratus in the milk, then mix and stir in flour to make a thin batter like for pancakes; 3 or 4 spoonfuls of batter to a common round tin. Bake in a quick oven; 4 or 5 of these with jelly between forms a cake.  
A. A. ELLSWORTH.

##### TO MAKE APPLE JELLY.

Take 1 bushel of ripe apples, cut them in halves, and take out the cores; then put them in a large kettle; add 1 gallon water; cook them until tender, then put them in a sack of coarse linen (cheese linen is the best). Let them hang until morning, and then boil the juice 20 minutes; then measure it, for every pint of juice adding 1 lb. of sugar. Boil again until it gets like other jelly. Season with lemon or any other essence, as best suits the taste.  
A. A. ELLSWORTH.

#### Minnie May's Flower Garden.



A RUSTIC FLOWER STAND.

This beautiful stand needs no description. Get your husband or brother to make up the frame for you out of a rough box, which they can get from the grocer you deal with, and some nice saplings. The balance of the work can be easily done by yourselves with glue, bark, paper and varnish. When you make up any of these fancy fixings, let me hear how you like them.

##### TO MANAGE CUTTINGS.

In selecting a cutting a great deal depends upon a judicious choice; if the slip is too young and full of fresh sap, it will fade away from too much evaporation, and if it is too old, that is, hard and woody, it will take a great while to strike root.

You must take a cutting that is partly ripened, and is from a vigorous shoot, yet is a little hardened at the base.

It is also essential to have a bud or joint at or near the end of the cutting, as all roots strike from it, and the nearer it is to the base, the greater your chance of success.

Plant your cuttings in common pots, filled half-full of rich loam, and two inches of sand on the top (scouring sand will do, but not sea sand). Wet this thoroughly, and put the cuttings close around the edge of the pot; for if the bud joint comes in contact with the surface of the pot, it seems to strike root more quickly. Pull off the lower leaves before you plant the cutting. Press the wet sand tightly about the tiny stem, for a great deal of your success in raising the cuttings depends upon the close contact of the sand with the stem. When the cuttings are firmly planted, cover them with a glass shade if possible, for it will greatly promote the growth of the plants.

##### TO CHANGE THE COLOR OF FLOWERS AND PLANTS.

Common cowslips may be changed from their natural yellow to an intense purple by merely transplanting into richer earth. The color of plants can be readily varied by mixing certain substances with the soil. Wood charcoal will darken the hue of dahlias, petunias, and hyacinths. Carbonate of soda turns the last-mentioned flowers red, and phosphate of soda alters greatly the shades of many plants.  
MINNIE MAY.

#### Minnie May's Scrap Bag.

##### TO CLEAN PAINT.

Use but little water at first; keep it warm and clean by changing often. Soap will remove the paint, so use but little of it. A flannel cloth takes off all fly specks better than cotton. Cold tea is the best liquid for cleaning varnished paint, window panes and mirrors. A saucer of sifted ashes should always be standing at hand to clean unvarnished paint that has become badly smoked; it is better than soap. Never put soap upon glass unless it can be thoroughly rinsed off, which can never be done to window glass. Wash off the specks with warm tea, and rub the panes dry; then make a paste of whitening and water, and put a little in the centre of each pane. Take a dry cloth and rub it all over the glass, then rub it off with a chamois skin or flannel, and your glass will shine like crystal.

##### TO MAKE COCOANUT CANDY.

Rasp very fine a sound, fresh cocoanut, spread it on a dish and let it dry naturally for three days. Four ounces will be sufficient for a pound of sugar for most tastes, but more can be used at pleasure. Boil the sugar, and when it begins to be very thick and white, strew in the nut; stir and mix it well, and do not quit it for an instant until it is finished. Keep the pan a little above the fire to prevent the nut from burning. If you cannot get a cocoanut, buy a package of "Dessicated Cocoanut" in your grocery.

Burnside Farm, Nov. 12, 1873.

Dear Minnie May,—

We all appreciate your column, and eagerly look for it; it is going to be a great help to housekeepers. Here is a neat little thing for a Christmas gift to an industrious little needle-woman, an emery bag, resembling a strawberry.

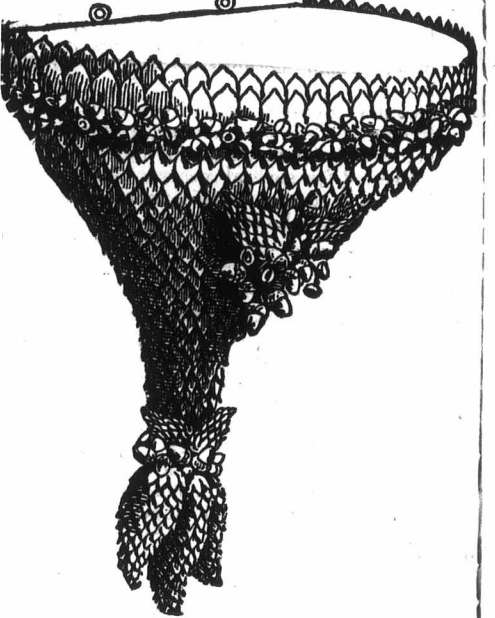
Make a small woolen bag, shaped like a strawberry; cover with strong cotton, the same shape; cover that with red silk, stitch in the seeds with yellow silk thread, put on a green top to look like the green calyx, and add a loop for a stem. It is pretty and useful.

Here is a neat and inexpensive tidy, suitable for grandma's rocking chair or the dining room lounge:—

Take one skein of red woolen yarn and one of white cotton yarn; set up 18 stitches, and knit it garter-fashion, 29 times across; then change for the other color. Crochet the

strips together with an open crochet chain, or sew them together. To make it in a diamond shape looks very nice. Honey comb pattern:—Knit one stitch, widen the second, stitch in each row for five rows; then knit plain without widening for six rows; then narrow on five rows to a point. The blocks may be made of much larger size if desired, and I think would look better larger, say twice as large. Thirteen red blocks and six white ones form the tidy. A white initial letter embroidered on the central block looks well.

I have not time to take up John K.'s letter just now. I refer him to the Women's Rights Committee, and he deserves to be well castigated by them. Obey the men, indeed!  
Yours truly,  
MARY P.



CONE BRACKET.

After the directions given last month for cone work, it will be unnecessary to describe the way to make this bracket. The engraving shows distinctly how to arrange the cones. It will make a very neat ornament.

Melburne, P. Q., Dec. 14, 1873.

Dear Minnie May,—

I am very much interested in your column and I thought I would send you a couple of recipes,

##### FOR CLEANING SASH RIBBON,

or making it stiff and new. Take a little vinegar and water; sponge the wrong side, and iron with a warm iron.

##### FOR CHAPPED HANDS.

Put a little oat meal in some water; wash, and before drying rub with some honey, then rinse and heat them by the fire. One application will cure almost the worst cases.—Glycerine is good instead of honey. Will some of your contributors tell me a recipe for sore lips and cold sores.

##### TO MAKE A HANGING BASKET.

Take perforated card board, three square pieces, about seven inches square, and round one corner. After having worked them with silk in squares, with beads in every other corner—the large glass beads preferred—bind around with ribbon the color of your silk. Have one square silk, the other a bead. Now take two opposite corners and sew them over a little way; then sew the three altogether in the same way, fastening them just at the corners where they are sewn. Put a tassel of beads on the bottom corner, and a long string of beads to hang up by. Fill the top spaces with a bunch of paper flowers and hang in the corner of the room.

If I have not described it well enough, please tell me and I will try again.

Poor John K. had to take it in your last. I would say a word to him: he is partly in the wrong, and partly in the right; of course Mrs. K. knows best how her little household matters are to be done, so John should not be so absurd as to interfere, but in matters of dress, &c., she ought to give into his judgment. I hope he and Mrs. K. will send their photo's for Uncle Tom's picture, as I want to see them.

Yours, &c.,  
NINA M. KNAPP.



feits until next month will be photographed those who have sent them shorty.

My old friend, nice letter, for which thanks. My new ni East, the girl that month, is going to b family. I have alr letters from her an spect many more. photograph is goin bein the big picture I feel proud of havi there. Emma A. son, another new claims admittance the family, and wh her uncle and all rest of the family Christmas and H New Year." He Emma Gill with an and Neil Gilmour Sophia Johnson, w busy making Chris presents, but nonc Uncle Tom. Bell Hess says:

159.—Put down strokes, / / / /; ad strokes and make n

Maggie Headrick whose school exar tion I hear splendi ports, says:

160.—I have a pie land 20 feet square, on it I have a hou feet, one way an 20 another, and a gar feet one way and 20 another. How can be?

My smart boy, V A. Rutherford, some

##### HIDDEN CITIES.

161.—He provoked laughter by a groce beck of his hand.

162.—It amused r see the senator on to the camel.

163.—The picture a comical cut taken an old painting.

164.—I saw little bo stoning a black

165.—He lies in g edge of forest.

166.—The streets And I but And the tra But utter

Now just pr And then For when he I wouldn't

But with an Placed just I sadly hurt As my for

167.—What is it never see after it is

168.—When is a la

Many thanks to A kind wishes. I h member both of the nieces and nephews. picture of two nieces Adams sends some v

169.—What is nei bone, but yet has fou







Miscellaneous.

BREADSTUFFS.

The shipments of wheat and flour for the four weeks ended August 30, reached 5,500 tons. This brings the total exports for the year up to close upon 147,000 tons, which will leave about 30,000 tons on hand to meet purchasing requirements to the end of the year.

SALT AS A FERTILIZER.

Mr. A. H. Moll, of Greenfield, and D. H. Whitney, of Lincoln, in Monroe county, Wisconsin, have both experienced some in the use of common salt as a fertilizer, and in every trial it has proved to be of great power and utility.

Mr. Moll had fenced and undertook to cultivate a piece of ground that had been occupied for some years as a public wagon road, but was not able to raise grain on it of any amount. He took a barrel of meat brine, reduced it three to one with water, and sprinkled it over the land, and ever since it has produced very heavy crops.

OPEN DRAINS IN FIELDS.

There are few countries that need draining more than many sections in the West. The inconvenience of the usual ditches with steep sides, and the unsightly banks, have deterred many persons from forming them, and the system of under draining, on the other hand, except near the large towns and cities, where land very valuable, is out of the question on account of the expense.

These ditches need not be straight, but many follow the general full of the fields, Spring and early Summer while the earth is saturated with water is undoubtedly the best time to take out the lines, unless the farmer be able to employ the services of a practical engineer for the purpose.

If the sides of the ditch slope away at an angle of 45°, the width of the ditch at the top will be twice the depth, the bottom of it being a point. Therefore, for a ditch two feet deep, the surface should be four feet wide. This will be found deep enough for any surface drainage; in fact from fifteen to twenty inches in depth, is deep enough for any ordinary surface drainage; indeed a ditch twelve inches deep, if kept clean, will do wonders in this respect if the decline be uniform.

Stake out the ditch in the line of uniform descent, then plow a number of furrows according to the depth of the ditch, making the dead fall where the centre of the ditch is to be. Then with the scraper commence to scrape the earth from the centre to the side, commence at the lower end of the drain, so that if heavy rains intervene the water from above will have free passage. Proceed with the other side the same way, always spread the earth over the surface of the land; or, better, fill up low places that may be observed. Continue to plow and scrape narrower and narrower each time, until at last the required depth having been reached, the ditch will present the following appearance:

If a rise of six inches to the foot is decided on, and this grade is preferable when the dead furrows of the land are to run to the ditches, the top of the ditch must be four feet for every foot in depth. In making

these ditches, the man and team should back up, only going forward when drawing out the earth; unless the material is to be moved some distance, say two or three rods.

In making ditches and grading roads, many teamsters become impatient and needlessly worry themselves and teams. The first thing is to teach the team just what you want of them, and while doing so, they should not be needlessly hurried. Their movements must be necessarily slow, but the quantity of work that may be done in a day, and the slightness of cost compared with ditches dug by hand are surprising. When finished, the plowing may be continued with care to the very edge; and thus a system of drainage may be induced that will render fields capable of being plowed fully a week or ten days sooner than could otherwise be accomplished.

EVAPORATION ON THE FARM.

It is supposed that a considerable portion of rain that falls—from one third to one half, perhaps—is filtered through the soil. After having discharged its duties in the soil, it must not any longer remain there. It must find an outlet, mingle again with the immense atmospheric ocean, and thus become energized for future work. Now, if the soil be a porous one, the water will pass gradually through it, constantly yielding all its beneficial influence to the plants which stand in the soil. On the contrary, if the soil is a compact one, the water will stand too near the surface; evaporation will be excessive, and the ground will be cold and unfruitful. Another matter is worthy of consideration. The evaporation from our fields not only draws away their moisture, but takes with it the carbonic acid gas, ammonia, sulphur, and phosphorus, in some degree. These cases combine with the air as they arise from the earth, so that breathing the air about us, sometimes brings painful diseases, or proves fatal.

FATTENING THE SOIL.

Agricultural career on a good scale, carried out generally on the best practised systems adopted by the successful farmers in the most enlightened districts in this or any other country is one to be admired and brings honor and renown to the agriculturist. Management, in every respect, should be such as to make certain of not losing any of the fertility in the soil; and a thorough sound minded farmer will endeavor to fetch up to the highest pitch of capability to produce crops every field and every acre in his possession. A clever agriculturist understands the way to enrich his soil without wasting his crops to do it and without allowing his land to lie idle. While a certain class of men plow under clover, let half their meadow grass rot on the ground and cut up into chaff inferior fodder of various kinds and feed their cattle thereon in the winter, he increases his herd and flocks, and when the price of beef, mutton, etc., warrants it, buys rich food, oil cake, etc., making a profit on that, and by eating the clover and grass his smart (?) neighbors waste, and giving the food mentioned in addition, produces such a strong fertilizing manure that the land to a state of fatness which gives immense crops in return.

Cattle and sheep, the latter especially, are necessary for successful farming; the feeding of the land the sheep and, cows is of the utmost consequence; for fat land is a necessity to prosperity, while poor soil is ruin and starvation. It is this neglect to fatten the land which causes all the complaints wailed forth in print; and the stopping of the pangs of hunger of fields which have received no meal for years, by giving them their own raw productions to eat, such as plowing in clover or leaving crops of grass on meadows to rot, is sometimes like keeping a herd of swine and allaying hunger and attempting to fatten them up by feeding with their produce of young pigs! Give the swine abundance of everything to make them fruitful, and they will increase and multiply beyond the belief of those who have only been accustomed to the poverty kind of animals, supplying funds in abundance by marketing the surplus. Get the land in such condition that it will increase and multiply its produce, and the animals bred and fattened on the production will daily and hourly feed the ground which has had its appetite sharpened by the withdrawals of the where-with to grow the crop. The live stock fattens the land with solid and liquid food in a direct manure, when grazing or otherwise consuming the crops on the soil where grown, and the return is in proportion

to what there is supplied; consequently, when oil cake or any rich food is given in addition to what the soil springs forth, there is corresponding fatness and increased produce, which explains how some men prosper while others fail in trying to do so by extracting everything possible from everybody and every substance regardless of the laws of nature and the common sense so few pay any attention to.

Recipes.

TO REMOVE CRICKETS.

Put a little chloride of lime and powdered tobacco in their holes.

TO RENDER BOOTS WATERPROOF

Take—boiled oil, sixteen parts; turpentine (spt.), two parts; bees-wax, one part; resin, one part. Turpentine (Venice,) two parts. Melt, and use hot.

METHOD OF PREVENTING COLD FEET AT BED-TIME.

Draw off your stockings just before undressing, and rub your ankles and feet well with your hand, as hard as you can bear the pressure, for five or ten minutes, and you will never have to complain of cold feet in bed. It is hardly conceivable what a pleasurable glow this diffuses. Frequent washing of the feet, and rubbing them thoroughly dry with a linen cloth or flannel, is very useful.

TEA.

Somebody, who professes to speak from long experience, avers that the leave of the raspberry if properly treated, make finer tea than any that finds its way to Mincing Lane. The french pheasants make an aromatic drink from the leaves of the black-currant tree, and believe it to be a specific for indigestion. Thanks to Mr. Raspail, they have also learned to appreciate the flavor, aroma, and virtue of borage tea. Our dietetic philosopher and friend, Pin Bee, would like to do in England what M. Raspail did in France, but knowing the inveterate suspicion the poorer classes at home have of anything to which they are unaccustomed especially if it costs little, directly declines making this experiment himself. 'Let any social doctor,' says he 'who may be anxious to test the liability of the English agricultural laborer as a pupil, accost him with the following proposition: 'My good man, I have, I assure you, from the bottom of my heart the liveliest interest in your welfare. Now, the tea you drink is detestably adulterated, and very dear stuff. It does you no good; now, take my advice—grow borage, which will cost you nothing, and drink borage tea; it helps digestion, is a sub-orific, has a delightful aroma, and will have no effect on your nerves, or the nerves of your wife. I am lost in conjectures as to the fate that would befall the doctor. He might be bonneted, elbowed into a thorn-hedge, reminded that the horse pond is near or recommended to confine his attention to his own tea-cup. But the unlikeliest result of all would be thanks for the suggestion. No the unlikeliest would be the trial of it.'—Chamber's Journal.

The Produce Market.

Advices from England report markets firm, the weather remarkably fine for the season, and favorable for planting both at home and abroad. This fact is expected to exert considerable influence on the course of prices during the coming months, and if no real scarcity of grain is to be apprehended may help to prevent the rise which in some quarters is now anticipated. Supplies of home-grown wheat have been light, and of foreign moderate, but numerous cargoes have arrived off the coast, principally from America.

Toronto.—Market quiet but steady, both in trade and in prices. Prices have been firm, being strengthened by a rise of 6d. on flour, 2d. on red wheat, 4d. on red winter, 3d. on white and club and 9d. on corn in the English market. Our stocks continue to increase, those of flour being double and of wheat quadruple those held at the same time last year; and stocks at Montreal show a still larger increase, amounting to 74,800 bushels of wheat and 89,000 barrels of flour, against 175,000 and 39,000 last year.

Wheat—Fall, No. 1, \$1.23; spring, \$1.13 to \$1.18. Flour—Extra, \$5.62 to \$5.65; spring wheat flour extra, \$5.25. Oats—Street prices, 30c to 40c; by the car load, 38c to 39c. Barley—On the street prices have advanced to \$1.23 to \$1.24. Peas—60c to 63c. Potatoes—Prices are firm at 65 to 75c per bag.

Chicago Markets.

Chicago.—Flour, demand light; holders firm. Wheat unsettled and closed firm; No. 1 spring \$1.17; No. 2 spring \$1.14; spot; No. 3 spring \$1.11; rejected \$1.03 to \$1.04. Corn steady; No. 2 mixed 52½c to 54c cash; rejected 51c to 51½c; new 48c to 49c. Oats advanced and in fair demand; No. 2 37½c to 38c; rejected 35c to 35½c. Rye dull and drooping; No. 2 75c to 75½c. Barley dull and lower; No. 2 fall \$1.33; No. 3 spring steady at \$1.04 to \$1.05.

London Markets.

Red wheat, \$1.10 to \$1.15; white wheat, \$1.18 to \$1.25; spring wheat \$1.13 to \$1.17; barley, \$1.10 to \$1.15; oats, 36 to 39c; peas, 53 to 58c; corn, 55 to 62c; buckwheat 52c. Potatoes, 70 to 80c per bush; apples, 40 to 80c; turnips, 20 to 25c; hay, \$14 to \$16. Dressed hogs, from \$5.50 to \$6.12½; beef, from \$3.50 to \$5.75 per cwt.

New York Markets.

Flour dull, 5c to 20c lower; receipts, 9,000 bbls; sales, 2,000 bbls; \$5.75 to \$6.35 for superfine State and western; \$6.75 to \$7.65 for common to good extra State. Rye flour steady and quiet. Wheat quiet and unchanged; receipts 144,000 bush; sales 35,000 bush, at \$1.56 for No. 2 Chicago. Rye dull. Corn quiet, without decided change; receipts, 20,300; bushels; sales 31,000 bushels; 78½c to 79c for western mixed ashore. Barley quiet; receipts, 5,000; sales none. Oats firmer; receipts 45,156 bush; sales 24,000 bush, at 55c to 56c for new western mixed; 58c to 59c for white do; —c to —c for black do. Pork firm; \$16 for new mess. Lard firm; 8½c to —c for steam. Butter 52c to 53c. Cheese, 13½c to 14c.

Buffalo Live Stock Market.

Buffalo.—Sales of 400 Ohio steers, ranging from 1,088 to 1,446 lbs, at \$4.37½ to \$6; 42 Illinois steers, ranging from 1,326 to 1,456 lbs, at \$4.37 to \$5.89; 190 Texas steers, ranging from 1,084 to 1,086 lbs, at \$4.50; 250 Indiana steers, ranging from 1,086 to 1,258 lbs, at \$4.50 to \$5.37½; 100 Michigan steers, ranging from 990 to 1,202 lbs, at \$3.50 to \$4.75. Sheep and Lambs—The market was active at 12½c decline on all grades. Sales of 1,600 Michigan sheep, ranging from 78 to 93 lbs, at \$4.35 to \$5; 200 Ohio sheep, averaging 80 lbs, at \$4.50. Hogs—The market was dull and slow at 20c decline from yesterday. Yorkers at \$5 to \$5.19; heavy hogs at \$5.20 to \$5.30.

BREAKFAST.—EPPE'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-v

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London, Ont., 23rd Oct., 1873. Notice is hereby given, that the Board of Directors have this day declared an assessment of 50 per cent, payable on or before the first day of January, 1874, to be levied on all Premium Notes embraced between Policy No. 70,476 and No. 73,389 inclusive. The assessment this year is at the same rate as for many years past, and experience justifies the belief that this rate will never be exceeded. By order of the Board. D. C. MACDONALD, Secretary.

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. WILSON & HASKETT, PRODUCE DEALERS AND COMMISSION MERCHANTS. OFFICE, Corner of King and Oxford Streets, INGERSOLL, Ont. g and JAS. M. WILSON. JNO. HASKETT. 8-1f

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JOHN MILLS, Wholesale and Retail Bookseller, Stationer and News-dealer, Richmond-st., London. American papers received twice a-day from New York. English magazines received weekly from London. London, Ont., Oct. 28, 1872. 12-1f

Jan. TESTING HON. Bow P 1873: My De Cattle F it is rep spoonful sharpen tion, an the who GEORGE Bango Hugh M your Y cattle t up quick feet, and used. mers to Lands Hugh M -After tie Feed lions, I class art but as a LOND T e THIS TIO reputati is the on Book-ke on the in REA Farme mercial it to the thereby than els favorab cost of than 1. For fu 6t CARRI Wellin 9 THE fit u vate R sels, 3 Cloths moders (YANA U Est Stock, 3 per wee \$900,000 deoases Compa tages o Manage doubtes Widow Policie issued of the p or exch may be 30 days miums. assural offices o Secreta Hami \$5 I sex, 3 us in th anythin STINS OCEA trip vants Line low. Advert C. D. C. Lor The F will be 3 months will pay 3 ery. We subscribe know who SPEAKS only \$1.00 F ruit 64 paged single lang fruits in at use of mar

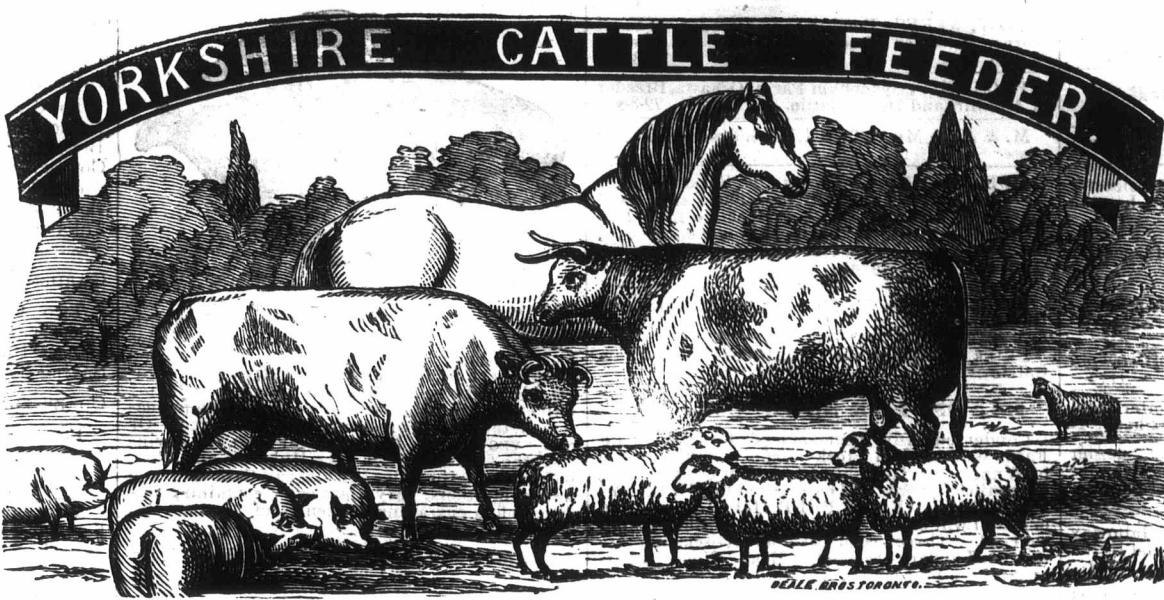


TESTIMONIALS FROM THE HON. G. BROWN and others.

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.

Landsing, 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 Feed, 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 Foreign Horses Landing P. O., Ont., Yonge St.

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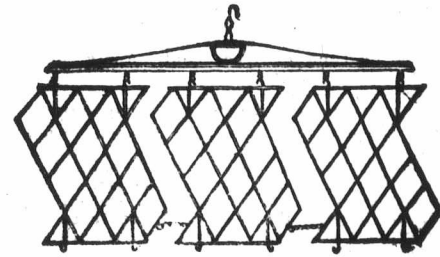
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Receipts, 9,000 bbls; for superfine State and common to good extra

Receipts 144,000 bush; No. 2 Chicago.

Change; receipts, 20,300; 78c to —c for western

Sales none. Cash; sales 24,000 bush, mixed; 58c to 59c for white

Ohio steers, ranging at \$4.37 1/2 to \$6; 42 to 1,325 to 1,456 lbs, as steers, ranging from 50 Indiana steers, ranging 4.50 to \$5.37 1/2; 100 Michi- 0 to 1,202 lbs, at \$3.50 to

Market was active at 12 1/2 of 1,800 Michigan sheep, at \$4.35 to \$5; 200 Ohio 24.50. and slow at 20c decline \$5 to \$5.19; heavy hogs

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