

# FARMER'S ADVOCATE.

"PERSEVERE AND SUCCEED."

VOL. X.

LONDON, ONT., NOVEMBER, 1875.

NO. 11

## The Farmer's Advocate!

PUBLISHED MONTHLY BY WILLIAM WELD.

OFFICE: 96 DUNDAS STREET WEST, LONDON, ONT.

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## FREE! FREE! FREE!

To all NEW subscribers to THE FARMER'S ADVOCATE for 1876, the balance of the year 1875 from the time the subscription is received will be sent free, that is, the paper will be sent to January 1, 1877.

New subscribers will be considered those whose names have not appeared on our books during 1875.

We trust this liberal proposal will induce every present reader and friend of the paper to use his best efforts to extend the circulation and usefulness of their favorite paper.

## The Provincial Exhibition of 1875.

This Exhibition, as most of our readers are aware, took place in Ottawa on the 20th, 21st, 22nd, 23rd and 24th of September. The citizens of Ottawa, or those who took part in making preparations for it there, have been most indefatigable in their exertions to satisfy the public requirements. The Exhibition grounds were in good order; ample buildings had been erected for the stock, manufacturers' and arts departments, and for mechanical tools. The building for grain, fruit and vegetables was not quite large enough to contain all that was brought to the Exhibition. A wide and substantial sidewalk had been made from the city to the grounds, two miles in length. The water accommodation has not been equalled at any Exhibition; good water was conducted from the city in pipes, giving an abundance of excellent water for all purposes. The great advantage Ottawa has over all other places is that steamboats could land their passengers on the grounds by means of the Rideau Canal, which passes along the side of the grounds. There were about a dozen steamers running between the city and the grounds; they were well patronized and arrived and left about every quarter of an hour, and visitors were able to avoid all dust. Bands of music added much to the pleasure of visitors.

In addition to this attraction of the Exhibition, the sight of the handsome, substantial, massive Parliament Buildings was the admiration of the visitors. In our opinion, they are superior to the British Parliament Buildings. The site on which they stand is very grand, as it is a high eminence overlooking the Ottawa river. The banks are very steep, nearly perpendicular, but having trees growing up the side. After a person has once seen the locality and buildings, and consults the map of Canada, the selection of the locality appears to be about as good as could have been made.

The city is rapidly improving, although the lumber business, which is a great support, is in a depressed state at present. But business must return; the present stringency and lack of confidence cannot long remain. Ottawa must become a large and important city. The line of railroad leading to it from Prescott passes through the most miserable looking part of the country we have ever travelled. The land is low and wet, and is, we understand, owned by large capitalists. It must be drained. This and all lands withheld by capitalists from actual settlers should be taxed high enough to compel the owners to sell or make them productive.

The visitors that attended the Exhibition found ample accommodation in the city at reasonable rates, very different to what had been expected. The Exhibition was a good one. In stock the competition for prizes was not near as large as at the Exhibitions when held in the western portion of the province, but the quality of the stock was good.

The implement department was well represented. Vegetables were very good. In spring grain the display was superior to our western exhibitions this year, greater competition and good quality deserving special commendation. Fruits were also well represented. In the fine art department we noticed paintings that we thought highly meritorious. Poultry was but poorly represented.

At one of the gates a bag containing over \$60 was very strangely purloined. Many purses were found and nailed up in the building for owners to claim, or to warn others of danger. Many also left minus their watches.

Exhibitors attend exhibitions with a view of effecting sales, but probably at no Provincial Exhibition we have attended were there fewer transactions in this line than at Ottawa.

We will now make a few remarks which may not be appreciated by all, but as we write for the farmers of Canada, we believe they will duly appreciate them, and that good will result to the country by giving them consideration.

For the satisfaction of visitors to the Provincial and other Exhibitions, we would suggest that the judging of the prize stock should take place at the time the largest number of visitors are on the ground, or that the prize animals should be out at stated times on Wednesday and Thursday, as herdsmen do not care to show their stock much after the prizes are awarded. It generally takes some time to decide on the best, and the show rings are much fuller before the award is given than afterwards. There were no animals out of the stalls or stables; for some cause or other, the herdsmen did not show a desire to display their stock as much at this exhibition as at the western exhibitions.

### SEED WHEAT.

The Canada Company have, for a series of years, given \$100 to the Association for the encouragement and spread of the best fall wheat. The Canada Company are to be lauded for their generosity. We would suggest to the Association a means whereby greater good may be done, or, in fact, where we believe an injury has been done by the awarding of this prize. (See last month's paper, page 182, on "Classification of Wheat.")

The Association gave a second prize of \$40 to the same variety; also the same variety carries off

the first prize as the best white wheat. There are other varieties more hardy, more profitable, and of better quality, which cannot gain a prize, and yet they yield double the profit to the grower and to the country.

The Association gave a special prize for hybridized wheat; this might, perhaps, induce other persons to attempt hybridizing. Perhaps some members of the Board might deem it proper to encourage the introduction of new varieties, with reports of their success, as some of the imported varieties have proved highly advantageous.

Many implements are exhibited, and awards have to be made. Judges would like to know which were the best, but without actual test many awards are made that do not prove correct when the implements are put to actual work. Would it not be well to engage a field near the grounds, on which such implements as cannot be judged otherwise might be tested, such as the harrows, gang plows, scarifiers, cultivators, drills, planters, potato diggers, subsoilers, &c., &c.? Or would it not be well to have a special trial of such implements, instead of the Provincial Plowing Match or in connection with it the coming year?

Some stock men claim that Canadian breeders should be just as much encouraged as foreign breeders, and that as Canadians pay the prizes, they should be entitled to receive them. At the present time, high fed British stock, some of which cannot breed or propagate and are only fit to look at, are awarded double the prizes that Canadian stock is. Perhaps it might be well to award special prizes for imported stock.

At the annual meeting of delegates, as usual the President delivered a long and good address. There were two new subjects introduced in it on which discussions might be held. One was the commendation of the Government Farm to the public; the other was for a grant of money for the American Centennial. Not one of the delegates asked a question in regard to either of the above subjects. The great work of the meeting was to select a place for the holding of the next Provincial Exhibition. The votes were taken for Hamilton, Kingston and Guelph; Hamilton received the largest number of votes, and Guelph the next largest. Hamilton was not prepared to give the guarantee for the necessary accommodation. Time was allowed for doing so. Should the necessary arrangement not be made by February, the Board of Directors can make such arrangements as they please. Should Hamilton fail to comply, most probably the Exhibition will be held in Guelph.

A dissatisfaction and jealousy regarding the holding of the Exhibitions at different localities is creeping in. Some of the cities are becoming careless about expending so much money for it. There is some talk of making it permanent in some place; some consider the money should be divided and given to particular cities, and others consider that if the Government would leave agriculturists entirely to themselves and let them manage their grain and stock exhibitions, that they would be better attended to. The above subjects should be discussed in Granges and other Farmers' Clubs, and we shall be pleased to publish the results of any such discussions, or other persons' opinions regarding them.



### The Diseases of Live Stock.

In considering the many diseases to which the live stock of the farm are now liable, the *Massachusetts Ploughman* asks—Did they use to have these troubles with the horses and the cattle? And he answers in the negative. "The question," he says, "would not be asked at all if these were not new things entirely." The question has arisen in many minds, and the impression is widespread that many of the diseases with which people and all domestic animals are afflicted are new. From this opinion the writer's is different. There are several diseases that have been of old time, and that, having disappeared for a period, return at intervals, diseases sometimes increased in malignity, and diseases known in former years, but now disguised under other names than those they had been known by. It is true that the higher civilization of the present time has its accompaniments in greater debility. There is less power of endurance, a greater susceptibility to the effects of extreme heat and cold, and of fatigue. The native cow of England, roaming in the forest unhoused and unpampered, is free from many of the diseases to which the high-bred and high-fed Durham or Ayrshire is subject. Nor has the epizootic broken down the spirit and enfeebled the body of the wild horses of the Pampas. Much reason as we have to be thankful for the blessings of increased civilization, we cannot close our eyes to the attendant evils. And civilization brings not these evils as a matter of necessity. To man is given the ability to ward them off, and if they do come, to diminish their force.

This year there has been an unusual prevalence of disease among the farm stock of Europe and America. The condition of the atmosphere that has been so favorable to vegetation, has been the reverse to the health of our live stock. Very heavy rains and high floods succeeded the drouth of the earlier season, and the great heat and alternate cold have been trying to the constitution, whose vital force has been weakened by feeding and treatment not accordant with nature. In England the "foot and mouth disease" has been very prevalent, though not fatal in proportion to the numbers affected. In one county, Dorsetshire, not less than 8,000 cases were reported in a single week. Throughout the whole southern kingdom disease and death are among the herds, and farmers are alarmed by their rapid increase. For some years the country has never been wholly free from the disease, and it is thought the wet weather has caused it to spread over the kingdom and increased its virulence. The most active measures, authorized by the Government and the Legislature, have failed to "stamp out" the disease. Medical skill and the most assiduous care of stock-breeders have failed in their endeavor to check it. Not only are horned stock liable to it, but sheep also and pigs have been smitten by it.

The *Am. Agriculturist* says the disease has appeared at times at several places in America, though no serious outbreak has, so far, occurred; it adds: "Neither do we think such an occurrence probable, on account of our more favorable and healthful climate, our less luxuriant pastures, and our less artificial style of feeding." A writer in the *Markham Economist* affirms, on the contrary, that the disease by which cattle in various parts of the United States have been suddenly stricken, is not the same as the foot and mouth disease so destructive in England. He says: "The two diseases are entirely different; while both are blood diseases resulting from specific poisoning of the blood, their symptoms are widely unlike and readily distinguishable." Whether the disease in the American herds is the foot and mouth disease, as some affirm, or the less contagious disease—the

"splenic fever," or "splence fever," as it is said by others to be, it is well for every one interested in stock raising, as all farmers are, to be prepared for it, to be able to detect its first symptoms, and to apply the remedies. As the wetness of the season has always been a cause of increased virulence of the disease in England, so is the state of the atmosphere a cause of anxiety for the health of our flocks and herds. Sudden changes of temperature, with warm days and cold nights, a damp, lowering atmosphere, with dense, chilly fogs—such weather, in short, as is provocative of typhoid fever in man, is apt to be a means of the introduction of these blood diseases into a neighborhood.

In the "foot and mouth disease" the feet and mouth are affected, as the name implies; there are blisters on the lips and tongue, blisters on the coronet around the hoof, blisters on the heels and between the divided parts of the hoof. In all blood diseases there is high fever, the breathing is difficult, and the disease accompanied with stupor, sometimes with convulsions; parts of the body are highly inflamed and often gangrenous, and the condition of the animal is altogether depressed, so much so that it cannot walk or stand. After some days the disease may have exhausted its virulence, and the animal may recover. Such seems to be the case in the great majority of cases in England at present, where few attacks are terminating fatally, but death may ensue very rapidly after the attack.

The diseases of the class in which splenic fever is included are not considered contagious, though great precaution is necessary to prevent its being communicated from the diseased animal to others by contact with the excretions, or by other means. It is said that man even may be affected by such contact. The foot and mouth disease is contagious, though there are instances in which it is not communicated; this, however, is known to be applicable to every contagious disease. Of the cases referred to by the *Agriculturist*, "the first symptoms are a fit of shivering, followed by a cough, indisposition to move, fever and a desire to get away from other cattle." The presence of fever is easily detected by the usual symptoms—a rapid pulse, quick breathing, inflammation of the eyes, and dryness of the muzzle and of dung. The following treatment is recommended by the *Agriculturist*:—"The proper treatment is to give a gentle purgative, as 2 oz. of Epsom salts with 2 oz. ginger, in sweetened water, at once. Then careful nursing is all that can be done. The mouth should be washed frequently with a mixture of one quart of water and one ounce of myrrh. In the absence of myrrh, one ounce of alum may be used, with an infusion of a handful of sage leaves in hot water. The large blisters on the tongue and lips should be opened with a sharp-pointed knife. The feet should be washed with warm water and carbolic soap, and bound up in cloths wetted in a solution of two drams of chloride of zinc in one pint of water. Warm bran and oatmeal slops should be given, and an infusion of linseed oil, but no solid food."

Care must be taken that the animal affected be separated from all other stock, that their stalls be perfectly clean, and in case of death or recovery, that the stall where the affected animal was be cleansed with hot lime wash and that no effluvia or the slightest particle that might possibly communicate the disease remain on the premises. The flesh and every part of the animal are poisonous.

Stimulants, in case of great weakness of the animal, are recommended to be given at regular intervals as needed. In such a case half an ounce of carbonate ammonia may be given every second hour.

### November on the Farm.

To every season its own work; seeding and planting, haying and harvesting have each their seasons. If there be any time in which the farmer has little to do—little to occupy his mind or hands—it is not the month of November. When the gathering in of the produce of the harvest has been completed, and the harvest home enjoyed; and when the fall seeding has been finished in good order, we can turn our thoughts to the many things that claim our attention before the winter storms are upon us. The short evenings, and the grass crisp and crackling to the touch of the foot in the late morning, warn us that there must be active preparation for the winter now nigh at hand.

Potatoes and mangolds are stored before Halloween, and this season the root houses are well filled generally throughout the country. Potatoes especially have been an abundant crop. The disease has in places done some injury in clay or wet soils, but on the whole, not only has there been a good crop, but it has also been well saved.

The turnip crop is generally allowed to remain in the ground till this month. It grows well in the cold weather, and by not taking them out of the ground till November they acquire a greater bulk and maturity, and could we reasonably anticipate favorable weather for storing them, there is a profit to be made by not taking them up earlier.

In pitting roots, care is always necessary to allow no water to remain in or on the soil. When properly pitted and securely covered, there is no other method by which roots can be kept safer or fresher than by pitting. For keeping seed potatoes we have found it especially advantageous. The seed should not only be sound; it should also be as fresh as possible. The seed that remains in the ground makes a vigorous growth.

Manure may in this month be applied to young wheat as a top dressing. It will nourish the tender plants and be beneficial as a mulch in protecting them from the winter and spring frosts. Some farmers have mulched with straw and have found it of service.

Add to the manure heap. This should never be neglected. The Scotch farmer says: "Where there is muck there is luck." Leaves of trees, weeds, if they are to be had, droppings from cattle—all should be used to increase the heap of manure; it will add to your granary in autumn and to your heaps of roots in the fall.

The cellar should be thoroughly cleared before any roots or vegetables be stored in it. This is a very important matter. The foul air ascending to the dwelling rooms of the house is highly injurious to the health of their inhabitants, and the mustiness from unclean walls and floor and from decaying vegetable matter will infest the roots and vegetables stored. See that windows and door are made tight, and bank the walls carefully. Timely precaution may save you much trouble and loss.

Fences should now be examined, and stakes, rails and boards replaced wherever needed. All should be put in good order. This will aid greatly in the preservation of the materials of the fences; it will prevent the straying of the stock off the farm and the trespassing of cattle, and will save more labor in the hurry of spring. When attending to the fall overhauling of fences, we should not neglect the farm buildings. They generally want an overhauling at this season. Let us see that the houses for our stock are in order, warm and dry, and at the same time well ventilated.

Where there is an earth closet it is well to store up some barrels of dry earth to use in it during the winter. Dry earth may also be found useful in your cellar; it is an excellent disinfectant, and carrots, beets and seed potatoes, if there be such in the cellar, will keep fresh if they be mixed with dry earth.

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For storing cabbage the best plan is to dig a shallow trench in a place where winter snows cannot lie; then pull up the cabbage and put them in the pit, the heads undermost, and cover with earth to the depth of six inches, leaving the roots exposed. In this way they will keep safe till spring.

All the live stock on the farm should be carefully attended to and well fed this month. If neglected, they will fall away in condition, and to restore that condition when they fall away is a far more difficult matter than to preserve it when gained. Cattle should be in good condition when housed, and that condition maintained throughout. A few acres of turnips, mangolds and ruta bagas, with hay and the straw of the farm, if well saved and judiciously fed, will bring the farm stock round all right to the season for pasturing and soiling. Cleanliness, warm housing and regular feeding are necessary.

Feeding hogs well now will save much food later in the season. They will not fatten so quickly in the cold winter, nor at so little expense.

Sheep demand the farmer's care. A field of good aftermath, if given up to the sheep, will pay well in their healthy thriving; and a little grain fed daily will be well repaid in the spring and summer. No stock on the farm pays better than sheep.

The horse needs good grooming and good feeding; then he will do us good service and pay double for every pound of his provender and all the attention of his owner.

**Our Grain Crops.**

**THE COST AND PROFIT OF RAISING OATS.**

In the consideration of what grain to sow for our spring crop, we must not base our estimates on the results of one season. It is necessary to take into account the average returns of past years and the probabilities of the future. This season our wheat crop has been fairly remunerative; the returns from our fields of fall wheat have been much better than was anticipated in spring, and the yield in some places was really good, teaching us another lesson—not to form our judgment from present appearances. The spring wheat crop is reported from all parts of the country to have been one of good yield. Though the price is not high, it is not so low as that of 1874, and there is a brisk demand, with an expectation of an advance in prices.

Barley has realized our expectations. Last fall, and again in spring, we expressed our opinion that barley would prove a remunerative crop. Our opinion was founded on the greatly increased and increasing demand for malting barley, and the limited area within which it could be successfully grown. We now know the profits from the crop. The yield has been unusually large, and prices fairly remunerative. The price at present in Toronto is 95c. to 99c. per bushel; in New York, \$1.25 for Canadian barley; while the yield has been in some instances very heavy, as high as 60 to 70 bushels, the yield generally being not less than 40. For malting barley the high prices are paid, but any, tolerably fair, will find a good market for feeding, if not for malting.

Oats have been a profitable crop to the grower this year; the produce has been heavy and the prices such as to pay very well. The demand for oats has been steadily increasing for some time, and the prospects are for continued increasing demand. The superiority of oats for feeding horses has been fully established, and to enable them to go through the heavier work and maintain the greater speed demanded by high farming and improvements of the country, they must be well fed. And it is not

only as food for horses and other stock that there is an increasing demand for oats. Oatmeal is more prized as an article of food for man than it has heretofore been in this country. Agricultural and medical journals advocate its use to increase the strength and improve the health of young and old, and the consumption of it has greatly increased. In illustration of this increase, we may mention that there are now in this city two steam oatmeal mills, where there was not one a short time since.

With the brisk demand there is good price, such as will fairly pay the farmer for his outlay of labor and money. The market notes of Toronto give 40c. per bushel; of New York, 35c. to 50c., and in every market there is a demand for oats of fair quality. The great question with farmers, as well as other business men, is "Does it pay?" Let us see if the growing of oats pays. We will take a field of ten acres, with the expenditure and receipts:—

Plowing and harrowing 10 acres, at \$3 per acre.....	\$30 00
Seed—2½ bushels per acre; 25 bushels at 50c. per bushel.....	12 50
Sowing seed, 2 days, at \$1.50 per day.....	3 00
Cutting, 60c. per acre—\$6; binding, 5 men's work at \$1.50 per man.....	13 50
Threshing (expenses included), 5c. per bush. 20 00	20 00
Marketing grain and rent of land estimated equal to value of straw for feeding and manure.....	60 00
	\$79 00

Estimated yield, 40 bushels per acre—400; estimated price (3s. York) 37½c. per bushel—\$150.

Cost per acre, \$7.90; cost per bushel, 19½c. Net gain—\$7.10 per acre.

The profit to a farmer of an oat crop may, of course, be higher or lower than the above calculation represents, as the yield and the market price may be, but this has been for some time a fair average, and the expenses are from the writer's own knowledge. The straw is certainly not overvalued. We doubt if its value as fodder is sufficiently appreciated. When cut before it is hardened and sere by over-ripening, it is, if carefully handled, well saved and preserved, not inferior as provender to some hay that we have seen. We fed our store cattle on oat straw with a small portion of cabbage and roots for years, and, when turning them out to pasture on the 12th of May, they were in better condition than much of the stock of other farmers that had been fed on hay. We have had ample proof of its value in feeding. "The proof of the pudding is the eating of it." Let cattle be well cared for, their stalls warm and clean, and the house properly ventilated. Let them get fresh, sweet straw in the evening, again at eight o'clock, and again at six o'clock in the morning, as much as they can well use; straw thus fed daily, with a few pounds of turnips, will support dry cattle well through the winter.

While thus calculating the profits we may reasonably expect from a crop of cereals or roots, we cannot forget that a farm on the whole pays no such profits. There is a portion of the farm that brings in no return of dollars and cents to the farmer's exchequer. There are waste places occupied with fences, farm buildings, woods, and other non-paying acres; but with all the drawbacks, the farmer can make his profession pay fairly—not more, certainly, than he is entitled to. His labor of body and of mind should be well paid. The risks of loss of live stock and crops, and the investment of capital can only be compensated by liberal profits in his business; and we must not omit the oft-repeated fact that only good farming pays a profit, or even a laborer's wages to the owner and tiller of land.

**Fattening Sheep.**

The necessity of keeping horned stock well housed has been continually impressed on the minds of stock feeders by the agricultural press. If cattle be suffered to remain exposed to the extreme cold of winter, with its alternate rains and frosts, the food given to them to keep up or improve their condition is wasted. Much of it is necessarily used up to supply that heat that they should have from good comfortable winter quarters. From the want of this provident we see so many cattle in March and April apparently half-starved, though the consumption of food has been as great by them as by those that are as plump and sleek as if they had been fed on the best grain of the farm.

In fattening beeves this important item is not lost sight of, but we should remember that it is as essential in fattening sheep as it is for other stock. In proof of this we give two instances published in the Journal of the Royal Agricultural Society:

"One hundred sheep were placed in a shed, and ate twenty pounds of Swede turnips each per day, while another hundred in the open air ate twenty-five pounds, and at the end of a certain period the former animals weighed each three pounds more than the latter, plainly showing that, to a certain extent, warmth is a substitute for food. This was also proved by the same nobleman in other experiments, which also illustrated the effect of exercise. No. 1.—Five sheep were fed in the open air between the 20th of November and the 1st of December; they consumed ninety pounds of food per day, the temperature being about 44°; at the end of this time they weighed two pounds less than when first exposed. No. 2.—Five sheep were placed under shelter, the temperature of which was 49°; they consumed at first eighty-two pounds, then seventy pounds per day, and increased in weight twenty-three pounds. No. 3.—Five sheep were placed in the same shed, but not allowed any exercise; they ate at first sixty-four pounds, then fifty-eight pounds, and increased in weight thirty pounds. No. 4.—Five sheep were kept in the dark, quiet and covered; they ate thirty-five pounds per day, and increased in weight eight pounds."

A similar experiment was tried by Mr. Childers, and is thus related in the same journal:

I last winter enclosed a small yard with posts and rails, and erected a thatched shed, just large enough to allow a score of sheep to lie down at once. The floor of this shed was boarded with rough slabs. I then proceeded, on the 1st of January, to draw forty wethers out of my flock of Leicester, and divided them into two lots, as equal in quality as I could get them. On weighing each sheep separately I found the weight of one score to be 2,565 pounds, and that of the other 2,580 pounds. I put the first lot into the yard and placed the other lot on turnips. The field was a dry, sandy soil, well sheltered and peculiarly favorable for sheep. Each lot had exactly the same quantity of food given them, and the results were as follows:

As many cut turnips as they could eat, which was about 378 pounds per day for each lot. Ten pounds of linseed cake, being at the rate of half a pound per sheep per day; half a pint of barley per sheep per day, and on each day a little hay and a constant supply of salt.

For the first three weeks both lots consumed equal portions of food, but in the fourth week there was a falling off in the consumption of the wethers in the shed of fifty-two pounds of turnips per day, and in the ninth week there was also a falling off of twenty-eight pounds more. Of linseed cake there was also a falling off of three pounds per day. The wethers in the field consumed the same quantity of food from first to last. The result of the experiment was as follows:

20 Shed Wethers.	Increase.	20 Field Wethers.	Increase.
Pounds.	Pounds.	Pounds.	Pounds.
Jan. 1.... 2,565	...	2,580	....
Feb. 1.... 2,879	314	2,794	214
Mar. 1.... 3,020	150	2,914	120
April 1.... 3,365	345	3,092	178
Total	790		511

Consequently, the sheep in the shed, though they consumed nearly one-fifth less food, made above one-third greater progress.



An English writer on sheep says:  
 "The result of these important and valuable experiments is precisely what we should expect from theoretical reasoning on the principles of the subject. It shows the pecuniary advantages of attending to the comforts of sheep and all other animals, the expediency of providing proper sheds, affording shelter when the weather is severe, and lessening as much as possible their exercise."

#### Oleomargarine Cheese.

"For our own part, I think that persons should have perfect liberty to manufacture and sell oleomargarine cheese, if they think it would pay them to do so, but it should in every case be sold as such."—*Agricultural Gazette.*

With the opinions expressed in this sentence we fully coincide. People have a right to manufacture an article of food as well as of clothing, if it be invariably offered for sale as what it really is, provided it is in no wise deleterious to health. If the oleomargarine cheese be really as good, clean and healthful as its manufacturers represent, there is still the objection to it that it may, and in all probability will, be sold for that which it is not. And what means can be taken to prevent this fraud, for such the selling of oleomargarine cheese for whole milk really is? We are told, it is true, that the one "can be as readily distinguished from the other as shoddy from long wool," but palpable as is the difference between shoddy and that which its manufacturers design it to represent, all are not sufficient adepts to distinguish it, and some are victims to the deceit. We are told also—"When a piece of the oleomargarine cheese is pressed between the thumb and fingers, it feels cold and clammy, as compared with common cheese," and also that "the native fat in the whole milk cheese has mingled with it about two per cent. of light flavoring oils and a somewhat smaller portion of albuminous matter—all in a state of emulsion, which together give both to butter and cheese, when skilfully made, a peculiarly delicious flavor that does not belong to either of their imitations; it is easy, therefore, especially when new, to distinguish between oleomargarine and whole milk cheese."

But these distinguishing characteristics are insufficient to prevent the imposition that may be perpetrated on the great majority of purchasers. The first must be in most cases an entire nullity. The knowledge of the greater or less degree of "cold and clammy" is often as much from the state of the person feeling an object as from that of the object felt.

That it is possible to impose by fraud the spurious article for the genuine is proved by the fact that such imposition has occurred. Take one instance: Capt. Gardiner, of McClean, N. Y., the manager of the Oleomargarine Cheese Manufacturing Company, said to the reporter of the *Utica Herald*—"I know of at least four houses that sold it in New York, and one or two of them thought they had played a good trick upon some sharp buyers by selling them oleomargarine cheese at top prices for full cream cheese."

We do not now speak of the quality of the oleomargarine cheese; we refer merely to the fraud to which it is almost sure to lead and to which it has already led, by manufacturing a spurious article that may be imposed on the inexperienced for that which is genuine, and we have no hesitation in saying that it is the duty of the Government to adopt such measures as will protect the community from the imposition.

If it be unclean or injurious to the health of consumers, the manufacture of it should be prohibited. If, on the contrary, it be in every way suitable for the food of man, there remains this one objection to it—the great probability that it, a spurious article, may be sold for genuine whole milk cheese;

and any attempt at such imposition should be prevented. The example set us by England in punishing those who sell adulterated food should, as far as possible, be followed here. A grocer in London, E., was lately mulcted in a heavy penalty for selling coffee in which there was a mixture of chicory. It is well known that chicory is not at all injurious to the health, and it has been for many years mixed with coffee, a fact not unknown to many coffee drinkers. But, inasmuch as the article sold by the grocer was sold by him as coffee, whereas it was a mixture of coffee and chicory, he was sentenced to pay the full penalty. Had he sold it for what it really was he would not have been fined.

Cheese should be branded as whole milk or oleomargarine, and any attempt to pass the spurious for genuine be punished by the infliction of a heavy penalty. The cheese should also bear the name of the factory making it, if it be factory-made. Stringent measures should be enacted and carried out, that Canadian producers of every kind keep their good name for honorable dealing and good and genuine articles.

#### Purchase of Valuable High-bred Stock for New Brunswick and Nova Scotia.

The agents appointed by the Government of New Brunswick to select animals for the purpose of improving the live stock of that province, made some purchases of excellent stock at the Provincial Exhibition and the Western Fair. The number of Shorthorns purchased was large—36 in number. They bought also 27 Ayrshires, 6 Jerseys, 1 Hereford and 1 Holstein, and some Penheron horses, part of them of the purest Norman breed and of beautiful form. They were purchased that by the importation of animals of the purest blood the live stock of the province might be improved. They were to be sold on the most favorable terms. Agricultural societies were to have the moneys paid in by them placed to their credit to the extent of their purchases, and 6 and 12 months' credit given for the balance.

The sale took place in Fredericton on the 17th of last month, and all the animals were sold according to the Government scheme. They had cost \$21,000, and at sale by auction realized over \$15,000. This sum is to be appropriated to the further purchase of improved stock. A highly profitable loss for the province!

The sister province, Nova Scotia, has purchased some very valuable live stock for that province, to be disposed of in a similar manner for the improvement of the Nova Scotian herds. Their agent, Prof. Lawrence, has been very successful in his purchases, though he has had to pay good prices. Of his selections no less than five are of the fashionable Bates' blood.

#### The Epizootic.

From every point we have reports of the prevalence of the Epizootic in horses. In New York, Philadelphia, and, in short, in all the principal towns in the Northern, Middle and Eastern States, the disease has prostrated hundreds of horses. It seems to be spreading in every direction, though it is thought to be of a milder form than at the time of its last visitation. We have similar reports from Toronto, Hamilton and Montreal.

Horses that are in good condition will, as was to be expected, suffer least from its attack. A slight cough is the first symptom; this becomes more severe and is accompanied by swelling of the throat between the jaws and a discharge from the nostrils.

The treatment that has been found most effectual is to keep the horses warm and clean, in a well-ventilated stable, and covered, if the weather be cold and wet. Feed them well with good, well-

saved hay and good oats, giving them a bran mash once a day. If the throat becomes much swollen, rub it thoroughly with some good liniment, and be careful that they do not take cold, as a cold taken in the disease is generally fatal. Let them have no heavy work or violent exercise, but a little exercise every day at light work; this is beneficial, whereas violent exercise or over exertion would be apt to produce serious results. Keep the horse in good condition and high spirits as much as possible; use no violent remedies but good care and nourishing, and let nature do the rest. The disease generally lasts from two to three weeks.

#### Great Sale of Shorthorns at Winchester, Kentucky, U. S.

The Vinewood herd, the property of Benj. B. Groom & Son, was disposed of by the proprietors by auction on the 14th of October. The entire herd, comprising sixty-four females and nine males, was sold in the short space of two hours and twenty minutes, and brought the large sum of \$123,440. The females were sold at an average of \$1,709; the males, \$1,557. A calf three months old, the 22nd Duchess of Airdrie, was sold to J. H. Spears & Son, of Talinda, Ill., for \$17,500. Among the successful competitors was Mr. J. B. Craig, London, Ont.; he bought Kirklevington Duchess for \$5,150, Ruby Duchess for \$1,235, and Cambridge Queen 5th for \$500.

#### Feeding Cattle.

It may seem to our readers a very small matter to be acquainted with the principles of feeding cattle, but it is of considerable importance to know how cattle are kept in good condition economically. More food than will be used up at a meal should never be placed before stock, for they will not feed with relish on the refuse they have breathed on, except when compelled to do so by hunger; and it is very advantageous to have a regular time for feeding, for if they are not attended to at the same hour each day, a great deal of the vital energy of the stock is wasted in worrying and expectation.

Warmth, light and proper ventilation are very important objects requiring the attention of the careful stock raiser, for stock will fatten much quicker when the stable is kept warm, and the carbonic acid gas, which the animals breathe, and the ammonia from the manure have free egress, and a current of fresh air can rush in and supply its place, although care must be taken not to allow a current of air to blow directly on the animals.

If it is desirable to fatten cattle for market, it is more thrifty to do it quickly; thus it will be cheaper to feed ten bushels of corn in two months, if the cattle are healthy, than if twice that length of time were occupied by the process. Many good farmers find advantage in using the Yorkshire Cattle Feeder prepared by H. Miller & Co., of Toronto. Some of the large breeders manufacture and use it or a similar condiment in very large quantities.

It is well to remember that it is a bad plan to starve stock at one season with the intention of making it up at another, for when an animal is poor is the time disease is most likely to set in. We would advise selling fat stock early. Fat hogs command a much higher price now than they will later in the season.

#### Land Speculation.

Strange, but true! Reckon it up. In 1823, a person purchased for taxes 200 acres of land in the township of Dorchester, not over 10 miles from this office. The price paid was \$16. The land was sold this year for \$3,200. This only yielded a profit of 6 $\frac{1}{2}$  per cent. on the \$16, and compound interest and taxes taking \$3,184.

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**The Western Fair.**

This is the name given to the Agricultural Exhibition held in London. The three western cities, London, Toronto and Hamilton, held their Exhibitions in the same week—the week after the Provincial Exhibition. There exists a little rivalry on the part of the directors of these fairs, as each wished to surpass the other and each desired to have the week after the Provincial Exhibition for their show.

The Western Fair has for a long series of years been more successful than those held in any other city; in fact, it stands the strongest rival to the Provincial Exhibition, in many ways surpassing it. For instance, in general purpose horses and in Leicester sheep the competition was about twice as strong. Far more sales were effected among farmers at this Exhibition. The display made by agricultural implement manufacturers has never been equalled in Canada. There were seven steam engines in operation on the ground, all erected at the expense of the manufacturers, while at Ottawa we only noticed one, and that was for mechanical purposes, erected by the Association.

**Visit from a Maryland Farmer.**

Mr. J. Grey, from Still Pond, Kent Co., Maryland, called at our office the other day. He informed us he had been some weeks in Canada, having been to counties east of this. He has purchased upwards of one hundred sheep from the following breeders:—McGregor, Fleming, Lane, Craig, Tooley and McColl. He purchased many of the prize animals, besides a fine breeding stock of ewes. His purchases comprise Lincolns, Cotswolds and Leicesters.

He said in no part of Canada could he procure such good sheep as in this vicinity. Let our breeders wake up. He said he could not find what he considered any really pure-bred Lincolns in the country; he only took the best he could find.

Mr. Grey also left his order with a person in this city for a quantity of seeds, as he wished to procure them better than he had been supplied with. We enquired of him the state of farming in his part of the country. Peaches, wheat and clover are the principal products in his locality. The peach crop is an important one, some farmers there having a thousand acres of peaches; one man has fifteen hundred acres. He says none of their best peaches are sent to Canada.

We inquired the value of land there. He said from two to three hundred dollars per acre. We asked the rental; he said they had three hundred and seventy-four acres, and they were offered thirty-two hundred dollars per annum for it, under a lease of five years. Mr. G. is in partnership with his brothers; they own nine hundred acres.

We enquired regarding manure. He said they manured once in five years, and put on from one hundred and seventy-five to three hundred bushels of lime per acre; the cost of lime there is only seven cents per bushel.

In regard to labor, he says they used to employ the negroes, but now employ German laborers. We inquired whether they did not anticipate trouble with them. No; they are dying off rapidly, and are living in a most debased condition. Disease carries them off. They will run to some spree of a night, sleep in a shed or fence corner, and are unfit for work. They won't sleep in a bed if one is prepared for them, and they won't have them around the premises. We asked if they did not steal. He said only chickens; they always would do that, but in other matters the farmers were not molested, as the law dealt severely with them.

Mr. Grey kindly gave us an invitation to call and see them during the Centennial Exhibition, which will be held within two hour's ride of their residence. We hope to have the pleasure of calling on them, and hope to give you more about peaches, sheep lime, etc.

**Sale of Stock.**

Mr. Craig, of Elmhurst Farm, Barnhamthorpe, has purchased from Col. J. B. Taylor, of Springwood Farm, London, Ont., bull 17th Duke of Avondale, heifer 12th and 13th Duchess of Springwood, of the Craggs tribe, and Rose Jackson, of the Rose of Sharon tribe. The price paid is said to have been \$10,000.

At Guelph Central fair Mr. Joseph Kenyon, of Colorado, made extensive purchases of prize animals in the sheep class, among them being two shearing rams and four ewe lambs from Jarmin Riddell, Richmond Hill, and some Leicesters and Cotswolds from Richard Gibson and George Douglas, London.

Yesterday afternoon, says the *Times* of Sept. 8, forty pure bred shorthorns belonging to Lord Skelmersdale, and two belonging to the Earl of Bective, were sold by Mr. Thornton, in Lathom Park, for 5,600 guineas. Two cows were sold for 520 guineas each—"Fluffy Gwynne" to the Earl of Bective, and "Waterloo Bienvenue" to Colonel Oliver, Hampshire. There was a large gathering of breeders from all parts of England, America, Canada and Australia. Prior to the public sale, Lord Skelmersdale sold the Duke of Ormskirk, by Fourth Baron of Oxford—First Duchess of Oneida, three months old, for 2,000 guineas, to Mr. Foster, of Killhowe, Carlisle.

**Correspondence.**

**Wheat.**

SIR,—You ask for reports of new varieties of grain. I procured some of the Red Fern wheat last year, and sowed it on a piece of low land, but unfortunately, the unusually wet weather caused the land to be covered with water for eight days. I thought I should not have a grain, but after the water left it recovered better than any wheat I ever saw, and I threshed a fair crop when I expected none. I am well pleased with the wheat, and feel satisfied that had the grain a fair chance, it would be better than any other spring wheat in this part of the country.

I had Farrow wheat sown by the side of the Red Fern; it did not stand the wet half as well. In fact, I do not believe any wheat I ever saw will stand the wet as well as the Red Fern. I think it the best bearded spring wheat I ever saw. Telfer, Oct., 1875. GEORGE SCOTT.

SIR,—The following extract is from a letter that recently appeared in the *Christian Guardian*, from a correspondent at the Bruce Mines. It may induce some who think of removing to Manitoba to turn their attention to places nearer home.

"Near the mouth of the Spanish River there is a field of oats—105 acres; some of the stalks are six feet eight inches long. I send you a part of one that measures one and a half inches in circumference; also a head that measures fourteen inches in length. Now, if any farmer down east can produce any better, will he please send you a sample. I think if this part of the province were better understood and examined, many more farmers would settle here, where we have neither grasshoppers nor potato bugs, in preference to going so far west. There is plenty of land to be obtained here and around Sault Ste. Marie for 20 cents an acre, and if that is considered too much, then it can be got free. Yes, and that, too, within two or three miles of a steamboat landing on the main thoroughfare to the great West.

"A farmer told me a few days ago that he raised 800 bushels of potatoes last year off two acres of land. I have purchased a lot of land here at 20 cents an acre, all woodland, and one team in three days drew one hundred dollars worth of wood from the stump into market. I also bought a block of pine—forty acres—for eight dollars, and one tree will more than pay for it all. Then just think of good prairie meadow land being purchased for 20 cents per acre, that will yield say one or one and a half tons per acre! A farmer can keep just as many cattle as he pleases, as any quantity of pasture can be had free and hay for the cutting.

"Then, as regards prices, I don't think any market in Ontario affords such good prices. I have paid 15 cents a pound for every pound of fresh meat I have purchased this summer. Potatoes were \$1 a bushel last winter, oats 75 cents per bushel, eggs 75 cents per dozen, and everything else in proportion. I may remark hay was \$45 per ton at Prince Arthur's Landing last spring. I may remark on the foregoing that the hay which sold at Prince Arthur's Landing at \$45 per ton, would probably not have fetched more than one-fourth of that price

at Sault Ste. Marie, and the present scale of prices could not be long kept up when the country is more fully occupied."

I have lately received a letter from an acquaintance at Sault Ste. Marie, in which he states that "wheat is now selling at from \$1 to \$1.25 per bush. of a good quality, suitable for seed. The growth of wheat grown in this part is not large, there being no mill until this year. The farmers have grown the grain more suitable for feed for horses and cattle. They will now turn their attention more to wheat, as it can be disposed of here at their doors."

I may add that at the agricultural exhibition at Sault Ste. Marie last year, the display of grain and vegetables was very fine. I have as yet seen no report of the exhibition which was to have been held on the 8th inst.

One of my neighbors, an old settler in this township and also a magistrate, told me early in the season that he intended calling a meeting of the farmers to consult about the best way of enforcing the Act respecting the protection of threshing and sawing machines, to prevent accidents, but the season has passed away and nothing has been done. If only one or two farmers in a township were to refuse to employ an unprotected machine, they would not get their threshing done at all. To be of any use, this Act must be amended so as to render it imperative on manufacturers of such machines to have them properly protected before they are sent out, and in default thereof render them liable for damages to those who may be injured through their neglect, just as the railway companies are at present.

A general law for preventing cattle going at large would be very unsuitable, and is not necessary. The municipal councils have the power to pass by-laws to prevent cattle going at large, but they dare not pass such laws for fear of being turned out of office at the next election; the members of our Legislature, also, dare not pass any really beneficial general laws for fear of offending the electors, and consequently losing their seats at the next general election. At present everything is left to the people, but experience proves that so much liberty is worse than useless, positively injurious. The practice of allowing cattle to run at large on the roads is very dangerous. I have more than once narrowly escaped a serious accident when riding or driving on the road after nightfall, from cattle lying on the road, as they generally come out of the woods at night to escape the flies. In townships which are, comparatively speaking, newly settled, some excuse may be found for this practice, as most of the settlers have not pasture enough for their cattle, and must of necessity allow them to run at large, although even in those places I see no reason why every settler should not be obliged to fence in his own lot, as in such cases there is no want of fencing material; but in the old settled townships, where most of the land is cleared, there can be no such excuse.

Surely the time has arrived when farmers ought to bestir themselves in self defence. The numerous highway robberies which have been committed lately, in some of which farmers have been sufferers, affords sufficient reason for their demanding from the Legislature the passage of an Act to empower Police and Stipendiary Magistrates to direct the Police to arrest all suspicious characters, and deal with them under the Vagrant Act. Such a law, if passed and vigorously enforced, would soon frighten the tramps and burglars out of the province. But unless the farmers determinedly insist on their Parliamentary Representatives extending to them this measure of protection, they are not likely to obtain it; and I would suggest that public meetings should be held everywhere for the purpose of enabling farmers generally to express their wishes in an unmistakable manner.

The 75,000 boxes of cheese at Montreal, which were supposed to be the produce of joint-stock cheese factories, turn out to be American skim-milk cheese, mixed with tallow, which has been imposed on the Montreal merchants as Canadian cheese. Farmers, for their own sakes, ought to demand from the Dominion Parliament the imposition of duties on all American produce equal in amount to the duties they impose on ours, so that we might at least supply our own markets ourselves, and so prevent such trash from being imported into Canada. If our farmers could only be brought to know their own strength and act in unison, they would not be so trampled on by unscrupulous politicians as they are, and as the *Advocate* has always been an independent farmer's paper, I trust you will not refuse insertion to the opinions I have now expressed. SARAWAK.



**Inquiry.**

SIR,—Are there any laws laid down anywhere, or by any authority other than the Society's by-laws, that you know of, whereby judges of fruit are governed at our exhibitions? An incident which occurred at the Westminster Township Show relative to the judging of some fruit, set me to thinking on this subject. In apples, for instance, is it size, color, symmetry or flavor which has to be taken into consideration? Say, for instance, that I have a plate of splendidly formed and colored Alexander apples; you have another plate of the same variety, larger, but poorly shapen and not colored well. A great number of people would say that the largest specimens should rank first, whilst others say the best shapen and colored should have it. In desert apples, we will say, I might show a variety unequalled for flavor, but not so showy as others, though wanting the flavor. Now, in melons, for instance, flavor must be the test, but in a great many other things size and color will go a long way.

INQUIRER.

**Good Seed, Making Pork, &c.**

"Caledonia's" contributions are always received by the ADVOCATE with pleasure. To-day we give his letter as written in the old style—abbreviations, absence of capitals and old-time spelling. We have ere now had some valued correspondents who delighted to follow the same old method, but to many of our readers the letter as printed will doubtless possess all the charm of novelty.

Our sistem o' getting good seeds: we, t' farmer's club, organized f' t' furtherans o' wellfare, protection & intelligence, after a large number o' our members being humbuged or anoid—wh' ever you like to call it—resolved to contrive at our next meeting some plan of remedying t' annoiance, 'tis, in the first place we will say turnip seed t' will stand testing, and after it is properly tested, grow what supposed to grow; carrots & field beets t' same or any seed o' t' kind t' are wanted.

Our plan, after finding t' work well f' a number o' years, is simply to deside before hand what kind & quantite o' seed we wish to h', & employ some one to raise them; any one can do it w' profit, as he knows he will sell all he raises at a reasonable price, t' price being agreed on at t' time o' making t' contract always.

**Making Pork.**—I will also explain to you wh' we have done in t' way o' making pork; after many discussions, we decided that it was profitabel to winter hogs wher' roots were plenty & easie razed, but unless a farmer had land t' is exelent f' razing root crops, we considered t' a frootles peece o' husbandry; we adopted t' plan o' razing spring pigs and having clover fields purposely f' them to be turned in as early as posibel, having rings in all their noses. Three years ago, after desiding upon which w'd be t' most profitabel breed, one o' our members agreed t' purchase a thurrow bred bore wh' he new he c'd get f' 25 dollars, proposing to charge 75 cents, wh' was not so very unprofitabel, f' in three years t' bore drew f' t' members o' t' club 40 dollars, for other parties 20 dollars, & at t' present time c'd be sold f' 30 dollars.

FROM A MEMBER O' T' CLUB IN HALDIMAND CO.

[The method of your club for getting good seeds has some advantages, if it be carried out with care and skill by the person employed. You will have your seeds fresh—a great object, as old seeds of many varieties are sure to fail—of some, for it is not so with all, some doing better the second year than the first. One disadvantage attending your method is that you will not be so apt to have new, improved varieties as if you got them from a seedsman whose business it is to procure for his purchasers the best and most improved varieties to be procured. Another disadvantage is that there is not that change, that is so very profitable, from a different soil and locality. The failure of seeds to grow is not always the fault of the seeds. Often when seeds have been sown we have an entire want of moisture for such a length of time as to retard the growth, and in many instances destroy the vitality of the seed sown. Garden seeds should be sown when there is some sign of coming rain, or if there be dry weather, the ground should be cultivated and the seed sown that evening, and, after

being rolled or pressed heavily, covered with boards or mulch for a few days to prevent the evaporation of the moisture, and there will be fewer complaints of failure of seed. Your method of raising pigs is one that we knew to be practised in the old country, and very profitably. The hogs were pastured through summer in a field of clover sowed especially for their use. In the autumn they were turned into the stubble field, and then put into the yard for fattening. It is the most economical method, and the hogs thrive well, and they are healthy and their flesh healthy and lean.—Ed.]

**Government Lands Open for Settlers.**

Some of our subscribers have been making enquiries of us relative to the Free Grant Lands and other Government lands open for settlement. In reply we give the following extracts from such authorities as we think are qualified by their personal knowledge to give information on the subject:

MUSKOKA.

As to the nature of the district, one-half of the land contains for the most part as good soil as any in Ontario; the other half is very middling or perfect rock. The land will produce excellent crops of any kind of vegetation that may be covered with snow in winter, or that is spring sown or set; but fruit trees that are above the snow have the greatest difficulty in growing. For the raising of sheep and cattle, no part of Canada is better or more productive.

With regard to settlers, there are scores of families throughout the district who are satisfied and comfortable, are living on their own farms, ranging in value from \$1,000 to \$4,000. Many of these are right glad that they went to Muskoka. Of course they have been there many years, and have "borne the burden and heat of the day." The foregoing is the bright side of the picture; but there is a dark side as well. There are hundreds going to Muskoka who ought never to go there at all. No man ought to go unless he has a strong constitution, is prepared to endure all sorts of hardships and privations, to work like a horse and continue at it steadily for a quarter of a century. If he can do all that, there is hope of his making himself a comfortable home and fortune to rest upon in his old age.—[From Rev. J. Marples, late of Bracebridge, to the *National*.]

MANITOBA.

Manitoba winter is colder, somewhat longer, and much steadier. Summer weather is about the same in temperature in day time, but the nights are usually cool.

We believe that chill fever and ague are unknown.

The country is well watered for a prairie country. Small spring creeks are not numerous. Settlers on the large rivers depend mostly upon these for their water supply. In some parts natural springs of excellent water are frequent. Settlers have encountered scarcely any difficulty in getting good water. Wells are obtained from ten to forty feet.

The prairie land is usually pretty level, yet sufficiently undulating. Land is nearly all good. Hills are so scarce that they are at a premium.

The staple timber of the country is a kind of cottonwood called poplar. This grows to large size, and is manufactured into lumber. Usually, however, it is of small growth. Oak grows in abundance in some parts. Ash, elm, birch, cedar and spruce are found in localities.

In and within reasonable hauling distance from Winnipeg, white pine imported from Minnesota is almost exclusively used. It sells at from \$25 to \$45 per thousand feet.

The prairie is excellent pasturage. The hay it makes is not quite so nutritious as timothy, but stock do well upon it, and horses never have heaves.

But very little effort has yet been made to cultivate grass. We have seen excellent samples of cultivated grass.

First-class imported general purpose horses are worth from \$175 to \$250 each; good native horses about \$100 each. Oxen are worth from \$150 to \$175 per yoke; oxen are much used. Cows sell at from \$40 to \$60 each.

There are sheep in Manitoba, and they do exceedingly well.

Cattle require to be fed from about the middle of October to the end of April.

The soil is alluvial, varying in depth from one foot to four feet. Government lands sell at one dollar per acre, but \$160 acres is the most they can sell to one person. Every actual settler is entitled to 160 acres free.—*Manitoba Free Press*.

**Milk a Scavenger of the Cow's Body.**

Written for the Farmer's Advocate by Prof. L. B. Arnold, of Rochester, N. Y.

It is a fact which must have been noticed by all observing farmers and their families, that medicinal agencies, taken into the stomachs of all milk-giving animals, re-appear in the milk of such animals. No fact is more notorious than that any medicine—cathartic, emetic or alterative—given to a nursing mother, effects the child in exactly the same way it does the mother, the medication being carried through the milk of the mother to the stomach of the child in such large proportions as to make the effect upon the child as active as upon the mother. This inclination of the milk glands to carry of medicinal matter from the body of the milk-giving mother is not an isolated inclination to carry foreign matter from the system. Disease is carried as readily as medicine. Any and every disease which taints the blood, as small-pox, measles, typhoid fever, scrofula or consumption, are transmitted through milk as readily as the effects of medicine. The excretory power of the milk glands does not stop with carrying off medicine and disease, it extends to all foreign matter floating in the blood of the milk-producing animals. Nor is this power confined to the milk glands. It belongs to other glands as well. All the large glands of the body act as scavengers. But each has a function of its own, to which it is more especially adapted. The liver and the kidneys are more active in carrying off foreign and waste mineral matters, while the central glands are more active in ejecting organic substances. These functions, however, run into each other. The oil of turpentine will appear in the secretions of the kidneys in fifteen minutes after being swallowed, and nitrate of potash will about as soon appear to some extent in milk as well as in urine. While the milk glands are not very different from other large glands in their general action, their functions have an interest above all others, in a sanitary and economical point of view, because of the part their secretions take in our food and commerce.

The very large amount of liquid passing through the udder of a cow, makes that liquid an efficient flux for removing everything from the blood that is not needed there. There are a great many things which creep into the blood in some way, which circulate and pass out with the nutritive elements. The essential oils of plants which give them distinctive flavor or odor, as of turnips, onions, &c.; the putrid matter in rotten potatoes, decaying grass, or any and every other food in a state of decomposition, find their way out of the system through milk. I have just been witnessing a striking instance of this from feeding the whey of a cheese factory to the cows furnishing milk for the factory. The whey in the factory was not different from that of other factories. It was one of six factories owned or controlled by one man, under whose personal supervision they were managed. The whey of all factories, as now managed is stale before it leaves the factory; incipient decay is started in it, and the cows partaking of it carry the seeds of destruction into their milk, and thence into the cheese. In this instance only a part of the cows supplying milk to the factory used whey. But it was enough to infect the cheese. The curds acted badly and smelled badly; the cheese puffed and was off flavor, and quite unlike the cheese of the other five factories managed in just the same way, so far as manufacturing was concerned. The quality of cheese was depressed a dollar per hundred. The depreciated value brought out a strong remonstrance to feeding whey to the cows, and it was stopped. The effect abated gradually, disappearing with the third day. The cheese of the fourth day became like those made in the other five factories controlled by the same superintendent, demonstrating, beyond a doubt, that the whey, though very slightly affected, carried into the bodies of the cows the seeds of putrefaction, which were cast out again in their milk. So with all other fermenting, stale or decaying food. It is sure to make its impress upon the milk of the cow using it, making it objectionable and unsafe to feed milk cows with any food, or giving them any water, which contains anything that would not be proper to be taken into the human stomach.

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**Agricultural.**

**Agriculture in France.**

Paris, September 4, 1875.

Although harvesting operations are nearly terminated in all France, yet the exact result cannot be stated with accuracy till threshing operations are completed. General opinion believes the yield will be a mean average of about 28 million quarters for wheat. In exceptional years, double this quantity is produced. Some 24 million quarters are required for home consumption, and four for sowing; thus no wheat can be exported of this season's crop, but such can take place from reserved stocks, which are large.

The importance of the vine-bug, or phylloxera question, to France, may be estimated by the fact that the insect, which covers the roots like a bark, has already destroyed nearly half a million acres of vineyard, and threatens with ruin two millions of acres more. For three years a Government Commission has been occupied at Montpellier experimenting with all suggested remedies, on an affected vineyard several acres in extent. It may be safely said the Commission, composed of practical and scientific men, has discovered no cure; it has, however, demonstrated the happy action of manures in prolonging the life of the vine, without preserving it. The submersion of the vines, for thirty days at least, in autumn or winter, with running water, and the subsequent application of fertilizers—known as the Faucon plan—is the sole efficacious remedy up to the present demonstrated, and so highly is it appreciated, that a project is on foot to construct a canal, to be fed from the Rhone, so as to enable several million acres of vineyards to be temporarily inundated. A special commissioner has left for the United States to study a variety of American vine-stocks known in Pennsylvania as the "corn-grape," and reported capable of resisting the phylloxera.

It is becoming the custom in France to present the farmer who offers his wheat to be cut by a competition of reaping machines, with the prize reaper—the latter being purchased for that purpose by the local farming society. Not less noteworthy is the progress made in the adoption of threshing machines. For large farms, steam machines, of course, are employed; but in the case of small holdings, the little Swiss machine is preferred. It is portable, and so passes from neighbor to neighbor. If worked by a horse, ten bushels of grain per hour may be threshed; if turned by two men, one-half that quantity.

A fresh impulse has been given to hay farming by the employment of machines for compressing the fodder. A cubic yard of hay, ordinarily bundled, weighs about one cwt.; by pressure, and well corded and wired, five and six times that quantity can be forced into the same space. It is thus that Cherbourg sends hay to Paris, and the same facilities prevent a region from suffering from any penury of fodder. The presses are of various sizes, the portable ones being hired out.

Reports of late have been very unfavorable to the giant maize of Nicaragua, so much esteemed for green feeding. On examination it has been found that the seed had not been imported from South America, but raised in the vicinity of Marseilles. The seed germinated very unequally and sickly, and was found to be black in the centre and suffering from a dry rot. Apart from any question of degeneracy, the climate of France cannot ripen this maize, and hence our farmers are falling back on the variety known as "horse tooth." M. Goffart, who has become the authority on the preservation of green maize and rye in trenches, for winter and spring feeding, asserts that the plan has never failed where the instructions have been minutely followed. The amount of moisture contained in the plant is no obstacle to its preservation, as maize contains 80 per cent. of water when put in the trench, and revealed on analysis the same per centage four months later, when taken out to be consumed. M. Goffart thinks that the reason why so many complain of green rye not conserving well is owing to its being relatively dry, containing but seventy per cent. of water, and hence one reason, perhaps, why a watering with salt in solution proves so beneficial. The colder the state in which green stuff is put into the trenches the better; thus after filling some pits in December, M. Goffart found that such as had a layer of ice on the surface before being covered in, maintained the desired low temperature to the last.

Belgium is very much occupied with the means to increase the breed of horses, to supply the deficiency caused by foreign purchases. The favorite plan is to award annual prizes to the best stallions, aged from four to nine years, and which shall have covered thirty mares at least, in the locality. France, in addition, gives prizes for the best brood mares, but which must not be exported. Belgium, being very rich, can afford to pay good prices. There the rent per acre of land is 90 francs, and for its purchase, 4,000 francs. The land is fertile, excepting the heath district of Campine, and 15 quarts of milk is the expected yield of a Dutch cow. When the quality as well as the quantity diminishes, the animal is at once fattened for the butcher. It is by means of beet pulp that Belgian farmers are able to fatten so much stock.

To destroy the terrible bug worms which attack the young hop stems, M. Breithaupt pours some carbolic acid on a heated shovel; the fumes cause the worms to fall dead in masses.

Canadian poplar seems to be prescribed for roadside planting. Instead, ordinary poplar is recommended for humid soils, elm for strong clays, and oak for land unsuitable to any other tree; the distance between each tree to be 33 feet.

It is alleged that one of the obstacles to the rearing of horses in France is the absence of oats. In the southern parts of the country barley is the favorite grain for horses, as is practiced at present in Spain, Algeria, Arabia, &c. The Romans fed their cavalry horses only on barley. A new variety of oats, called Salines, has been introduced in the neighborhood of Lille, which yields over 80 bushels per acre, where formerly half that quantity was produced; hence the cultivation of this grain crop is now rapidly spreading. Oats sell at 11 to 14 francs per cwt.—*Abridged from Correspondence of the New England Farmer.*

**Large or Small Farms.**

There is no mistake more common or more injurious than that of supposing the more land a man holds the greater must be his profits, for profits do not arise from the land itself, but from the manner of using it. The best soil may be made unproductive by bad management, and the worst may be rendered more profitable by the opposite course; but without sufficient capital no land can be properly cultivated. At the same time, there is nothing to which capital can be applied with greater certainty of a fair return for a liberal expenditure when correctly employed, than in land. In fact, assuming that the expenditure be directed with judgment, it will be found that the profits upon the outlay increase in more than a proportionate degree to its amount; thus, supposing that twenty-five dollars be the lowest and fifty the highest sum that can be employed in the common culture of the same acre of land, it is more than probable that if twenty-five dollars would return at the rate of ten per cent., the fifty dollars would yield twenty per cent., or an intermediate sum in the same ratio. Admitting this to be true, and no experienced agriculturist will doubt it, it follows that a capital of five thousand dollars expended in the cultivation of two hundred acres, will only yield a profit of five hundred, while if it were applied to one hundred acres, it would produce one thousand dollars; therefore it is evident that this profit would be increased by diminishing the quantity of his land.

Many a man has been ruined by a large farm, who might have acquired a competency on one with half the number of acres. Most farmers are anxious for large plantations, and many are thus betrayed into the error of attempting to work a greater quantity of ground than they have the means of managing to advantage—some in the delusive hope of acquiring these means by future savings, others from the vanity of holding more land than their neighbors; hence arises a deficiency of stock, imperfect tillage and scanty crops, with all the train of rent in arrear, wages ill-paid, and debts unsatisfied, and final ruin.

He who prudently commences with only such a number of acres as he has power of cultivating with proper effect, is certain of raising the full return from the soil; and his engagements being in accordance with his means, he enjoys present ease of mind, and lays the surest foundation for future prosperity. It therefore behooves a man to weigh well the charges with his means, and never allow himself to be seduced by any ideal prospect of gain into the imprudence of entering upon a larger farm than his capital will enable him to manage with the spirit necessary to insure success. Truly did Judge Buel say that "large farms are the curse of

our country," and perhaps no one had better experience from which to draw such an expression. If a farmer has one hundred acres, it would be much better for him to put the price of another hundred on it than to buy one hundred more, and make the same labor produce double the crops, and not have double labor for double crops, as is usually the case with us.—*German town Telegraph.*

**A Model Farmer.**

Originally Mr. Johnston's farm was a strong and heavy clay, and previous to his ownership it was, in the language of the neighbors, "run down," and, as a former owner of the part told him, the "cream had all been taken out of it," receiving for a reply—"I will make butter from it yet." An old barn, standing amid the accumulated manure of many years, told the story of its management. Though the land was by no means springy—in fact I believe there was but one permanent spring on the place, and that was away from the lake shore—yet it was full of water that could not find its way through the tenacious clay. Mr. Johnston became the owner of this land when he was by no means a rich man. He purchased in pieces, as his means and credit permitted, until he had 300 acres (since reduced to about 100). He now tells the story of certain careful bankers lending him money without security, on his note for eighteen months to drain this land. He does not yet see how they dared to trust him for such large sums to invest in what was considered by most of his neighbors as a wild scheme of "burying crockery" in his land, as they deridingly talked when they passed by, wagging their wise heads. "But, Mr. Johnston, did you pay that large note by the time it became due?" "Long before," was the prompt reply. The two crops of wheat that came in during the time, by their increased yield wiped the debt all out, and gave him and some others confidence in his policy—which may be summed up by saying that he first took the stagnant water from his land, and then made all the barn-yard manure he could by feeding sheep and cattle during the winter, and turning into the ground great crops of clover and grass, when he plowed his pastures and meadows, to raise wheat. The immense work he performed will be best comprehended when it is stated that he laid about forty-five miles of tile drains—and this, too, on what is called uplands, not, as has been said, made wet by springs, but by the water that fell upon it from the clouds—and he is recognized as the very father of the now so generally practised system of upland draining in this country.

The prejudices he encountered may be understood when we are informed that to do the work thoroughly on one of his fields it was necessary, for an outlet, to make a drain through a field belonging to a neighbor, and that he could not obtain consent from the owner to do so. "Why," said he, "if you should cut a ditch through my field two or three feet deep, you would take all the moisture out of it and ruin it." He had to purchase this field, which he was only able to do after long negotiation. Once in his possession, the whole field was speedily cut into strips two rods wide, bounded by tile drains. The immense crops that followed astonished the former owner, so that he might be seen very early of a morning, when he thought he was unobserved, looking over the new line fence upon the once wet, soggy land, that would give him very little but aquatic plants and nearly worthless grasses. How our venerable friend loves to tell this story.

He had a field of forty acres that was seeded to clover, and most of it (all but three or four acres in one corner) had been drained, which he wished to put into wheat, and he did not wish to plow it until the clover had become fully grown. To this end, he purchased, in the early spring, three pairs of strong oxen, intending to put on each plow a span of horses and a yoke of oxen, a boy to drive and a man to hold the plow. Acquaintances, as they passed along the road, began to ask why he did not plow his summer fallow; but he bided his time, pasturing ten sheep to the acre after the clover had become well grown, and until quite late in June. Then, with his three span of horses and his men, he went to the field, sending in another direction for the oxen. For some reason there was delay in bringing the oxen, and having nothing else on hand, he started a team of horses before one of the plows, and was surprised to find that two horses on a plow were enough, and no oxen wanted. So when the oxen came, the boys were told to drive them back, and let them get fat to be sold for beef.—*E.*

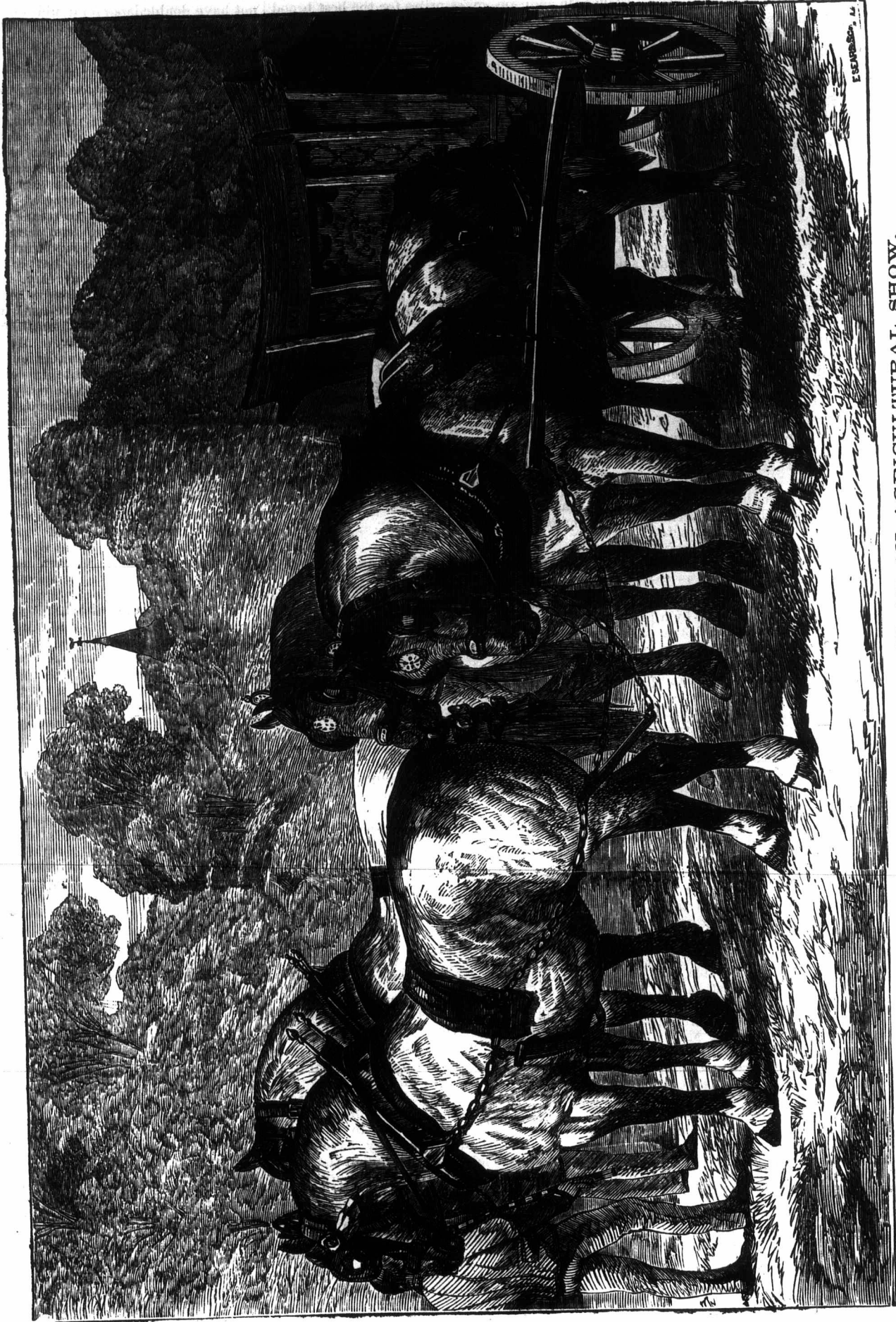


This saving of a boy to drive and a yoke of oxen was due to the draining. The tenacity of the soil had been broken up by freeing it from water. This was demonstrated when the plows came to the part that had not been drained—left, as in Mr.

Johnstone's judgment, not wet enough to materially injure crops. To plow this undrained land it was necessary to use three horses to a plow. The lesson taught was improved, and drains were at once put into this piece. So it was not merely the

increase in the crop, but the lessened cost of producing it as well, that was gained. The after treatment of this field consisted in keeping the surface mellow, and leaving the clover in the furrow. In regard to this method of sum-

**English Draught Horses.**  
 Our neighbors "over the border" are now importing such from every day in old England. The cut of one recently imported, which we expected to give the old country to improve their farm horses and general stock; some are also imported into Canada for like purpose.



AN ENGLISH FARM TEAM AS SEEN AT AN AGRICULTURAL SHOW.

Our Canadian farmers generally prefer the horse less heavy and more agile, but an infusion of the blood of the English Draught Horse might be an improvement, as our farm horses are often deficient in lift and power. The best horses we ever saw in the plough were the Carriage Horses—strong, vigorous and spirited, but not too clumsy.

mer following, Mr. Johnston said that in 1859 he harvested 12 acres of Mediterranean wheat that measured 35 bushels to the acre, weighing 64 lbs. to the bushel (making the merchantable average 37½ bushels). He plowed an old sod in June, deep, using three-horse teams, and kept the surface mellow by harrowing, but no other plowing.

The largest yield of wheat was in 1827; 20 acres averaged 42½ bushels to the acre.

So it turns out that this master workman has never been able to produce, on a field of real mother earth, more than 42½ bushels to the acre of wheat in one crop.—Country Gentleman.

Messrs. Crooker Bros., of Wellington Square, have forwarded to us a very neat wire office basket and a useful work basket for our better half. They are the best wire baskets we have seen. They have the largest wire-working establishment in Ontario; they make 60 different sizes, from the large basket for the barn to the small egg boiler.

Extract

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**Extracts from Our Agricultural Exchanges.**

**LAWNS.**—After the present date, (Oct 7) it is well to cease mowing lawns. The grass will grow a few inches and form a thick mat over the whole surface, affording the best and most easily procured winter mulch for the roots of the grass, and bringing out the green blades some days sooner in spring than where the lawn is kept closely cut until winter. —*Country Gentleman.*

**CLOSE PLANTING OF RASPBERRIES, CURRANTS, &c.**—We are more and more becoming converted to the practice of close planting and close pruning of the above. Take, for instance, black raspberries or blackberries, grow them close in a row, and like a hedge, by keeping them well cut as they grow. This makes the branches stiff so that they do not get down in the dirt, and are easily passed among to get the fruit, and, too, by mulching the entire surface, the same amount of mulch mulches a much larger number of vines. The roots of all kinds of plants run much further than few people have any idea of, and simply mulching around the plant does not answer the purpose. The roots of a plantation of raspberries and blackberries or strawberries, or even currants, run through the entire surface, and hence to be properly benefited, the entire surface must be mulched or kept worked by hoe and cultivator, and the part that most needs this is the extremities of the roots. Currant and gooseberries must have a cool, moist place to do well, and, if planted on dry soil, this is best secured by a heavy mulching of the entire surface. So if fruit, and that of the best quality, is sought for, sow close, prune close, and mulch heavily is our advice. —*Fruit Recorder.*

**A TREE PROTECTOR.**—There was on exhibition at the New England Fair a model of a very simple, elastic guard for keeping horses from gnawing the bark from roadside trees. It is a simple pailing of slats to surround the trunk, but, instead of being nailed to the tree or set on the ground to rot, it was suspended by elastic springs, which would give as the body of the tree enlarged. We consider it well worthy the consideration of owners of roadside shade trees. It is utterly absurd to spend time and money in planting trees along our streets when the first horse that comes along is allowed to stop and leisurely make a dinner from the bark, while the owner is, perhaps, thoughtlessly smoking a cigar at a neighboring saloon. —*Gardner's Monthly.*

**PURE-BRED SHEEP.**—The cross-bred races of sheep are the most popular breeds with those who look to the wool and mutton for their profit. The pure-bred sheep (so called), or those which go back to a long distance for their origin, are chiefly bred, not for their value in wool and mutton, but for the purpose of crossing on other races for the production of a really profitable market sheep. The prices South Down, the Cotswold, and especially the Leicester, are found to be less profitable sheep for the farmer than the Oxford, the Hampshire and the Shropshire sheep. These last are cross-bred sheep, and, among English farmers, go by the significant name of the "rent payers." In Germany and France, the pure-breeds have been found less profitable than cross-breeds, and we are now mak-

ing the same discovery in this country. There is a popular need for a sheep which produces a carcass of choice mutton along with a fleece of wool which bears as high a price per pound as that of any of the purer breeds, and which can be brought to early maturity and made to weigh heavily at less expenditure than the pure-bred sheep. At the same time we want a sheep of hardy constitution, which can stand the rough usage of the farm better than the high-bred races. It does not pay the farmer to keep the pure-breeds for the production of mutton at 6c. to 8c. per pound. But he can produce half-bred sheep by the use of pure-bred rams, whose mutton will be worth the highest

intense, it will be well to cover them with a coating of coarse manure. —*Colonial Farmer.*

**PROTECT THE BIRDS.**—During the year several of our correspondents have given their testimony in favor of the quail as an insect exterminator, and have advocated their better protection from the roaming members of sporting clubs, that get past all the useless game laws simply for their own accommodation and gratification. We have just seen the statement of an Ohio farmer, who shot a quail for the purpose of satisfying himself as to the truth of the claim that birds are insect exterminators. He found in the crop of his victim one cutworm, twenty-one striped vine bugs, and over a hundred chinch bugs. Now, in view of what we are all beginning to understand regarding the immense destruction being done, by chinch bugs especially, it is easy to see that farmers want a complete revision of our game laws, and that they should be made for the complete protection of the birds, and through them the protection of our crops. —*Prairie Farmer.*

Salt should be furnished to all animals regularly. A cow, an ox or a horse needs two to four ounces daily. Salt increases the butter in milk, helps the digestive and nutritive processes and gives a good appetite. The people of Interior Europe have a saying that a pound of salt makes ten pounds of flesh. Of course, salt only assists in assimilating the food; it does not make flesh nor muscle.

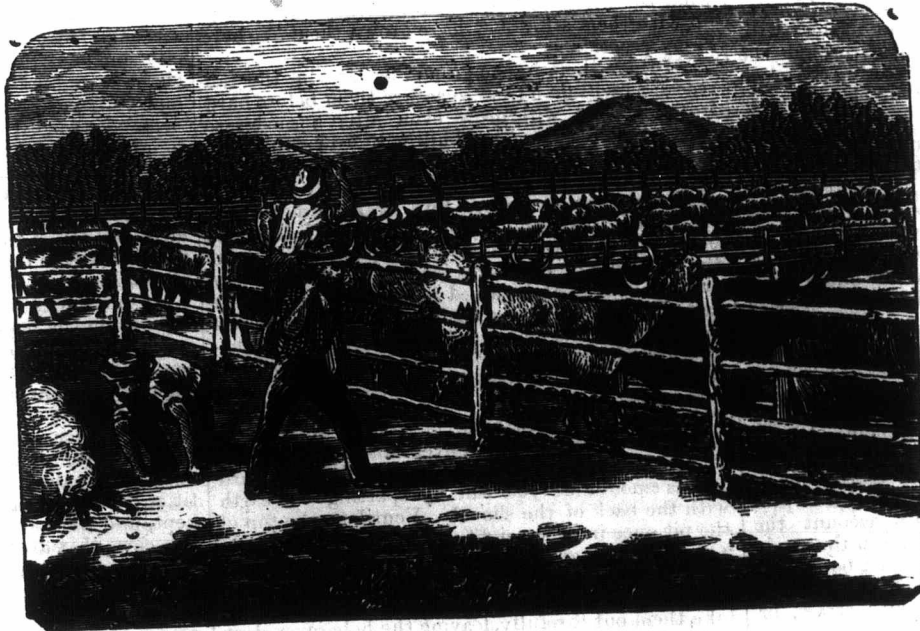
**Branding Cattle.**

This scene, branding cattle in Texas, presents a striking feature of the stock raiser's and herdsman's life on those vast plains, where the brand is the only means for the owner of many hundred, or even thousands of the semi-wild cattle that roam at large over the unbounded country, to tell his from the thousands among which they pasture free and unrestrained. Here we see the steer or heifer driven within the enclosure, and held fast with the lasso, and hard by the iron heated in the blazing fire to impress the indelible brand on the side.

Such stock as here represented by our artist, as they cost little, so are they worth little money. Their price is from \$5.50 to \$7 per head, taking the whole head or brand, as it is called by the herdsmen. When fattened they are sold from \$20 to \$30. When driven North, they not unfrequently smite with the Texas fever the cattle of the farmers along their route. This, as well as the low price at which they are sold, make their approach dreaded by North-Eastern breeders.

Farmers who have threshed their fall wheat and barley are highly pleased with the yield which has been realized. Mr. Geo. Gould, of this township, sowed nine bushels of barley on a little over three and a half acres of land, from which he has a return of upwards of two hundred

bushels, or about sixty bushels to the acre. We have also heard of others who have realized large returns. With such well authenticated reports in our possession, we have no doubt as to the prospect of better times among all classes of the community. Money will soon be much more plentiful, trade will work up, and our commercial interests will very rapidly assume a more encouraging aspect. —*Ingersoll Chronicle.*



price in the market, from ewes whose mutton would not bring more than 4 cents a pound. —*American Agriculturist.*

**BURYING ROOTS.**—There is one way of burying roots so that the frost will not get at them, and that is, the placing of layers of straw between the layers of earth with which they are covered. It is necessary to be more careful with potatoes than with any other roots, as they will not stand the slightest frost without being injured. Potatoes should be laid in compact heaps and covered carefully with straw. Over the straw put about eight



inches of earth, and over the earth a good thick layer of straw. Over all put six or eight inches of earth. Frost will go through almost any thickness of earth alone, but it will not penetrate far below the non-conducting straw. The earth should not be packed any harder than will suffice to keep it in place. By using straw and earth combined, time is saved in uncovering when the roots are wanted to be got at. If the snow is blown from the heaps during the winter, and the cold is very

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### Stock and Dairy.

#### Indian Corn as a Fodder Crop in England.

Indian corn as a cereal grain cannot be grown to advantage in England, there not being sun enough to mature the plant. But its culture as a forage crop is found to be practicable and profitable. Experiments have been made as to the possibility of preserving the corn stalks in a green state, by burying them in trenches, the same as potatoes, mangolds and other bulbous-rooted fodder plants. The plan is said to succeed admirably, and a recent number of the *Mark Lane Express* informs us that this season many breeders and feeders will, in the absence of other fodder crops, through the drought, make ample provision by storing the green maize for the support of their stock of cattle through the winter months.

This will be regarded as a "new wrinkle" in the treatment of Indian corn by the farmers of this continent, who have long made use of dried corn stalks for winter fodder, but, so far as we know, have never dreamed of its preservation in a green and succulent condition for winter feeding. Its value as an appetizer, and as a diet for milch cows, can hardly be over-estimated, and we see no reason why the process is not just as available in this country as in England. In the hope that some of our farmers will be thereby induced to try the experiment, we append the directions given by the English agricultural journal above mentioned:

The process of storing is simple enough. A long, wide and deep trench is dug, from three to four yards deep (this appears to us unnecessarily deep), in a dry and healthy soil, and of a width in proportion to the depth. Taking into account the subsidence of the mass thus deposited in the crude green state, a good bed of straw must be laid at the bottom, and on the top and sides the trench must also be covered over thickly with straw, or boards, if they are at hand, to protect the whole mass from the rain, which, if allowed to reach the plants, would destroy their nutritive quality. There is a difference of opinion, and, of course, of practice, as to the state in which the green maize should be pitted. Some prefer cutting it up into short pieces, the chief objection to that mode being the time and labor expended in the operation at a season of the year when such requisites are especially valuable. The process, in fact, appears to be unnecessary, as the fermentation of the store will by its own weight be complete without the outlay of any such extra labor.

Beginning with the deposit of the seed, this should be got through as soon as the frosts of spring are considered to be over—say the latter end of May or later, but certainly not earlier. The maize should be sown in rows, closer or wider according to the soil, not very close, the plant being large itself, and the foliage broad and heavy. It will be ready in July or August, care being taken not to wait till the plant is matured, but whilst the cobs are still in the milky state, and the whole plant in the most nutritive condition. We do not find that any salt is used in the deposition of the mass, but we certainly should be inclined to add a proportion of that most useful condiment, as both agreeable to the cattle and promotive of health and quick feeding. The greatest care must be taken to guard against the rain; and there must be provided a good straw covering, with over that a coat of earth, laid on ridgeways and beaten down hard. Attention also must be paid to the subsidence of the whole body of the maize, which will require looking to daily, and the covering adjusted according to circumstances. In this respect the pitting of maize differs from that of potatoes and other roots which suffer no subsidence, or at most a very inconsiderable one; but maize in its most florid state contains a large proportion of moisture, causing rapid and copious fermentation, which, whilst it condenses the whole mass, renders it, if carefully attended to, more nutritive and palatable.

We now repeat the precautions that must be employed: 1st, Sow as early as the spring frosts will allow; 2nd, If for preserving, cut whilst the grain is in the most milky state; 3rd, Place in the trench carefully, with a good bed of straw at bottom; 4th, Carefully cover with straw, as much like the thatching as possible, then with earth, beaten down smooth and ridgeways; 5th, Watch well while the subsidence is progressing, and when the fermentation has subsided, give a coat of earth to keep out the rain, which must be the chief care in the business.

#### Storing and Feeding Rutabagas.

The following letter to the *Michigan Farmer*, by Mr. J. R. Hendryx, contains many valuable hints on storing and feeding rutabagas to stock. We take the liberty to bring this forward at this time for the double reason that the time now draws near at hand for planting, and, as the writer affirms, they contribute in a large degree to the general health and well doing of cattle or sheep during our long winters, we think the roots ought to be more generally cultivated:—

"You ask me to tell your numerous readers how to harvest, secure and feed Swedish turnips, or rutabagas, so that they may know something of what the whole cost is, and what they have got to do with them after they have grown them—so here is my practice.

"I leave them in the ground as late in the fall season as will give time to secure them before hard frosts, as they will grow even after a moderate frost—that is to say, the bulb will grow while ever it can extract anything from the leaves. Take a sharp hoe and clip the tops, so as to leave two rows of the roots in one row of tops. Take a rake or four-tined fork, and throw the tops into small bunches; then with a common potato hook haul the two rows of rutabagas into one. This is very quickly done. Make a bed for a pit by hoeing the dirt out so as to leave a basin, say from six to seven feet wide, and as long as you like. Haul your turnips and throw them in. Pile up as high as you can make them lie, making at the same time as sharp a ridge as you can. Cover well with good dry straw, the straw being put on as straight as though it was a thatch. Cover this with earth not to exceed six or seven inches. Beat down as hard and as smooth as you can by spating the earth with the back of the shovel. Ventilate the top of the pit once in every eight or ten feet, by placing a round stick, say three or four inches in diameter, endwise in the top of the pit through the straw. Stamp the earth well around the sticks, and then take them out carefully, leaving the hole open clear to the turnips. Leave it in this condition until the severe cold weather comes, and then cover the vent holes with a little stable manure. If the pile is not broken into or used during the winter, as soon as the severe weather is past, take off the cover and most of the earth and open the vent holes, and thus leave the pit till wanted for use.

#### HOW TO FEED.

"I cut with a machine, and feed to cattle and sheep all they will eat. My milch cows give an abundance of sweet milk, and the butter is as sweet and yellow as any fall butter. My sheep are healthy, and the ewes give an abundance of milk for their lambs. I impute this to the use of the turnip in feeding. It is not that the turnip furnishes so much solid food, but it supplies green vegetable matter, which not only helps to digest the dry food which is fed through the winter season, but which also supplies the digestive organs with juices which otherwise it would drain from other parts of the system. This is the real economy of feeding turnips in winter. The turnips utilize all the dry fodder which is fed to cattle and sheep, and in keeping the animals plump and their whole system full, they save much grain and hay, and, besides, they turn the grain and hay into profit, instead of being used without any gain. There is no man who has once wintered his sheep judiciously on turnips as a part of their daily food, more or less according to the season, that will not always grow a few again, if he is not too lazy.

#### THE TOPS.

"The tops can be mixed with dry straw or corn-stalks to good advantage; but great discretion and care should be used in the mixing. The layers of tops must be very thin, and the straw and stalks thick."

A very valuable mare, whose misfortune is to have flat feet, used to be shod with ordinary plain shoes, but, going uneasily on pavement, it was thought that leather soles would be an advantage; these were tried, but, instead of being better, she was worse. A friend of the owner suggested that a rim of leather under the shoe, leaving all the middle of the foot free and open, would remedy the defect, and now with this plan she is one of the best steppers in the country.

A new horse disease, epizootic in its character, has broken out in Syracuse, N. Y. Nearly all the horses met in the streets have a cough, which is quite severe and frequent in its spasms. They appear to be "stuffed up," and their breathing is difficult, as if their lungs were severely congested. These attacks come on suddenly and without any premonition.

#### The Need of Salt.

My observations are that all persons and animals that have come under my notice as consuming abundance of salt, are and have been the most hardy and robust. I lived a strict vegetarian for a number of years, abstaining from the use of condiments, including salt. The only attack of fever I ever had was during this vegetarian life. In my younger days I was an invalid, and supposed I could not eat and digest strong and highly seasoned food. I gradually became a consumer of meats and strong food, requiring much salt, and now I am as robust as any of my family. I now have a family of seven children, who are all hardy and robust, and have all been used to strong and highly seasoned food, using much salt, even so as to excite comment. My views on the use of this article have gradually given way, and every animal under my care has all the salt it will consume. Some years ago I employed a number of Canadians to labor at logging and lumbering. They were the greatest consumers of salt I ever saw, and were the hardest men ever in my employ. I also at different times have boarded gangs of railroad men, and found the most hardy of them were great users of salt. I could give many individual cases, all similar.

At one time I had a flock of sheep which I tried to keep on the no-salt principle. They did not do well, and I had to resort to regular salting. The best and most thrifty pig I ever raised was salted regularly for experiment, and my pigs now have salt in their food, and any one can judge by seeing them whether I am successful in this line. At different times I have owned cows which were voracious feeders, and would consume great quantities of salt; yet they never failed to be easily kept, and were always good milkers. I now have two cows that are greedy eaters of salt. They are both excellent cows, and give good milk in large quantities. I have one cow that is a dainty eater, and will scarcely ever taste salt. She is not so good a cow for milk, and is hard to keep, and will be the first to be sold. When I want to buy a cow, the first thing I want to know is if she is a dainty feeder or otherwise. If she will eat everything given her, she is sure to want plenty of salt, and I am sure of a good cow.

I now have six work horses, all greedy eaters but one; he is dainty and many times off his feed, and will not eat much salt. He is hard to keep, and has to be humored in feeding. I have owned him some years, and he is learning to use more salt, and is more hardy than a year ago; his vigor improves with his appetite. The rest are all good feeders, and one in particular is remarkable for hardness. The mangers of the others are often cleaned and given to her, and she will clean all up, and keep fat and sleek on ordinary feed. She consumes as much salt daily as any other two of the lot. Within sight, as I write, there are a number of young cattle grazing. I can go to this herd and select those that consume the most salt, and I would, if buying from a herd, prefer seeing them salted first.

I have simply given facts coming under my own observation, and do not account for them on any scientific grounds, and it would indeed be singular if mine was an isolated case. What say the experienced and careful stock raisers who read your valuable paper? My experience and conclusions are contrary to my former belief, forced by the best of all proofs—thorough trial.

For fear some may misconstrue my opinions in regard to the use of salt, I will say that I do not think that people or animals can live on salt; I think in some instances too much can be used. I emphatically and earnestly condemn the usual practice of giving salt to animals at stated periods; it is just as unnatural for animals to receive salt in this way as for a person to go without until the craving would cause him to go to the salt barrel and gorge himself. Treat them to food and salt as we do ourselves, and I am assured they will do well. Let any one come into my barn, and he will see at all times a box of salt in each manger for cattle or horses. I never allow these salt boxes to become empty for a day. For hogs I mostly mix a little salt regularly in their feed every day. If hogs are not used to this way of feeding, and by chance get an over-feed of salt, it will surely kill them; but with regular, every day use, in the right quantities, I am sure it promotes health and growth.

So with chickens, only they require still less: never overdose at intervals, or death will follow. The subject is an important one, and I am timid to enter any discussion, but let us have facts and experience; it will hurt no one.—D. R., in *C. Gent.*

#### Live Stock.

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Live Stock for the Common Farmer.

At the recent Agricultural Convention held under the auspices of the Wisconsin State Agricultural Society, G. E. Morrow, of this paper, delivered an address on Live Stock on Wisconsin Farms, of which the following is a brief abstract:

The condition of farming in the West, and in Wisconsin and the Northwest as fully as in any other part of the country, for the past few years, as is well known, has been far from satisfactory. There has been a general feeling that too exclusive attention has been given to grain growing, and connected with this has been a general increased interest in relation to stock raising and feeding. For this Wisconsin and the Northwest has some disadvantages, chief of which are the facts that the winters are long and cold, and there is more liability to droughts than in some other sections. There are, however, some advantages. The soil is fertile and grass and other forage grows with great rapidity. The difference in length of Wisconsin summers and those two hundred miles south is less than is generally supposed. The climate is healthful and the dry, bracing air of winter, although cold, is better than the damp, cheerless weather of some supposed to be more favored spots.

The rearing and feeding of live stock, gives work on the farm throughout the year, and thus enables the farmer to more steadily employ an important part of his capital. The growing of small grain exclusively gives hurrying work during a part of the year and leaves the farmer comparatively idle during the remainder. Live stock use up profitably much of the coarser products of the farm largely wasted in exclusive grain growing. The animals can get a good living from land which would otherwise give little or no profitable return. Keeping live stock greatly increases the quantity of manure made on the farm, and enables the farmer to better adopt a system of rotation of crops. Being able to ship live stock or animal products greatly helps Western farmers in meeting the great transportation question. Breeding, rearing and feeding animals tends to higher intelligence and better farming. Few things will tend more to give boys a love for farming than interesting them in breeding.

As nothing succeeds like success, a stronger argument in favor of giving increased attention to live stock than a feeling that this ought to be done, or arguments to show that it would be profitable, is found in the abundantly proven fact that stock raising has paid well in Wisconsin and other parts of the Northwest.

But if money is to be made, the stock must be good stock. By good stock is meant that which is well adapted for the purpose designed. In the market reports we read that one steer sold for seven cents, another for three cents a pound. One is better adapted for the designed purpose than the other. The purposes for which we desire animals are best accomplished when they are far removed from their "natural" condition. No natural or wild animal is so well fitted for meat, milk or wool production as when it has been subjected to the influence of man. "Like produces like" but with exceptions and modifications, and so by selection and careful treatment we develop the characteristics we wish, and repress those we do not desire, bearing in mind that no animal can be perfect, and that special development in one direction is usually accompanied by lack of development in other directions, and that a characteristic which has descended through several generations is much more likely to be reproduced than one in which the animal differs from his ancestors.

Thus we see why the pedigrees of animals are valued. These are partial histories of families and furnish evidence, more or less conclusive, that for generations past the ancestors have or have not had the same general character as has the individual in question. The character of the more immediate ancestors is more important than those more remote, so if we know certainly the character of the sires and dams for a half dozen generations back, we need not be anxious about those more remote. Pedigree is not all that is important. A poor animal may have a good pedigree; a good animal may have a poor pedigree. If both pedigree and individual be good and then good care be given, we have assurance of success.

Admitting the desirability of making live stock prominent in our farming system, it is a pertinent question with many farmers, "how are we to change? Our farms have been devoted to grain culture; we have not the means with which to buy improved stock, nor have we the feed, had we the stock." In this, as in all such matters, time

is required. A sudden change cannot be made. Grass should be sown as far as land can be spared for it. It is fortunate that the Northwest is especially adapted to the growth of crops which partially take the place of grass, and help us when the grass fails. Chief of these is corn.

By careful selection and skillful management a farmer may, in a series of generations, so improve his stock that the first and last specimens would hardly be recognized as of the same breed, but this is a slow process and hence the average farmer will do wisely to avail himself of the work done by others in this direction. Most farmers cannot afford to purchase full flocks or herds of the improved breeds. They can afford, however, to make use of well bred males and thus in a comparatively few years have animals almost or quite equal for practical purposes to those pure bred. If, in addition to this, even one or two full blood females can be secured and bred from, a great additional help will be had, and it is surprising how soon a good sized flock or herd of full blood animals can thus be secured.

It is a fallacious and unwise objection that farmers cannot afford to pay the high prices asked and received for some specimens of imported stock; for there is no need that they should, as in any well established breed, very creditable specimens can be obtained at prices which farmers can afford to pay.

In the selection of breeds it should be borne in mind that no one is perfect; no one adapted for all uses and climates; that the breed best for one man may be ill suited to the wants of another. It is unwise to have so strong prejudices as to be unable to see any merit in but one breed. On the other hand, it is well to have well established convictions, for in stock raising, frequent or aimless crossing of breeds is always an evil.

For the professional stock-breeder it is often advisable to give attention to but one class of animals, and to but one breed of this class. For the general farmer it is often advisable to keep horses, cattle, sheep, swine and poultry, selecting some one breed of each. Exclusive attention to any one class is rarely advisable, and sudden changes to meet the fluctuations in market prices are nearly always inadvisable.—Western Rural.

Shorthorns.

THEIR GENERAL UTILITY.

(From the Mark Lane Express.)

Mr. E. A. Fawcett, of Chidwick Hall, St. Albans, delivered a lecture at Chew Magna, on "Shorthorns—Their General Utility for all Purposes," in the course of which he said the origin of shorthorns dated back some hundreds of years before the "Herd Book" was compiled; and the folly, therefore, of relying simply upon the foundation of the "Herd Book" would be apparent. The "Herd Book" was only established in 1822, or about then, and, therefore, the early pedigrees, as they were found entered therein, were necessarily, to a large extent, made up of hearsay, or, at best, upon very questionable information. People referred to the "Herd Book" as though it went back to the beginning of the breeding of shorthorns, although it is well-known they had been known as the Teeswater, or Dutch cattle, for hundreds of years before. After showing the very doubtful origin of some of the earliest of the noted shorthorns, the speaker said that milk, hair and beef were the properties the early breeders looked for and considered necessary, but now it was pedigree that gave the value almost entirely. Now, just let them see for a moment if gentlemen who gave such enormous sums for pedigree animals were justified in what they were doing. Take first the purity of blood, for there was little else heard of now, just as if providence had given to a few particular breeders the talent or ability to produce animals superior to those of any other man. He traced the ancestry of Crown Prince, supposed to be the best Booth bull ever bred, and said that in talking of pure blood there was no greater rubbish published. He had a catalogue which showed that at a Killerby sale, in 1852, Wide-Awake was sold and purchased by Mr. Emerson for 10 guineas. Fawcett was sold to the same gentleman for 21 guineas. In 1872 the descendants of these animals sold at from £500 to £600, simply because they were said to be pure blood. He referred to the enormous prices realized by the offspring of the Duchess, and said that why the Duchess family was superior to

any other shorthorns, he was at a loss to imagine. If it could be shown that the beef was superior, that the milk was richer, that it made more cheese or butter, or that it made better cheese or butter, that there was more constitution, or it was of superior quality; or, if they could show any superior merit, he would say they were right; but they could not do so. The Duchess cows were purchased out of Stanwick Park nearly forty years before the "Herd Book" existed, and yet their exact breed was said to be known. Now, did they believe that in that neighborhood the breeding of any cow could be traced forty years after it had passed away? But there was no record of any pure shorthorns existing in Stanwick Park at the time referred to. He traced at considerable length the increasing prices obtained for what were called pedigree stock, showing that, in many instances, the pedigree was incorrect, and that the speculation was an unprofitable one, and then, as a practical man, gave his view of how shorthorns were to be bred, and what use they were. The most important point, in his opinion, in selecting a cow, was to take care that she had plenty of good thick-set hair on her, so that, if they were obliged to keep her out at night, she would have something on her back to keep her warm. The next thing was to look after the milk. He looked upon milk as the first great element in life; if they had no milk they had no constitution; and without milk how were they going to get cheese or butter? It was the fashion now to run after meat; people wanted to see a cow almost like a barrel, her ribs and shoulders not to show. She was to be straight on this side and on that; and this was what they called neatness, and perhaps it might look pretty. But, as practical men, they all knew the value in a cow of good wide loins and hips. The next point was the width of the chest—not the depth of it, but that the chest should be round in order to give plenty of room for the heart and lungs, and plenty of room between the fore-legs. He would advise them to purchase no show animals. The greater number of prizes were not acquired by animals fed on sugar, which was sure to stop the breeding, and if they came to turn these animals out to grass, they would melt away like snow in the summer. Then, again, clean food and clean water were very essential if they wished to do anything with shorthorns. Filthy, dirty water would produce inflammation of the stomach. He used a large quantity of bran and linseed, and scarcely ever lost a cow from milk fever. He strongly advocated kindness, and said there was positively no knowing the loss a master suffered from the man who ill-treated them. The manner in which animals were stuffed and made up for shows, caused a great deal of suffering, and he thought it was very unreasonable, very wrong, and ought to be put a stop to. He had noticed since he came into the country that a great number of the cows were allowed to remain all night in the fields. That ought not to be, and he thought that every landowner ought to supply his farmers with warm sheds in which he could put his cattle at night. It was well to give them air and exercise in the day, but by leaving them out at night they lost a great quantity of milk. The night air was very much colder than the day, and it took from the animals the carbonic gas, extracting the butter and cheese which the farmer wanted. If they had any doubt about it, let them try six cows under the different treatments, and see the difference there would be in the yield of milk. He was not there to lay down any rule, but from his experience he was perfectly certain that it was a serious loss to farmers to have their cows lying out all night.

Sheep on a Farm.

Sheep are undervalued by the mass of landholders, as a means of keeping up the fertility of the soil and putting money into the pockets of the farmers. The moment one begins to talk of sheep husbandry, the listener or reader begins to look for wool quotations alone when there is talk about the profits of farming. Sheep on a farm yield both wool and mutton. They multiply with great rapidity. They are the best of farm scavengers, "cleaning a field" as no other class of animals will. They give back to the farm more in proportion to what they take from it than any other animal, and distribute it better with a view to future fertility of the soil. Prove this? There is no need of proof to those who have kept sheep, and know their habits and profits they yield. To prove it to those who have not had the experience, it is necessary they should try the experiment or accept the testimony of an experienced shepherd.—N. Y. Herald.



### Canadian Cattle Trade.

This year about 734 head of cattle were shipped by the Dominion Line alone, and several consignments were forwarded by the Allan Line; and we think one or two by the London Steamship Line. A Toronto firm lately shipped 110 steers, averaging 1,300 pounds each, which sold in the English market at £27 per head, being a profit to the shippers, on the drove, of over £300. Canada being eminently an agricultural country, we have every facility, and inducement, too, for rearing live stock. It will be remembered that at the late sale of short-horn cattle in Scotland, by the Earl of Dunmore, one or two of the finest animals sold had been purchased in Canada. Not many years ago Lord Dunmore imported two calves from Canada, for which he paid \$12,500, and the Duke of Connaught, the finest bull in the world, which was sold at such a fabulous price, is the son of one of these calves.

### Cheese Fair.

The Provincial Cheese Fair held at Ingersoll on the 6th and 7th inst., under the auspices of the Dairy Association of Ontario, in connection with the Oxford Agricultural Society, was in every respect a grand success, there being the largest and finest lot of cheese ever put on exhibition in Canada. The judges were Messrs. Thos. Ballantyne, M. P. P., Stratford, J. L. Grant, London, Eng., and F. W. Fearman, Hamilton. Below we give a list of the successful competitors:—

CLASS A.—Six factory cheeses, 1st prize, James Elliott, \$100; 2nd, A. Malcolm, \$75; 3rd, O. Collins, \$60; 4th, E. Hunter, \$50; 5th, J. Ireland, \$40; 6th, A. Bell, \$30; 7th, P. Dunn, \$20; 8th, H. S. Lossee, \$10; 9th, J. Sharman, \$5; 10th, W. Huxley, \$5; 11th, J. Rimp, \$5; 12th, J. Morrison, \$5; 13th, H. Cole, \$5; 14th, J. Chisholm, \$5.

CLASS B.—Two colored cheeses, 1st prize, Jas. Elliott, \$25; 2nd, J. Ireland, \$15; 3rd, H. S. Lossee, \$10.

CLASS C.—Two white cheeses, 1st prize, E. Hunter, \$25; 2nd, H. S. Lossee, \$15; 3rd, A. Bell, \$10.

CLASS E.—Five loaf or bruckle cheeses, 1st, A. Malcolm, \$20; 2nd, W. Huntley, \$10.

CLASS F.—Two colored cheeses, July make, 1st, J. Elliott, \$50; 2nd, John Chisholm, \$25; 3rd, J. Morrison, \$10.

CLASS G.—Two firkins butter, 50 lbs. each, 1st, John Holdsworth, \$40; 2nd, Jas. Land, \$20.

There were upwards of 400 cheeses exhibited, the entries being from all parts of the Province, with very keen competition throughout, showing a manifestly increasing interest and development in this branch of husbandry. The fair was well attended, especially the second day, for notwithstanding the unfavorable weather, there were several thousand people present, and everything passed off in a most satisfactory manner. The distribution of prizes was scattered over the province pretty generally; it is worthy of remark, however, that the majority of them were taken by parties in this county.

### Neglect of Animals in Autumn.

If animals were endowed with speech, they would often remonstrate with their owners about the neglect and carelessness with which they are occasionally treated. And though they cannot speak, yet they have a certain mute eloquence in their look, and tell their tale with a force and point that are often more effectual than words. Very often the rough, shaggy, staring coat, the prominent ribs, drooping head, woe-begone countenance, and appealing eye tell a tale as plainly as if it were in print. It tells of hard work, poor feed, exposure to storm and tempest and keenly-biting winds. And yet there may be a tight, snug barn, and stacks of fodder still remaining in the field, while from very thoughtlessness the poor old faithful servant, who has plowed his master's field year by year, is permitted to remain in an airy yard or barren pasture, with half-filled belly, and sniff with impatient appetite at the fodder just beyond his reach across the fence.

It is to be hoped that it may attract the attention of those farmers who seem to think that the fresh air of our October nights and an occasional wetting with the cold fall rains, are good for the health of their horses, colts, cows or calves, and make them hardy and vigorous. But this is all wrong. It is unprofitable as well as cruel. Animals exposed to the cold until they are chilled, are stunted in their growth, and gather the seeds of future disease. Warmth saves feed. Cold wastes feed. Stock well housed keep in better condition

on less food than those left out doors in rail pens, damp yards or exposed pastures. At this season no stock should be kept out at nights nor on stormy days, for the abrupt change from warm sunny days to cold storms of rain and sleet is too great a shock. Pine boards are, in a sense, excellent fodder, and a dry bed of straw the best of nutriment.

Farmers who consult the comfort of their stock and their own profit, will see to it that their stables and sheds are put in good order, loose boards nailed on, doors and roofs made tight, good dry straw furnished for bedding, and that their cattle are comfortably sheltered before the cold winds begin to blow, and the first snow of the season flies.—*American Agriculturist.*

### Notes on the Garden and Farm.

#### Twelve Rules for Successful Farming.

1. Drain and irrigate.
2. Plow deep and loosen the subsoil.
3. Provide good storage for solid manure, and cisterns for the liquid manure.
4. Choose commercial fertilizers intelligently, and do not use one in excess of another simply because others have used it.
5. Manure every crop which benefits by it, and manure high.
6. Cultivate only safe, paying crops, and select the best seed for these.
7. Cultivate every crop upon your fields, and in proper rotation.
8. Cultivate more and better fodder.
9. Feed plentifully and of the best fodder.
10. Breed stock, and let not mere accident control the increase.
11. Support breeding and feeding by proper care.
12. Keep accounts.

—Translated from *Landwirthschaftlichen Kalendar*, 1875.

#### Wheat Growing Maxims.

Somebody has been at the trouble of condensing a great deal of information about wheat growing, as follows, into very small compass, and somebody else has set it afloat without crediting it to the author. If we could we would gladly give his name.

1. The best soil for wheat is a rich clay loam.
2. Wheat likes a good, deep, soft bed.
3. Clover turned under makes just such a bed.
4. The best seed is heavy, oily, plump and clean.
5. About two inches is the best depth for sowing the seed.
6. The drill puts in the seed better and cheaper than broad casting.
7. From the middle of September to the last of October is the best time for sowing.
8. If drilled, one bushel of seed per acre; if sown broadcast, two bushels.
9. One heavy rolling after sowing does much good.
10. For flour, cut when the grain begins to harden; for seed, not until it has hardened.

#### Value of Coal Ashes.

A correspondent of the *American Farm Journal* writes as follows:—

"A thorough trial has convinced us that coal ashes scattered around the roots of plum trees from five to six inches in depth, and for an extent of about four feet in circumference, is the best remedy for the annihilation of that destroyer of this luscious fruit, the curculio. For many years a fine and apparently healthy plum tree of the green gage variety has every spring gladdened us with its countless snowy blossoms, only to bring disappointment. Our coal ashes from two coal stoves had, during the entire winter and spring, been placed in a huge pile in the yard, with the intention of having it carted away during the summer. However, learning of the value of coal ashes for old apple trees, the thought struck us that there would be no harm in trying it for the young plum tree, as it might destroy the curculio eggs in that vicinity. Accordingly, coal ashes as above described was placed around its roots, and the remainder of the ash heap scattered in the same manner around four or five English cherry trees, hitherto useless, since their fruit had been so stung that it had always been worthless. Never did trees blossom more profusely, but it was a good fruit year, and the ashes was not supposed to have

benefited them in this respect. As the small green fruit began to form, very little of it fell to the ground, and that was unusually large, plump, perfectly sound and healthy, and very abundant in quantity."

A. A. Moore, of Vermont, has a cow eleven years old, three-fourths Durham and one-fourth Ayershire, which gave 410 pounds of milk in seven days, commencing June 17. From the milk sixteen pounds of butter were made. The cow had three quarts of ground wheat per day after the second day of the trial; before that two quarts daily.

Farmers often raise poor stock which will not begin to pay its cost, simply because at the start they save a dollar or two by using an inferior male animal. It is a well established fact that pure bloods transmit their characteristics to their offspring with much more certainty than natives, which being generally a combination of many strains of blood are liable to give us progeny of all imaginable characteristics. But it does not follow that we cannot improve on our native stock by carefully selecting the breed. Get the best is the true policy.

#### Distances Between Trees.

We quote from an exchange the following estimates of the proper distances to be left between trees and shrubs when setting out an orchard or garden. We think it is worth preserving for reference.

Standard apples, 30 feet apart each way. In poor soils 25 feet may be enough.

Standard pears and cherries, 25 feet each way. Cherries will do at 18 feet, and the dwarf growing sorts, Dukes and Morellos, at even 16 feet.

Standard plums, peaches, apricots and nectarines, 10 to 18 feet apart each way.

Quinces, 10 to 12 feet apart each way.

Pyramidal apples, cherries, pears and plums, 10 to 12 feet apart each way. The greater distance is better where land is not scarce.

Dwarf apples (bushes), 6 feet apart.

Currants, gooseberries and raspberries, 3 to 4 feet apart.

Blackberries, 6 to 7 feet apart.

#### Blind Stagers in Pigs.

Prof. Law, a good authority, gives the following: When the hog is attacked, dash bucketfuls of cold water over the body. Throw a purgative injection into the rectum, composed of six ounces of sulphate of soda and one or two teaspoonfuls of spirits of turpentine in ten ounces of water. Setons saturated with turpentine may be inserted under the skin behind the ears, or the back of the neck may be blistered by rubbing in the following mixture: Spirits of turpentine and liquid ammonia, one ounce each, with powdered cantharides, two drachms.

When a cow's bag becomes swelled, a simple and generally effectual remedy is found in applying fresh lard, which should be thoroughly and repeatedly rubbed in. Some people use beef brine instead of lard, with good results. Plenty of rubbing without any application will often effect a cure. The calf should be allowed to suck until a cure is effected, and, if a portion of the milk is drawn from the cow before he is given his rations, so he will be obliged to do a good deal of stripping, he will help to reduce the swelling.

#### Extermination of the Thistle.

The Berlin correspondent of *Land and Water* published a piece of information that will be welcome to many a farmer. "Who ever knew," says he, "of two plants being so inimical to one another as one to kill the other by a mere touch? This, however, seems to be the case when rape grows near the thistle. If a field is infested by thistles give it a turn of rape seed, and this plant will altogether starve, suffocate and chill the thistles out of existence. A trial was made with different varieties of rape seeds in square plots, when it was found that the whole ground was full of thistles, and nobody believed the rape having a fair run. But it had, and as it grew the thistle vanished, faded, turned grey and dried up as soon as the rape leaves began to touch it. Other trials were then made in flower-pots and garden beds, and the thistles always had to give in, and was altogether annihilated, whether old and fully developed, or young and tender."

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**The Apiary.**

**Encouragement to Bee-Keepers.**

BY A. C. ATTWOOD, ED.

The past may be ranked as having been a poor season for bees. The spring was cold and backward; the white clover was late in making its appearance, and then only in limited amounts; the whole summer has been exceedingly cool, and in fact, a large portion of it may be put down as cold. We have had frost every month this summer, and it is not to be wondered at if bees have not done well. But my bee-keeping friends must not be discouraged. We have had good seasons for bees, and we shall have good ones again. As we can grow potatoes in spite of all difficulties, so we will succeed with bees if we make the care of them a part of our business. To the care of bees a certain portion of the master's time must be given. He cannot sit down in his cushioned office and give orders to others, expecting every little detail so inseparable to bee-keeping to be properly attended to by hired help who understand nothing about it. There are certain things that he must himself attend to if he wishes or expects to succeed. It is scarcely necessary to say that a person who considers bees beneath his notice, and the care of them unbecoming, will never succeed.

No book or treatise can be substituted for that real thorough knowledge of bees that is absolutely necessary to success, and which can be obtained only through experience. Books, when they give expression to the experience of others, are as such really valuable and will render assistance in connection with practical experience, but will not without it.

This summer has proved the superiority of the Italian bees over the common black bees, for while the former have in most cases given a surplus and have plenty left, the latter are in almost all cases short of stores. Stocks that are light should be broken up by putting two or three together, with all the honey; others that are better may be fed up, if done immediately. A small hole should be made through the centre of every card for a winter passage; this is important, and when winter comes on have everything in readiness so they can be put away comfortably into winter quarters where it will not freeze, and is dry, dark and quiet.

Any questions with regard to bee-keeping will be cheerfully answered by addressing—Editor of Bee Department, FARMER'S ADVOCATE.

**Poultry Yard.**

**Sulphur for Poultry.**

There is no remedy and assistant so easily and cheaply obtained, so harmless to the fowls, nor so satisfactory in its results as sulphur. It being in the system of animals to a small degree, there is a greater affinity for it than there otherwise would be. It can be administered to the fowls by having it in a small box, so that they can help themselves, or by mixing it with their food once a week, or as often as there are indications of vermin. Penetrating, as it does, to every part of the system, all parasites are quickly and surely destroyed. Also, gapes are said to be prevented in chickens by its use.

Fowls need it more than most animals, their feathers containing between four and five per cent. of sulphur. Their eggs also have a small quantity, which is noticed by the discoloring of a silver spoon when it comes in contact with a boiled egg. Applied externally to the fowls when on the nest, to the nest itself, or mixed with the soil in the dusting box, it is equally efficacious in destroying vermin. To be used as a fumigator of buildings, it is necessary to remove the fowls, close the room or house, mix a little saltpetre with the sulphur in an iron vessel, and apply a match to the mixture. This should be done in the morning, and the doors and windows opened in the afternoon for a thorough ventilation.

Lard mixed with sulphur in proper proportions and applied as often as is necessary to the feathers on the neck and back of young and old turkeys, is a very good safeguard against the ravages of foxes.

For our own profit, and the comfort of the fowls, let us then use sulphur, or remedies of a like nature.—W. D., in *Poultry World*.

**Poultry for Farmers.**

Mr. W. A. Burpee writes as follows in the American Fancier's Gazette:—

It has generally been believed by farmers, and the belief is still prevalent, that it is ridiculous to expect to make poultry pay such enormous profits as are claimed for them; they laugh at the idea of 200 per cent. profit, yet even more than that can be obtained by poultry breeding. It would, no doubt, be preposterous to say so, unless proof endorsed the statement, but facts substantiate it, and some of the largest and best breeders of this country show, year after year, that these present results can be obtained. What would some of our farmers say if they were told that poultry pay as much as 500 per cent.? The French have reached to a greater knowledge of successful poultry raising than any other nation, and they claim this immense profit, and there is not the slightest doubt but that their large profit is no exaggerated statement, but a reality.

In this country it is known that poultry can be made to pay at least 200 per cent., and we dare say that even larger results may be obtained. Now, farmers, what do you say to this? Is there not some inducement to pay greater attention to this hitherto comparatively neglected branch of rural industry? We are confident that you can realize more profits from poultry raising, provided you attend to them properly, than from anything else on your farm.

Caponizing is mostly practised in this country in Pennsylvania and New Jersey. Its effect upon the fowls is that they grow one-third beyond their otherwise natural size, fatten more easily and rapidly on less food, and their flesh is of finer quality, the price they command in market being 50 per cent. higher than that of ordinary fowls of the same age. As an illustration of their superiority, we quote from an exchange of recent date the statement that "a man in New Jersey has just sold a lot of 258 capons, averaging ten and three-fifths pounds each, the heaviest pair weighing twenty-eight pounds. The price obtained was 38c. per lb., making over \$4 a head for the fowls."

**Horticulture.**

A. PONTNEY EDITOR.

It may possibly be striking some of our readers, now as the season for fall plowing has set in, that they will plow up the orchard. To such we would say, Stop and consider a while before doing so. The past severe winter has taught us some useful lessons, and the question of keeping an orchard in grass, or planting root crops in it, and thereby making it arable and clean. We must confess to an entire change of opinion since visiting the extensive orchard grounds of Mr. W. Saunders, of this city. That gentleman, in connection with other experiments, conceived the idea, some year or two ago, of trying the difference, in his orchard of 70 acres, filled with apples, pears, plums, cherries and small fruits generally, between seeding a portion of it down to clover, and keeping a portion of it thoroughly cultivated and clean.

He divides the ground in such a manner that the rows of trees of any variety were about equally standing in grass and on clean land, and the result of this summer's observation on the different kinds of trees, as well as on the different varieties of each kind of tree, has convinced him that the mulching afforded by the clover, and consequent protection to the roots, is of immense value; in short, upon this vexed question, whatever other growers' opinions may be, Mr. Saunders, at any rate, is a staunch advocate now of seeding an orchard down.

Fully two-thirds of the trees, which the past winter, or perhaps the late frosts which our readers will remember as being very severe, killed, stand upon the clean land; rows of some varieties of pears, which, among the clover, are only touched here and there, are, upon the arable land, none entirely.

This may not, probably, be the result of the protection afforded during winter by the covering of clover, but we think it is to be attributed to the fact that the trees so protected began to show signs of vitality later on in the spring than those not so covered, and consequently they were in a better condition to withstand the late frosts than their neighbors differently situated. We are aware

that this is a subject upon which eminent fruit growers vary very much indeed in their opinions, but that the facts exist as here stated cannot be denied, and, from our knowledge of Mr. Saunders, we know that he will only be too pleased to show them to any one wishing to profit by his experience. Noticeable, particularly among his pear trees, is the one sent out some years since by the Fruit Growers' Association, "Clapp's Favorite." It stands pre-eminent as a tree on his grounds, healthy, hardy and full of vigor, untouched to the very last variety a year ago when the slug made havoc among his pear trees. Grimes' Golden apple, also distributed to the members of the Fruit Growers' Association, bids fair, from its appearance with Mr. Saunders, to be a useful addition to the list of good apples. The tree carries a remarkably thrifty and healthy appearance, and also shows signs of being very prolific. The fruit is essentially dessert size, and the flavor, when ripe, is said to be fully up to the standard of that class. One other matter in connection with raising an orchard, and one which eventually must receive greater attention at the hands of our farmers, is acted upon by Mr. S.—we mean planting belts of trees for wind breaks. To the north and west of his grounds we noticed rows of silver maples and Norway spruce, the spruce planted in a separate row in advance of the maples and opposite to the openings in the maples. We should outstep the bounds of this article altogether were we to begin to say what can be advanced on this all-important subject—a subject which our neighbors in the Western States are already beginning to grapple with in a practical manner by holding out to purchasers of lands large inducements to plant at once. A case in point came within our own notice a year ago, when visiting Quebec. The country about is, to a large extent, devoid of timber, and we noticed several plantations of many acres in extent of maples planted by the occupants of the land for timber.

Should we not, while we have the material for plantations existing plentifully at our doors, begin to do some such thing, in view of the time coming when we shall be necessitated to do it.

All gardening operations not finished with last month, should be hurried along now as fast as possible. Beds of fall-planted bulbs should be covered with leaves and some evergreen brush to prevent their being scattered by the wind. Hybrid, perpetual and moss roses, together with all the half hardy varieties of shrubs, can be easily protected sufficiently by tying cedar brush about them, or, if in beds, covering them with the same material thick enough to cause the snow to gather. Hardy herbaceous plants even are benefited by care of this kind. The woods furnish this kind of protection naturally to the many pretty wild flowers which gladden our eyes in the early spring.

Roses, before covering, should be cut back well. The more young woods next season the more and finer blooms. Dahlias, tuberose, gladiolus, Medeira vines, &c., &c., must be taken up and packed away in some dry, frost-proof place, or they are lost.

Celery, if not already dug, should be got in at once, and packed on sloping shelves in the root house in layers of light earth or sand, so the moisture will not gather in the heart.

Strawberry beds, especially new plantations, should be covered with corn stalks or some other litter sufficiently thick to prevent heaving in the spring.

Manure and dig roughly the flower-beds intended for next spring's planting, and leave everything neat and tidy in the garden, removing all dead tops, rubbish &c. It will be both time and expense saved in the spring.

**The New Postal Law.**

Letter postage will continue the same, three cents per half ounce: the postage must be prepaid by stamp; if wholly unpaid, the letter will be sent to the dead letter office. Letters of more than one rate, and on which the postage of one rate has been paid, will be sent; and 6 cents per extra half ounce will be charged, to be collected at the office of delivery. Newspapers occasionally, as from friend to friend, will be one cent for every four ounces; when less than one-half ounce, one-half cent will be charged. No postage can be charged for newspapers on delivery. Packages of seeds, cuttings, bulbs, roots, scions or grafts; packages of samples of goods or merchandise, when posted in Canada for any place in Canada, the rate of postage will be one cent per four ounces in weight.







**Keeping Apples for Daily Use.**

The question is often asked, What is the best way to keep apples for common family use? We have found central shelves in an apartment set off or devoted to this purpose the most convenient. The apples are spread on these shelves only a few inches deep, so that they may be readily examined or picked over as fast as decay commences on any specimens.

It is very important that the apples be kept as cool as practicable after gathering in autumn and before the freezing weather of winter arrives. For this purpose they are placed on the floor of an out-house facing the north, and allowed to remain there till about the time that freezing weather commences, when they are removed to the shelves of the fruit room, in the basement of the house. This fruit room (which is about ten feet wide and thirty long) is separated from the rest of the basement by an eight inch brick wall, and has a cement bottom to keep the air dry enough. Windows for ventilation are hung on hinges, so that they may be opened or closed to any desired degree, for the regulation of the temperature by the thermometer. The nearer this temperature is to freezing, the better the fruit will keep. When the weather is warm outside, the windows are closed to exclude the warm air; when colder, they are opened sufficiently to admit cool air and keep down the temperature.

The apples being thinly spread on the shelves, any decaying specimens are readily detected and removed, care being taken not to disturb or tumble over the sound apples which remain. An examination every few weeks during winter and spring will keep the supply clear of rotten apples.

Among the advantages of this mode are the readiness with which the specimens which will not keep are separated from the others, and only long keepers allowed to remain. When fruit is kept headed up in barrels, which is a common mode, this selection and separation cannot be made, and, while they are kept excluded from the air so long as all remain sound, the commencement of decay in a few specimens soon spoils all the rest.

A little practice will enable the attendant to remove these specimens which will not keep, even before decay begins; and by going over the shelves several times during the winter and spring, none but sound long keepers are left.

As warm weather approaches, and it becomes more difficult to keep the apartment so cold as may be desirable for the fruit, a portion of the soundest and hardest are selected and placed in shallow boxes and shoved under the lower shelf, on the bottom of the cellar. The cold cellar bottom keeps them at a low temperature, and the shelf above serves as a cover to prevent air currents. In this way we have fresh specimens of such fruits as the Baldwin and Rhode Island Greening at the middle of June, and sometimes kept fine, hard, fresh Greenings into the middle of July.

The three leading requisites for success are—1. Placing the apples in a cool out-house in Autumn till freezing weather. 2. Removal of decaying specimens from the shelves. 3. Keeping the temperature as low as practicable without freezing, by a proper adjustment of the hanging windows.—*Country Gentleman.*

**Sulphur for Grapes and Peaches.**

A very intelligent fruit grower lately told us that, reflecting the grapes always seem to flourish on soils of volcanic origin, he assumed it was attributable to the sulphur present, and determined to try that substance as a fertilizer for them, which he did with very satisfactory results. Encouraged by this, he made a mixture of lime, salt and sulphur, and applied it to his peach trees with surprisingly good effect. *American Farmer.*

If you want to grow chestnut trees, the fruit must be planted as soon as it is perfectly ripe, and while it is in its fresh state. If a few trees only are wanted, plant the chestnuts about three inches deep, just where it is desired to have the trees stand permanently. They do better not to be transplanted, and sometimes will not grow. When they reach a proper height, the stems can be grafted with any better sorts attainable. But it requires a careful hand to graft the chestnut to insure its growth. When fairly started the young tree pushes ahead rapidly, and often takes one by surprise in the earliness of its bearing. Waste places where the land cannot be used for crops will do for this tree.

**Protecting Plants with Paper.**

We are only beginning to learn the manifold uses of paper. Already it is being largely and successfully employed as a building material, and now it is recommended as a winter protection for plants, shrubs, vines, box, &c. The *New York Tribune* speaks very highly of the utility of the strong paper flour sacks now so common, and advises that when emptied of the bread-making powder, they be all carefully laid away and kept for hoods wherewith to cover the more tender pets of the garden on the approach of winter. If the color of the paper bag is not liked, it can be made to suit by applying a coat of white-wash, toned to any desired tint with ochre or lampblack. This is not the season of year exactly for dressing plants with paper hoods, but it is a good time to begin laying up the store for use next winter. In view of the opinion held by many the chief damage is done to the tenderer occupants of the garden during the transition from winter to spring, it might not be amiss even yet to have recourse to these paper dresses, as a precaution better late than never.

**FERTILIZING FOR FRUIT.**—Animal manures promote vegetation, but mineral fertilizers are essential to secure the finest crops of fruit. If you apply two quarts of coarse bone meal to each vine, spreading it over the surface of the soil for a radius of say five feet, you will doubtless have more and better grapes. Unleached wood-ashes, and peat from a reclaimed swamp, may be used to great advantage in a vineyard, and salt as well is highly beneficial. Use any of all of the above in very early spring, and merely incorporate with the surface soil by means of a hoe.

**Entomology.**

**Damages by the Chinch Bug.**

The following communication, contributed to the *Prairie Farmer* by C. Thomas, State Entomologist, Illinois, is of very great interest to agriculturists, illustrating the great losses caused by insects. "The estimates," he remarks, "are large, in fact, astounding, when compared with the agency by which the loss is caused. It is true the loss is not wholly attributable to the chinch bugs, but partly to the very dry weather here of last year."

REPLY BY THE MEMBERS OF THE FARMERS' AND FRUIT GROWERS' ASSOCIATION, BELLEVILLE, ILLINOIS, TO A CIRCULAR FROM THE STATE ENTOMOLOGIST:—

1st question.—Did the chinch bug do any damage to crops in your county last year?

Yes. To all crops, including wheat, corn, oats and hay, corn being damaged at least sixty per cent.

2nd question.—Has it appeared any previous season within ten years, and if so, when?

It has been in the county for forty years, visiting different sections, principally the southern, but the greatest loss has been sustained within the past three years, since which time its depredations have been general.

3rd question.—Did more than one brood appear last year? If so, give the dates at which each was seen.

It is believed that there are two broods, the first appearing in June, the other in the early part of August; but investigations have not been so careful as to make our statement positive.

4th question.—What remedies and what preventative measures, if any, have been used, and what the result?

No general efforts have been made to exterminate the pest, or prevent its ravages, unless burning the stubble fields, and, in some few instances, the sowing of strips of oats by the sides of the corn may be regarded as such, and some good has no doubt resulted from both.

5th question.—Give an approximate estimate of the amount of damage done by them in your county in 1874.

In estimating the damage done during the year 1874, that was increased by the unusually dry and hot weather, it would be safe to say that wheat

was damaged 20-100, corn 60-100, oats 50-100, and hay 20-100, making a total of \$1,725,000.

6th question.—State what you can in regard to their migrations.

In regard to their migrations, it may be said that they are seen in the first warm days of spring, generally on the wing, as if seeking suitable food, after coming from their places of concealment and protection during the winter. Another migration occurs soon after the wheat is cut off, when they enter the oat, and especially the corn fields, preying upon them until the fall, when they are again seen in the air in their flight to the woods, looking for suitable winter quarters or coverts under the brush and trash in the fields or fence corners.

In conclusion, I would say that, besides the chinch bug, the ravages of the army worm, especially in new meadows this last spring, were very severe, injuring wheat, oats and corn, with enough of the Colorado potato bug to give annoyance to the planter, and doing damage to the crop, unless picked off and destroyed.

E. W. WEST, Rec. Sec.

**Description of the Army Worm.**

The army worm which has attracted a great deal of attention in certain portions of the United States, New Brunswick and Nova Scotia, is so little known outside the ranks of the naturalists that a description of it will be acceptable to all who have read the accounts of its late ravages.

It belongs to the order *Noctua*, genus *Leucania*, and is known in Great Britain, where fifteen different species have been found. It figures in Newman's "British Moths," and Hayworth names it *K. unipuncta* from the single white spot which appears on each of its upper wings. It is familiarly known as the American Wainscot Moth.

The perfect insect will, within a fortnight, be found in abundance in those localities recently subjected to the unwelcome visitation of the crawling and devouring armies, and it may be readily recognized by reference to the following description from the *American Entomologist*:—

"The eggs hatch during the early part of May in the latitude of South Illinois and Missouri, and the young worms may feed by millions in a meadow without attracting attention; but when they have become nearly full grown and have stripped bare the fields in which they were born, they are forced, from necessity, to travel in search of fresh fields, and it is at such times they first attract general attention. A curious instinct leads them to travel in vast armies, and, as they are now exceedingly voracious, devouring more during the last three or four days of their worm life than they had done during the whole of their previous existence, they are apt to strip the leaves from the blades of grass or grain on their way. On the other hand, they are attacked by at least five different parasites, and, when we understand how persistent these last are in their attacks, and how thoroughly they accomplish their murderous work, we cease to wonder at the almost total annihilation of the army worm the year following its appearance in such hosts. Furthermore, there may be influences at work, other than parasitic, which causes an increase or decrease in the number of this pest. It is a significant fact that almost all great army worm years have been unusually wet, with the preceding year unusually dry, as Dr. Fitch has proved by record.

"The army worm, like other insects, hatches from an egg, and this egg is apparently deposited by the parent moth at the base of perennial grass stalks. The worm varies but little from the time it hatches to the time when it is full grown. Some specimens are a shade darker than others, but on many thousands of specimens examined, we have found the markings the same. When full fed, which is generally about four weeks from the hatching, it descends into the ground, where it forms a hollow, oval chamber, and changes to a shiny, mahogany-colored chrysalis. Sometimes it scarcely penetrates the surface, but forms a rude cocoon under what dry herbage there happens to be on the ground. Thus the worms vanish, and its sudden disappearance is as mysterious to those who have no knowledge of natural history, as was their abrupt advent.

"After remaining in the chrysalis state about a week, the perfect moth appears. The general color of the moth is light reddish brown, or fawn color, and it is principally characterized by, and receives its name from a white spot near the centre of the fore wings, there being also a dusky, oblique line running inwardly from the tips."







Uncle Tom's Department.

Our Letter Bag.

Letters from the East, Letters from the West, Letters from the North, And from the South,

Is the doggerel style I have to adopt of compiling this month's letters from my nieces and nephews. So numerous are they that I regret not being able to publish them all, but must confine myself to three, keeping the rest—for they are too good to spoil—for another number, when I have more space.

I have much pleasure in complying with J.H.C.'s request and offer the two following prizes:—1st.—For the three best original puzzles (to be in by the 18th Nov.), one handsome chromo. 2nd.—For the largest number of correct answers to November and December puzzles, a beautiful chromo. These are splendid premiums, and from the keen spirit displayed on former occasions, I expect a lively competition, so those desirous of obtaining them will have to put in practice the ADVOCATE motto, Persevere and Succeed.

Humboldt, Neb., Oct. 2, '75.

DEAR UNCLE TOM,—Last month you requested your nephews and nieces to write you, which gives me encouragement to drop you these lines from this far west country. We have long been taking the ADVOCATE in father's family, both in Canada and here, and like it very much. Uncle, your department is full of the most amusing puzzles and comical pieces I ever read; the older you get the funnier you seem to be. Mother says—but she tells me it every month—she will not let me see the ADVOCATE, as I laugh so much the week it arrives I do not study my lessons. Well, perhaps I don't, but I make up for lost time afterwards. I am 13 years old and going to school. I keep the ADVOCATE bound up, and when friends come to see us, and time seems long, I can turn up your, or our Department—for my cousins send such nice puzzles to it—and keep them in laughter and pleasure the rest of the evening. Some of our neighbors, who occasionally borrow the paper to read, intend subscribing for the new volume in January. They think it the best practical instructor on agriculture they have read. I see you have been visiting some of my cousins during the summer; and I wish you would come over here, Uncle, and see our prairie country. We would make you welcome. But I guess I am writing too long a letter. I will tell you about the country in my next. ELLA M.

Caledonia Springs, Oct. 8, '75.

DEAR UNCLE,—I presume you will have something to tell us about the Provincial Exhibition. I heard you were there. I was not there, as I had to remain and see to things while father and mother were gone. Our exhibition took place on Sept. 29th, and it was on a very small scale, the highest prize for anything being only \$5, but the admission was 25 cts., which some people considered too much. It was rather amusing to see the majority of them go over the board fence seven feet high. There were some persons guarding the fence, but with little effect. I threshed my oats that I got last spring from the Emporium, and got 29 lbs. from 4 oz. sown. As the worms cut nearly the half of it, and it did not all ripen, and the soil was rather poor, I think it was a good yield for the chance they had. I found an Early Rose potato in our field that weighed 1 1/2 lbs., and a black potato that weighed 2 lbs., which I think is pretty good. Try and give us some prizes next month. I like the new story very well. You have my best wishes for the improvement in your slum, and also for your welfare. J. H. CROSS.

Ingersoll, Oct. 18, 1875.

DEAR UNCLE TOM,—I suppose you think your niece Hattie has forgotten you, but such is not the case. I did not receive the last paper in time to write, so I postponed till this time. Uncle Tom, you gave your nieces very good advice, by supposing they did get married to a good-natured person, and when he got rather old he got ill-natured, what would they do then? Mamma says when she was first married, Papa was so good-natured, but he is getting old now. Still he is not very ill-natured, but when he is putting up stove-pipes, sometimes he gets angry, but not very often. I enjoyed my summer immensely, but I can't describe to you all the pleasures I have had. Well, I must conclude for this time. HATTIE HAVILAND.

Puzzles.

106.—Though it is cold I wear no clothes, The frost and snow I never fear; I value neither shoes or hose, But yet I wander far and near. LUCY ROBERTS.

RIDDLES.

107.—It came though I fetched it, When come it was gone, It stayed but a moment, It could not stay long; I ask not who saw it, It could not be seen, And yet might be felt By the king or the queen.

108.—You eat me, you drink me, Come guess if you can, I'm sometimes a woman, And sometimes a man. HATTIE HAVILAND.

109.—My whole is a town in Italy; behead and curtail and I am a portion of the human frame; transpose and I am an animal. THOS. RUSTON.



How many figures are here?

Answers to Oct. Puzzles.

80. Marlowe, Caxton, Chaucer, Xenophon, Chantrey, Vandyke—MCCXCV. 90. Ure, Wear, Trent, Don, Ouse, Stour. 91. Parcel, Ennui, Reform, Ultra. 92. Paris. 93. London. 94. Oxford. 95. Bristol. 96. Dublin. 97. Dover. 98. EAST. 99. ROSE. 100. S. A HOY. OVER. HAM. SOAP. SEMI. SARAH. TYPE. ERIN. MAD.

101. For cattle to rub their tails against. 102. Joshua. 103. Tar-tar. 104. A ship. 105. Team-steam.

CORRECT ANSWERS TO OCT. PUZZLES.—J. H. CROSS, Caledonia Springs; J. Richards, London; Arch. J. Taylor, Glencoe; Kate Crerar, North East Hope; Jas. Smith, Blanshard; E. M. Saginaw; John Quick, Montreal; E. McLeod, West Williams; Geo. Wiley, Belleville; Esther Mountjoy, Wingham; J. McKeith, Lima, Ohio; J. Fitzgerald, Toronto; John Hodgins, Biddulph; Nell Nicholson, Ashbury; John Gobald, Stanley; J. McVey, Cleveland; J. Kingsmill, London Township.

The Black Bear of America.

Young readers, have you ever studied Natural History? If not you are neglecting one of the most interesting subjects that can engage your attention. Judging from "Miss E. L.'s" letter this month, I presume your parents think I am getting too funny. In accordance with the request of several correspondents, I intend giving illustrations, and short articles occasionally, on the above subject, but not at the neglect of our comic pieces. The old folks are not going to cheat us out of our fun. In treating on this subject I do not intend to tell you a bear story, as many of you have listened to tales from your fathers about the dangers and encounters they endured in their early settlement in this country, but for want of room shall merely give a concise description of it, and its habits. I have no doubt, these articles will prove instructive, not only to the young, but to others more advanced in years.

The black bear has been found in all parts of North America, as far south as the Gulf of Mexico; and this Canada of ours, not many years since was one of its favourite haunts. They vary in size, but average about six feet in length of body.

The head is short and broad where it joins the neck; eyes small, close together; ears high, rounded; body and legs thick and clumsy; claws short, flat, incurved, calculated for climbing and burrowing; tail very short about 2 inches long; fur long, straight, and rather soft; nose fawn-colored, which color extends to the eyes; eyes and nails black; hairs on the whole body of most specimens glossy black.

Bear flesh is considered a dainty dish by epicures especially in the fall, when it feeds principally on herbs and nuts. For promoting the growth of the hair, bear grease is held in high repute, and will sell for one dollar a pound.

Many superstitions concerning the bear are entertained by the Indians, and they go through numerous ceremonies before hunting it.

It invariably hibernates in cold regions during the winter, making its den under a fallen tree by scratching the dirt away. At the beginning of a snow storm it retires to its recluse, the snow forming a warm cover. Its breath makes a small aperture in the snow by which it is discovered and frequently captured. As the seasons alternate the bear seeks a new region where suitable food may be obtained, and greater safety enjoyed. In the spring it searches for those roots, herbs and succulent plants upon which it lives during that season, along the lowlands and bordering rivers. In the summer, when berries ripen, it betakes itself to the mountains with its cubs. Being fond of honey it makes it a point to purloin every bee tree in its route, as it is a capital climber, and when it is in search of nuts it lops of the branches with much ease. But not being particular in its choice of food, it sometimes destroys pigs, calves, sheep, &c., and will attack a full-grown cow when hungry. It catches fish with much skill, which it is very fond of.



THE AMERICAN BLACK BEAR. DOUBLE ACROSTIC.

110. 1. A piece of dress; 2. One who receives usury; 3. A girl's nick-name; 4. The orb of night; 5. Attempted; 6. To become calm; 7. A river in Asia; 8. A great gun for a battery. The initials read upwards, and the finals downwards, name persons of great renown. FRANK LAWSON.

RIDDLE.

111.—What is the longest and yet the shortest thing in the world; the swiftest, and the most slow; the most divisible, and the most extended; the least valued, and the most regretted; without which nothing can be done; which devours every thing, however small; and gives life and spirit to all things, however great?

REBUS.

112. The father of the Grecian Jove; A little boy who's blind; The foremost land in all the world; The mother of mankind; A poet whose love-sonnets are Still very much admired.— The initials letters will declare A blessing to the tired. J. SMITH.



### Minnie May's Department.

#### Premium for November.

From the many flattering encomiums I am constantly receiving from my readers, I feel assured that MINNIE MAY'S DEPARTMENT has been a source of useful information and productive of much good in the family. I do not intend to retrograde in this respect, but to make it a household instructor and ladies' companion. And, dear readers, can you not assist very much in doing this? In the management of your homes are there not matters of common occurrence which, if published in these columns, would; from the immense circulation of the ADVOCATE, be a benefit to thousands of families, and thus advance the interests of all?

I purpose during the following month to give a handsome chromo to the subscriber sending in the best six new recipes—those that have been tried and found successful. Recipes to be in by the 20th November.

MINNIE MAY.

#### Recipes.

Mrs. W. W. has sent me a piece of cake made from the following recipe, which I would recommend my readers to try. Mrs. W. W. is no novice in the art of cooking, as her cake testifies:—

DEAR MINNIE MAY:—I have found some splendid recipes in your department of the ADVOCATE. I send you a couple of mine, which I hope you will like. Please give them a trial:—

##### DRIED APPLE CAKE.

Two and a half cups of flour; one cup of dried apples; one cup of molasses; one-half cup butter; one-half cup of brown sugar; one-half cup of sour milk; one and a half teaspoons soda; one egg; all kind of spices. Soak apples over night, cut fine in the morning, and boil in molasses for about an hour.

##### JELLY CAKE.

One cup of flour; one cup of sugar; three eggs; one teaspoon of baking powder; a little salt.

Mrs. W. W.

Can any of my readers [supply "H" with the information required?

DEAR MINNIE:—I want to know if you could tell me how to make skeleton leaves, and what is the best time to pick the leaves for that purpose.

##### COCOANUT CAKE.

Make it the same as jelly cake, only instead of putting jelly between the layers, beat the whites of two or three eggs to a stiff froth, then add a cupful of white sugar; spread it on the layers, and then sprinkle coconut thickly over it, and the same on the top and sides.

##### CUSTARD.

Put a quart of milk on the stove, and, while it is coming to a boil, beat the whites and yolks separately; when you get the whites to a stiff froth, drop it into the milk—a spoonful at a time—and keep turning the egg, until sufficiently cooked; then place them on a glass dish; take the milk off to cool; then add to it the yolks, with sugar and flavoring to taste; then put this on the stove to thicken, but don't let it go to a boil or the eggs will curdle.

Sarnia, Sept. 15, 1875.

H.

##### RICE.

To boil rice as in India, proceed as follows:—Into a sauce-pan of two quarts of water, when boiling, throw a tablespoonful of salt, and then put in one pint of rice, previously well washed in cold water. Let it boil twenty minutes, throw into a colander, drain, and put back into the sauce-pan, which should stand near the fire for several minutes.

##### TO DRY PUMPKINS.

Cut the pumpkins through laterally, clean the inside; then continue to cut, in the direction as before, rings about half an inch thick. Cut off the rind and hang the rings on a pole in the sun or warm room to dry. When dried it will keep a year. It is to be boiled in plenty of water until tender, then skimmed out and prepared for pies, the same as undried pumpkins.

Another way:—Take the ripe pumpkins, pare, cut into small pieces, stew soft, mash and strain through a colander, as if for making pies. Spread this pulp on plates, in layers not quite an inch thick; dry it in the stove oven, which should be kept at so low a temperature as not to scorch it. In about a day it will become dry and crisp. The sheets thus made can be stowed in a dry place, and they are always ready for use for pies and sauces. The quick drying after cooking prevents any portion from slightly souring, as is nearly always the case when the uncooked pieces are dried, the flavor is much better preserved, and the after cooking is saved. To use, soak pieces over night in a little milk, and they will return to a nice pulp as delicious as the fresh pumpkin.

##### TO PRESERVE CIDER.

The following method of preserving cider sweet is recommended as superior to any other:—"I allow the cider, after it comes from the press, to stand until the pomace settles. When this point is reached, I put it in a clear vessel, and let it come to a boil, skimming off the skum carefully. It is then put into kegs and demijohns, and tightly corked and sealed. By this process I have excellent sweet cider, not merely for the entire winter, but for years. This method would not of course be available where large quantities are made, but for an ordinary family it answers admirably."

##### DRYING APPLES.

As the time is now at hand when fall apples must be saved, if at all, by drying, I will give the method I am best pleased with, in hopes, if others have better ways of doing it, they will let them be known.

To begin with, I never dry withered, gnarly, specky apples, either for my own use or to sell. It is too much work to prepare them for drying; and then I don't think it honest to sell such, unless at a very reduced price. Some people have an idea that anything in the shape of an apple will do to dry, and that nobody will know the difference between bad and good dried apples when cooked. But I think if such people would buy such dried fruit for a year or two, paying a good round price for it, they would learn a difference between it and fair apples.

I have a machine which pares very nicely and saves much time. Any good machine seems to me far preferable to hand paring. I keep the cutting and coring even with the paring, for as soon as the fruit is exposed to the atmosphere it begins to soften and lose flavor.

I prefer laying the quarters on clean boards or racks to stringing them, but if they are at all crowded they will be sure to suffer from it. It is better that no two quarters should touch while drying. Let the heat—whether in a dry-house or by your kitchen fire—be at first sufficient to very soon close the pores of the cut fruit; afterward it should be a few degrees less; if a crust is formed upon the quarters, the thorough drying of them is made more difficult.

It is a great pity to dry apples (as many people do) so very effectually that they are as hard and tasteless as chips. There is more danger of this when apples are sliced than when quartered. I last year saw some most delicious apples cut into thin shavings and dried till they rattled in the pan like bits of shingle. When wanted for use they will require a two days' soaking at least before being fit to cook, and will then be almost without flavor. If, when you put dried apples away, they cannot be easily pressed and mellowed with the fingers, they have not received just the right treatment.

Sacks that will hold two or three quarts are better than larger ones for the keeping of dried fruit. Let them be tightly closed and hang where no dampness can gather. Either paper or cloth sacks will do, so that they are impervious to flies and millers.

#### The Latest Fashions.

Notwithstanding the presence of many dark, quiet colors, modest enough for street attire, black costumes will prevail, as they have done for years. To give something of novelty to these is the object of the modistes, and this is accomplished by combining two or three black fabrics in one dress. Thus, instead of using gros grain for the whole dress, matelasse silk will be used for the overdress, velvet for the sleeves, bows and flounces, and gros grain for the underskirt; striped and plaid velvets—all black—are sometimes used instead of damask-figured stuffs, but the latter are seen in the most elegant dresses. There is also a renewed effort to relieve these dresses by facings of cardinal or strawberry red faille, but of course this is

restricted to house dresses. Square trains separate from the lower skirt are a conspicuous feature of these dresses. The overdresses of these new black toilettes have some resemblance to polonaises and to demi-polonaises, yet at the same time they suggest a basque and upper skirt. The French modistes seem to have devoted their ingenuity to making undecided nondescript garments that are very pretty to look at, but which the fashion writer finds very difficult to classify and describe. One good thing to be said of these combination costumes is that they afford admirable plans for making over old dresses, as there is no necessity for matching old goods with the new, since a partly worn silk skirt may be taken from one dress, enough velvet for sleeves from another, while only a few little new matelasse or striped velvet must be bought for the over garment.

Flounces of new dresses are not flowing *volantes*, as at present, but are attached to the skirt almost as closely near the bottom as at the top. To keep these from looking stiff, they must be made very full and bunchy, and this brings box-plaiting into use again. A row of double or even triple box-plaitings is the tasteful border that edges the skirts of many handsome dresses. Others have a side plaiting, not straight like that worn during the summer, but bias, turned in very deeply at top and bottom, and sewed to the skirt two inches from the top of the plaiting, making a wide fringe for heading, and also tacked again about three inches from the lower edge. It is the rule now to have but one cluster of trimming, and to trim the skirt alike all around.

Since jet has gone out of fashion, various netted aprons without jet have been introduced. Thus, there are those made of soft silk braid, either colored or black, tied in diamond shape and richly fringed. Others, again, are of chenille, also netted in diamond designs, and these have very heavy fringes of chenille in tassels on the edge. These are seen on the richest French dresses, and later in the season will be imported separately.

Feather trimmings will be very much worn, and some novel designs are imported, such as a *ruche* of feathers for heading, below which is a fringe of the feathers. This trimming in finely curled black ostrich feathers for black velvet or silk cloaks costs \$8.50 a yard; in greenish-black cock's feathers, it is \$6.50. Simpler than the last, and much cheaper, are narrow curled fringes of black or of gray ostrich feathers to put under the edge of silk sacques, and give the effect of the fur linings of which glimpses are sometimes seen in this way. These trimmings cost \$1.85 a yard.

The large circulars and long sacques lined with fur became so popular last winter during the extremely cold weather that they are again preferred for the coming winter. They are made now of the heavy Antwerp silks that come of double width, also of Sicilienne and the ordinary gros grains. They are lined with squirrel-lock fur, and bordered with gray or black fox fur, or perhaps with black Alaska sable. The prices are higher than those of last year, owing to the advanced price of the squirrel furs for linings. A good garment of this kind now costs \$100; many are more expensive.

Real mohair braids in loosely woven tresses, in basket patterns and in the substantial Titan designs, are favorite trimmings for cloth and other wool stuffs. They come in various widths, and the wider they are the more stylish they are considered. There are various qualities in these braids. A stylishly woven braid of pure mohair four inches wide costs \$2.10 a yard; prices decrease, of course, as they get narrower. Black silk galloons with threads of gold or of silver cost from \$1 to \$4 a yard, and are from one to three inches wide.

Fringes will be more worn than ever. They are crimped, netted, tufted, tasseled, made of chenille, or of crimped braids, or loops of galloon, with strings of buttons here and there, and are of all widths from two to six inches.

Dog collars of silver, gilt and of jet are shown, to be worn close around the neck. These are very pretty with the high Cavour collars of linen.

New chatelaine belts of silver wire links and clasps fasten around the waist, and have pendants for vinaigrettes, fan or handkerchief; they cost from \$2 to \$10.

New French jewelry of blue enamelled forget-me-nots on *marked* steel is strong, and also in excellent taste. Pendants of forget-me-nots in leaves, birds, crosses and lockets cost from \$3 to \$10. They are to be suspended from a black velvet necklet that is studded with enamelled forget-me-nots. Ear-rings to match cost from \$3.75 to \$6.

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**Wit and Humor.**

True to the core—A good apple.

Why do old maids wear mittens? To keep off the chaps.

If you wish constitutional liberty, don't wear a pull-back dress.

Instead of putting money in stocks, many old people put it in stockings.

It is remarked that wood will last much longer if left for the woman folks to saw and split.

Why is a horse half way through a gate like a cent? Because it is head on one side and tail on the other.

What is the difference between a successful lover and his rival? The one kisses his miss and the other misses his kiss.

A Fulton (N. Y.) chap who went to church with his girl, hung his hat on her bustle, which came up over the top of the seat.

The quickest way to start a civil war is for a married man to get up to light the fire and go back to bed without warming his feet.

A Danbury man who was trying to shelter himself in a doorway from the rain on Sunday, had mournful pleasure of seeing five of his umbrellas go by.

"The first step towards wealth," says an exchange, "is the choice of a good wife." And the first step towards securing a wife is the possession of good wealth.

This is the season of the year when domestic debating societies start to argue about six o'clock in the morning whether it is a man's or woman's work to light the fire.

"Can you swim?" is now the somewhat startling and embarrassing question addressed by an ardent young aristocrat to a blushing partner just introduced to him for a quadrille.

"Then you won't give me a bite of your apple?" exclaimed one urchin to another. "No, I won't." "All right, then, the next time our chimney catches fire you shan't come into our yard and holler."

A shrewd old gentleman once said to his daughter, "Be sure, my dear, you never marry a poor man; but remember that the poorest man in the world is one that has money and nothing else."

A "cullud chap" was hugging a salmon-colored maid recently, when she whispered sweetly in his ear, "I don't mind you huggin' me Jim, but, but, for de Lord's sake, don't touch dat bile on de back o' my neck."

At the Provincial Exhibition, in Ottawa, a farmer had his watch stolen. Shortly afterwards, on putting his hand in his overcoat pocket, he found the watch with a card attached to it containing the following:—"Returned—not worth stealing."

When a man wants a plug of tobacco, the grocery three-fourths of a mile off is only a step, but if his wife wants a drink of cool water from a neighbor's well opposite, by some mysterious agency that well suddenly becomes removed more than half a mile away.

Meddling with others sometimes brings us into scrapes, and thereby one of the elders of a certain church made "bad worse." A young fellow entered the church and took his seat, keeping his hat on. The elder, noticing it, requested him to take it off. His request not being complied with, he told the young man a second time, and, seeing he still hesitated, the elder gently lifted the hat off, when, to his chagrin, out rolled a quart of hickory nuts, and making more noise than was consistent with decorum. "Man," quietly said the youth, "see what you have done!"

A SPELLING MATCH.—He left the spelling bee at 10 o'clock, and stopped in a saloon on his way home. Here he met several friends who "set 'em up" divers times, and he reached home about midnight, with a confused brain and a very demoralized pair of legs. Then he swore that somebody had stolen the key-hole, but his wife, with a fearful scowl on her brow, and a lamp in her hand, admitted him.

"Drunk!" she exclaimed.

"D-r-u-n-k (hic) drunk. Thaz ezynuff."

"Brute!"

"B-r-o-o-t (hic) Givus harder one."

"Idiot!"

"Thaz harder (hic) but I can spell um. I-d-i-d-g-i-d-g-t, idiot. Now givus a stunner (hic)." She picked up a poker and gave him a "stunner," and the spelling match adjourned *sine die*.

**Patrons of Husbandry.****Grange Matters.**

Mr. B. Payne, Overseer of No. 16 Grange, commends a Grange Life Insurance Society. This subject might be discussed in the Granges. We solicit reports of discussions on any subject that may tend to the benefit of the farmers.

We could not give you the list of Granges established in September, as they were not forwarded to us. We now give the list of those established during the two past months. We hear that considerable trading has been done by the Ingersoll and Park Hill Granges, which appears to have been satisfactory. We also understand that considerable trading has been done by some of the northern and eastern Granges.

We would like to hear of more discussions on agricultural subjects, as our opinion is that from discussions on subjects pertaining to agriculture the greatest good will be done. We hope for greater unanimity among farmers, and that this Order may be the means of bringing it about.

We have received two invitations from Granges to deliver addresses, but we were attending the Exhibitions and had so much work in our office that we could not comply with their requests.

**Granges Established During the Past Two Months.**

228. ASHTON.—Master, Thomas Evans, St. Mary's; Sec., James McLang, Fish Creek.

229. MOUNT NEBO.—Master, Thos. Eadie, Glenallan; Sec., Geo. B. Scott, Glenallan.

230. FARMINGTON.—Master, John Briden, Farmington; Sec., John McLaine, Farmington.

231. CRANBROOK.—Master, John Whitfield, Gray; Sec., John McNeil, Gray.

232. WALES.—Master, John J. Adams, Wales; Sec., Hiram W. Wood, Wales.

233. MONCRIEFF.—Master, James Livingston, Moncrieff; Sec., Alex. Stewart, Gray.

234. NEWRY.—Master, Henry Smith, Newry; Sec., G. Richmond, Newry.

235. TOWN LINE.—Master, Thos. W. Myers, Shelbourne; Sec., John W. Stone, Shelbourne.

236. FLOWER OF THE FOREST.—Master, Donald McDonald, Molsworth; Sec., Archy McDonald, Molsworth.

237. ARCHERTON.—Master, Wm. Kerr, Elmvale; Sec., John Barnett, Elmvale.

238. LESKARD.—Master, Thomas Staples, Leskard; Sec., Richard Staples, Leskard.

239. LOYAL.—Master, John Thomas, Frost Village; Sec., Andrew McIntosh, Frost Village.

240. THAMES.—Master, David Swanson, St. Mary's; Sec., Moses Sinclair, St. Mary's.

241. RODGERSVILLE.—Master, James Laing, Rodgersville; Sec., James Elder, Roderville.

242. LENOX.—Master, William Dellar, Napanee; Sec., Thomas Anderson, Napanee.

It is claimed that nearly one-third of the farmers of the United States are in connection with this Order. If this be true, it is obvious that the organization is destined to exert a most powerful influence upon the condition of our country population.

The features of the organization which are regarded by superficial observers as the most prominent, to wit, co-operative purchases, etc., are, in fact, the least important of the objects it should aim to accomplish.

Men of reflection and intelligence have long since discovered that by the aid of association, people engaged in other vocations, and residing in the large towns and cities, would be able to control the material, social and political interests of the country.

To counteract this tendency, to encourage higher intellectual and social culture, and consequently to increase the influence of the country population, as well as to advance their material and pecuniary interests, this organization of the Patrons of Husbandry was established. Its growth has been more rapid than its most sanguine friends could have anticipated, and nothing but mismanagement and imprudence of its leaders can prevent its most complete success.

But its members must bear in mind that as the Patrons increase in numbers and influence, their

duties become more important and more difficult, and there is increased necessity for the selection of their very best and most able men for the discharge of public duties. Unless the Patrons can rise above all selfish and personal considerations in these selections, and look alone to the general welfare, the Order, instead of the great good it promises to accomplish, will prove the reverse.—*National Live Stock Journal*.

**Champion for 1876.**

The unprecedented success of the "Champion" Reaper in Canada has been such that the Joseph Hall Manufacturing Company have decided to devote themselves exclusively to its manufacture, and will build 5,000 machines for the harvest of 1876. The "Champion" Combined Reaper and Mower, "Champion" Single Reaper, and "Champion" Single Mower have given universal satisfaction this season.

Two thousand five hundred "Champions" have been sold in Canada, and from Prince Edward Island to the Western extremity of Ontario, but one report has been received, namely:—that the machine is giving great satisfaction in the work done, and its durability and freedom from breakage are in marked contrast with all other machines.

Nothing will be left undone by the Hall Company to maintain the great reputation the machine has won. Only the choicest material will be used in its construction, and by thorough division of skilled labor and building it as a specialty, the highest grade of workmanship will be secured.

At Springfield, Ohio, Messrs. Whiteley, Fassler & Kelly, the "Champion Machine Company," and Messrs. Warder, Mitchell & Co., are already working their shops to their full capacity on next year's machines; 40,000 "Champions" will be built at Springfield for the coming harvest.

Although the "Champion" is sold at a little higher price than ordinary machines, there is not the least doubt that it is the cheapest, taking into consideration the material used in its construction and the perfection with which the parts are put together. Durability and freedom from vexatious delays caused by breakages in the field, are two of the strong points of the "Champion," and should not be lost sight of by all intending purchasers. The changes in the Hall Works necessary to make the building of the "Champion" a specialty, are now being made, and in a few days work will be begun in earnest on next year's machines.

The "Champion" in the United States has distanced all its competitors, and there is no doubt but, when built as it will be built by the Hall Company, it is destined to take the same high position here.—*Ontario Reformer*.

**Editor's Table.**

R. Clarke & Co., publishers, of Cincinnati, have laid on our table "The Law of Horses," a very useful book, containing 400 pages, bound in leather. It is the most complete work of the kind we have seen. It contains the law of bargain and sale, rule as to unsoundness, responsibility of Livery auction and sale, stables, veterinarians' negligence, rules of road, responsibility of owners caused by vicious or unruly horses, &c. To persons dealing in or using horses it is highly valuable. We are not aware if the laws are applicable to both countries; we presume there is but slight difference, if any. At any rate, it is a very useful book, and an acquisition to any library.

**Little Giant Thresher.**

Sharman & Foster, of Stratford, are still manufacturing this great labor-saving and economical thresher and separator, a machine which has for the last eight or nine years kept constantly gaining in favor with the farming community. We consider it is the best small thresher now made, if for a farmer's own use, or even a few joined in company. A wood-sawing machine can be driven with the same power, and adds but little to the expense. They have lately made very decided improvements on it.—*Stratford Ex.*

**The Ontario Veterinary College.**

In our advertising columns will be found the advertisement of the above College. It has now been established thirteen years, and affords to any young man desirous of studying for the profession, every advantage. The professors connected with it are unequalled in the province for ability and success in teaching. We can cordially recommend the institution to all.



**Toronto Exhibition.**

This was the last Exhibition we paid a visit to. The competition for prizes in stock was not as large as at some of the other Exhibitions. John Abel, of Woodbridge, made about as much noise as any one, as he had his steam thresher running; this was the principal steam power in operation.

The floral hall, or the part that ought to be devoted to it, as the very pretty jet of water in the centre of the building would add much to the charm of the flowers, was very handsomely ornamented with rustic work, statuary and castings of animals. W. Rennie was a great exhibitor in this line of goods. There was a great competition in root culture; two of the greatest prize takers are striving for the victory of a special prize, at a special show, at which it is expected larger roots are to be exhibited than at any exhibition held this year. We believe some of the vegetables shown would surpass many shown at the Provincial.

Another feature of this exhibition was the presence of fireworks in the evening. The art gallery, floral hall, &c., were illuminated with Chinese lanterns, which gave a grand and pleasing effect to the occasion. The display of fireworks was highly pleasing.

The attendance in the evening was far more than double that to be seen on the ground at any other time. This required a special ticket, and helped to add to the receipts of the Association. We thought this novel feature might be added with advantage to some other city exhibitions, but there is a difference of opinion in regard to it. Farmers, what say you; shall we vote to add fireworks or not? Let us hear from you.

Some of the Torontonians consider it was wrong for other cities to hold their exhibitions the same week. We know not whose fault it was. Each exhibition should let the day appointed be known early, to avoid collision. Space prevents the publication of all the prize lists, but many of the prize takers will be heard of hereafter.

**Hamilton Exhibition.**

Having already written on the Guelph, Provincial and London Exhibitions, we next visited Hamilton. Each exhibition is a repetition of the display of the bountiful gifts of Providence to our favored land. The cornucopia was never more replete than this year, the display at each being highly meritorious to exhibitors. The labor and pains taken by the directors of each of these self-supporting institutions deserves the thanks of the inhabitants, as their rewards are pecuniarily nothing. Still these exhibitions do good, and we hope to see them continue improving.

Our opinion is that each exhibition excels in some particular line. Hamilton appeared to excel in the display of Southdown sheep, marble works and pressed iron ware. The fruit department was highly gratifying, and in other departments the display was generally good.

We hope to see a better feeling between the citizens and the county officials of this locality, as a law suit between them may have tended to injure their exhibition.

THE COMING SHORT-HORN CONVENTION AT TORONTO.—S. F. Lockridge, Greencastle, Ind., Secretary of the American Association of Breeders of Shorthorns, has issued a circular calling attention to the forthcoming Convention of Short-horn Breeders, beginning on Wednesday, December 1st, 1875, and continuing two days. The day following the Convention, Mr. J. R. Craig's sale of Shorthorns, of Burnhamthorpe, will take place at Toronto.

We have had some enquiries from subscribers as to the insect that is causing the apparent blight in the twigs of apple trees. Our enquirers have sent for our examination some of the twigs affected. We append an article on the subject from the *N. Y. Tribune*, a good authority on entomological subjects.

**THE APPLE-TWIG BORER.**

I inclose a specimen of a bug that does great damage to the apple tree in this locality; it invariably attacks as shown in the twig sent. Which of the many pests is it? It is about the only one that attacks the apple here.—A. CUMMINGS, Page Co., Neb.

It is the Apple-twig borer (*Bostrichus bicandatus*, Say), a small, cylindrical brown beetle, whose depredations are well known in the West. It is one of the comparatively few insects that commit serious injuries in the perfect state, its larval history, indeed, being as yet unknown, although it is supposed to breed in the sap-wood of forest trees and the stems of grape-vine. Both male and female beetles bore the twigs of fruit trees, evidently for purposes of food and protection, and may always be found in the holes, head downwards, during the winter and spring months. Besides the apple they occur in grape, pear and peach stems, but have never yet been found in those of the crab apple. The only way to counteract their injuries is to prune the infested twigs whenever found, taking great care to burn them with their contents. Downing refers to this insect as the cause of twig blight; but, though it often causes the twig to die, it has no connection with the real spur or twig-blight of the apple, which, like fire-blight in the pear, is of fungus origin.

Perth, Oct., 11th, 1875.

W. WELD, Esq.,—I wish you to inform me if you have, or know of any means of preventing ants from destroying fruit trees. My apple trees are very bad with them, and I have used ashes, lime and soap-suds with no effect at all. Your information on the subject will oblige

FRANCIS LAMBERT,

Tennyson P. O.,  
Co. Drummond,  
Ontario.

[Though we have frequently seen ants on our fruit trees, we never knew them to do them any injury; but fruit trees seem to be more subject to attacks from enemies—insects and others—than ever. We have applied to a gentleman well versed in entomology on the subject and he could not give any information more than we already had. Will any of our subscribers write to us on the subject?

**Where to Manure.**

At a recent meeting of the Farmers' Club, at London, Prof. Voelcker said, in reply to some statements made by Alderman Mechi, "Don't manure subsoil of any kind, light or heavy; manure the top soil, and keep manuring elements as near as you possibly can to the surface, so that the young plant may derive immediate advantages from the food prepared for it. This, we take it, is the true doctrine very forcibly expressed, and we believe it accords with the experience of the most careful observers, both in this country and in England.

**Long Corn Roots—Deep Plowing.**

During the drought which prevailed in Ohio the past summer, a gentleman, having occasion, says a correspondent of the *Country Gentleman*, to dig for woodchucks in his corn-field, found roots at the depth of seven feet, which appeared to resemble corn roots. On following them carefully, they were found to terminate in the corn-stalks. How much deeper they went he did not know, as the lower end was not reached. The corn crop was a good one, although the surface soil for many inches in depth was, to all appearances, perfectly dry. The gentleman is a firm believer in deep plowing and thorough tillage.

We hear that Mr. Groom, of Kentucky, cleared \$60,000 from his recent sale of Shorthorns.

**Commercial.****The Excess in the Supply of Wheat in Great Britain.**

This is the heading of the report, in the *Michigan Farmer*, of crops and prices, and in these few words is contained the state of the English grain markets. The wheat crop of '75 has been below an average in England. In some of the European countries there are breadstuffs to spare, but in Europe, as a whole, they are below an average. And, notwithstanding this deficiency, prices are not high—little higher, indeed, than they were in '74, a year of abundant produce. As the provident man in the days of prosperity lays up in store for the future, so has '74 provided out of her great wealth of breadstuffs for the coming year, and in the fertile regions by the Danube and Don in the Old World, and St. Lawrence and Mississippi in the New, much of the wheat that would have been sent forward had higher prices awaited the shippers, remained in the granaries, and much that arrived in England remained in store; so that at no period since the first movement of the crop of '74, has the demand been equal to the supply. There is still another reason why prices have not advanced to a higher rate. England, the only great purchaser, has vast resources. Her wealth is only equalled by her enterprise. She has no competitor in the market. She is not forced to buy at the seller's prices. From the shores of the Baltic and the Mediterranean, as well as the Trans-Atlantic countries, whole fleets are daily arriving with their cargoes to her ports.

The *New York Produce Exchange* informs us that the supply of wheat and flour in the British markets for the two months of August and September was 32,346,408 bushels, while the consumption was but 26,672,000 bushels, leaving in store a surplus, for the eight weeks only, of 5,274,408 bushels. This supply still keeps up, and the large shipments of July, August and September having given an excess of supply, we now have the low average and the light margins, with the balances very generally against the buyers.

Prices still rule low, though there have been light advances and more firmness.

Oct. 23.—No change to-day in English quotations; cargoes of wheat afloat were quiet, and prices quoted about 6d. easier. New York tending downwards. The West was firm, with Chicago up to \$1.11½. Toronto market dull and inactive. Flour was inactive; wheat was equally quiet; oats steady, and barley quiet.

LIVERPOOL, Oct. 25.—Flour 24s 6d to 25s 6d; wheat, 9s 6d to 11s 6d; corn 30s; barley 3s 6d; oats 3s 4d; peas 4s 1 to 4s 1 1/2; cheese 5s 6 to 6s.

MONTRÉAL.—Flour, extra \$5.22½ to \$5.25; fancy \$5.10; spring extra \$4.95.

TORONTO.—Wheat, fall \$1.10 to \$1.11; spring \$1.06 to \$1.07; oats 37c to 38c; barley 70c to 91c; peas 70c to 75c; rye 60c.

NEW YORK.—Wheat dull and heavy; \$1.34 to \$1.36 for No. 1 spring; \$1.23 to \$1.24 for sound new and old winter red Western; \$1.32 to \$1.52 for white Western; barley \$1.10 to \$1.15 for common to prime four-rowed state; oats 45c to 52c; corn 60c to 72c; cheese 6c to 13c for common to prime.

LONDON, Oct. 25.—Wheat, Dehil \$1.60 to \$1.75; Treadwell \$1.55 to \$1.67; Red winter \$1.55 to \$1.60; spring \$1.60 to \$1.75; barley per 100 lbs. \$1.20 to \$1.60; peas \$1.08 to \$1.13; oats 90c to 94c; rye \$1.05 to \$1.10; corn \$1.20; beans 90c to \$1.20; hay \$15 to \$16 per ton; dressed hogs \$7.50 to \$8.50; potatoes 45c to 50c per bag; cordwood \$4 per cord; eggs 21c to 23c per doz.; roll butter 22c to 23c; keg do. 16c to 18c; lard 15c to 17c per lb.; cheese, factory 11c to 11½c per lb.; beef \$4.50 to \$6 per quarter.

**Late Sales of Thoroughbred Cattle in Great Britain.**

At Lord Skelmeisdale's Shorthorn sale, Sept. 7th, S. R. Streeter, of Ohio, was the purchaser of Honeymoon, a 6-year old cow; Hon. H. M. G. Cheyne bought Sonata, 4 years old for 125 gs.; J. Hope, Canada, Princess Victoria 10th, two years, 285 gs.; F. W. Stone, Formosa, a yearling, 81 gs., and Simon Beattie, Princess Victoria 11th, yearling, 375 gs. The general average made was £149 on 35 cows and 5 bulls.

At a sale of Shorthorns by Mr. Geo. Moore Whitehall, England, Sept. 9th, Prof. G. Lawson, Halifax, Nova Scotia, bought the cows Rose Gwynne 4th, 59 gs., and Polly Vaughn, 51 gs., and bulls Gwynne of the Forest, Viscount Oxford and Skiddaw. Grand Duchess of Oxford 11th was bought by Sir Curtis Lampson for 2,000 gs.; Siddington 9th made 250 gs.; Lady Worcester 16th, 700 gs.; Grand Duchess of Oxford 31st, less than three months old, 1,000 gs., and these, with some other high prices, carried the general average up to £297 each on 27 cows and 7 bulls. John Hope, of Canada, bought Oxford Queen, a yearling, for 71 gs.

Mr. W. Stone, Guelph, imported in August last the following Shorthorns, the first two bred by Mr. Leney, Watlington, Kent, and the others by Sir G. R. Phillips, Weston Park, Warwickshire:—1, Sultana 7th, sire 2nd Duke of Geneva; 2nd, Mayflower 3rd, sire 6th Duke of Omeida; 3rd, Jesdemona, sire 3rd Duke of Geneva; 4th, Queen of Weston, sire Duke of Kent; 5th, Queen of Weston 5th, sire Cherry Fawley; 6th, Senstress, sire Cherry Grand Duke 6th; 7th, Didona 3rd, sire 2nd Duke of Milote.

With the cattle there were also a two-shear Cotswold ram, bred by Mr. Godwin, a shearling ram bred by Mr. Garne, and two ram lambs bred by Mr. Lavidge.

Col. W. S. King, Minneapolis, Minnesota, has purchased Richard Gibson, of Canada, his entire flock of imported Lincoln sheep, consisting of some forty head. These, added to Col. K.'s former flock of Cotswold sheep, give him what is probably the finest flock of Lincolns in the country.

Messrs. J. H. Kissinger & Co., Missouri, have, it is said, sold to Mr. A. Kimberley, W. Liberty, Iowa, the imported Shorthorn heifer, Orange Blossom 5th, for \$3,500.

Mr. Torr, of Aylesbury, England, one of the most prominent breeders of Great Britain, has had a sale of Shorthorns the most successful on record. He sold 55 animals for £24,650, being an average of \$2,525 a head. The highest priced beast, Bright \*mpress, brought \$10,800, and others sold at \$8,000, \$7,500, \$6,000, two at \$5,000, and heifers at from \$4,000 to \$6,000. Fifteen hundred persons were present, and the result of the sale is said to be unprecedented in the history of the cattle trade.

Messrs. Jardine & Sons, Hamilton, Canada, have sold their prize Ayrshire cow, Annie Lawrie, and bull calf, to Campbell & Son, Orangeville, for \$400 (gold).

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