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# FARMER'S ADVOCATE

AND HOME MAGAZINE

\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

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## EDITORIAL.

From most sections of Canada we are receiving most encouraging reports, as given in our "Farm Gossip" department, on the condition and prospects of the crops of grain, fodder, hay, roots, and fruit.

Joseph Leiter, the young Napoleon of the Chicago wheat pit, has met his Waterloo. He once owned 35,000,000 bushels of wheat which he might have unloaded at great profit, but, like the man who wanted \$1.50 when he could get \$1, he waited too long.

The General Manager of the Canadian Bank of Commerce, in his annual address to the shareholders, the other day, devoted considerable space to telling how the Canadian farmers should feed hogs. Next!

The *Exporter*, of Montreal, P. Q., says: "Sheep and their products have suffered less from the past drop in prices than any other farm product. They pay as well to-day as they did twenty years ago, and the prospect now is very bright indeed for Canadian sheep."

"OLD READER."—The new handbook for farmers on raising hogs, by the Editor of the *Hamilton Spectator* and the manager of the Bank of Commerce, has not yet been issued. Meantime you will have to worry along with our old methods, which have proved fairly safe and successful.

United States nurserymen complain that the Canadian San José Scale Bill caused them a loss of \$500,000 in orders, and at their recent Omaha meeting passed a resolution urging that Congress retaliate. We venture the prediction that Congress will do nothing of the sort.

The editor of the *Hamilton (Ont.) Spectator* may yet save his bacon. In the *London News* the intimation is made that he is in training as prospective Minister of Agriculture in Mr. Whitney's Provincial Cabinet. When that time comes his elevation will doubtless be in recognition of distinguished services rendered the great Canadian hog.

We understand that on July 2nd the Hon. Mr. Fisher, Dominion Minister of Agriculture, accompanied by Prof. Robertson, Commissioner, will leave for England, their mission being the further extension of the British trade in Canadian agricultural products. Hon. Mr. Fisher will also visit France to arrange preliminaries for the representation of Canada at the Paris World's Exposition.

A very satisfactory point about the letter of Dr. J. G. Rutherford, M. P., of Portage la Prairie, Man., published in our last issue, is the distinct pledge that this season will witness the disappearance of the outrageous elevator monopoly. It is gratifying to have this assurance coming from a prominent member of the Government side of the House. Its early and effective fulfilment will now be awaited. The Northwest farmer is in no mood to be trifled with.

As announced in the last issue of the *FARMER'S ADVOCATE*, an important feeding investigation, with six of the leading breeds of sheep, has been arranged for the season of 1898-9 at the South-eastern Agricultural College of England. The native place of all the foremost breeds where the industry has attained a degree of perfection that excites the emulation of the world, the leaders of agricultural progress there still find scope for work. Strange to say, the experimental farm system of Canada still lags behind, where it ought to be a pioneer in this and other branches of animal husbandry, the most important department of agriculture.

## The Napoleon of the Chicago Wheat Pit.

Another "Napoleon" has ignominiously come to grief. They all do. These plungers who get things going their way and start forces in motion that they cannot control. Joseph Leiter, thirty years old, graduate of Harvard University, son of L. Z. Leiter who used to be a partner of Marshall Field, the Chicago merchant prince, of Columbian Museum fame, is a young man who was doing a comfortable legitimate real estate business with a capital of a million dollars given him when he graduated. He has caressed the speculative buzz-saw with the usual result. The methods of ordinary business seemed tame to him. He became impressed with the importance of the wheat shortage, and in April, 1897, without any knowledge whatever of Board of Trade operations, he started in to buy wheat. Natural conditions and his reckless buying, coupled with the knowledge of his father's great wealth, started no end of faint-hearted speculators into "bullish" activity. In an incredibly short time he "made" half a million by advancing prices. Then he started in on a more daring campaign and made further large winnings. This merely added fuel to the speculative flame, and he began a still more vigorous operation in December wheat (that is, grain deliverable in that month). Armour (the millionaire dressed-meat man) was his chief opponent in this deal. Leiter calculated that Armour's wheat at Duluth and other points in the Northwestern States could not possibly be delivered in time. It did seem a physical impossibility, but not only was every available grain car in the Northwest set in motion, but fifty tugs were chartered at Duluth and other points to keep the ice broken until the grain fleet could be got through to Chicago. All kinds of vessels were pressed into the service, and it was nip and tuck between the old speculator and the young one. The quiet closing of that transaction gave color to the idea that the two had arrived at some understanding to work the public together. Leiter went at it again, and more recklessly than ever. He had the railroads and the lakes and the Atlantic heavily burdened with grain, and with the war, the European bread riots, the revocation of foreign imports, and his utterly reckless buying, prices got up to \$1.85 in May. Shrewd, experienced observers say no man ever had a finer chance to close out his holdings than Leiter had in May, but instead of trying to do that he borrowed all he could on his wheat in store, in transit by land and on sea, and in order to keep up the fictitious values he had established, he was the highest buyer in all of the primary markets. All the money he ever had coming without any effort on his part except to count it, he seemed to have no idea whatever of quantity or values, and stood ready to "buy any market to a standstill" at prices higher than sellers hoped to get. Such tactics could lead only to one result, and his four to five million dollars profits quickly faded and carried with them as much more. His father gave him in all \$8,000,000, and there being four children in the family, this was considered quite his share of the \$25,000,000 estate. Nothing was left but to place his affairs in the hands of trustees. His cash wheat holdings were turned over to Armour, but it is believed that about all he did was entirely on his own account. No doubt when war and shortage and bread riots were sending prices to dizzy heights this young man felt that it was all his doings, that he was quite the "whole thing." He forgot. When the dismal end came perhaps he was willing to disclaim any responsibility and throw the blame upon natural causes. However, he has had his experience, the farmers got some small benefit, but the gain was mostly in second hands (dealers') when the big figures were being paid, and Western farmers have vastly increased their wheat acreage on account of the inflation, so in the long run they may easily

lose as much as they gained. This makes three gigantic "corners" that have been broken on the 13th, 14th and 15th of June on the Chicago Board of Trade—the McGeoch lard deal, the Harper wheat manipulation, and the Leiter wheat transaction. The wrecks of these Napoleonic undertakings are sad and numerous. The good there was in them is difficult to see, unless they serve as a warning to others who imagine they might prove to be the one in ten million to carry through such high-handed, audacious business. He that maketh haste to be rich falleth into a snare.

## A Pig-headed Hamilton Editor.

"It will be observed that the *FARMER'S ADVOCATE* gives the Canadian pork-packers credit for skill in their business. They deserve the credit. They are skilful and know their business from top to bottom, and it is rather odd that the *ADVOCATE* should set its opinion up against theirs, for the packers, to a man, credit the superiority of the Canadian product to the feeding."—*Hamilton (Ont.) Spectator*.

The editorial in the *Spectator* from which the foregoing is quoted sets out with the statement that the *FARMER'S ADVOCATE* has endeavored to show that the wide swath cut in the British market by Canadian bacon and hams is not due to the feeding but to the breed of hogs raised. What the *ADVOCATE* did say on that point was as follows:

"During the past year we have heard a great deal in Canada about the superlative merits or demerits of this or that food for pork-making; but those who understand the situation best know that the high position attained by Canadian bacon in the British market is due to a long and intelligent system of breeding the proper type of hog, judicious feeding and management, and subsequent skill on the part of our packers. It is this strong combination that has put our pork products in first place."

In the next place, if the Canadian packers, "to a man," credit the superiority of the Canadian product to feeding, why did the big Ingersoll packing concern go to the trouble to bring from England an importation of pure-bred hogs of the bacon type, which were distributed with the idea of improving the hogs of the country from the packers' standpoint? And why have the Wm. Davies Company, of Toronto, addressed letter after letter through the *FARMER'S ADVOCATE* to the farmers of Canada describing the style of hogs they wanted raised and giving specific directions as to their idea of breeding? And if there was "nothing to it," why did the Canada Packing Company tender so much advice as to the particular breed they wanted? And why has U. S. Secretary of Agriculture Wilson been advising the use of hogs of the Canadian bacon type, which Americans have lately been securing for breeding purposes in considerable numbers? Feeding and general management are important, but the foundation is laid in the breeding (not breed), which determines primarily the conformation or type and the utility of the animal as a feeder.

Again, the *FARMER'S ADVOCATE* has always been ready to credit our packers with understanding their end of the business, but their self-appointed newspaper spokesman in Hamilton is not disposed to give the farmers and breeders of Canada credit for knowing much about their own work, though many of them have been at it from a quarter to half a century. We understand that the *Spectator* man has taken to farming himself, and, like most amateurs, already thinks he knows it all. We have hopes of him, however. If he continues to read his *FARMER'S ADVOCATE* attentively, and has had a few years' experience carrying the swill pail to the "gentleman that pays the rent," he will know more about the mysteries of animal nutrition and profitable feeding. Should his pea crop fail or be discarded on account of the "bug," or for other reasons, as has often been the case, he will be able still to compound a ration of



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barley, shorts, etc. (he dare not use even a kernel of Canada corn), that will help to fill the bacon bill (as well as the pig), as so many others have done. He already feels disposed to concede that "good breeds of pigs are, of course, better than poor breeds," but hastens to qualify this startling ultimatum by a declaration which discloses one great trouble gnawing at his vitals, viz.: "The best breed of pigs that ever lived will not make good bacon if fed on free American corn!" He has been losing his morning sleep by the squealing of hungry mongrel swine. Let him try some well-bred ones (see our advertising columns), and keep them well filled with a properly constructed grain ration, soaked say in whey from the Bullock's Corners cheese factory (not forgetting a little exercise on a grass lot, clover preferred, and provided with a few shade trees or other shelter), and he will cease to grieve about free corn, nor begrudge the cattle and other stock feeders of Canada a little addition to the supply of raw material which is a necessary part of a successful system of farming and which proved such a boon during the past season.

### Feeding Stock for the Showing.

Periodically some writers for the agricultural press work themselves into a sweat over the high condition in which stock is brought out at the leading exhibitions, alleging that by a system of overfeeding the animals are rendered unfit for breeding purposes and that in many cases the judges are deceived by the fat which it is claimed covers a multitude of defects, and that, as a consequence, the animals of the best type and those best suited for breeding purposes and the improvement of the race fail to win the prizes. Our opinion is that in these days there is very little ground for the apprehension over which these writers are worrying. There was a time, some thirty years ago, when the expression of such a grievance might have found a response in the minds of advanced breeders and feeders, when heating corn or pea meal was supposed to be the only feed that would put an animal in sufficiently high condition to stand a chance of winning in a showing, when patchy rumps and ribs with rolls of fat on them as large as a man's arm, and covered with a hard hide, and dry, harsh handling hair, were not uncommon accompaniments of show cattle; and when the hogs exhibited were lumps of lard, being made as fat as they could be and live, their jaws being so heavy that in some cases these prevented them eating their feed from a

trough, their meals being served in the form of balls, which were dropped into the mouth of the drowsy porker by his attendant, and a pillow had to be supplied him to rest his weary head on and to save him from suffocation. That this is no over-drawn picture not a few living witnesses can testify. Under such feeding and treatment it was not strange that in a few years a large proportion of the animals became, like extinct volcanoes, burnt out, and incapable of reproducing their kind. Those were the days, too, when judges of stock at some of the leading exhibitions were nominated by members of the board of directors representing the districts for which they were elected, and men were honored by being appointed judges at the Provincial Fair on classes of stock they had never bred or handled, and in some cases had never seen or heard of before. A case is on record where a judge appointed to pass upon Southdown sheep enquired of a friend on passing by the pens, "What do they c'a they wee black-faced things?"

But the world has been moving, progress has been made, and we have advanced a long way past this state of things, though some writers do not seem to realize the fact. The judges for our leading exhibitions are now nominated by the breeders' associations, and are selected because of their fitness for the work, their experience in breeding and handling the classes of stock they are invited to judge, and their knowledge of the type of animals which meet the demands of the market and the times. Men so qualified are not likely to be led into the mistake of giving preference to an over-fed or abnormally fat animal, lacking in quality and smoothness, if such should be presented for competition, which is a rare occurrence in these days. Breeders and feeders too have been progressing in their methods of preparing their stock for exhibition, and have been mixing their meals with brains and bran, and with barley, oats and oil cake, and giving them the necessary exercise to develop their muscle, strengthen their bone, and build up a robust and vigorous constitution. The result is that the show stock of the present day, as a rule, are smoothly turned, having a large proportion of natural lean flesh of the best quality, evenly distributed over the carcass, and standing on strong, straight legs, of a good quality of bone, all of which are indications of usefulness, vigor, and endurance. Animals prepared in this way for exhibition are by no means unfitted for successful breeding; but, with judicious treatment after the show season is over, will be in a condition to produce offspring abounding in health and calculated to honor their generation. Indeed, as a matter of fact, the prize-winners in all classes of stock in the last few years have been largely the produce of show animals, as the records will attest, and we can point to instances where bulls that were, in the hands of judicious feeders—prize-winners for years and champions on many occasions—have proved active, healthy, and useful breeders up to twelve and fifteen years, and to show cows that produced strong and vigorous calves up to the same age and older. We have also knowledge of sweepstakes boars that have lived and served their generation as breeders of prize-winners up to ten years of age.

We have no desire to pose as the advocate of overfeeding—it is ill-judged and unprofitable from every point of view—but we strongly favor liberal feeding of breeding and working stock, as well as of show animals, provided it is wisely and judiciously done, believing that it is only by this means that the best possibilities of any race of animals can be brought out, either in respect to conformation and healthfulness of all stock, or to practical work in the case of the dairy cow, to the production of wool and mutton in sheep, or of the best quality of meat in what is called the bacon hog.

We have no sympathy with the idea promulgated by some persons, that the rules of the fairs should require that stock be shown in ordinary breeding condition. There would be little in such an exhibition to inspire enthusiasm, the show would largely lose its charm for visitors; besides, it would be impracticable to draw a line and say "thus far and no farther," for it is well known that some animals are slow, hard feeders, requiring twice as much feed and time to get into presentable condition as others. The advance column of feeders are doing good work in harmonizing science with intelligent and successful practice, and we only wish the rank and file would more generally join in the forward march, for we

are fully persuaded there is infinitely more reason to deprecate the extent to which under-feeding is being practiced than is overfeeding. The men who feed well are those who take the most interest and pride in their stock and who learn from experience and observation how intimate is the connection between good breeding and good feeding in obtaining the best results, which can only be done by keeping the animals at all times in a thrifty and improving condition.

## STOCK.

### Sheep in Small Flocks Profitable.

To the Editor FARMER'S ADVOCATE:

I believe that the number of sheep in the Province has decreased somewhat in the last few years. I have found numbers of farmers who at one time kept small flocks that have gone out of them, owing, generally, to the trouble that they have been to them; but these cases have invariably been in districts where wheat was king. There is, however, one thing noticeable, and that is that a very large percentage of farmers would like to keep a few sheep if they had things in shape for keeping them; the object in view being the small carcass of meat for home consumption, and the saving made by producing on the farm what must otherwise be bought during the summer months. I am, however, of the opinion that farmers and their families need to be educated to eat mutton, a very large percentage of these now growing up having eaten so little of it that they have not acquired a taste for it.

As to the wool paying for the keep of the average flock, it will no doubt do it some years, but this past season it would come very far behind. There is a very great difference between the price that farmers receive for their wool and what they have to pay for their yarn. I have taken wool to the mill that used to be in Rapid City, where they would buy your wool and sell yarn; at the figures that they paid and sold at it cost upwards of fifty cents for carding, spinning, and dyeing. Last year I made a trial shipment of 14 lbs. of wool to Morden woolen mills, as I heard their figures were reasonable. I sent the wool from Whitewater to Morden, and had the yarn sent from there to Winnipeg by express. The mill docked 50 per cent. for dirt—it was unwashed wool, but in good shape—and then charged 25 cents per lb. for carding, spinning, and dyeing, thus amounting to \$1.75. The expressage amounted to \$1.85. Had I sold the wool and bought the yarn at Winnipeg I would have been 50 cents ahead. I got yarn made from coarse wool, while I had sent to the mill pure Southdown. I give these figures to show how much the Manitoba farmer needs a cheap parcel post, the express companies' charges being exorbitant. This year I expect to get my wool carded and spun by the Silesians; I have sent them a little to get a sample of their work, but have not yet had it returned. I lately heard of a man who had just brought into the Province machinery for doing certain work, and was looking out for a power to run it. Such men ought to be encouraged.

I think most farmers can keep sheep advantageously by fencing a pasture for them, even where it is but two or three acres—just enough to keep a few sheep for home use. Now that wire is so cheap, this can be done even in the open prairie country at a figure that the profits on the sheep will warrant. Of course, where there is lumber to be had, it can be done more cheaply, but even then it often pays best to use some wire at the present prices.

It is the small flock on every farm rather than large flocks here and there that will tend to advance the sheep industry in Manitoba. Wolves are in some districts a great trouble, but a small flock kept in a pasture near the house, with a dog of stag or fox hound blood, will reduce losses from this cause to a minimum. It may be said that it takes considerable land in a prairie country to pasture even a small flock of sheep, but on most farms there are pieces of waste land lying a little low (if there are a few willows all the better, they make shelter) which, if seeded down with red-top, Canadian blue grass, white clover, etc., would produce pasture in a very different proportion to what the native grasses do.

I believe an export market would be a benefit to the Province, but we probably need more sheep before we can expect much of a market other than a local one. It seems a pity that with a climate so eminently suitable for sheep a large export trade in them is not carried on; for apart from any direct profit that may be in the sheep themselves, they are of such inestimable benefit as farm scavengers and manure-makers. It seems to me that there is no reason why we should not export sheep. If we can send cattle to the Old Country, why not send sheep? Our cattle there compete with cattle exported from other countries; our sheep would only come into direct competition with the sheep of the Old Country, for though ship loads of frozen mutton from the great wool-producing countries go to the English markets, it is of inferior quality, and is "only frozen mutton."

If we would work up an export trade, our aim should be to send over only sheep of superior quality. The old scrags which are drafted out of our flocks should be kept at home, and care taken



that the sheep exported be only young, well-bred, well-fattened sheep of the best mutton breeds. To those who are starting a flock of sheep I would say always use a pure-bred ram; never, unless you have a warm building and are prepared to feed grain during the winter, have a lamb come before the first of May; always dock the lambs, it makes them look better, even if you expect to sell them in the fall; and on no account neglect to castrate the ram lambs. There are profits in sheep, but, like any other branch of the farm, slipshod care does not pay.  
"CLAUGHBANE."  
Dauphin District, Manx.

**Shoeing for Action.**

**GENERAL PRINCIPLES TO BE CARRIED OUT.**

Balancing the action of the horse is one of the most difficult experiences the shoer has to contend with, having so many different horses to shoe and each with a different action. Another noticeable fact is that different breeds of horses have different actions and require different modes of balancing the foot, as well as different kinds of shoes to modify their action. Experience has taught that a shoer's success in this branch of the science depends greatly upon his methods of balancing the feet before attaching the shoes. If your horse has a long, low stride and you wish to effect a more graceful action, you should lower the toes of the forward feet by removing from the bottom as much of the horn as safety will permit, and use a rolling-motion shoe if necessary, which will bring his feet more under him, giving him that desirable rolling gait that makes a horse look stylish and game. If a horse has too much action it is necessary to lower his heels and extend the toes, thereby giving him more surface to break over, which will give him that sliding action so much admired by horsemen. But before doing this be sure that the tendons of the legs will stand the strain occasioned by lowering the heels.

**Preventing Forging.**—If the animal has more action behind than forward, causing him to forge, and you wish to regulate the action and prevent the habit, lower the heels of the hind feet and leave the toes as long as possible. Never allow the toe of the hind foot to project over the shoe; always extend the shoe as far as the foot will permit in order to give the horse all the surface to break over, which retards the action that will give time for the forward feet to get out of the way. After preparing the foot in this manner, make a long, light shoe, with low heel and toe calks. In fastening the shoe to the foot set it flush at the toe, having that part of the shoe straight with the center of the foot. In extreme cases use a very low toe calk, but no heel calk. When you have the hind shoes attached to the feet in this manner remove from the toes of the forward feet all the horn from the bottom of the foot, leaving the heels natural; then use a rolling-motion shoe of the required weight, fitted as long as possible at the heels. If calks are needed set the toe piece well back on the shoe to give the effect of the rolling motion. Frequently the driver may assist in preventing this most by raising the head with the check-rein.

**Soreness Due to Bad Shoeing.**—Horses sometimes become sore, which causes them to lose confidence in themselves on the road or track. This soreness may be, and usually is, caused by bad shoeing. For instance, a horse having shoes attached to his feet that have not a level-bearing surface for the foot to rest upon causes the foot to conform to the shoe, thereby impairing the action of the laminae of the foot, resulting in inflammatory action and causing contraction of the outer wall, corns and navicular diseases. Another fault is driving nails too high in the foot. Anyone giving the subject thought can see that a short, thick hold is preferable to a high, shallow one, and then there is no danger of wounding the foot by nails entering the laminae. Never nail the shoes back of the quarters, nor allow too much bearing at the heels, nor too much pressure on the sole, as the natural ascent and descent of the laminae would allow the sole to come in contact with the shoe when the horse is in action, often causing a lameness that is sure to produce bad habits in travelling and is sometimes very hard to remove.

**The Trouble in the Mouth.**—Frequently we find horses with imperfect action that is not caused by shoeing, but by careful investigation we find the trouble to be in the mouth; that is, the molar teeth become sharp and lacerate the cheek and tongue, or he may have a continued toothache, when he will hug the bit in such a manner as to become mixed in his gait. In cases of this kind the owner should employ the services of a qualified veterinary surgeon or dentist who should attend to the animal's mouth at once, as delay is sometimes ruin.—*Farmer and Stockbreeder.*

**The Royal Commission's Report Condemned.**

The British Central Chamber of Agriculture has adopted the report of its Cattle Diseases Committee, which practically condemned the recommendations of the Royal Commission on tuberculosis, owing to the absence of any adequate provision for compensation. In the opinion of the *English Live Stock Journal* some practical scheme might be devised that would tend to lessen the disease by slaughtering animals visibly affected, and paying compensation on a just scale.

**Selection of Store Cattle for Feeding.**

Perhaps never before in the history of Canada has there been such a demand for stockers as during the last year. While American buyers have taken large numbers to consume their enormous corn crops, Canadian farmers, as they are



FIG. I.—A GOOD HEAD AND FRONT.

learning the art of producing cheap feed in the form of ensilage and the like, are, more than formerly, anxious to secure thrifty consumers of the same. In the last year or two many have bought stockers for the first time, and some at least have learned lessons upon selection of feeders that, while expensive at first, may prove profitable in the end. The great increase in dairying has led to the more general use of dairy-bred bulls, and from these hundreds of steers have been raised, and poorly raised at that. These in their second, third or fourth year, when allowed a good grass run, may be easily taken by the novice as fairly

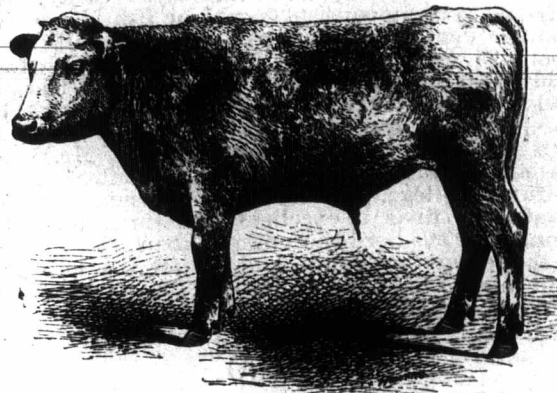


FIG. II.—A BAD FEEDER.

good and profitable animals to buy, especially if secured at from two and three-quarters to three cents per pound. Now, if such cattle are from beefy dams, and have been well reared, they might return a profit for labor and cheap food consumed; but in most cases the dairy cows that are bred are not of that sort and the result is to disgust the inexperienced steer feeder with trying to make money out of beef, or else to show him the more glaring lesson, that to try to do it with the wrong type of animal was the mistake.

Practical and experienced feeders, who breed or purchase steers for fattening, observe striking differences in the aptitude of animals of varying

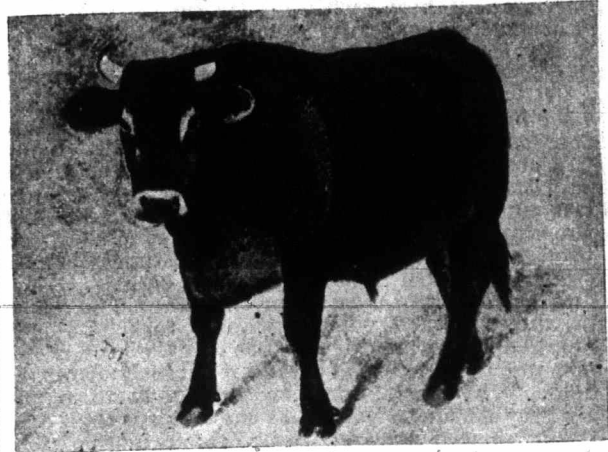


FIG. III.—A DAIRY-BRED STEER.

types and make-up to lay on flesh readily and in such form and quality as to command the highest price on the market. Prof. Curtiss says, in a recently issued bulletin on "Essentials in Beef Production": "It requires a well-trained eye to detect in all cases the possible variation of results in the store or stock steer; but there are some

distinctions that are easily detected. There are certain types of cattle, for instance, that never feed profitably under any conditions, and it is quite as important to discriminate against these in the feed lot as to be able to recognize the excellence in other types. The accompanying illustration, Fig. I, represents a yearling steer that combines practically all the qualities that go to make up a good feeding steer, while Figs. II. and III. represent the opposite type. No. 2 represents a scrub or unimproved steer, while No. 3 is of the dairy-bred type, either of which there is good reason for discarding, as they present angular outline, spare form and rough exterior."

While the actual feeding qualities of a steer in thin condition are more difficult to detect than one in a better condition, still the better sort (to quote Prof. Curtiss) "presents a blocky frame and stoutness of build, accompanied by short, straight legs, wide back and loin, well-sprung ribs, fullness back of shoulders and in flank, prominent brisket, wide chest and well-rounded barrel, together with a good, soft, mellow-handling skin and fine silky hair, giving what is termed the thick, mossy coat, without coarseness, and, withal, a good strong, vigorous head, clear, full eye, and quiet temperament." Soft, mellow-handling skin, and freedom from coarseness in head, horn or any other part are desirable characteristics. Cheap meat, a greater percentage of offal, as well as a tendency to unthriftiness, usually accompany coarseness and a hard-handling skin.

Not only will the thrifty steer of beef form make greater gains for the food consumed, but he will sell for a much better price per cwt. when fat. This is readily understood when it is remembered that loin and rib roasts of prime quality retail for from sixteen to eighteen cents per pound, while flank and plate cuts sell for from two to four cents, and internal tallow for four cents per pound. It is not a matter of prejudice against this or that breed or type when an expert buyer offers three and a quarter cents per pound for one man's cattle, and four and a half for another lot of no greater weight, as he values them strictly on their merits. The controlling factor is the utility and inherent value of the animal for the practical test of the butcher. So that if some of us have, perchance, remodelled our stables with the idea of feeding steers, and after a winter's feeding are almost ready to proclaim that there is "no money in beef," let us look into the cause and see whether or not we have given the matter a fair trial in the character of animals fed; and before giving up, if it is necessary to purchase stockers, may we select only those which have been well reared from thrifty, beef-form parentage, and in themselves possess the characteristics indicated in Fig. 1.

**Hampshire Sheep.**

J. M'CAIG, PETERBORO CO., ONT.

The Hampshire breed of sheep cannot be said to have secured any foothold in Canada. The reason of this is not quite evident. It cannot be said that they are too new a breed, when the Oxfords, which owe their existence on one side to the Hampshires, and hence are still newer, have already quite a circle of breeders and admirers. They are new in the sense that it is only within the past ten years that the Hampshire Flock Book has been established. This want of documentary evidence of the purity of blood of the breed has operated to deter purchasers from outside of England from investing in them. Nevertheless, the breed is recognized as being well fixed in character in England and as having high merit. It is not an uncommon thing among breeders in Canada who have made a success of handling a particular breed of sheep can say that such and such other breeds of sheep can never be popular or that they are unsuited to the country. There is no reason in such assertions, as no breed of English mutton sheep has been a failure in Canada, but rather all have met with pronounced success. With the introduction of every breed there is generally a period at the beginning attended with doubtful success. This arises from the fact that sheep must be acclimatized. It is not natural to suppose that individuals of the breed would preserve in our harsh climate the bloom that they brought from the more equable climate of England on the more succulent feeding so much a necessity to mutton breeds and so much a peculiarity of the British Isles. Neither should one expect to raise the same crop of lambs from sheep undergoing acclimatization as from sheep in their native environment. It is probable from this fact that doubtful opinions are expressed as to the prolificacy of the Hampshires. Another cause for failure in the introduction of a new breed is that importers, whose enterprise we admire, do not always select wisely. Many of the sheep that are brought into the country are show specimens, and are often unsatisfactory for breeding purposes. Fancy prices and disappointment are often synonymous terms in the sheep business. Instead of bringing into the country pampered specimens of a breed, would it not be wiser for a man to pick up fifty or sixty field ewes, of approved blood, of course, at prices that would make it possible for the ordinary breeder to buy half a dozen at something less than the price of a whole year's crop? The rams require more care in selection. The ram is more than half the flock. A man may begin with a very ordinary lot of ewes and in a very few years have an excellent flock by the use of first-



class rams. Ram lambs would answer as well as shearlings in this early-maturing breed.

Ontario has been the pioneer Province of Canada in wheat, in dairying, but above all, in live stock. Ontario is the stock farm of Canada as Britain is of the civilized world. There is room for all the breeds of sheep. The sheep business is looking up. The Hampshires are credited with early maturity above all the other breeds. They have the hardiness of their part-progenitors, the Southdowns, and almost the size of the Cotswolds. Specimens of the breed examined by the writer at the Ontario Experimental Farm show a big heavy carcass, good shoulders, well-sprung ribs, quarters well carried out, deep and well set out in the chest, body close to the ground, and pretty heavy bone. The head looks slightly coarse, but chiefly on account of a strong Roman nose, said to have been a mark of the original native Hamp. and Wilts. sheep. It seems to be a tenacious mark of the breed, as it is seen distinctly impressed on the Oxford, though in a modified degree. The above description of points is from the ewes, the Hampshire ram at the College Farm being rather an indifferent specimen of a sheep. It may be that the small number of Hampshires that have come under the writer's observation do not afford sufficient basis on which to form a conclusive estimate. The good points of the ewes are those that properly pertain to good individuals of any breeds, and the ones examined may be above the usual type in form. They certainly look like hearty and gross feeding, meaty sheep, a constant characteristic of the mutton breeds. For the ordinary farmer the Southdown has neither the weight of wool or carcass that will make it the most profitable sheep for him. The extra quality of the Southdown meat does not receive the recognition it should; we cannot have such a degree of discrimination in taste where mutton is not the meat most generally consumed. The Hampshire, on the other hand, has a large carcass and is of excellent quality of mutton, having a large proportion of lean meat. It is this character of fair size and good quality that has given the Shropshire its popularity, and there seems no reason to doubt but that the Hampshires will take an honorable place in the near future among the other breeds. The Hampshire has good ancestry in the Southdown, and is the parent on the maternal side of the Oxford, which already has a wide circle of breeders and admirers. It is time for the Hampshires to have a run. There is no need of controversy on the merits of any breed. All are good, and different men have different tastes, and there is room for twice as many sheep in Canada as we now have. It is sometimes said that sheep cannot be profitably run on land that is worth as much as Ontario land, that it is all right to run sheep on land good for nothing else. Yet England is raising mutton profitably on land worth \$100 an acre. The position that Ontario should expect to take in the sheep industry is that of the producer of fine types of animals of all breeds for distribution to other parts of Canada and to the United States. This means more intensive and succulent feeding, such as is required by the mutton breeds, and it should mean likewise the importation and breeding of such other classes of sheep as have a good reputation in England and have the qualities that would naturally commend them to the Canadian breeder. These are: good size, good quality, hardiness, and early maturity. The importer who has good judgment enough to couple moderation in cost, particularly in ewes selected, with his enterprise should have no difficulty in finding a market for a few Hampshires in Ontario.

#### The Cause of Saddle Galls.

When a horse has returned to the stable after a long ride he should by no means be unsaddled within from half an hour to an hour after dismounting, or it may tend to the production of saddle galls, which may be very difficult to cure. These galls have their origin in uneven pressure of the saddle, due to faulty construction, from shifting of the saddle when the girths slaken, and not infrequently from bad riding. The reason why the non-removal of the saddle for some time after dismounting acts as a protective against sore backs is well explained by Moller. Where an injury has taken place, the vessels are compressed and almost bloodless. If pressure be now suddenly removed, blood is vigorously forced into the paralyzed vessels, and may thus rupture the walls. On the other hand, if the saddle is allowed to remain some time in position, circulation is gradually restored without injury. The fact that the swelling appears after the removal of the saddle supports this explanation.—*English Live Stock Journal.*

#### Judges for the Winnipeg Industrial.

Among the judges that have signified their intention of acting at the Industrial at Winnipeg are the following: J. A. Graham, V. S. Clarendon, Ont., on Clydes, Shires, Drafts, and General Purpose. M. H. Teneyck, Hamilton, Ont., on Hackneys, Thoroughbreds, and Ponies. Dr. Quinn, V. S., Brampton, Ont., on Standard-breds, Coachers, and Roadsters. Thos. Russell, Exeter, on breeds of beef cattle. G. W. Clemons, St. George, Ont., all breeds of dairy cattle. Jos. Featherston, M. P., Streetsville, Ont., sheep and swine. S. Butterfield, London, poultry. Prof. E. H. Farrington, of Madison Agricultural College, Wisconsin, dairy products.

#### Pig Feeding and the Toronto Market.

Mr. Wm. Harris, a leading dealer on the Toronto (Ont.) live stock market, reports to us the receipt of a considerable number of hogs which dressed "soft and flabby," a tendency, he believes, due to exclusive corn and grass feeding, a conclusion reached, we presume, on the reports from the buyers of the hogs. Whether the vague reference to grass feeding means that the pigs are supposed to have been fattened on heavy grass or clover and corn alone, or while fattening are allowed the run of a grass lot like an orchard, as is usual in Canada, or whether cut grass, such as alfalfa, is fed them along with grain, no definite information is given. The rational system of allowing a healthful, outdoor run, with a bits of grass, and the privilege of "rooting" while fattening, with a mixed ration, promotes vigorous health, and buyers say that pigs so fed weigh better than those closely confined in pens, indicating, as one would expect, a firmer carcass.

The suggestion is now thrown out by way of warning from the packer that the animals may yet be paid for after slaughter to the wholesale dealer according to grade, or else to cut the price all round. Country buyers inform us that in the past they have sometimes been docked for sending in lots of hogs too fat or over weight. When the packers were clamoring for pigs of certain breeding and paying for all sorts alike, the suggestion was frequently made that the raising of hogs of the bacon type could be encouraged by paying a premium on them, as they were presumably the sort on which the packers were making their handsomest profits. Our Toronto market correspondent, writing on the above subject, says:

"Our bacon products stand at present at the very top by long continued effort of breeding and feeding for quality, but it will lose its prestige if the one-sided system complained of by Mr. Harris is now followed to any extent. It will do no harm to the growing pigs, but they should be finished on pea and barley meal, mixed with millfeed, such as shorts, for quality of meat. It must be remembered that Wiltshire bacon owes its good name to being fed on barley and oatmeal, and the celebrated Waterford brand to potatoes and barley meal."

#### Remedy for Horn Fly.

In some quarters the horn fly is again reported troublesome to dairy cows and other cattle. An effective remedy consists of seal or fish oil, worth about 80 cents per gallon, and crude carbolic acid, about 25 cents per pint. Mix thoroughly four tablespoonfuls of the acid in one gallon of the oil, and rub on the cattle with a rag once a week. Be careful not to apply too heavily on the hack. It will also kill the warble fly and vermin. Mr. Wm. Rennie, Farm Superintendent at the Ontario Agricultural College, who uses and recommends this treatment, finds it excellent for winter use, also going over the herd thoroughly about three times in the season for vermin and to put the hair and skin in nice handling condition. A gallon of the mixture would do about 30 animals.

## FARM.

#### Points on Harvesting, with Especial Reference to Peas.

To the Editor FARMER'S ADVOCATE:

SIR,—Harvesting operations cannot be two well prepared for, as delays at such a time often cause serious loss. The work should be carefully laid out, looking well ahead so that everything will be in readiness to go on with at the proper time.

It is important that grain be cut while the kernels are soft. When cut at that time wheat turns out a heavier and brighter sample than if allowed to get dead ripe. When land is level and the crop is even and clean, there is no advantage in selecting seed from portions of the field, but careful screening and sowing only the heaviest grain should be the rule with all grains and on all farms. Oats will bear cutting quite on the green side without loss, especially when the straw is to be fed. Early cut, well-preserved oat straw is often preferred by stock to even slightly damaged hay.

If it is not desired to feed the pea straw, there is no better way to harvest peas than with the old-fashioned revolving horse rake. If pulled before the crop is dead ripe, they will not be shelled as much as with some of the pea harvesters, and a boy and two men can pull twelve acres in a day. If the straw is to be fed, the pea harvester should be used. It is never wise to stack peas unless one has sufficient lumber to cover the stack tightly. When one has plenty of barn room, they should be drawn in and unloaded with the horse fork. In some neighborhoods where peas are largely grown it is the practice to thresh the crop directly from the field. When neighbors can arrange to do so, this is a very satisfactory way, as the straw is then open and loose, and can be threshed much more rapidly than if they had been stacked or put in a mow. Not only that, but the hauling has only to be done once, and is accomplished very expeditiously when a good force of teams and men are employed. A ten or twenty acre field is in this way cleared in very short order; a bulky, awkward handling crop has been disposed of, and the threshing is done. The threshing machines used have their cylinders run at a lower speed than for other grain; concaves

with less teeth are also used, and in some cases an elm board is used in place of one of the concaves. An ordinary grain separator thus arranged will thresh dry peas fresh from the field very rapidly, and will not crack but very few. A. M. J. Halton Co., Ont.

#### Cut Grain on the Green Side.

To the Editor FARMER'S ADVOCATE:

SIR,—As to the condition of ripeness at which wheat should be cut, there need be very little doubt to any one who has observed how much plumper and smoother the berry of grain will be cut on what may be called the green side than that which is left to shrink and shrivel up in the straw after the sap has all gone out. I like to cut before the grain gets hard when bitten with the teeth, and while there is sap enough in the straw to mature the grain while it stands in the shade of the stook, and I think what makes the brightest and heaviest grain is the best condition both for milling and for seed.

I have never practiced selecting seed grains from different parts of the field. As a rule, the soil is so similar and the crops grow so uniform in this neighborhood that there is little opportunity to select in that way. However, I am quite particular to grade seed thoroughly when fanning it to sow, and never sow anything but the heaviest samples. What has already been said in regard to wheat applies with equal force to other grains, and especially oats, as I think there is no thrifty farmer who can afford to waste such a valuable by-product as well-cured oat straw. I would, under all circumstances, cut oats just as soon as I think they are matured enough to only shrink slightly while drying in the stook.

As to harvesting peas, in order to save them from shelling and get straw in best condition for feeding, I know of no other way better than a scythe in the hands of a good, willing man, but such an outfit is difficult to place in these days, and so we have pea harvester attachments on our mowing machines, and so cut them with a good deal of waste, but the hogs are turned into the fields for a few days and they find most of the shelled ones. I would not advise stacking peas if it can possibly be avoided, but would haul and put in the barn, where they can be threshed when it is convenient. It is out of the question for an ordinary farmer to be threshing and hauling peas (or any other grain, for that matter) at the same time.

We find the binder, pea harvester, horse fork and slings the principal aids in economical and speedy harvesting. JOHN BURNS. Perth Co., Ont.

#### Three Rules in Clover Curing.

Though a first-class food may be made from properly cured clover, it may be so improperly cured as to be a worse than useless food. I usually begin cutting when the greater portion of the heads are in bloom, not waiting for them to begin to turn brown, as is so often advised. In the average season this is usually about the middle of June in this district. If the season is late, of course we do not cut so early as that, excepting when a second crop for seed is wanted, then, if the weather permits, even if the heads are not perfectly formed, we begin cutting about June 15th. I always choose sunshiny weather, and begin cutting about four o'clock in the afternoon, and continue cutting until sunset, or until as much hay is cut as can be conveniently raked and put into coils in about one hour. I prefer this time of the day for the cutting, as the clover is at its driest, and the cut clover will not become soaked with dew, as does that which is standing, the upper surface only becoming moistened, and it will begin to wilt long before the standing clover has become dry the next morning. Were it cut while wet, the surface would take much longer drying, the air and heat not being able to reach it.

About noon the next day, if found to be in proper condition, it is shaken out with forks or a tedder, and about three o'clock the rake gets in its work and it is put up into medium sized coils, while the team is ready again at four to cut another strip. This process is continued until all is cut, though on the third or fourth day the hauling begins. After that, no time is lost from the haying, for when not engaged in cutting or curing we are busy storing the cured clover.

I have practiced this method with a three tons to the acre yield in favorable weather, and have always found nice, bright, edible hay. Of course, weather is not always favorable, and a much longer time is required if the weather is cool and cloudy, but if there be prospects of a shower I always try to get it into coils, or at least into windrows, even though it be scarcely ready, preferring to shake it out again on a dry day rather than to allow it to become saturated with rain. For this reason, I never cut hay on Saturday, for if the hay gets dry and then becomes wet with rain or heavy dew, it becomes black and perhaps musty, or if the weather is right it will become too dry, and the leaves will fall off in either case, losing half its feeding value, while two wettings and dryings make it a minus quantity, as far as food is concerned; though if left for manure, it being evenly spread, would be very beneficial. If I were buying hay, I would pay a higher price for well-cured clover than for the best of timothy hay, considering it a much better food for either cattle or horses.



I would emphasize the rules—cut only when the clover is dry; cut only a small piece at a time, and do not cut on Saturday.  
Middlesex (North) Co.  
H. C. GRAHAM.

**Harvesting Operations.**

To the Editor FARMER'S ADVOCATE:  
SIR,—As the prospects for a good grain crop are promising, it should be the effort of every farmer to conduct the harvesting operations so as to secure the best results in the product. Care should be taken not to allow wheat to fully ripen before cutting it. Both for milling and for seed a greater weight is secured, as well as the maximum vitality and milling quality, by reaping the crop just when the grains have reached the dough stage and the straw is ripe near the ground. When the field is clean of weeds and contains no green spots we consider it of no advantage to select seed from any particular portion of the field.

When oat straw is used for feeding it is advantageous to cut the crop quite on the green side, as then the straw, if well saved, will contain enough nutriment and freshness to be much relished by stock; at the same time the grain will fill almost to the maximum and not have as thick hulls.

Peas cut with the scythe in the old way and rolled into bunches lose very little by shelling. Owing to the openness of the straw it is not wise to stack them. We always draw to the barn and do not thresh them till late fall or winter. When the straw is used for sheep feed, for which it is valuable, we prefer to thresh a little at a time so as to always have fresh straw.

ROBT. ROBERTSON, Supt.  
N. S. Expt. Farm, Nappan.

**Harvesting in New Brunswick.**

To the Editor FARMER'S ADVOCATE:  
SIR,—Although the spring opened wet and cold in this section, yet at this writing all grain crops are looking well, and hay crop especially seems well advanced for this season. As to the proper mode of harvesting wheat, there is a great diversity of opinion among farmers in the Lower Provinces. My own experience has taught me that wheat, in order to make good flour and a good quality of bread, should not be allowed to stand till the grain gets hard without being cut, as many do. The proper time, in my opinion, is to cut the grain just as soon as the milk in the kernel gets dry, and before the grain begins to get hard; then, having the grain cut and properly bound in sheaves, put it in stooks, cap well to prevent grain from being spoiled or discolored by rain or dull weather; then, after the sheaves have stood in stook till grain has become thoroughly cured, put the grain in the barn, and it is then ready to thresh at any time. By cutting the grain at this stage of ripeness, and harvesting as I have said, a better quality of wheat is secured, which will make a good, light, wholesome bread. Should the grain be allowed to stand without cutting till kernels become hard, the flour will be darker and drier, and the wheat much more shrunken.

In harvesting oats here, where so much straw is fed to cattle during the winter, I would cut the grain with a binder, a little on green side, then stand grain in stook and allow it to stand till thoroughly dry before putting in barn. Straw from oats which have been allowed to stand till the grain is dry and hard is almost useless to feed to cattle, in fact they will rarely eat it.  
King's County, N. B.

M. H. P.

**Moisture as a Protection from Frost.**

Prof. Huston, Chemist at Purdue University, Indiana, writing on the protection of crops from frost, says: "The direct loss from injury due to frost is of considerable importance. We hear most frequently of damage to fruit buds in the spring, and the damage to the peach crop has become a standard joke for the funny man. The loss of early garden crops receives less attention, but if the total were known it would reach quite a respectable figure. Both spring and fall frosts often injure the corn crop to the extent of many thousand bushels."

"Water is the best protection from frost. The air always contains some water vapor, and the warmer the air is the more water vapor it can contain. At 50 degrees a cubic foot of air might contain four grains of water vapor, and usually contains about three grains. When the air cools, a point may be reached at which it cannot hold up all the water which it contains. If this is above the freezing point, some of the water vapor is deposited in the form of dew. But when the water changes from water vapor to liquid dew, a large amount of heat is given off and this prevents a further fall of temperature. But if the air contains so little water vapor that it can cool below the freezing point before the water begins to deposit, the water is deposited in the form of ice crystals and we have a frost. A moist air, then, is a protection from frost. The frequent shallow cultivation that saves soil moisture will at the same time keep the air above the soil more moist, and will to some extent serve as a protection from frost. Dr. Kedzie quotes a circumstance where a recently cultivated corn field was not injured by a frost that cut down the corn on surrounding fields."

"A more direct and effective way of protecting plants from frost is to irrigate the land or to

sprinkle the plants with water at the time the frost is expected. In this State few farms have means of irrigating in the usual way. But there are many farms on which fruits are sprayed, and the spraying machinery may easily be used to sprinkle plants with water to protect them from frost. This method has proved practical and profitable on a variety of early spring crops."

**Plant Fertilization and Seed Production.**

All plant seeds are produced from flowers. The flower usually contains two sets of organs—the sexual and the enveloping. Sometimes the latter are partially or wholly wanting, but the sexual organs—the stamens and pistils—must be present either in the same or in different flowers in order that the plant may be fruitful. The envelopes usually consist of two sets or whorls, and are shown in Fig. 2, at a, b. The pistil consists of the ovary at the base, the style and stigma at the end (Fig. 2, c, f, g). The stigma is the receptive surface on which the pollen falls, and is connected with the ovary by the style. In Indian corn the silks are the styles. The stamens or male organs are located between the pistil and the envelopes. (Fig. 1, d; Fig. 2, d). A stamen consists of a stalk or filament and an anther. The anther produces the pollen, the fertilizing element, seen in a mass of dust usually of yellow color, and consists of a countess number of pollen grains. When ripe the anthers open and the pollen is exposed, to be carried away either by the wind or by insects or other animals.

In the majority of plants both sexes are present in the same flower; in a small number they are in different flowers, either on the same plant or on different plants. In the latter case the female plant only produces seed, and then only after fertilization by the pollen of the male plant. This is accomplished by the pollen grains falling on the stigma of the pistil, when they burst and their contents are conveyed to the ovules in the ovary (Fig. 3) by means of pollen tubes, which grow out from the pollen grains and extend down through the styles. After fertilization the ovary rapidly develops into the fruit (Fig. 4).

**Cross and Self Fertilization.**—The matter of fertilization underlies the whole subject of seed production, for on the fertilization of the seed depends the purity as well as the vigor of a variety. A flower is cross-fertilized when its ovules are impregnated by the pollen of another flower; self-fertilized when they are impregnated by pollen from its own stamens.

Among the many adaptations for cross-fertilization, the two great external agencies are the wind and insects. Insects visit flowers for the sweets they find, and are undoubtedly attracted by color and odor. While collecting the honey, insects are dusted with pollen, which, passing to other flowers, they deposit on their stigmas. Many flowers are so arranged that only bees and insects large enough to pollinate the flower can obtain the honey. The peculiarities of structure are numerous and varied. A common type is found in the flower of the pea family; for instance, in that of red clover (*Trifolium pratense*). The flowers are visited by the bumble-bee, whose long proboscis can reach into the tube at the bottom of which the honey is secreted (Fig. 5). Smaller bees cannot secure the honey, but they collect pollen, and doubtless aid in fertilization while so doing. The stigma stands out above the anthers, and a bee thrusting her head into a flower would first brush against the stigma, leaving some pollen from a flower previously visited, and thus dust herself afresh with pol-

len, to be carried in turn to the next flower (Fig. 5).

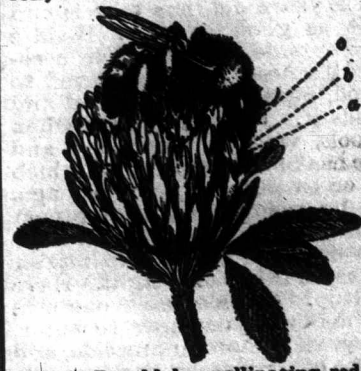


FIG. 5.—Bumblebee pollinating red clover—a, stamens and pistil of flower; c, proboscis of the bee. (Peters' Division of Botany, U.S. Department of Agriculture.)

Owing to the scarcity of bumblebees during May and June, the red clover blossoms are seldom fertilized, hence the failure of the blossoms of the first crop to produce seed. Later in the season bumblebees become more plentiful, and in gathering honey cause the fertilization of the blossoms of the second crop, from which a good yield of seed is usually secured when not interfered with by weevil and other enemies. It is claimed that bumblebees had to be imported into Australia before red clover seed could be raised there.

In the cabbage family arrangements are such that self-fertilization can take place if cross-fertilization fails. In cabbage blossom honey is secreted at the bottom of the corolla tube. An insect sucking the honey would touch the stigma and the anther of one of the short stamens. At the next flower the pollen thus collected would most likely be deposited on the stigma. In case cross-fertilization fails the long stamens bend over and pollinate the stigma. It is known that cross-fertilization does frequently occur, by the difficulty of keeping varieties of cabbage, turnips, etc., from mixing.

In pumpkins, squashes, cucumbers, and melons, the male flowers appear first, followed by the female (Figs. 6 and 7). Here cross-fertilization is inevitable, and mixing occurs when several varieties of a species are grown near one another. The grasses, corn, wheat, oats, barley, etc., having flowers without odor, nectar or conspicuous color, do not attract insects and are fertilized by the wind.

As has already been said, the purity, as well as the vigor, of a variety depends upon the fertilization of the seed. While cross-fertilization has been clearly shown to be productive of more vigorous plants, and therefore a benefit so far as the life of the species is concerned, there are other considerations of vital importance to the seed-grower. The first of these is purity of variety. No matter how well the seed germinates, nor how vigorous the plants, if they are not of the variety wanted the crop is at best a partial failure.

While crossing between plants of the same variety is beneficial—the more so if their ancestors were not grown under the same conditions—crossing between the varieties of a species should, as a rule, be guarded against. Intelligent crossing of varieties, or of species even, may lead to good results, but indiscriminate crossing can only result in the loss of well-established types.

**Increase Wealth by Saving It.**

Mr. T. B. Terry writes a common-sense article for the *Practical Farmer* upon the subject of housing implements, from which we offer a cap to many of our readers who can wear it. The observation is made that if implements and tools were left out during the winter or even a part of the time in summer, when not in actual use, they will soon have to be replaced. It is a sad fact that most farmers who leave machinery and tools outdoors are hardly able to stand the loss, while they are quite forgetting that it is this loss, among others, that is keeping them poor. Mr. Terry instances a case of a wooden-framed harrow which, although not as old as one of his own, which is quite sound, was so rotten that it was liable to give out at any time, simply because it had not been housed, while Mr. Terry's had never been allowed out except during the season in which it was in use. On the same farm was noticed a number of more costly tools, not more than from three to five years old, that were so rusted, rotted, and out of shape, as to be of little value. It is not wise to buy new and improved tools and implements and not provide a place of shelter for them. Mr. Terry refers to his manure spreader, which he bought 16 years ago and which is practically as good as ever; and the secret is that it has not been allowed to stand

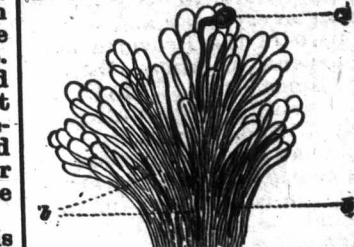


FIG. 1.—Tomato flower—a, calyx; b, corolla; c, pistil; d, stamens. (Peters' Division of Botany, U.S. Dept. of Agriculture.)

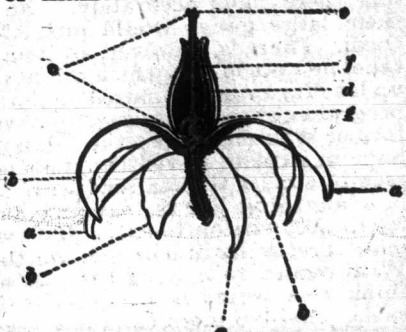


FIG. 2.—Tomato flower, longitudinal section—a, sepal; b, petal; c, pistil; d, stamen; e, stigma; f, style; g, ovary. (Peters' Division of Botany, U.S. Dept. of Agriculture.)



FIG. 6.—Male flower of cucumber, one petal cut away to show the stamens—a, sepal; b, petals; c, stamens. (Peters' Division of Botany, U.S. Department of Agriculture.)

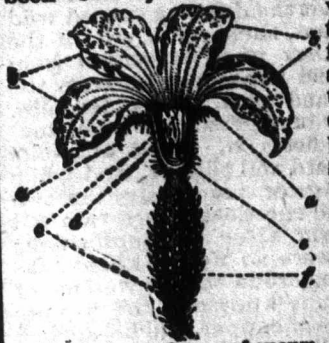


FIG. 7.—Female flower of cucumber, one petal cut away to show the stigma—a, sepal; b, petal; c, pistil; d, stigma; e, style; f, ovary. (Peters' Division of Botany, U.S. Department of Agriculture.)



FIG. 4.—Pod of common bean. This is the ripened pistil. (Peters' Division of Botany, U.S. Dept. of Agl.)



out of doors an hour when not in actual use. His wagon, too, although 28 years old, has wheels and running gear almost as good as ever. Besides being never unhitched outside, it is given an occasional coat of paint. Harness, too, is referred to as being aged, but good, because it is cleaned and oiled whenever it needs it. It is plain that when one has not to buy tools, wagons, machinery and harness frequently he has more money with which to provide comforts or to put away for old age. Mr. Terry concludes by recommending a proper tool house, even if it is necessary to scrimp a little more at the time in order to get it. No matter how plain the tool house is if it is only tight. Have doors and close it all up. Do not leave one side open for sun, wind and rain or snow to enter. Make the building long, with doors on one side, and one pair of doors on the other side, so that wagons and heavy tools can be driven through. The earth makes the best floor, as it relieves the necessity for frequent setting of tires on wagons and buggies. One may have an upper floor on which to store light tools and numerous other things. According to our observation the most men who leave tools and implements standing out exposed to the elements are equally careless about other things. It is not an "eyesore" to them to see a few boards off the barn, a door off its hinges, or a gate having to be belted open and shut, and falling apart. Often, too, the need of repairing a broken panel in the fence does not impress itself until the stock has made two or three destructive excursions over a grain field. We believe the proverbial "stitch in time" has not a more fitting application than in such cases as we have cited, and which are far too frequent; and in nine cases out of ten the careless one will excuse himself on the ground that he has not time to attend to these little things. It is when a man allows his business to get control of him in this way that he commences to fall behind, and before he is quite aware of it the foundation of his business has commenced to crumble, his hope has lost its buoyancy, and failure follows. Failure is a gloomy gulf, and the more we dread it and keep away from it the better we will conduct our business, by adding to our wealth by preventing it slipping from our grasp in premature decay.

#### New Way to Kill Weeds.

A notable discovery of a new method of destroying weeds in young grain is announced by Mons. Hider in the *Journal d'Agriculture Pratique*, France, namely, that of spraying the weeds with a solution of sulphate of copper. Attention was first directed to the plan by Mons. Bonnet, a vine grower, who noticed, when spraying his vines, that certain wild plants accidentally sprinkled with the copper solution were killed. This spring it has been tried more extensively by agriculturists. One Mons. Jules Bernard found that the dressing caused wild mustard to turn black first, then white, and if the weeds did not perish they were prevented from further development and consequently from the production of flowers and seed. Mons. Brandin, President of the Society of Agriculture at Melun, tried the dressing in fields of wheat and oats infected with wild mustard and thistles, and while the corn continued to grow vigorously, the two weeds perished, except in one field where rain fell abundantly in the night after the application; even there the weeds were so nearly killed that they were no longer dangerous to the welfare of the corn. He used what is known as the five per cent. solution of sulphate of copper, and he applied two hundred and ten gallons of the solution on the acre.

An attempt to verify the genuineness of this discovery has been made by an Agricultural Experiment Station at Laon, France, by spraying grain fields, in which were growing wild mustard and wild radish, with five per cent. solutions of copper sulphate. The result was that the mustard was destroyed, but the radish and other weeds were unaffected, although they were quite young. A stronger solution might have destroyed the other weeds. The leaves of the grain were slightly injured, but quickly recovered. No effect was noticed on clover or lucerne sown with the cereal. It is stated that a fifteen per cent. solution of iron sulphate, where it would be cheaper, may be substituted for the copper sulphate. The cost of treatment where power spraying machines are used is given at approximately \$2 per acre.

#### To Carry a Lantern and Two Pails of Milk.

BERNARD BAKER, Ontario Co., Ont.—In May 15th issue of the *FARMER'S ADVOCATE*, in the Helping Hand Department, a plan is shown for carrying a lantern and two pails of milk. I consider I have a better plan, because by it the lantern does not have to be carried over the milk, in which case, if the lantern were leaking just a little, it would give trouble. It is to have a stout string from the lantern handle just long enough that when it is held in the hand which is also holding a pail of milk, the lantern will hang down beside the pail and rest against it.

#### "Worth Its Weight in Gold."

Chas. S. Bavidge, Selkirk Municipality, Man.—"I am very well satisfied with the *FARMER'S ADVOCATE*. In fact, it is worth more than its weight in gold, and no wide-awake farmer should be without it."

#### "Illustration Stations" Considered.

To the Editor *FARMER'S ADVOCATE*:

SIR,—I think Prof. Robertson's estimate that the products of Canadian agriculture might be increased 25 per cent. without increasing the cost of production, by more advanced and intelligent methods, is a moderate one. His scheme for promoting that increase would depend for its success very largely on the way it was worked out. It would have to be divorced entirely from politics; the slightest suspicion of its being made an excuse for "doles" to government supporters would kill it. The selection of farms, etc., should be left to local organizations, the selection of "Illustration Stations" and the management of them only being in the hands of the Department. His scheme for recouping the farmer for any loss in the cultivation of the "comparatively small plots" is not a good one. If these are to be "Illustration Stations," and not "Experiment Stations," nothing whatever should be attempted but what has passed the experimental stage, is of immediate and practical interest to the neighborhood in which it is conducted, and then it should be tried on a scale that any farmer could attempt. A strict account of the work expended on it should be kept and the product valued. If it does not show a profit, but a loss which has to be made up from the Dominion Treasury, then the "Illustration" is a poor one. There would be no object in having only one-quarter or one-eighth acre plots in this Province, as the "Illustrations" would probably be largely grain, and no farmer has an equipment for handling these plots accurately. No threshers with their large gangs would put off time threshing them. There is, however, an item Prof. Robertson takes no note of, but which might probably swallow up his fifty or one hundred dollars. A part of the programme would necessarily have to be that each farmer who conducted the "Illustrations" would have to explain to visitors their objects, methods, results, etc., if the stations were taken advantage of to anything like the extent indicated, viz., from 500 to 1,000 visitors to each. This would necessarily make pretty large demands on the farmer's time. With regard to moving the stations frequently, I think this would be a mistake. Many "Illustrations" involve more than one season's operations in preparation, etc.

If no other "Illustration" were attempted but one which would convince the farmers of this Province (Manitoba) that a systematic rotation to include grass must be adopted, that the capacity of our soil for absorbing and retaining moisture depends almost entirely on the amount of humus in it in the shape of rotting sod, grass, roots, etc., that the same thing will prevent the drifting which is becoming more alarming every year and which is already making some parts of the Province look like a desert, then the expense of these stations would be repaid many times over. This would necessarily involve the leaving of the station in one place for some length of time.

I confess that I have not had the time to give such a radical innovation the consideration it deserves, but would imagine that the cost of the scheme, properly conducted, would be so small that it might be worth while giving it a trial.

Municipality of Morton. JAMES FLEMING.

#### Manitoba Crop Bulletin.

The June bulletin issued by the Department of Agriculture shows an increased area under wheat over 1897 of nearly 200,000 acres, and an increase in the total crop area of over 250,000. There is a marked increase in the oat area, a falling off in flax, and a very large increase in potatoes and roots. Fodder growing is receiving more attention, and this must continue from year to year as the settlements fill up and cultivation and drainage convert the wild hay lands into wheat fields.

This is the first year any estimate has been attempted on the cultivated grass area; Brome grass being reported to the extent of 973 acres, which is a good showing. An increase in milk cows of over 9,000 is a hopeful sign to the dairy interests.

District.	AREA UNDER CROP.		
	Wheat, acres.	Oats, acres.	Barley, acres.
North-western.....	122,600	83,162	15,400
South-western.....	595,134	168,882	32,454
North Central.....	305,224	89,155	31,302
South Central.....	374,614	113,000	51,334
Eastern.....	90,660	60,625	27,568
Province.....	1,488,232	514,824	158,058
Total area under Flax.....			14,361
" " Rye.....			3,198
" " Peas.....			1,594
" " Corn.....			1,195
" " Brome.....			973
" " Buckwheat.....			68
" " Potatoes.....			19,791
" " Roots.....			8,448
Total area under all crops is 2,210,942 acres.			
A comparison with the acreage of 1897 shows:			
	1897.	1898.	
	Acres.	Acres.	
Area under Wheat.....	1,290,882	1,488,232	
" " Oats.....	468,141	514,824	
" " Barley.....	153,266	158,058	
" " Flax.....	20,653	14,361	
" " Potatoes.....	13,576	19,791	
" " Roots.....	6,130	8,448	
Total.....	1,958,025	2,210,942	

The rains and favorable weather of the first ten days of June are reported as being general all over the Province, and the general prospect is good.

#### Farmers' Excursions to Experimental Farms

To the Editor *FARMER'S ADVOCATE*:

SIR,—I should be pleased to see any such scheme as that of Prof. Robertson's for "Illustration Stations," as reported in your issue of May 2nd, carried out to a successful issue, but from my experience with farmers I do not believe the results of such a scheme would be at all favorable. There are many difficulties in the way of such a scheme. The \$100 or \$200 mentioned is not sufficient remuneration for any person undertaking the extra work and trouble of such a position. If some of our municipal councils who are at a great distance from the Experimental Farms were to take this matter in hand, under the guidance of the present heads of the Experimental Farms, something practical might be worked out. I have often felt ashamed at the apathy of my brother farmers in not taking a deeper interest in our Experimental Farms, for in my mind these farms are doing a wonderful amount of good. The very fact that the proverbially grumbling farmers have found no cause for complaint against the superintendents of the western farms is sufficient proof of their great utility. Some claim that they get all the benefit to be derived by reading the results of experiments as given in the agricultural press or in the bulletins issued. But do they read them? And even if they do, they would receive much greater benefit from visiting the farms during the growing season. It is always an inspiration to me to visit these farms and see the methodical way in which the work is done. People speak of the monotony of farm life, but were they to take an interest in doing even the ordinary farm work thoroughly and in the best possible way, they would find an interest in every operation.

I would like to suggest that steps be taken to induce our farmers to visit the Experimental Farms in greater numbers, and more frequently cheap excursions might be organized under the management of the Minister of Agriculture, and if the railway companies could not afford to offer a rate of about \$1 per head, the Government might make up the necessary amount by a small grant. I think a great many farmers might avail themselves of the opportunity if they could get to the farm and return for an outlay not to exceed \$1 per day and the loss of a day's work on the farm. The change of air and scene would be beneficial for the sake of health, even if there was nothing to learn. It would be necessary to advertise the dates well ahead. I have no doubt the superintendents of the Experimental Farms will be pleased to take charge of the excursion parties and give all information possible. I have always received the greatest courtesy and attention when visiting the farms, although I am aware that it is a considerable tax upon the time of those busy men. W. WENMAN, Glenwood Municipality, Man.

#### The Elevator Monopoly.

To the Editor *FARMER'S ADVOCATE*:

SIR,—Having read your editorial in reference to the above subject in your issue of June 1st, and also Dr. Rutherford's letter in June 15th regarding the same, I trust you will allow me space for a few brief statements regarding this matter.

I notice with a good deal of pleasure that notwithstanding the vast amount of discussion as to the means to be adopted in order to secure the abolition of the elevator restrictions, there appears to be very little debate as to the desirability of retaining the monopoly. The latter question has been settled finally by a most emphatic negative from nearly every right-thinking man in the country. All of the resolutions, propositions or measures brought up in the Local House at Winnipeg or the House of Commons at Ottawa during the recent sessions (with the exception of the Compromise Bill), reveal a desire of more or less strength to secure the removal of the present elevator restrictions. I only hope that after all methods to that end have been fully discussed and thoroughly weighed, those will be adopted and promptly acted upon which will most quickly secure to the farmers of Manitoba and the Northwest Territories the shipping privileges of which they have been most unjustly deprived during the past fifteen years.

In reference to Dr. Rutherford's letter, it is only due to him and the other representatives from the West for me to state (as one of the delegates present during part of the proceedings at Ottawa upon this question) that I do not believe that either he or any of the Western members were actuated by C. P. R. influence in accepting (for the time being) the compromise measure. I have good reasons for concluding that it was an error of judgment due to other causes than this. Neither does the writer believe for one moment that the members in question withdrew their support to this measure simply to oblige the delegates who were opposed to it. I am satisfied that when they saw that the Bill would be detrimental to the interest of the Western farmers, and decidedly unpopular with the vast majority of their constituents, they acted in accordance with those convictions, and exerted themselves to secure the withdrawal of the unfortunate compromise measure.

I cannot but admire the candid and manly way in which Dr. Rutherford explains how he came to support this Bill in the Railway Committee, and how, on receipt of "further light" as to the nature of its contents, he withdrew his previous endorsement of the measure. I sincerely hope that the same honest and manly way will now prompt him to commu-







## GARDEN AND ORCHARD.

## Spraying of Fruit Trees.

[Comment on letter of E. Edwards in issue of June 15th.]

The discussion with Mr. Edwards has, I trust, been profitable to the readers of the *ADVOCATE*; to myself it has also been profitable—and pleasant too, with the exception of the personal element introduced occasionally by my valued Island correspondent. The practical experience cited by Mr. Edwards is, indeed, very satisfactory, and certainly worthy of record. That plum trees in Prince Edward Island have not been injured by the use of the formula recommended—1 lb. each of copper sulphate and lime to 10 gals. of water—is well worthy of note; and more important than this is the fact that two applications of Bordeaux mixture—the first presumably about June 10th, and the second three weeks later—were sufficient to protect the trees and fruit from insect and fungous attack throughout the entire summer. I sincerely trust that this experience is general on the Island.

The statements made by Mr. Edwards emphasize the desirability of individual research and experiment by Canadian farmers and fruit-growers.

In my experience in Ontario the formula mentioned by Mr. Edwards has proved injurious to the foliage of peach trees. In Ontario and Quebec injury by the same mixture has been frequent if not invariable—often enough, though, to justify the statement that it is unsafe. For this reason, in connection with the publication of the results of spraying experiments carried on in 1894, I recommended the following formula:—4 lbs. each of copper sulphate and lime to 50 gals. of water for all fruits trees except peaches. If, however, more than three applications of this strength are made to plum foliage, injury may result—at least in Ontario and Quebec. Therefore, in experiments superintended by myself, where four or five applications were made, a weaker mixture was used.

In regard to Mr. Caston's article, I took the liberty of calling it *sensible* not because the work of a government or of a government official, but because his letter was calculated to popularize the practice of spraying, and because he had the good sense to recommend the accepted formula adopted by the Department of Agriculture for Ontario. The spraying experiments carried on by this Department have thus far been directed against the enemies of the apple. Mr. Caston resides in an apple-growing section, and no doubt wrote also from the standpoint of an apple-grower.

In conclusion, I must express my gratification in knowing that spraying has been practiced so long in Prince Edward Island, and that it has an adherent so well able to defend and urge its advancement. I trust Mr. Edwards will, through his Provincial Fruit Growers' Association and the *FARMER'S ADVOCATE*, give us his experience from time to time in carrying on this important part of the fruit growers' annual programme.

Ithaca, N. Y., June 20, '08. JOHN CRAIG.

## Purchasing Nursery Stock.

BY ELLIS F. AUGUSTINE, LAMBTON CO., ONT.

It has long been a matter of wonder to me why it is that farmers, with scarcely an exception, purchase their nursery stock through traveling agents, instead of dealing direct with nursery owners. Perhaps one principal reason is, that the majority of farmers give little thought to the planting of trees and plants until approached by an agent with magnificent illustrations and glowing accounts of some new and high-priced fruits, which, when planted, often prove to be entirely unadapted to the purchaser's locality. But in some instances the farmer himself decides to set out a good-sized orchard. He makes out a list of varieties wanted, and gives his order to some well-known agent, which certainly is much better than dealing with an utter stranger. But if the farmer is not an authority upon fruit-growing, he will be most certain to choose a number of unprofitable varieties, or such as are unsuited to his locality. He will also pay from forty to sixty per cent. more for his stock than he could have purchased it for from some reliable nursery direct. I am not disparaging the tree agent, for undoubtedly there are numbers of farmers who are indebted to his visits for now possessing orchards, who otherwise would never have set out a single tree. But it is to the interest of the progressive farmer to deal in as economical a manner as possible.

A nursery can well afford to ship stock direct to a cash customer for one-half the sum demanded when ordered through an agent. I shall now endeavor to show why such is the case: First, the agent receives a commission of 25% to 30% for canvassing orders; next, about 10% is paid for delivering the stock. Sometimes in addition to this a commission is paid for collecting; and I believe I am safe in saying that at least 10% of the stock delivered is never paid for. From this it should not be inferred that the parties ordering the stock are dishonest; but not infrequently the trees are carried about the country in delivering by persons knowing little about the care required in handling nursery stock, and caring less, until they are so damaged that the grower would be ashamed to own them as his product, and the purchaser feels justified in refusing to pay for them. This is not mere theorizing, as my statements are the outcome of personal experience.

At one time I ordered a number of apple trees

through an agent, paying \$20 per 100. The price for a single tree was 25 cents. The same prices were asked this season by agents, and from 25 to 50 cents for pear, plum, and peach trees. This spring I purchased 107 trees from a prominent Canadian nursery, apple trees costing me 10 cents each, or \$9 per 100; pears, 18 cents each; plums, 17 cent each; and peaches from 9 to 15 cents each. The Fitzgerald peach, several trees of which were sold by an agent to nearly every farmer in this vicinity at 50 cents each, were purchased by me at 15 cents apiece. Now, the lot of trees spoken of as ordered through an agent were delivered to me in a much damaged condition, with bark badly shrivelled up, ten trees having to be replaced; also, out of the number there are sixteen trees untrue to name and of an entirely worthless variety.

On the other hand, the trees coming from the nursery this spring were an exceptionally fine lot of well-grown, thrifty ones, packed in an excellent manner, and word was sent me so that I was at the station waiting to receive them. If the trees were not as ordered, no payment was to be made. Not only this, but the nursery growers are ever ready to advise as to a suitable selection, and as to the varieties which will prove most profitable and best adapted to the purchaser's locality. If intending tree-planters will communicate with reputable nurseries direct, they will, I feel assured, be gratified at the treatment received.

## Transplanting and Care of Evergreens.

[FROM THE MINNESOTA STATE FORESTRY ASSOCIATION.]

As to the best time for transplanting evergreens, my own experience has proven that while evergreens can be transplanted with comparative safety at any time between April and November, if proper precautions are used, yet for Minnesota the very best time for the operation is in the month of May, when the soil has become somewhat warm and friable and the buds are just beginning to swell, but before growth has actually commenced. If the work must be done before the proper time or during April, the trees should be protected from the effects of cold and drying winds until the middle of May, or until the roots take hold in the soil and can take up moisture, or many of them will be pretty sure to die. As the name implies, they are always in foliage, and the drying winds are searching through the branches and evaporating the natural moisture from the foliage, causing a severe draft upon the vitality of the tree, which can be greatly obviated by suitable protection, but such protection is hardly practical except in small plantations. The best size of evergreen trees for timber planting or for ornament, except it be trailing and shrubby kinds, are those from fifteen to thirty inches high that have been nursery grown and transplanted in the nursery at least twice, thus having insured a good root system. When bales of evergreens are received from the nursery they should be unpacked at once, the roots wet with water that is not too cold, and then heeled in immediately into mellow soil and kept there until they can be planted. Never allow the roots of an evergreen or any other tree to be exposed to the wind or sun while moving them to the planting place, and until they are put into the ground keep them well covered with a wet blanket, or have them standing in a tub of water. We like best to set them on land where a hoed crop was raised the previous year and that was plowed in the fall, then fitted for planting with a thorough harrowing just before planting. In setting, dig holes ample to receive the roots in natural position without cramping or crowding. Judging from actions, many persons suppose that a tree may be planted like a post, that the main object is to fix it in the ground so that it will not fall over, forgetting that it has vitality to be preserved and that the vitality is often a very delicate thing, and so they open but a small hole, jam the roots into it, and fill up with clods and sod or whatever is most convenient. After the hole is properly dug, place the tree in just the position it is designed to stand, first putting enough fine earth in the bottom of the hole so that it shall not be too deep, and with every root in the right position. Next work the finest of soil in amongst the roots, using the hands to make sure that it comes in contact with every root and fiber, and that there are no air spaces left, and press very firmly about them.

After the roots are covered the balance of the filling may be done with a spade, and the firming by tramping with the feet as the work proceeds, finishing off with an inch or so of fine loose soil on the surface. No manure should be used in the holes, and great care taken that hard lumps and sod are kept out. Of course, if the soil is so wet that it does not crumble freely, or if water is turned into the holes while setting, then tramping should be delayed until it becomes sufficiently dry, but the hand work about the roots must not be neglected. The trees should be set about one to three inches deeper than they stood in the nursery, and if the ground is in the right condition it is best to apply a mulching about them at once. If the trees were good and well rooted, carefully dug, rightly handled and properly planted, every one will live, and the principal part of the subsequent care is to keep them from being run over or broken down by stock, keeping grass and weeds from robbing them of moisture, and an occasional renewing of the mulching for a year or two, or a frequent stirring of the surface soil with hoe or rake. If it should be necessary to water at any time, the watering is best done at night or when the sun is

not shining, and an occasional washing of the foliage with syringe or spray pump, using clear water as warm as the atmosphere, and doing it after sundown or on cloudy days, is often very beneficial. Trees taken from swamps or forests, or that have not been transplanted in the nursery, should be partially shaded from the sun and dry winds until they become established in their new homes. A cheap way for protecting the newly set trees is to drive two stakes on the south side about three feet apart, and a few inches from the tree, tack burlap or gunny sack cloth on to them, or nail on strips of board with narrow spaces between. A favorite practice of ours for watering is to make a few holes with a crowbar a foot or so from the tree, and turn the water into them instead of over the surface of the ground; by this method it sooner reaches the roots, and a less quantity will be needed, especially if the trees are kept properly mulched.

## POULTRY.

## Preservation of Eggs.

U. S. CONSULAR REPORT.

The Berliner *Markthallenzeitung* reports about experiments made for the purpose of securing the most rational method for preserving eggs.

Twenty methods were selected for these experiments. In the first days of July, four hundred fresh eggs were prepared according to these methods (twenty eggs for each method), to be opened for use at the end of the month of February.

Of course, a most essential point for the success of preservation is that only really fresh eggs be employed. As the most infallible means of ascertaining the age of the eggs the experimenter designated the specific weight of same. With fresh eggs, it is from 1.0784 to 1.0942. If the eggs are put into a solution of 120 grams (4.23 ounces) of common salt in 1 liter (1.0567 quarts) of water, the specific weight of which solution is 1.073, all the eggs that swim on this liquid weigh less, and consequently are not fresh. Only those that sink should be used for preservation.

When, after eight months of preservation, the eggs were opened for use, the twenty different methods employed gave the most heterogeneous results:

- (1) Eggs put for preservation in salt water were all bad (not rotten, but uneatable, the salt having penetrated into the eggs).
- (2) Eggs wrapped in paper, 80 per cent. bad.
- (3) Eggs preserved in a solution of salicylic acid and glycerin, 80 per cent. bad.
- (4) Eggs rubbed with salt, 70 per cent. bad.
- (5) Eggs preserved in bran, 70 per cent. bad.
- (6) Eggs provided with a cover of paraffin, 70 per cent. bad.
- (7) Eggs varnished with a solution of glycerin and salicylic acid, 70 per cent. bad.
- (8) Eggs put in boiling water for twelve to fifteen seconds, 50 per cent. bad.
- (9) Eggs treated with a solution of alum, 50 per cent. bad.
- (10) Eggs put in a solution of salicylic acid, 50 per cent. bad.
- (11) Eggs varnished with water glass (Wasserglas) 40 per cent. bad.
- (12) Eggs varnished with collodion, 40 per cent. bad.
- (13) Eggs covered with lac, 40 per cent. bad.
- (14) Eggs varnished with sward, 20 per cent. bad.
- (15) Eggs preserved in ashes of wood, 20 per cent. bad.
- (16) Eggs treated with boric acid and water glass, 20 per cent. bad.
- (17) Eggs treated with manganate of potassa, 20 per cent. bad.
- (18) Eggs varnished with vaseline, all good.
- (19) Eggs preserved in lime water, all good.
- (20) Eggs preserved in a solution of water glass (silicate of soda), 20 cts. a quart retail (cheaper in larger quantities), all good.

The last three methods are consequently to be considered the best ones, and especially the preservation in a solution of water glass, as varnishing the eggs with vaseline takes too much time, and the treatment with lime water sometimes communicates to the eggs a disagreeable odor and taste.

There is, however, one drawback with eggs preserved in a solution of water glass, viz., that the shell easily bursts in boiling water; this may be avoided by cautiously piercing the shell with a strong needle.

[NOTE.—Upon enquiry we have learned that egg-packing houses use a pickle the chief ingredients of which are lime, salt, and cream of tartar. No doubt the salt and cream of tartar prevent the disagreeable odor and taste spoken of as being communicated to eggs pickled in lime water. A pickle of this sort would be much more cheaply employed than water glass or vaseline. Above all, we would recommend packing only unfertilized eggs in whatever preparation is used.]

Mr. Leonard Paus, an egg expert, recently from Antwerp, Belgium, and now in charge of a large egg-packing establishment in London, Ont., claims that for small quantities of eggs, such as would be necessary to put down in a farmhouse for winter use, there is no better preserving material than dry sifted coal ashes. A box that is easily turned should be used. First put a layer of one inch of



dry ashes on the bottom, then a layer of eggs, then ashes, and again eggs, until the box is filled. Nail on the cover, fitting firmly down on the ashes, and place the box in a dry place in which the temperature does not vary to any extent, but never store them in the cellar, as it is too damp. The boxes should be turned upside down once a week to prevent the yokes resting on the shells, which soon spoils the eggs.—ED. F. A.]

**QUESTIONS AND ANSWERS.**

[In order to make this department as useful as possible, queries enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquiries must in all cases attach their name and address in full, though not necessarily for publication.]

**Veterinary.**

**To Remove Wart.**

C. F., Gladstone, Man.:—"I have a two-year-old colt growing an ugly wart on the outside of right leg. A red, fleshy wart commenced growing in January. Kindly let me know how it could be taken off?"

[Remove with knife and sear the part with iron at red heat. You are within easy distance of a good veterinary surgeon and I would advise you to employ him.]

**Splint and Sweeny.**

O. S., Snowflake, Man.:—"I have a five-year-old mare that has a splint on her front leg. (2) Have a mare that is sweenied. Please answer, if possible, in your next issue?"

(1) Oil the hair closely from the part and apply, with a good deal of friction, the following blister: Binioidide of mercury, 1 dram; cantharides, 2 drams; vaseline, 2 ounces. Mix. Wash off in forty-eight hours and apply vaseline to blistered surface. (2) Rub the shrunken part twice a week with this liniment: Liq. ammonia and terebinth, of each 2 ounces; raw linseed oil, 4 ounces. Turn out to pasture.]

**Obstruction in Cow's Teat.**

J. T., Queen's Co., P. E. I.:—"Would like to know what can be done for a good milk cow, about nine years old, that has a lump in one teat that can be moved up and down with the fingers, and cannot be milked without first inserting a straw. It came there, with this calf, about three weeks ago, and now there is another one coming in another teat. Can anything be done, as it is almost impossible to milk her?"

[The movable obstruction in the cow's teat is, in all likelihood, a polypus hanging by a band from the milk membrane. The only treatment we can recommend is to subject the cow to a surgical operation by a veterinary surgeon, who will, with proper instruments, make a free incision through the teat, twist off the tumor and sew up the wound. The cow will then have to be milked for some time with a milk tube. If the cow is a liberal milker, and the operation and sewing up are not very carefully done, there may be trouble in getting the wound healed. It may be well to confine her on dry feed for some time so as to reduce her volume of milk before operating. She may be milked during this time by means of a milking tube.]

**Bronchitis in Cattle.**

D. C., Haldimand Co., Ont.:—"I had fifteen yearling cattle that were turned on the grass about the 1st of April. On the 15th of April they were turned into a field of new clover. Three weeks later one bloated and died, a few days later another. I removed them to a different field, when a third also, a calf, died. I gave each a dose of salts, and next day noticed they had a dry cough and discharged freely at the nostrils. What is the disease, and is there any cure?"

[Bronchitis is inflammation of the mucous lining membrane of the bronchial tubes, and in its simple form, as I am of opinion is the case in these cattle, a form of catarrh or cold existing in membranes of the nose and trachea (windpipe), causing a flow of mucus from the nostrils. Catarrh is very trifling in its first stage, and usually manifests itself by rigors or shivering fits, stiffness of gait, arching of back and dryness of nose—an unerring sign in cattle of the animal being unwell. It may arise from various causes—cold, chilly nights, checked perspiration, etc. Should the discharge from nostrils continue, apply the following liniment to the animal's side every day: Strong liniment for cattle—Oil of turpentine, 4 ozs.; liquid ammonia, 2 ozs.; olive oil, 10 ozs. Have two dozen powders made up, each to contain the following: Powdered belladonna leaves, 1 dram; powdered nuxvomica, 1 dram; powdered licorice root, 2 1/2 drams. Give one night and morning in a pint of flax-seed gruel until well. DR. W. MOLE, M. R. C. V. S.]

NOTE.—We judge the mistake was made with these cattle in turning them on grass while it was too young and the nights were too cold. Where such is done, they should be housed at night and given some dry hay for a week or ten days. In all probability their systems had become impaired from cold, as suggested by Dr. Mole, and were thus rendered ready victims to bloating, due to fermentation of the green clover (likely eaten wet) in the stomach. A good treatment for bloating is to give

spirits of turpentine, 2 ounces; raw linseed oil, 1 pint; baking soda, 1 tablespoonful. After this, give every hour until the animal gets relief, sweet spirits of nitre, 1 oz.; baking soda, 2 tablespoonfuls. Keep the animal well blanketed, and, as a last resort, the trocar and canula should be used to tap the body on the left side midway between the point of the hip bone and the last rib and four or five inches down from the side projections from the backbone. A sharp knife inserted four or five inches, and the hole kept open with a quill until the gas has escaped, will answer, if no better instrument can be secured at once. The animals will need good care for some time after an attack to avoid a return of the trouble.—EDITOR F. A.]

**Miscellaneous.**

**Injured Udder—Caustic Balsam.**

J. MURPHY, Norfolk Co., Ont.:—"1. I have a cow that will not let all of her milk down every time she is milked. She got hurt going over a set of bars. Please let me know through the FARMER'S ADVOCATE if there is any remedy? 2. Would you consider caustic balsam as good as blisters for splints, spavins, etc.? Is it a safe remedy for a farmer to use?"

[1. If the udder is bruised and tender, it should be well bathed with hot water, in which the hand can be borne, before each milking and also once in the middle of the day. This will tend to effect a cure, and also reduce the soreness just at milking time. The cow can be made to forget to hold up her milk by making her comfortable and giving her a pail of bran and crushed oat slop, or in dry form, while she is being milked. If the udder or teats have received serious injury, the chances are she will have to be dried off and fattened.

2. Caustic balsam is a blistering liniment, and if well rubbed in will remove all soreness from splints, spavins, etc. It is perfectly safe for a farmer to use; in fact, many farmers swear by it for almost all animal ailments where a liniment or blister is good treatment.]

**Dodder in Clover.**

MR. BERNARD BAKER, Ontario Co., Ont.:—"I enclose a stem of lucerne clover around which is entwined a dodder vine. The patch of dodder from which this was taken is about a rod across. Will the dodder spread, and, if so, how and at what time does it flower and its seeds ripen, and is it likely to become a nuisance?"

[The questions asked and much more information about dodder was given in the FARMER'S ADVOCATE of June 15th, page 253.]

**Regarding Staggering Goslings.**

To the Editor FARMER'S ADVOCATE:

In answer to L. F. H. re goslings with staggers, I might say I think the trouble with the goslings is that they have been fed too much shorts, which will not only cause bowel trouble but will cause leg weakness as well. When shorts is used for fowl of any kind it should be mixed with bran, sufficient to make it crumbly and not porridge or sticky.

L. G. JARVIS.  
Ont. Agr. College, Guelph.

Stop feeding sulphur. Good grass and water is the best food that can be given the goslings. Perhaps the grass may be too long and the goslings may have been trampled on; or, they may have been too much exposed to the sun, and again, they may have been overfed. My plan is to let the goslings take the newly hatched goslings into the pasture fields. I have a place to put them into at night. I do not feed the young ones. They have all the spring water and grass they wish in the pasture. I have hatched out 52 this year and have another setting to come out. So far I have lost only one gosling. My goslings grow rapidly and are always strong and healthy. I occasionally give a look at them to see that none are caught in the long grass. It is quite possible your correspondent may have too many old geese with the goslings and the latter may get trampled on. I would like to know what sort of geese your correspondent has and how old they are when they die.

A. THOMPSON.  
Chateauguay Co., Que.

**Rock Cress (Arabis).**

READER, Renfrew Co., Ont.:—"Kindly identify the enclosed weed, describe its habits of growth, and suggest method of eradication?"

[The plant received is of the genus *Arabis* (Rock Cress), of the Cruciferae family. It is about 16 in. tall, slender and straight, and bears small, narrow leaves at intervals up the stem of from one to two inches. Its root is slender and straight, and bears few root fibers. The flowers are whitish, but in the conspicuous. The enclosed plant, taken from the ground on June 7th, has numerous flat, slender seed pods growing from its upper four inches, and just two or three remaining flowers next below the seed pods. It is quite a common weed, which comes up from the seed, matures, bears seed and cation is to cause the germination of the seed and destroy the plant before its seeds are formed. This is easily accomplished by growing a hoed or cultivated crop, such as corn, roots or potatoes, giving careful weekly attention to the field until all the weeds are killed. Summer-fallowing will destroy the weeds, but it is thought by many to be unduly expensive, except, perhaps, in preparation for winter wheat.]

**Plan of Homemade Hay Press Wanted.**

E. S. BATE, Okanagon, B. C.:—"Could you please publish in the FARMER'S ADVOCATE plan of a homemade hay press?"

[Factory-made hay presses are constructed so simple, strong, and convenient to use, and sold at such reasonable rates, that we doubt if there could be any advantage in trying to make a homemade press, especially if any considerable amount of hay is desired to be pressed. We will be glad, however, to publish any practical suggestions from readers.]

**Size of Water Pipes for Pumping Water.**

ROBERT RIDDELL, York Co., Ont.:—"I have a windmill for pumping water which forces it 505 feet. The mill stands in a very boggy place, which in the spring of the year is flooded with water. The water has to run away through a 4-inch tile, and it takes it some time to do so. I thought I would move the mill 270 feet. Would the same pipe do to draw as is required to force? Some say it will, and others say it takes a larger pipe to draw. I would like to have your opinion and the opinion of the readers of the ADVOCATE."

[The information given is not full enough. We should know size of pipe now in, size of cylinder and of windmill, and ground elevation. The windmill can be placed 270 feet from source of water supply, providing the elevation between cylinder level and water level does not exceed 25 to 27 feet. If the windmill is 8 feet in diameter, and cylinder not over 3 inches, and pipe is 1 1/2 inch, it will work satisfactorily. If the present pipe is 1 inch the cylinder should not be more than 2 1/2 inch. If the cylinder is larger it will be well to change for the smaller one. The usual rule is to have suction pipe half the size of cylinder and the outlet pipe can be one size smaller.

GOULD, SHAPLEY & MUIR COMPANY, LIMITED, BRANTFORD.

There would be no difficulty whatever in drawing the water by suction a lateral distance of 270 feet providing the pipes are perfectly tight. It is, however, most essential that the inlet or suction pipe to a pump should be air-tight to secure its successful operation. The theory is that water can be raised by suction about 33 feet perpendicularly, but practically 20 to 25 feet is about all that is safe to recommend. The diameter of a suction pipe should not be less than about half the diameter of a pump cylinder. When the suction pipe is near the extreme limit of say 25 feet vertical height, it should be even larger than this. The lateral or horizontal distance does not make any material difference, but where a long pipe is used it is desirable to have a check valve on the pipe if it is laid low enough to be safe from frost. Elbows or short turns should be avoided in a suction pipe as much as possible. In fact, this would also apply to a discharge pipe, as every turn causes increased friction and in consequence requires more power to operate the pump. We trust the above will answer your enquiry satisfactorily.

ONTARIO WIND ENGINE & PUMP CO., LIMITED, TORONTO.]

**Dying Fowls.**

MISS J. MCK., YORK CO., ONT.:—"I would like to know if you could give me a remedy for my hens. They look well and are fat, and were laying well till about a week ago, when they suddenly began to get sick and die. Some of them sit on the roost, others sit on the ground, and seem to sleep or be stupid. They will not come to the feed, but mope around a few hours and then die. They seem to have a thin, yellowish discharge; they look quite red in the head till they die, but those that linger for a few days get pale. They have unlimited run. They were fed on barley all winter and did well, but latterly they have been fed on oats. They have pure water near, but I see some drinking the liquid in the barnyard."

[The sickness and death of the fowls may be traced to the drinking of liquid from the barnyard. Mr. A. G. Gilbert, Manager of Poultry Department at Central Experimental Farm, Ottawa, reports that a number of similar cases have been traced directly to the fowl drinking soilage from the barnyard manure heap. It is unfortunately a fact on many farms, though not in this one, that where hens are allowed the free run of the barnyard no provision is made for them to receive fresh water to drink. No doubt flocks thus neglected would thrive much better and lay more eggs if regularly supplied with fresh water to drink.]

**Pigs Dying.**

SUBSCRIBER, Brome Co., Que.:—"Would you kindly inform through your valuable paper what is the cause of a sow losing her pigs when fed nothing but milk, nor handled, laying quietly in a good clean nest in a moderate condition?"

[With so little data as to age and condition of the pigs it is difficult to assign a cause. It is possible to feed too much of so good a thing as milk, and if the sow was getting too much it would be liable to affect the pigs through her milk. Probably less milk and more variety of other light foods would have been better both for the mother and the little ones. If the pigs had grown very fat it was an indication that they needed more active exercise, and this is essential in the case of the sow as well. Quietness, if continued too long, is apt to be fatal to the youngsters.]



Solution of Breeding Problem.

JOEL B. CRAIG, Lambton Co., Ont.:—"As I have had occasion to work out similar problems to that of "Query" in last number of FARMER'S ADVOCATE, I will send my solution of same, which I think is about as near correct as nature allows:

Table showing breeding results over 10 years, including cow counts, calves, and males/females.

814 number of whole herd at 10 years. \*By changing these two figures, 7 heifers, 8 males, makes a difference of 8 less females and 1 one male at end of ten years, or 7 animals less in total of herd.

Horse Power from Old Mower.

W. J. B., N. Westminster, B. C.:—"Will you kindly publish the plan of horse power made from an old mower or reaper gearing."

[We will be pleased to receive from a reader and publish an illustrated description of a horse power such as is asked for by our British Columbia reader.]

Eradication of Sow-Thistle (Sonchus Arvensis).

R. O. D., Wellington Co., Ont.:—"I have discovered a small patch of sow-thistle. Can you tell me how to get rid of it, as I have heard it is a very difficult thing to do?"

[There are several varieties of sow-thistle, but the perennial sort (Sonchus arvensis) is most to be dreaded. It has an upright habit of growth from one to three feet high, and, like the common Canadian thistle, is frequently branched towards the top. The stems are hairy and bristly; the leaves resemble those of the dandelion, but are larger and have prickles along the edges and at the points. When the plant is wounded it gives out a milky juice, and is therefore sometimes called milk thistle. Its blossoms are bright yellow, resembling those of the dandelion. After getting a foothold it spreads rapidly from the roots, also from the seeds, and should therefore be vigorously and promptly dealt with. It usually makes its appearance in May and continues to grow all through the summer. It blossoms in July and later and soon ripens its seeds, which are numerous, and being attached to downy appendages are readily carried from place to place. Its propagation by the root stalk is similar to that of Canadian thistle. All along the creeping root stalks are numerous latent buds which send up new plants. The secret of eradication lies in not allowing the seeds to ripen and in clean surface cultivation, which latter serves to cut off the upright plants without disturbing the creeping root stalks which are always a few inches below the surface of the ground. A well-worked summer-fallow, followed by a cleanly cultivated hoed crop, will usually do a good job. A crop of buckwheat plowed down in the summer-fallow will smother many of the weeds and weaken those that remain.]

Slugs and Root Maggots.

GARDENER, Middlesex Co., Ont.:—"I am having a great battle with insect pests this season, two of the most difficult to manage being small snails (shell-less) or slugs which have been particularly destructive on beans; and a small white maggot, about a quarter of an inch long, which is destroying cabbage and onions by eating the roots about an inch underground. I tried lime for the slugs, but it did not stop them, and am now using salt sprinkled under each bunch of beans. If you, or any reader, can offer helpful suggestions for either, or both, of the above pests I will be greatly obliged."

[Slugs are frequently referred to the entomologist for some remedy against their injuries. They are not insects, however, but belong to the Mollusca. The best remedies against these troublesome nocturnal marauders are frequent dressings beneath the plants with freshly slacked lime or salt. The lime is preferable, as some plants are injured by salt. The effect of the lime is to dry up the viscid secretion which covers the slugs' bodies. It is sometimes necessary to make three or four applications, sowing the dry lime broadcast beneath and among the plants. The best time to apply it is in the evening. The slugs are able to pour out a considerable amount of the slime, and thus crawl away from the lime, but the glands which secrete this protection, after two or three consecutive nights of liming, become exhausted and the creature is killed by the fresh lime. Salt is also an excellent remedy and very fatal to slugs, but must be used with caution. A remedy which I have seen tried in Vancouver Island is to place in greenhouses where slugs were troublesome small heaps of damp oatmeal with which a small quantity of Paris green had been mixed. These were placed on slips of glass, which were easily moved from place to place where required.

The troublesome root maggots which every year do so much injury to market gardeners by destroying radishes, onions and cabbages, are the maggots of small gray flies about one-third smaller but

very similar in appearance to house flies. Many remedies have been tried, but none give perfect immunity. For radishes, the best results have been secured by watering the young plants from the time they appear above the ground with a carbolic soap wash made by adding two quarts of soft soap to two gallons of water. When heated to the boiling point add one pint crude carbolic acid. For use, take one part of this mixture and mix with fifty of water; then sprinkle directly upon the plants once a week.

For onions, mix one pint of crude carbolic acid with fifty pounds of land plaster; scatter along the rows close to the onions. Kainit has been highly recommended by some, but when the insects are very abundant is only partially successful.

For cabbages, the carbolic plaster mentioned above, as well as kainit or nitrate of soda, a small quantity round each plant, have been highly recommended. In my own experience the best results have been secured by removing the earth down to the small roots and pouring in either a decoction of white hellebore (four ounces to the pailful of water) or applying a small quantity of the dry powder around the stems and hoeing the earth well up to the collar of the plant again so as to induce a growth of new rootlets. JAS. FLETCHER, Entomologist, Central Exp. Farm, Ottawa.

Potato Bug Remedies.

"OLD SOD" writes:—"What is the best remedy for potato bugs, which threaten to be bad with me this year?"

[There is no better application than Paris green and water. At the Ontario Agricultural College various plans and remedies were tested, with the result that two teaspoonfuls of the poison in ten quarts of water, applied with a watering can (fine spray), secured the highest yield of potatoes—100 bushels per acre—while no treatment at all gave but 70 bushels. Apply as soon as bugs appear.]

Insufficient Fertilization of Pear Tree.

A Nova Scotia correspondent writes:—"I have a Bartlett pear tree which is in full bloom every spring. The fruit sets and gets about as large as a pea and then falls almost totally. What remains is usually twisted and does not develop to full size. Very few develop fully. Will you inform me through your journal what is the trouble and the remedy?"

[A Nova Scotia correspondent's query about the Bartlett is not easily answered. He says: "The fruit sets and gets about as large as a pea and then falls almost totally. What remains is usually twisted." It looks to me as if insufficient fertilization of the blossom was the trouble. The Bartlett is a self-sterile variety, and would unquestionably do better if it had some self-fertile variety near it like it, such as Angouline, Flemish Beauty, Keiffer, or Tyson. The curculio is possibly the cause of the twisted fruit. The pear bitten by this insect does not, like the plum, drop off, but develops into a gnarled and deformed fruit. If the tree in question stands by itself, plant one or two of the self-fertile varieties near it. If hardness is wanted, try Keiffer or Flemish Beauty; if flavor, select Tyson or Beurree Rose. In any case give the tree a good dressing of hardwood ashes or muriate of potash. M. BURRELL, Experimentalist, Niagara Fruit Station.

SHOWS AND SHOWING.

Table listing various agricultural exhibitions for 1906, including dates and locations like Trans-Mississippi, Omaha, Killarney, No. 1, Shoal Lake, etc.

Table listing various agricultural exhibitions for 1906, including dates and locations like Illinois, Springfield, Lanark, Almonte, Centre Bruce, Paisley, etc.

[NOTE.—If Secretaries of Fair Boards will send us dates of their shows we will include them in the lists of succeeding issues of the FARMER'S ADVOCATE.—EDITOR.]

Central Canada Fair.

Elsewhere will be seen the advertisement of the Central Canada Fair. This is the eleventh year of the show, which since its inauguration has progressed and improved until now it is nearly equal to even the Toronto Industrial, the greatest exhibition held in North America. That the directors of the Central Fair know their business is evident by the annual revisions and additions to the Fair price list. Every year sees changes in the interest of the exhibition. The live stock men and farmers generally have ever been treated especially well. Two years ago the directors erected new buildings—the finest in Canada—for the stockmen. Last year the prizes were greatly increased in many lines in which the farmers are the competitors, and this year there have been still further increases. Every suggestion of a competitor has been thoughtfully considered, with the result that the Association never loses an exhibitor. A new class in horses this year is for heavy draft, owned in the counties of Eastern Ontario. Hereafter farmers had to compete against city men and professional stock-raisers in the heavy draft class. A new class in the prize list for swine is for hogs suitable for export. The values of the second and third prizes have been increased in the poultry department, while the building has also been remodelled and a large addition added so that there will only be one story of coops instead of two as in the past.

Thirty-two gold medals are offered as special sweepstake prizes for horses and cattle. As usual, there is a special prize for a milk test during the fair. And all this besides the extension and improvement of the grounds, the construction of a new main building and the enlargement of the machinery building. Farmers who have exhibited at Ottawa in the past will be there again this year; those who have not been at the Capital's great fair will do well to take their stock there this year. All particulars can be obtained by writing E. McMahon, Secretary, C. C. E. A., Ottawa.

Toronto Industrial Exhibition.

The prize list for the Toronto Industrial Exhibition, which is to be held this year from the 29th of August to the 10th of September, has been issued, a copy of which we have received. The exhibition is to be formally opened by the Governor-General and the Countess of Aberdeen on Tuesday, the 30th August, and this will probably be their last official public act in the Dominion previous to their departure from our shores. The exhibition this year promises to be more interesting than usual on account of Great Britain and France each sending large exhibits.

The Winnipeg Industrial Exhibition.

Opens on the 11th July and closes on the 16th. Everything points to the most successful show of the series. The live stock department will be immensely stronger than heretofore, and many new and interesting as well as practical features are on the programme. No better time could be chosen for making a trip to the Prairie Province to see it at its best, both on its farms and in its great agricultural and industrial exhibition. The exceptionally low railway rates of fare are also a strong inducement to go west and view the vast heritage we have there.

MARKETS.

FARM GOSSIP.

Crop Prospects from Ocean to Ocean.

From the Pacific to the Atlantic, throughout Canadian territory, there comes the one story of exceedingly brilliant prospects in almost every agricultural product. The seeding season has been generally favorable throughout, except perhaps in the far east, which was somewhat delayed by cold rains. All grains well put in have had a peculiarly favorable growing season, with the gratifying and cheering results below given. Fruit districts report very favorably, except where insect and fungus pests have committed depredations. The peach leaf-curl seems difficult to combat even by careful and thorough spraying, but the loss from insects and other forms of fungus are being largely overcome by the use of the spray pump and proper mixtures. We have the country, the weather, the people, and the sources of information, which, if made the most of, can have but the one result of keeping us in the forefront of agricultural nations. The following reports from west to east contain much encouragement:

BRITISH COLUMBIA.

The weather is warm and growing crops are in splendid condition. The grass on the ranges of the interior in consequence of the copious rains is in excellent condition. Growing stock is reported in prime condition for butchering. The prices of all classes of farm produce are still high. There is a larger area in the Fraser Valley under crop than ever before. All classes of fruit are in the best possible state.

NORTHWEST TERRITORIES.

INDIAN HEAD DISTRICT.—We had a fine rain Monday (the 20th June), and crops of all sorts are recovering fast from the frosts. The hay crop is very poor; up to the 20th there had not been enough rain to give it a fair start, and it is rather late now to make up. We have a good catch of grass seed, and I hear of no complaint in this respect. For the first time our raspberry bushes are in poor condition. We never had better canes, or had them come through the winter in better shape. I attribute the injury to frosts of 27th, 28th and 29th ult., combined with lack of moisture at that time, but two rows close to a hedge, which must have received the effects of these frosts as well as the outer rows, are in fair condition. The outside rows were covered the same as the inside, but had very little snow on them, and after all the canes may have suffered more than appearances indicated. The crops in this and other districts outside the Indian Head municipality are looking much better than any previous year in my recollection, and I can say also that weeds are abundant everywhere. Angus Mackay, Supt. Experimental Farm.



MANITOBA.

Throughout Manitoba the crop prospect is good, in the central and eastern part of the Province could hardly be better, there having been abundant rains during June. In some sections of western Manitoba the rainfall has been somewhat light; consequently, the crop will be short in straw, and on the light side. On the whole, however, the outlook is most hopeful for all kinds of grain crops. The hay crop is, however, very light, and will be in many districts a total failure. Dependence will have to be put on wheat and other fodder crops, which in these districts will be light, unless copious rains come soon. In districts where there are deep sloughs and swamps there will be a good supply of hay on land usually too wet to cut; but the quality of such hay is not always of the best. Root crops have suffered from lack of early rains, and are backward. The season has not been favorable for seeding down to grass, although some good catches of grass are reported. Native wild fruit and cultivated currants and gooseberries promise a bountiful crop. Raspberries generally have been winter-killed. A very large area of new land is being broken up, new settlers coming in and the natural increase spreading out.

ONTARIO.

WABIGOON.—It is too early to give any idea as to prospects of potatoes and roots. Spring grains probably a fair crop. Hay below average. Wild fruit plentiful. Pasture fair. Season has been very dry.—A. E. Annis. Dryden, June 21st.

MUSKOKA AND PARRY SOUND.—Crops in this vicinity fair. If the weather continues favorable they will be above the average.

ESSEX.—Crops of all kinds are looking well here, and promise an abundant harvest. Wheat, corn, oats and barley are a first-class crop, and will in this locality give a yield of a 100 per cent. crop. Meadow will be short perhaps one-fourth. Pastures are all right yet, but dry; root crops short, but not much grown. Fruit promising an abundant yield of all kinds. Tobacco is the all-absorbing topic, hundreds of acres being planted, and shortage of plants will be the only limit to the acreage.—W. S. Baldwin.

LAMHON.—Prospects for wheat good. Oats and barley average, with oats somewhat short, but improving with rains. Peas very little sown, owing to failure for last few years. A large acreage of beans planted, which are looking well. Corn promises well, not the usual acreage planted. Roots a poor stand with many, owing to defective seed. Potatoes are looking well. Fruits: Apples a medium crop; plums average; peaches dropping badly, owing to curl leaf; raspberries and blackberries good.—E. F. Augustine.

W. ELGIN.—Wheat is above the average. Oats are looking splendid. Peas not so good. Corn so far is looking splendid. Acreage sown is very large. Hay is barely as large a crop as it was last season, but still it is good. Roots are extensively sown in this section, and as they are sown at different dates it is hard to give a correct idea of the prospect, but I believe it will be good. Potatoes not so good. Fruit of all kinds, good prospects, especially peaches.—Chas. C. Ford.

HALDIMAND.—Wheat is in good condition, and will average from 15 to 25 bushels per acre. Oats, peas, and barley are exceptionally good. The hay crop is very heavy. The potato crop also promises good results. Apple prospects are fair. Fruits have done no damage.

HURON.—Fall wheat is looking well; spring, none sown; oats, fair crop; peas, good; barley, very little sown; clover and timothy hay, disappointing; roots, looking well; apples, not much winter fruit; small fruits, plentiful.

BRUCE.—Hay—Old meadows are very light, but fresh seeded is above the average, especially clover. Fall wheat very uneven; some good fields, and as many others that are very poor. Summer-fallows are generally good, and where there was sufficient moisture last fall to give a good growth it is all right. Peas exceptionally good. Oats and barley average. Small fruits are good. Potatoes promising well, and are very uneven and backward. Potatoes promise well and are growing freely. Pastures are generally good, but the cold weather and drought are telling on them now, and unless we have rain they will soon be very short and dry.—J. B. Muir.

GREY.—Fruit prospects for this section appear to stand about as follows: Small fruits rather light, but more than sufficient for the demand. Cherries, 50 per cent.; plums, 70 per cent.; early and fall apples, full crop; winter apples, fair to good—about 75 or 80 per cent., excepting Spys, which are very light. Trees and fruits of all kinds looking remarkably well, except a few orchards which have been infested with caterpillars.—J. G. Mitchell, Georgian Bay Fruit Exp. Sta.

GREY.—Wheat, oats, barley and peas over the average, and fruit prospects are good. Root crops, early sown, look well, but late sown need rain. Clover exceptionally good, and meadows will yield large returns.

NORTH MIDDLESEX.—The wheat in this neighborhood is very good. Oats are hardly up to the average. Barley fair, but very little sown. Peas are very good. Hay is just fair, as the rain came too late. Corn looks very well. Roots are coming on well since the rains came. Potatoes are promising better than usual, though there are few fields compared with years ago, but oats have not yet made any great growth. Corn and roots are coming on well, and up to date (June 25th) pasture has been plentiful. The usual number of mixed fattened, the chief grain food being barley mixed with milfeed or other coarse grains in whey. Selling price \$1.65 to \$1.75 per cwt. alive. Cheese factory patrons are pleased to note a slight improvement, prices for that product now getting up towards 8 cents. Farmers are alarmed at the report of a sharp advance in binder twine. A newspaper report the other day credited the Government with closing the Central (Ont.) Prison factory because the country was flooded with twine and prices so low. It don't look like it now. Potatoes and garden stuff are doing well, barring insect pests. Strawberries, currants and other small fruits abundant, and excellent prospects for larger sorts, though it is too early to speak confidently regarding apples. The yield, however, will be nothing like what the spring bloom indicated.

PERTH.—Seldom has there been such a promising outlook for an abundant harvest as there is in this district at the present time. Fall wheat particularly is looking well; sown principally on sod land, and of the Dawson variety. In fact, I know of no product of the farm at the present writing that seems to indicate even a partial failure. Orchards promise abundant yields. There are more insect pests than usual. Tent caterpillars and curculio seem to be quite busy in orchards that have not been sprayed. Hay and pastures abundant. Corn, potatoes, and all kinds of roots have started well.—John Burns.

WATERLOO.—Crops of all kinds at this date are fully up to average. Wheat fine—none winter-killed. Rather early to speak of the prospects of corn and roots. Have had an exceptionally good season all round so far. Plenty of rain to give a good crop of pasture and hay. Roots and corn are getting a good start. There is the prospect of a good, even crop of fruits of all kinds. Apples ahead of last year. Peas, plums and cherries a good average crop, but scarcely "loaded down" so heavily as last year.—John Taylor, Jr.

WELLINGTON.—All grains, hay, corn and roots are looking well. Most things are further forward than usual at this time of year. Pastures are in good condition.—Jas. Bowman.

PEEL.—Present prospects of fall wheat 18 to 20 bushels, spring fairly good. Barley good. Oats promise well. Peas not up to average. Corn not up to average. Roots, turnips, and potatoes promise well. Mangels not very good catch. Hay excellent quality, but not very heavy. Pasture is excellent. Apple prospect good. Plums below average. All small fruits good.—J. Pickering.

OXFORD (NORTH).—Fall wheat that was well put in last fall is really grand, but a lot of the late sown had to be plowed down this spring, which again teaches the lesson that it is useless to put in wheat on land that is not well prepared and in good condition. Barley, peas, and oats have never been as good at this time of the season, that I know of. Very little spring wheat is grown, but looks well. Mangels are not as good as some other years. Potatoes came up vigorously, and are making rapid growth. Turnips came up rapidly, and are not injured by the flies. Clover and all grasses are exceptionally good, and promise a big yield. Pasture is better than it has been for years. Apples are only a fair crop. Plums will be the same, as brown rot has attacked them. Peas and small fruits are simply immense. On the whole the outlook is more encouraging than it has been for years past.—H. Bollert.

BRANT.—Crops are looking fine here, and fall wheat perhaps never looked better. There is some rust reported, but not heavy enough to do any damage. Hay is a heavy crop. Oats, barley and root crops look well, and promise a rich harvest. Apples have been falling off the trees, but the yield will be fair, nevertheless. Small fruits plentiful.

NORFOLK.—Reports from all parts of the county show that there will be an abundant harvest. The hay crop in many parts is superior to that of last year.

WELLAND.—The outlook for a bountiful harvest on the Niagara frontier has not been so promising for years as at present. Wheat, oats, rye and barley will be exceptionally good. Corn is a little backward. Other crops fair. Fruit harvest will be a very light one, and peaches are about one-quarter crop; plums a failure; pears and apples promise fair.

SMITH.—From all parts of this county come most encouraging reports of all crops and fruit prospects. Fall wheat has been greatly improved by timely warm rains, so that the yield is above the average. Haying has commenced and is a heavy crop. Farmers nearly all say they never saw the county look better from every point of view.

LINCOLN.—Wheat, 75 per cent.; oats, 100 per cent.; barley, 100 per cent. Corn good, increased acreage planted. Hay very heavy. Potatoes look well, increased acreage. Apples, good many dropping in orchards not sprayed. Peaches about one-third crop; plums about one-half crop; pears good average crop; grapes promise full crop.

WENTWORTH.—Fall wheat has much improved of late—is still only a poor half crop. Spring grain of all kinds promising a full crop, quite above the average. Hay, and especially clover, is very fine; clover a little affected with midge. Corn, not so much put in, but looks well. Potatoes promise well. Pasture has been excellent. The principal fruit grown in this section is apples, which promise a fair crop. Small fruits promise well. Peas very good. Plums and cherries average. Upon the whole, crops very satisfactory.—John Jackson.

HALTON.—The great bulk of fall wheat is a medium crop, while some is far above the average. Spring wheat good; not much sown. Barley, oats and peas away above the average. The hay crop is exceptionally heavy, especially the clover, is very fine; clover a little affected with midge. Corn, not so much put in, but looks well. Potatoes promise well. Pasture has been excellent. Small fruits are very abundant and of excellent quality. Apples and pears very abundant, but dropping badly. Cherries and plums will be a fair crop.

YORK.—All kinds of grain looking the very best. Hay (timothy) fair. Clover an abundant crop, two crops on the ground. Corn starting nicely. Mangolds; considerably damaged by fly, but plenty left for a crop. Turnips starting away nicely. Potatoes are coming a little delicate in clay and. Apple prospects fair. Small fruits of all kinds abundant. Pasture excellent.—John Bell, Oldsdale Farm.

ONTARIO (SOUTH).—Fall wheat, very little sown; some good, rest poor stand last fall. Spring wheat turned yellow in many cases, perhaps an average. Barley, oats and peas all looking well, except peas on wet land. Hay a fair average crop. Clover mostly good, some old meadows are light. Corn doing well. Mangels are doing well. Apples promise a very small crop. Peas are also scarce. Plums and cherries heavily loaded. Small fruits variable. Pastures good.—Elmer Lick.

VICTORIA.—The crops in this section were never in a more promising condition. Fall wheat is very heavy. The first crop of hay will be extra heavy, and old meadows will be an average crop. Spring wheat, oats and peas are good, as well as the corn and roots. Some of the grain was slightly damaged by the worms. Fruits looking well.

PETERBORO.—Hay and clover a fine crop. Wheat, fall and spring, heavy on the ground, but a good deal of the wheat showing rust and may affect the crop very much later on. Peas and oats are both looking well, peas particularly. Roots looking favorable.

DURHAM.—All kinds of cereals, without exception, never looked better at this season of the year. Peas, of which there is a large acreage sown in this section, are particularly promising. Hay and clover could not be heavier. The apple crop does not promise well. Plums are scarce.

NORTHUMBERLAND.—Wheat, both spring and fall, above the average, a large acreage of spring but not of fall. Rye not an average. All other grains extra good. Hay—clover, not large acreage, and good; a small acreage of timothy, and not large acreage, mostly old seeding. Pasture never better, if as good. Silo corn coming on fairly well, smaller acreage than last year. Roots coming on nicely. Mangels and carrots doing well. Potatoes, too early to say, but must be a crop. Fruit (small) of all kinds abundant. Apples only fair. The most favorable prospects in years.—Alex. Hume.

FRONTENAC.—The hay crop is very good, with the exception of old meadows, which are very light. The grain is also good, except peas, which have been hurt with the heavy rains. Potatoes are good. Root crops are very backward. Corn is not doing very well up to the present time. Fruit of all kinds a heavy crop. Pastures are commencing to get rather short, but on the whole we are going to have a bountiful harvest when everything is taken into consideration.—Richard Moore.

PRINCE EDWARD.—The prospect for a good grain crop is evident. Wheat, barley, oats, and peas are all good, and should favorable growing weather continue it will be up to the average. Timothy fair, but clover is very heavy—the heaviest for years. Corn, roots and potatoes all looking fine, with a good prospect. Buture never was better. The small fruits crop very good. Apples can be safely placed at half crop. The season has been thus far an excellent one, and prospect never was brighter.—W. C. Huff.

HASTINGS.—Hay is a heavy crop, particularly clover. Grain shows an unusual length of straw, and development is fully two weeks in advance of average seasons. Rye alone shows poorly. Roots are making a fine showing, and pastures are excellent. Strawberries are a very large crop and of fine quality. All other fruits are abundant and of average quality.

LENNOX.—Everywhere the country has the appearance of abundant crops and good pastures. Fruit of all kinds will be plentiful from present indications.

ADDINGTON.—The crops are above the average this year. Rye, barley and fall wheat are headed out and will soon be ready to harvest. Hay has not been as good as now in years past. Peas are above the average. Oats are coming on well. There will be plenty of fruit here.

LEEDS.—If the weather continues favorable the prospects are there will be the largest yield in many years. Corn, buckwheat and oats are in a particularly flourishing condition. Hay crop is heavy. There will probably be a very large yield of potatoes.

LANARK.—Everything at this date is looking remarkably well. Harvest will be from ten days to two weeks earlier than last season.

GRENVILLE.—Not much fall wheat sown, but what is in is very good. Hay is very good. Grain crops never looked better at this time of the year.

CARLETON.—With fair weather conditions during the remainder of the season the crops in the Ottawa district should be exceedingly heavy in all lines. Fruit is the only crop that has suffered, and in some sections apple and plum trees were attacked by caterpillars. Orchards that were near poplar bushes suffered especially, and in some cases were stripped entirely of leaves. However, other sections escaped, and where the caterpillars did not visit there are prospects of a large yield of fruit.

RENFREW.—The general appearance of the crops in this section is good. Wheat is reported in some places not quite up to the average, but oats and peas promise an abundant crop. Hay will be a large yield.

LEWIS AND CLARK.—Hay, clover, etc., will be an extra crop—best in years. All grains promise well. Roots are looking well; potatoes also; bugs very numerous. Corn made a good start, but last two weeks have been cold, especially at night. It has given it rather a stunted, yellow look; better weather may cause it to recover. Fruits, currants and gooseberries good crop. Apples, plums, cherries and strawberries only a medium crop, varying very much even on adjoining farms. Pastures extra good.—James H. Eason.

QUEBEC.

SHEFFORD.—The county in general never looked better. Hay is average, or above in places. Grain is more advanced than usual and above in places. Corn promises well—about average. Potatoes extra good for the time of year. Roots a good stand, but too early in the season to give an opinion. Small fruits a large yield. Apples fair. Pastures at their best—seldom better. April, May, and the first week of June was very dry, and a large area is put under crop in fine condition, and the recent heavy rains have forced crops ahead at a wonderful rate.—P. F. Fowler.

SHERBROOKE.—The continued heavy rains for the last ten days have insured the full hay crop so well started in the early spring, and in new meadows the yield will be a full crop, in old meadows above the average, though the latter show many weeds. Clover particularly good. All grain crops promise a heavy yield, now well advanced. Potatoes show remarkably well. Corn medium; much seed failed, and crows have stripped many fields.—W. A. Hale.

PRINCE EDWARD ISLAND.

QUEEN'S.—All kinds of grain are growing exceedingly well. Hay promises an abundant crop. Corn, potatoes, and root crops have come up well. Pastures are good, as we are having an abundance of rain. The fruit is well set on the trees, and promises to be as heavy as the great crop two years ago. Small fruits are also very promising. We are now having beautiful growing weather after the somewhat cold spring. We have had no frosts to injure the most delicate plants.—W. S.

NEW BRUNSWICK.

YORK.—Good prospects for hay. Pasture first-class. Grain was sown under favorable conditions, but the weather lately has been too cool and wet. Rather early to say much about roots. Potatoes are looking well. Fruits of all kinds wintered well and bloomed satisfactorily. Some strawberry rust, and considerable cool wet weather during blooming time, otherwise the prospects for small fruits are decidedly good. Many apple blossoms have blighted, but plenty have set to give a good crop. Some cutworms, but not many tent caterpillars.—J. C. Gilman.

NOVA SCOTIA.

KING'S.—Hay crop is exceptionally good, will exceed that of last year. A large acreage of potatoes planted, and prospects good. Cole beetles not very numerous. Apples have not set the phenomenal crop that was promised, owing probably to a week of rainy weather at blossoming time; still most orchards have set fairly well so far as can be judged now. Caterpillars not very plentiful. Tent caterpillars more abundant. Spraying more general than ever before. Plums variable; some orchards have set remarkably well, others very poorly. Peas have set well. Pastures are remarkably good, and stood doing well. The weather has been unusually moist since the last of May, and farm work has been delayed somewhat.—F. C. Sears, N. S. School of Horticulture.

CUNYBERLAND.—Grain of all kinds good. Hay exceedingly good. Corn, roots and potatoes have made a good stand, and are starting nicely. Potato bugs right on time. Apples and cherries promise well; small fruits fairly well.—C. H. Black.

UNITED STATES.

The U. S. Government statistician reports the aggregate acreage of winter and spring wheat to be 43,000,000 acres; prospective yield 700,000,000 bushels. The average condition of winter wheat is 90.8 per cent. and of spring wheat 100.9 per cent.—which is an unprecedented condition. The average for the past ten years has been 92.5 per cent. The condition of spring pasture is phenomenally high.

SAVANNAH, MO.—Fall wheat, 100 per cent.; oats and barley, 95 per cent.; peas and corn, 100 per cent.; potatoes, 75 per cent.; apples, plums, and pears, 100 per cent.; cherries and peaches, 70 per cent.; pastures, 100 per cent.; hay, 100 per cent.—Henry Jackson.

MICHIGAN.—Prospects good for wheat, oats, barley, corn. Hay—New meadows good, old meadows light. Fruit good.—John Aitkin.

Oxford County, Ontario.

We had some very heavy rains which have insured us an abundant crop of hay, and pastures are good and the milk flowing well, although cheese is still very dull of sale at 7 cents. The winter stall feeders in my immediate vicinity have just got rid of their cattle at 4 1/2 cents; potatoes have been selling well at about 80 cents to \$1.00, but now that the new crop is looking so well the demand is considerably limited. The ever-present potato bug does not seem to be so vigorous this year as formerly. The fall wheat is looking very well and has gained in evenness more than could possibly have been expected from its condition last fall, and if we get good filling weather we believe that the yield will not be much short of last season. Some have commenced haying. Corn and roots are doing well on ground that was properly prepared early in the season. Fruit promises to be abundant, and although we have been on the confines of frost at different times the temperature has not gone low enough to do any harm. At least one barn in our county was completely demolished by a wind storm or cyclone, and some others partially damaged; and this has given rise to an agitation for instituting an insurance department against wind storms and cyclones, to be run and worked as a branch of our worthy and successful local fire insurance. A barn in our neighborhood was consumed by fire, supposedly from spontaneous combustion. A quantity of crushed oats had been thrown loosely in a bin in the granary, and getting damp, generated heat enough to set the mass on fire. In warm weather chop should be well tramped and leaked after for a time, as it will be likely to heat enough to deteriorate very much in feeding value, even if it does not burn up the buildings. Hoing, weeding, cutting thistles and doing road work are now our principal occupations. D. L. June 22nd, 1898.



Kent County, Ont.

CHEESE FACTORY AND CREAMERY NEEDED.

We have had an ideal spring and summer so far; dry and cool during seeding, and a generous rainfall since. Crops of all kinds are looking splendid and vegetation is advancing rapidly; in fact, wheat will be ripe fully a week in advance of last year, and the crop will be a good average one; hay is medium to heavy; corn and beans look well, with a large acreage of the former. Hundreds of acres of tobacco have been planted in Kent and Essex and acres more would have been grown had the plants been obtainable. Most farmers unloaded their wheat at \$1 or better. Those that did not can now do so at from 75 cts. to 80 cts. per bushel. Flour has declined 25 cts. per hundred, but bran and shorts remain the same. Beans have declined in price from 75 cts. and 80 cts. to 50 cts. and 60 cts. per bushel. A great many are holding for the dollar, with rather slim prospects of getting it. Potatoes retail at 80 cts. per bag; new ones nearly large enough for use. There is an abundance of small fruits; strawberries are "on deck" and sell from 2 to 5 cts. per quart. Where spraying has been properly performed there will be a heavy yield of apples, plums, etc., but peaches have been badly injured by the curl. Eggs bring 8 and 10 cts. per dozen, and butter is from 11c. to 14c. per pound. A cheese factory and creamery is badly needed here. There is not one within miles. We have grand pasture land, good cows, and the best of shipping facilities; all that is required is someone with experience and capital enough to put up a good plant. Chatham, Ont. W. A. McG.

Ontario Canned Goods.

At a recent meeting of the Ontario Packers' Association a minimum price of 75 cents per dozen cans was fixed for canned peas, corn and tomatoes, and it was stated that owing to the increased cost of raw material it would be absolutely necessary to get higher prices than were paid last season. With the general advance in goods and the new demand for canned provisions for mining camps, the members held that there was no reason to fear that the price quoted would not be realized, and that there was a good prospect of this price being exceeded. After the reading of the crop report, the meeting decided that it would be unwise to press the sale of goods before they were packed, as the selling of futures has been attended in the past with very unsatisfactory results. During the season a fortnightly report of the progress of the crops and a monthly report of the packing done will be made by each member to the Secretary of the Association, so that the trade situation may be kept constantly before the canners. It was also reported that almost all of last season's pack of goods has been exhausted, so that the canners begin with a bare market.

Northwest Creamery Prospects.

Prof. J. W. Robertson, on his return to Winnipeg from a tour of inspection of Government creameries in the Northwest, reports that everywhere the country is in excellent condition, with fine prospects for cattle feeding and dairy business. From 25 to 50 per cent. more butter will be made in Government creameries, except three, than last year, while a general improvement in quality was noticed. The trade is extending to Japanese and other Eastern markets, where butter can be laid down at slightly lower cost than the French or Danish product.

Toronto Markets.

During the month of May the stock received at the Western Cattle Market amounted to: Cattle, 17,289; sheep, 1,755; calves, 1,044; hogs, 31,520. In all, 1,651 loads of cattle, sheep and hogs. This is again the heaviest market on record in Toronto. The following is the quantity of live stock exported via Montreal last week, ending June 22nd: Cattle, 3,409, and 317 sheep. Trade has been very active all the week; the butchers seemed to be out in full force and anxious buyers. The prices firm; everything being sold early in the day made the wholesale trade sharper. The fat cattle are not very good in quality—they were shipped out early in the season.

Export Cattle sold readily; prices steady and advancing; \$4.40 to \$4.75, the bulk going at \$4.55 per cwt. Dan O'Leary bought two loads of exporters at \$4.65; average, 1,360 lbs. each. Mr. A. Ironsides bought one load of exporters at \$4.60; average, 1,250 lbs. each.

Butchers' Cattle.—Choice lots butchers' cattle sold at \$4.35; good to medium, \$4.30 to \$4.25. Very inferior rough grass cattle sold at \$3.25. Mr. Wm. McClelland bought one load of 18 butchers' cattle at \$3.50 per cwt. W. Levack bought 220 cattle, mixed butchers and exporters, at \$3.75 to \$4.60 per cwt. Bulls.—Only a few of this class of cattle on sale; sold at \$3.50 to \$4 per cwt.; a good demand and bulls for export wanted.

Stockers and Feeders.—Messrs. Maybee and Zeagman sold to Ontario farmers 74 stockers, averaging 680 lbs. each, at \$3.80 per cwt. Stockers sold well at \$3.50 to \$3.80 per cwt., half fat feeders selling at \$4. Buffalo demand active.

Sheep.—Supply about equal to the demand. Yearlings and sheep mixed at \$3.25 to \$4 per cwt.

Lambs.—Spring lambs are enquired for at prices ranging from \$4 to \$4.75 per head.

Calves.—Supply limited. Good veals in demand for Buffalo. Sold from \$3 to \$8, according to size and quality.

Milk Cows.—For choice dairy cows the demand is good, \$50 was paid for a fine beast—a grade Ayrshire. Not many on offer. 25 only. Average price, \$36 per head.

Hogs.—Deliveries were very light, only 1,000 on offer. Market held firm at the same price as two weeks ago—\$5.20 for choice selections off cars, 150 lbs. to 130 lbs. Thick fat, \$1.90. Light and medium, \$4.50. Sows, \$3 to \$3.50 per cwt. Stags, \$2. We are again able to give our subscribers some information of importance. The price of hogs will be advanced to \$5.40 for next week, and farmers to take advantage of this rise must market their hogs by the second week in July, and not wait for any further advance for some considerable period.

Dressed Hogs.—The receipts were larger. There was a good demand, and the market was 40c. firmer, at \$6.50 to \$6.60 per cwt. Firm, with a prospect of a slight increase next week.

Hides.—The market is very firm. Dealers advanced prices on all grades 1c. per lb., bringing values up to 9c. to 10c. per lb. Choice steers, 9c. per lb. Cows, No. 1, 8c. per lb.; No. 2, 7c. per lb. Sheepskins, fresh, \$1 to \$1.30; old, 85c. to 90c.

Wool.—Unwashed, 10c. to 12c. per lb. Fleece, 10c. for small lots delivered. Pulled, 12c. for supers, and 20c. to 21c. for extras. Market firm.

Butter.—Deliveries fair of all stocks, demand active; small dairy prints 13c. to 14c. per lb.; creamery pounds 17c. to 18c. per lb.

Eggs.—New laid are quoted at 11c. to 12c. per doz. Choice candled stocks sell at 10c. to 11c. per doz.

Grain Market is very dull. Ontario red wheat is quoted at 80c. to 81c. per bushel; white at 78c.; goose at 73c. There

has been no deliveries for two weeks, only 500 bushels of all sorts delivered here to-day.

The railways claim to have moved 19,000,000 bushels of wheat, 32 per cent. graded No. 1 and 2 hard, which would mean to the farmers \$14,000,000 for last year's crop in the Northwest. Our exports for the ten months of the year which ends June 30th amount in value to \$119,000,000, against \$114,000,000 for the same period last year. The excess over imports for the ten months is \$17,760,000. In only one previous year since Confederation has there been an excess of exports over imports.

Hay.—The farmers struck a bad market, 20 loads on sale to-day. Price fell to \$7 per ton; baled hay \$7 per ton.

With a view to comparison of Old Country market values we quote prices from the city of Manchester, England. Milch cows \$14, about \$70; bullocks \$15, \$75; heifers \$12, about \$60; two-year stores \$7, about \$35; hogs or sheep \$2 6s., about \$11.50 each; pigs per stone (14 lbs.) 6s., \$10 per 100. Toronto, June 24th, 1898.

Chatty Stock Letter from Chicago.

Following are the current and comparative prices for the various grades of live stock:—

Table with columns: CATTLE, Extreme Prices, Two weeks ago, 1897, 1898. Rows include 1500 lbs. up, 1200 @ 1200, 1000 @ 1200, 800 @ 1200, Fed Westerns, Stillers, Stockers and feeders, Fat cows and heifers, Canners, Bulls, Texas steers, Texas C. & B., Corn-fed Texas, Hogs, Mixed, Heavy, Light, Pigs, Natives, Western, Texas, Lambs.

Prices for fine cattle have not lately been up to the high point of the season, but there is a good feeling in the trade. Cattle seem to keep the market pretty full. In a little while the Indian Territory cattle will be moving, and in four to six weeks the Western rangers will be ready. If there is going to be much of a gap in supplies it will have to show up pretty soon. It does seem to me, as the River Press, of Fort Benton, Mont., says, that after several years of half-starvation cattle on the ranges should be dying of excessive feed. Owing to heavy rains the cattle are being bloated by eating the rank green vegetation. Harry Yeomans, who bought bulls in Canada last year, has lately been out to Wyoming, and says he never before saw the country so green and full of feed as it is at present. Probably the early range cattle will be soft on account of the rankness of vegetation, but they ought to get very good before the season is out. It seems that the entire range country from Mexico to British America has had an unusual amount of rainfall so far this year. There has been a big demand in Cuba for fresh beef since war operations were commenced, but the difficulties of sending live cattle and the uncertainties of methods for handling dressed beef in the island made it so the U. S. Government is getting very many more inquiries than filling the contracts. Texas cattle which would naturally be used for the purpose are not very plentiful at present. The hog market is not so gay as it was a while ago, but considering the liberal receipts there is a good deal of vitality in it. The packers seem unwilling to pay high prices, but they are very willing to buy hogs on all breaks in the market. Texas sheepmen are waking up to the fact that they can make as good mutton as can be made anywhere. It takes those people a good while to learn such things, but they have learned the lesson now pretty effectually.

The consensus of opinion among horsemen is that good horses are materially higher in price than twelve months ago; also, that since we are now using the product of the last fall crop of colts in 1891, it will take some time for the supply of good horses to catch up with the demand.

Cattle Exports from Argentina.

According to the London (Eng.) Times shipments of cattle from Argentina to the United Kingdom and to some other European countries are increasing year by year, at least since 1895, while the total export from that country has largely declined. The total receipts of Europe from that country, which were 53,794 head in 1895, rose to 76,933 head in 1896, and to 82,565 head in 1897.

Of the total Argentine shipments the United Kingdom took 12 per cent. in 1895, 17 per cent. in 1896, and 36 per cent. in 1897. The total decrease of shipments is due to the decline in exports to adjacent South American countries, and notably Uruguay, Chili and Brazil, the first of which took in 1895 153,663; in 1896, 130,949; and in 1897, only 52,537 head; while the supply to Chili fell off about 40 per cent. and Brazil about 65 per cent. It would appear as though these South American countries were learning how to grow their own cattle, and may in time enter the field of competition with Argentina and ourselves in exporting meat products to Europe.

Canadian Bacon Has the Quality.

The Canadian Grocer is impelled to declare that Canadian bacon has attained a unique position in the British market. In addition to statistics showing that the trade has increased from \$1,800,000 in 1893 to \$5,000,000, it cites the Grocer's Journal of London as stating that "while the fall in price on continental and Irish bacon has been very heavy, Canadian has dropped only a shilling or so, and last week remained unmoved amid a scene of tumbling quotations everywhere. This is because buyers are turning to it at all centers, knowing that the quality is all that they require."

The New Abattoir for Winnipeg.

Gordon & Ironsides' new abattoir, which will cost in the neighborhood of \$60,000, will be completed by the middle of July. It is 302 feet in length, 62 feet wide and 48 feet high, and will have capacity daily for 250 cattle, 500 hogs and 300 sheep. The animals will be killed and the meat chilled and shipped to all the eastern markets. Messrs. Gordon & Ironsides are also commencing to build cold storages at Rat Portage, Fort William, and Montreal, the first two to cost \$5,000 each and the latter \$10,000.

Live Stock Exports.

The following are the live stock exports for the two weeks ending Wednesday, June 22nd, as prepared by R. Bickerdike, of the Live Stock Exchange, Montreal: Cattle, 6,803; sheep, 6,371.

J. C. MURRAY, Brandon Hills, Man.:—"I would not like to be without the FARMER'S ADVOCATE."



Memory Gems.

CONTRIBUTED BY MISS ELMA NAYLOR, ESSEX, ONT.

I. One by one thy griefs shall meet thee, Do not fear an armed band; One will fade as others greet thee, Shadows passing through the land. —Aelaide Proctor.

II. No man is born into the world whose work is not born with him. There is always work and tools to work withal for those who will. And blessed are the horny hands of toil. —J. R. Lovell.

III. Time loosely spent will not again be won. —R. Greene.

IV. Life may change, but it may fly not; Hope may vanish, but it can die not; Truth be veiled, but still it burneth; Love repulsed, but it returneth. —Shelley.

V. The thirst for the infinite proves infinity. —Victor Hugo.

VI. The world goes up and the world goes down, And the sunshine follows the rain; And yesterday's sneer and yesterday's frown Can never come over again. —Kingsley.

VII. In character, in manner, in style, in all things the supreme excellence is simplicity. —Longfellow.

VIII. For not that which men covet most is best, Nor that thing worst which men do most refuse, But fittest is that each contented rest With what they hold. —Spencer.

IX. There is no life so humble that if it be true and genuinely human and obedient to God it may not hope to shed some of its light. There is no life so meagre that the greatest and wisest of us can afford to despise it. —Phillips Brooks.

X. We have careful words for the stranger, And smiles for the sometime guest, But oft for our own the bitter tone, Though we love our own the best. —Margaret Sangster.

XI. Live as though life were earnest and life will be so. —Owen Meredith.

XII. So blind are we, our wishes are so vain, That what we most desire proves most our pain. —Dryden.

XIII. Ask thy lone soul what laws are plain to thee— Demand no other, stand or fall by them. This is the part for thee. Regard all else for what they may be — Browning.

XIV. A talent is perfected in solitude, A character in the stream of the world. —Goethe.

XV. It is not what we read, but what we remember, that makes us learned. It is not what we intend, but what we do, that makes us useful. It is not a few faint wishes, but a lifelong struggle, that made us valiant. —H. W. Beecher.

SENT BY MRS. WM. KINLEY, BELMONT, MANITOBA.

I. Self-reverence, self-knowledge, self-control, These three alone lead life to sovereign power. Yet not for power (power of herself) Would come uncall'd for) but to live by law, Acting the law we live by without fear; And, because right is right, to follow right Were wisdom in the scorn of consequence. —Tennyson.

II. A word fitly spoken is like apples of gold in pictures of silver. —Solomon.

III. Love took up the glass of Time and turned it in his glowing hands; Every moment, lightly shaken, ran itself in golden sands. Love took up the harp of Life And smote on all the chords with might, Smote the chords of Self, that trembling passed in music out of sight. —Tennyson.

IV. Better not be at all, than not be noble. —Tennyson.

V. Sunset and evening star And one clear call for me; And may there be no moaning of the bar When I put out to sea.

VI. For tho' from out our bourne of Time and Place, The flood may bear me far, I hope to see my Pilot face to face, When I have cross'd the bar. —Tennyson.

VII. Angels of Life and Death alike are his: Without his leave they pass no threshold o'er. Who then would wish or dare, believing this, Against His messengers to close the door. —Longfellow.

VIII. Silently, one by one, in the infinite meadows of heaven, Blossomed the lovely stars, the forget-me-nots of the angels. —Longfellow.

IX. Live, that when thy summons comes to join The innumerable caravans that move To that mysterious realm, where each shall take His chamber in the silent halls of death, Thou go not like the quarry-slave at night, Scourged to his dungeon, but, sustained and soothed By an unfaltering trust, approach thy grave Like one who wraps the drapery of his couch About him, and lies down to pleasant dreams. —Bryant.



THE QUIET HOUR.

Afterward.

"As when some workers, toiling at a loom, Having but little portions of the roll Of some huge fabric, cannot see the whole, And note but atoms, whereto they entomb— As objects fade in evening's first gray gloom— The large design, from which each trifling dole But goes to make the long much-wished-for goal, So do we seek to penetrate the doom That lies so heavily upon our life, And strive to learn the whole that there must be; For each day has its own completed piece. The whole awaits us, where no anxious strife Can mar completeness: here but God's eyes see What death shall show us when our life shall cease."

There is a wondrous power of explanation in "afterward." Things do not seem to us to-day as they will seem to-morrow. This is the key which the Scriptures give us for the solution of the strange mystery of affliction. "No chastening for the present seemeth to be joyous, but grievous; nevertheless, afterward it yieldeth the peaceable fruit of righteousness." There are many things in God's way with his people which at the time are dark and obscure, but which the future makes clear and plain. To-day's heavy clouds to-morrow

the painful mysteries vanish. When we stand, at length, at the end of our schooldays, the old, confusing pages will be plain and clear to us as childhood's earliest lessons, though hard at the time, are afterward to ripe manly wisdom. Then we shall see that every perplexed line held a golden lesson of wisdom for our hearts, and that the book of Providence is but another of God's many testaments of love.

In our sorrows and disappointments, good men come to us, and tell us that the Lord doeth all things well; that there is some blessing for us in every bitter cup; that the strange answers we get to our prayers are the very best things of God's love, though so disguised. To our dim eyes, all is darkness, and our faith is well-nigh staggered. Then our Lord's word comes to us, "What I do, thou knowest not now; but thou shalt know hereafter." "Afterward" is the key.

Possibly in this world, certainly in the great "hereafter" of heaven, we shall see that every providence of God, even the providences that were painful, and that seemed adverse, meant blessing and good. No doubt we shall see, too, that many of the richest blessings of our lives, as they stand in radiant brightness before Christ's face, have come from the experiences that were most painful and unwelcome.

"Let us leave God alone. Why should I doubt He will explain in time What I feel now, but fail to find the words?"

Another reason why many of God's ways seem so strange to us, is because we see them only in their incompleteness. We must wait until they are finished before we can fully understand God's intention in them, or see the beauty that is in His thought. We stand by the sculptor's block when he is busy upon it with mallet and chisel, and to our eye it appears rough, with no lines of beauty; but we see it afterward, when it is unveiled to the world, and it seems almost to breathe, so perfect is the finished statue. A building is going up. There is now but an unsightly excavation, with piles of stones and timbers lying all about in confusion; afterwards, however, we return, and a fine structure stands before our eyes, noble and majestic. Neither the statue nor the building was beautiful in its incompleteness. At present we see God's work in us and for us only in the process, not in its finished state; when it is complete, we shall understand why it was done in this way or that.

The marble might complain of the strokes, which seem only to cut it away, wasting its substance; but when the statue stands forth, the marvel and admiration of all eyes, it would complain no longer. The vine might cry out under the sharpness of the pruning-knife as many of its finest branches are removed; but when it hangs laden with purple clusters, its cry of pain would become a song of joy.

"Now the pruning, sharp, unparing, Scattered blossom, bleeding shoot; Afterward, the pious bearing Of the Master's pleasant fruit."

We should learn to trust God, even when the hour is darkest. The morning will surely come, and in its light the things that alarm us will appear in friendly aspect; and in the forms we have

dreaded so much, we shall see the benign face of Jesus as He comes to us in love. The ploughings of our hearts are but the preparation for fruitfulness. The black clouds that appear so portentous of evil, pass by, leaving only gentle rain, which renews all the life and changes desert to garden.

"What shall Thine 'afterward' be, O Lord? I wonder, and wait to see (While to Thy chastening hand I bow) What peaceable fruit may be ripening now,— Ripening fast for me." J. R. MILLER.

The Land of "Pretty Soon."

I know of a land where the streets are paved With the things which we meant to achieve; It is walled with the money we meant to have saved, And the pleasures for which we grieve. The kind words unspoken, the promises broken, And many a coveted boon Are stowed away there in that land somewhere— The land of "Pretty Soon."

There are uncut jewels of possible fame Lying about in the dust, And many a noble and lofty aim Covered with mold and rust. And oh, this place, while it seems so near, Is farther away than the moon, Though our purposes are fair, yet we never get there— To the land of "Pretty Soon."

The road that leads to that mystic land, Is strewn with pitiful wrecks, And the ships that have sailed for its shining strand Bear skeletons on their decks. It is farther at noon than it was at dawn, And farther at night than at noon. Oh, let us beware of that land down there— The land of "Pretty Soon." —Ella Wheeler Wilcox.

IX. I saw an aged man upon his bier; His hair was thin and white, and on his brow, The record of the cares of many a year;— Cares that were ended and forgotten now, And there was sadness round, and faces bowed, And women's tears fell fast, and children wailed aloud. Then rose another heavy man and said, In faltering accents to that weeping train: Why mourn ye that our aged friend is dead? Ye are not sad to see the gathered grain. Nor when their mellow fruit the orchards cast, Nor when the yellow woods let fall the ripened mast. —Bryant.

X. Give fools their gold and knaves their power; Let fortune's bubbles rise and fall; Who sows a field or trains a flower Or plants a tree, is more than all. —Whittier.

XI. Time that is past thou never canst recall, Of time to come thou art not sure at all; The present only is within thy power, And therefore now improve the present hour.

XII. I would not waste my spring of youth in idle dalliance. I would plant rich seeds to blossom in my manhood, and bear rich fruit when I am old.

XIII. The greatest homage we can pay to truth is to use it. —Emerson.

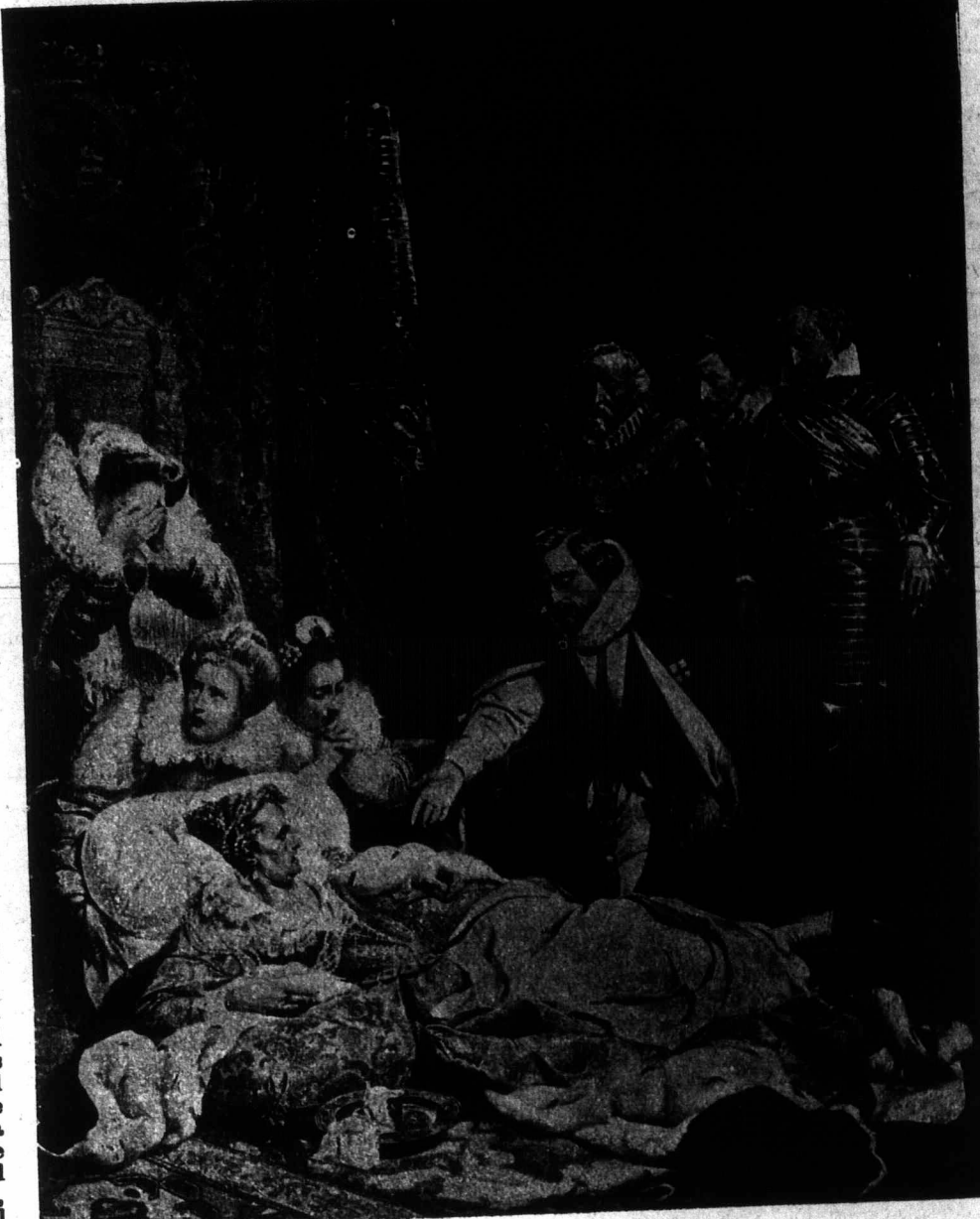
XIV. Truth is as impossible to be soiled by any outward touch as the sunbeam. —Milton.

XV. To have ideas is to gather flowers; to think is to weave them into garlands.

The Death of Queen Elizabeth.

BY PAUL DELAROCHE.

The last hours of the virgin Queen of England has attracted the efforts of more than one artist of note. Her departure dropped the curtain on one of the most glorious epochs in our records, and apart from the halo of fame and romance, there is sufficient in the strongly defined peculiarities of the woman and ruler to render her one of the prominent figures in the crowded ranks of history. Paul Delarocche has, perhaps, best succeeded in rendering the impressive scene of the great Queen's last hours. In rehabilitation of the chief actors, and in fidelity of detail, he has left little to be desired; yet he has failed to reproduce the strongest and most permanent impression that the history of this event leaves upon the reader. He has not given adequate expression to the hopeless bitterness which places the Queen's death in that long list of tragic scenes which have marked the passing away of the great.



DEATH OF QUEEN ELIZABETH.

are gone; and under the bright shining of the sun and the deep blue of the sky the flowers are sweeter, the grass is greener, and all life is more beautiful.

One reason for the present obscurity of life is our ignorance, our limited knowledge. We know now only in part: we see only in a mirror darkly. We have learned merely the rudiments, and cannot understand the more advanced and abstruse things.

A boy enters a school, and the teacher puts into his hands a Greek book—a New Testament, we will say—and asks him to read from the page before him; but he cannot make out a word of it; he does not know even the alphabet; it is a page of hieroglyphics to him. But the years roll on: he applies himself with diligence to the study of the language, and by patient degrees masters it. The language, and by patient degrees masters it. The day of his graduation comes, and the teacher again places in his hand the same page that puzzled and perplexed him on the day of his entrance. It is all plain to him now; he reads it with ease, and readily understands every word; he sees beauty in every line. Every sentence contains some golden truth. As he reads them they thrill his soul, and fill his heart with warmth and joy. Every line is bright now with the hidden fires of God's love.

Riper knowledge has cleared away all the mystery and unlocked the precious treasures. We are all scholars in God's school. The book of Providence is written in a language we do not understand; but the passing years, with their experiences, bring riper knowledge, and as we learn more and more

As the end drew near, spurning rest and food, refusing to be undressed or to go to bed, she lay on the floor with her finger on her lips, and her eyes fixed upon vacancy, spending days in complete silence, broken once with a last flash of her old fire when Robert Cecil said that she "must" go to bed. "Must!" she exclaimed; "is must a word to be addressed to princes? Little man! little man!—thy father, if he had been alive, durst not have used that word. Thou art so presumptuous because thou knowest I shall die." She passed away quietly at last, signifying by a sign her acquiescence in the long-delayed choice of a successor.

The great Queen died on the 24th of March, 1603. Though the remorseless hand of modern investigation has dissipated the glamor that for centuries hung around her heroic fame, the interest of her time, and the appreciation of its paramount influence on the genius and character of the nation, has increased rather than diminished. It will always be recognized as the springtime of the intellectual and religious life of the English people, a time when they received impulses and took forms that have produced world-wide results.





Christmas in the Forest.

The little house that, like a lamb strayed from the flock, lay far behind the other houses in the village belonged to Master Andrew.

Alas for Andrew! another shoemaker had settled in the village. He had learnt his trade abroad, and was far more skilful than our villager.

Christmas was approaching. The snow lay thick on the ground. In Andrew's house there were no Christmas preparations.

Then Andrew exclaimed: "There are hundreds of firs outside; perhaps the forester will let us cut down some to sell."

The next day the two eldest boys, George and Jack, started off to the woods with an axe and hand-sledge.

George was terribly frightened. What could he do? Where obtain help? He feared that Jack would be frozen.

In the center of the hall burned a large fire; over it was a vat-shaped vessel that sent forth spicy odors. All around hundreds of tiny forms were working busily.

But a new-comer appeared. He was also a dwarf, but different from the others in dress and appearance. He wore a green hunting-dress made from the wings of earth-beetles.

George raised his fur cap. "Honored sir," said he, "I came not to spy, but to implore your aid."

George ran quickly forward, followed by the little man, and soon reached the sledge. John still slept. His face and hands were icy cold.

He gave his commands in a strange, lisping speech. The gnomes hastened away, but speedily returned with a jug, which they handed to their lord.

contents between the lips of the sleeping boy, who immediately awoke, and stared wonderingly at the strange company.

George quickly explained what had happened, adding that he owed his life to the gnome's kind care.

Then the gnome questioned them about their family, and learning that they would have no Christmas rejoicings, bade them bring their brothers and sisters to the old castle and join the gnomes' Christmas feast.

The boys joyfully agreed, and thanking him for his kind invitation, turned to depart.

"Stay," said the gnome; "mount the sledge and hold each other tight!" He then ordered his servants to drag the sledge.

[TO BE CONTINUED.]

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES,—

With the advent of July comes again the pleasant duty of awarding the prizes for the quarter just ended. I am pleased to note that we are all the time adding some new names to our list.

This corner belongs to all who care to read it, and each may help to make it more interesting by sending some work for it.

The full returns for solutions not being in, I am able to announce only the winners of prizes for original puzzles during April, May and June, which are as follows:

1st—\$1, Miss Muriel E. Day, New Carlisle, Que. 2nd—75c., Mr. Richard Stinson, "Dick," Harrison, Ont.

The above contest has been the closest yet, and that for answers is equally keen, so those who are competing will require to do their best and get their work in in time.

As the last Gem contest was such a success, I think that something of a similar nature may be acceptable, so I herewith announce another competition, at which you may busy yourselves during the long vacation.

We offer three cloth-bound books for the three best collections of poems sent us under the following conditions:

A collection should not contain more than three poems, unless they be very short, when a greater number may be sent. The author's name, and, when possible, a brief account of his works should accompany each poem.

The award of prizes will be announced in Sept. 15th issue of ADVOCATE.

We claim the privilege of using any collection sent us, even though it may not win a prize.

Contributors may use a nom de plume if desired, but their full name and address should accompany their work.

Trusting this will meet a hearty response from our readers, Your loving— UNCLE TOM.

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c.

1.—RIDDLE. In stormy weather I am heard, Although you see me not; I speak the loudest to you, friend, When the weather's very hot. BYRON.

2.—SYNOPTATIONS. 1. Take a word meaning back from produce and leave to inclose. 2. Take a ruler from watching and leave a game at cards. 3. Take a blow from a Persian ruler and leave a verb in past tense. 4. Take an article from curable and leave a fur-bearing animal. 5. Take and from to measure and leave a personal pronoun. 6. Take the sun from comfort and leave one of cards. "Dick."

3.—TRANSPOSITION. Ho nmya a hftsa at dnmrao tase, Sdnf krma eth raechr ttlel tnmae? Nda yma a drow ta mndora kpsone. Yma oosht, ro moduo a thrae thsa kbrone. B. N.

4.—CHARADE. 1. A girl's name. 2. A male. 3. A metal. 4. A vowel. Whole means hard. "Kit."

5.—ARITHMETICAL PUZZLE.

Grid for arithmetic puzzle with numbers 11, 14, 17, 12, 15, 18, 13, 16, 19.

Arrange the given numbers so that when added vertically, horizontally or diagonally the result will be the same. "FRANK."

6.—CONUNDRUM.

Why are fast young men like sheep? BYRON.

7.—SQUARE.

1. The inventor of an Irish alphabet in which the letters are indicated by different arrangements of straight lines. 2. Stern. 3. A measure of distance. 4. So be it. "OGMA."

8.—CROSS.

Centrals down and across are the same.

Grid for cross puzzle with numbers 1-9 and words like 'Game at cards', 'To decline', 'A Turkish Governor', etc.

9.—GEOGRAPHICAL SQUARE.

The diagonals are two cities of Europe. 1. A city of Europe. 2. A city of Europe. 3. A city of Europe. 4. A city of Europe. 5. A sound of North America. MURIEL E. DAY.

10.—TRANSPOSITION.

Idrembere eht glarua etiapneo Hatt left mrof hatt duloc eikl wso. Kaelf yb fklea ghneal dan gidinh. Hte cars fo ruo ddppeegnulewo. PETER HYDE.

11.—ENIGMA.

My first is in boy but not in lad. My second is in merry but not in sad. My third is in stripe but not in streak. My fourth is in proud but not in meek. My fifth is in little and also in small. My sixth is in none but not in all. My whole a trusty guide is found. For animals men ride round. "HAZEL."

12.—NUMERICAL ENIGMA.

5, 4, 3, 6, 1 is an interval of time. 7, 2, 9 is single. 8, 12, 11, 10 is recompensed. 1—12 is a valuable work. "DICK."

13.—

My (1) is in zebra but not in horse. (2) " bad " but not " worse. (3) " maple " but not " spruce. (4) " bird " but not " goose. (5) " evening but " morn. (6) " cats but " corn. (7) we find in the Right of Biafra. " WHOLE is a river found in Africa. BLANCHE MACMURRAY.

14.—DIAMONDS.

(a) 1. A consonant. 2. A kind of carriage. 3. A well-known river in Italy. 4. A precious stone. 5. In circumnavigation. (b) 1. In conspicuous. 2. A Turkish name. 3. A spice. 4. A climbing plant. 5. In herbalist. (c) 1. In inquiry. 2. A girl's name. 3. A county in Asia. 4. Purpose. 5. In Niagara. "HAZEL"

Answers to June 1st Puzzles.

1.—An egg. 2.—[Diagram of an egg with letters O, O, O, A]. 3.—[Grid with numbers 4, 9, 2, 3, 5, 7, 8, 1, 6]. 4.—Rose-mary. 5.—Reconcentrated. 6.—(a) ha-pale; (b) cad-die; (c) bet-on; (d) mar-ram. 7.—Morning Glory. 8.—Jean Augustin Fresnel.

9.—h a s t e 10.—X Q's. a c t o r 11.—Because it does not leave its post. s t o n e 13.—(1) The Queen's Birthday. t o n i c (2) Pakenham. e r e c t

12.—M a P I d A S a c K S a f E A c o r N A r o H R o s A M a d a M A d o N o o N D o T MISS A. ARMAND, Pakenham, Ont.

SOLVERS OF JUNE 1ST PUZZLES. Susy Nafziger. SOLVERS OF MAY 16TH PUZZLES. (Late for last issue.) "Margareta," "Madge," John Goodall, Esther F. Bartlett, Marion Sanderson, "Essex," "Frank," Isabella Lawson.

COUSINLY CHAT. J. T. G.—I think your name appeared before; I certainly acknowledge all the answers I receive. Sometimes the work comes just a little late, and thus the acknowledgement must wait for next issue. Esther.—I understand just how hard the work is, but come as often as you can, and we'll be glad to see you. Where's Chris? Byron.—Anything intended for publication should be written with ink, and on one side only of paper. Puzzles for competition in this column are expected to be original. Miss Susy.—We do not pay for any certain number of answers—those who send the best answers during the three months get the prizes as mentioned at the head of this corner. "Frank."—Do not leave such a long time between your calls. "Dick."—Your puzzles are excellent, but do not crowd them so much when writing. Now don't say I'm cranky, I'm only afraid the printer may kick. "Muggins."—Where, oh where, is "Muggins" gone? Where, oh where, can he be? Busy wedding, perhaps. Isabella.—Am sorry your answers were too late to have your name in last issue, but you'll be earlier next time. "Essex."—Oh, you lazy fellow! Only a mere line with your answers. "Essex."—As the Great Canadian Puzzle is a thing of the past, your riddle does not suit, but it was very good. Try another. ADA A.



# Central Canada Exhibition

## OTTAWA, ONT., September 16<sup>th</sup> to 24<sup>th</sup>, '98

Entries close Tuesday, Sept. 13th.

**OVER \$75,000** expended since last Exhibition in extending and improving the grounds and erecting new buildings.

Prizes increased in all the principal Live Stock Classes, including Poultry and Pigeons, also new classes added to the Horse, Cattle, and Swine Departments. Special prizes for Milk Test.

Thirty-two Gold Medals as Sweepstake Prizes for Horses and Cattle.

New Main Building 310 feet long, constructed of iron.

Agricultural Implement Hall and Poultry Building enlarged, New Dining Halls, all buildings reconstructed and enlarged.

Live Stock accommodation unsurpassed. Evening Entertainments and "Spectacular" as usual.

Special Low Rates on all lines of travel. For all information, address

**E. McMAHON,**  
Secretary.

**W.M. HUTCHISON, M.P.,**  
President.

## PROVINCE OF ONTARIO

### ISSUE OF FORTY-YEAR ANNUITIES.

Sealed tenders for the purchase of terminable annuities running for a period of 40 years, issued under authority of an act of the Ontario Parliament, 47 Vic., chapter 31, will be received by the undersigned at his office, Parliament Buildings, Toronto, on or before 15th day of July next, at 2.30 p. m., when the tenders will be opened in the presence of such of the applicants, or their agents, as may attend.

The annuities will be in the form of certificates signed by the Provincial Treasurer, in which certificates the Provincial Treasurer will agree to make half-yearly payments at his office at Toronto, or in London, England, of sums of \$100 or larger sums, or their equivalent in sterling at the par of exchange (\$20 10s. 11d), on the 30th day of June, and 31st day of December in each year, for forty years from 30th day of June instant, the first half-yearly certificates being payable on the 31st December next.

The total amount of annuities to be issued in 1898 is \$5,700 annually, but tenders will be received for any part of the same not less than \$200 annually.

Tenders may, if preferred, be upon condition that the annuities be payable in sterling in London, Eng. In such case the conversion will be at the par of exchange, \$4.86 2/3 to the pound sterling. Tenders will be required to state the purchase money which will be paid for either the whole annuities offered or such portion as may be tendered for.

Notification of allotments will be given to tenders on or before 30th July and payments from the persons whose tenders are accepted must be made within ten days thereafter at the office of the Provincial Treasurer in Toronto, but if, from any cause, the purchase money is not paid by the 1st day of August next, purchasers who have not then paid will be required to pay interest on their purchase money from that date to date of payment at the rate of interest which the investment will yield, according to their respective tenders. The annuity certificates will be delivered at the office of the Provincial Treasurer in Toronto, where, if desired, they may be specially registered.

The Provincial Treasurer reserves the right to determine what tender is most advantageous to the Province, but no tender will necessarily be accepted. Tenders should be on the accompanying form.

Envelopes containing tenders should be endorsed, "Tender for Province of Ontario Annuities."

Further information may be obtained on application to the Provincial Treasurer.

**R. HAROUBET,**  
Provincial Treasurer.  
Provincial Treasurer's Office, Toronto, 2nd June, 1898.

**NOTE**—Illustration of calculation on interest basis—At the rate of three per cent, per annum (or in strictness 1 1/2 per cent, half-yearly) a present payment of \$2,320.36 would represent an annuity of \$100 for 40 years, \$50 payable each half-year.

### NOTICES.

Hermanville Farm, Hermanville, P. E. I., advertises in this issue a litter of choice Tamworth pigs from the famous sow, Parkhill Mab—772—.

The Ontario Agricultural College and Experimental Farm has issued a handsomely illustrated pamphlet descriptive of the work pursued at that institution. Copies may be had on application to the President at Guelph.

Wallace & Fraser, of Toronto, Ont., and St. John, N. B., have issued a small pamphlet of interest on the fall top-dressing of meadows and the manuring of grass with Albert's Thomas-Phosphate Powder. Drop them a card for a copy.

The Winnipeg Industrial prize list, though late in appearing, is quite an artistic and well edited production. The \$15,000 promised on the front cover should draw together an extraordinary class of exhibits from July 11th to 16th, and record-breaking crowds to witness the contests and high-class entertainments provided.

**P. Harold Hayes, M. D., Buffalo, N. Y.:**  
Dear Sir,—It is but the simplest form of gratitude for the restoration of health, which means for me being delivered from great, almost unbearable, suffering, both by night and day, to spread, as much as I possibly can, the knowledge of your treatment to other sufferers from Asthma. I have sought many remedies, through many years, but yours is the only one that has really helped, and it feels as if it was permanent help. I can walk as easily as I ever did, work several hours a day, sleep well at night, and this at sixty years of age, after being laid aside for some years of age. After being laid aside for some years of age.  
**PROF. ANDREW DALE,**  
10 Ravenna Road, Putney, London, S.W., Eng.

Owing to the great success of "Fleming's Lump Jaw Cure," Fleming Bros. have been compelled to open offices in Winnipeg, Man., and Chicago, Ill., in addition to New York, N. Y., and St. George, Ont. The following is a specimen letter of many continually being received endorsing their "Lump Jaw Cure":

**J. H. Fleming, St. George, Ont.:**  
DEAR SIR,—Having noticed your advertisement in the FARMER'S ADVOCATE, I was induced to try your "Lump Jaw Cure" on a three-year-old steer. It was a bad case, and after three applications is now completely cured. I have no hesitation in highly recommending it to any who have cattle troubled with the same disease. Respectfully yours,  
**ARCHIE CAMERON.**

## DISPERSION SALE —OF— SOUTHDOWN SHEEP.

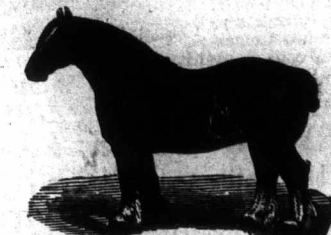
I will sell at auction, without reserve, at my farm, three miles south of the City of London,  
**On Thursday, July 7th, 1898,**

my entire flock of **EIGHTY** Registered Southdowns, including Rams, Ewes and Lambs. Flock was founded in 1890 on selected imported ewes from the famous flocks of Webb, Coleman and Jones, which have been bred to imp. Webb rams till last season, when a high-class imported ram from the flock of Sir J. Blyth was used, and a grand crop of lambs will be in the sale. This flock has furnished show sheep and prize-winners to leading breeders and showmen in Canada and the United States.

Terms:—Under \$10, cash; over that amount, six months credit on approved notes. Discount at rate of six per cent. per annum for cash.

**D. H. DALE,**  
GLENDALE P. O., ONT.  
A. M. HUNT, Auctioneer.

## Clydesdales for Sale



- 1 three-year-old imported stallion, by Prince of Millfield, out of Connie Nairn, by Prince of Wales.
  - 1 four-year old, by Queen's Own, out of Imp. Candour, by Macgregor.
  - 2 imported two-year-old stallions, by Macgregor.
  - 2 two-year-old stallions, by Prince of Quality, out of imported dams.
- Have also a well-mated team of three-year-old Clyde fillies, sired by Imp. Energy (7691), out of imp. mares.

These animals are all large size, good quality and sound. Terms reasonable.

**ROBT. DAVIES,**  
Thorncliffe Stock Farm, TORONTO.

## Arthur Johnston,



Greenwood P. O. and Telegraph Office,  
**OFFERS FOR SALE—  
FORTY PURE-BRED SHORTHORN  
HEIFERS AND COWS,  
Good as we have ever had. Also a  
FEW YOUNG BULLS**

**Berkshires** OF CHOICEST BREEDING AND QUALITY FOR SALE  
Send for Catalogue and prices. "No business, no harm." is our motto. Claremont Station, C.P.R.; Pickering Station, G.T.R. om

## Spring Grove Stock Farm

Shorthorn Cattle and Lincoln Sheep. The noted sires, Golden Robe—20995—and Nominee—19228—, at the head of the herd. Representatives of this herd won two silver medals and the herd prize at Industrial Fair, Toronto, 1897. Prize-winning Lincoln Sheep are also bred at Spring Grove. Stock of all ages and both sexes for sale. Apply **T. E. ROBSON,** Miderton, Ont.

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Sired by Indian Statesman, and from such families as Mara's Lily, by Warden, and other good ones. All in fine form.  
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Also cows and heifers representing the leading popular families. Imported Golden Fame—29056—at head of herd. A few good Roadster horses. Farm six miles from Hamilton. Catalogue sent on application. Visitors met at G. T.R. or C.P.R. if notified. om

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Two years old, yearlings and heifer calves out of imported and home-bred cows, and the imported bulls, Royal Member and Rantin Robin. Come and see them, or write, if you want something special.  
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Station on the farm. Cargill Sta. & P.O., Ont.

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### —OF— SHORTHORNS

Am now in a position to offer a very choice yearling Roan Bull and a few Females of the leading Scotch families.  
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HEARD OF  
**Shorthorns, Oxfords and Berkshires.**  
Young Bulls & Heifers on hand. Also a few choice Berkshires.

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Wyebridge, Ont.,  
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Stock of both sexes for sale, of choicest breeding and good quality, prices right.  
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Another chance to procure a choice young Bull from that grand stock bull Masena's Son (17608); will be sold cheap if taken at once; also one bull two years old by Hugo Alpha of Oaklawn.  
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**DURING** the month of June we offer choice bred Berk. and York. swine, 6 weeks old, at \$6. F. O. B. Also an up-to-date Jersey bull calf for \$15. All stock registered. We have them all ages.  
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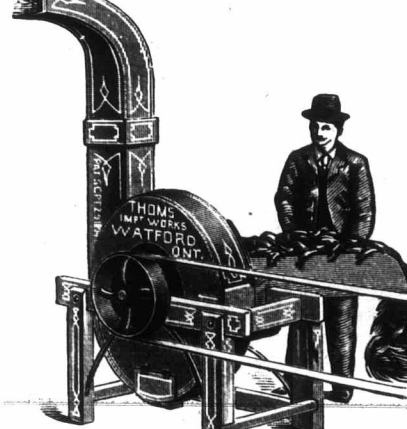
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Yours truly,  
**JOHN CLARK, JR.**

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(Patented in Canada and United States.)



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**Thom's Implement Works, WATFORD, ONT.**  
Established 1875.



ONE FIRST PRIZE BULL

A. J. C. C. Sire King of Highfield, winner of 1st prize over all Canada; dam, St. Lambert's Kathleen, made 21 lbs. 3/4 ozs. of butter in 7 days; dam of King of Highfield, Signal Ross May (22 lbs. 4 ozs. of butter in 7 days, and 1st prize over all Canada 4 times), also dam of Unoma May (26 lbs. 4 ozs. of butter in 7 days, and 64 lbs. of milk a day).

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NOW OFFERS 3 Yearling Bulls

Fit for service (2 golden-fawn and 1 squirrel-grey), and 1 six months (golden-fawn), by Costa Rica's son. He has 75 per cent. of the blood of Merry Maiden, champion sweepstakes cow of all three tests combined at the World's Fair, Chicago.

DAVID DUNCAN, Farm 5 miles from Toronto market. -0- DON P. O., ONT.

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Offering high-class A. J. C. C. cows and heifers in calf, and heifer calves; 9 choice young bulls. High-grade cows in calf; and Berkshires. R. H. BULL & SON, Brampton

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OFFERS six richly bred young bulls from showing-winning dams, and such sires as King of Highfield and Violet's Leo, both sweepstakes bulls. Settings from E. P. Rocks, Black Minorca, and Grey Dorkings. Correspondence solicited.

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WILLIAM ROLFE, Markham, Ont. offers twelve Jersey Bulls and Heifers (pure St. Lambert), out of tested cows. Grand individuals. Prices right.

JERSEYS, AYRSHIRE, BERKSHIRES

Offering one grandly-bred Ayrshire bull calf, and a few young boars from Snell-bred stock. WILLIAM CLARK, o MEYERSBURG, ONT.

"Gem Holstein Herd."

STOCK FOR SALE!

We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell, one or more at a time, on reasonable terms. Correspondence solicited.

ELLIS BROTHERS, BEDFORD PARK P.O., ONT. Shipping Station, Toronto. 7-7-08

Maple Hill Holstein-Friesians

(THE GOLD MEDAL HERD OF 1897).

SERVICE BULLS:

DeKol 2nd's Paul DeKol Duke (Imp.), Sir Pledge DeKol (Imp.).

Can spare a few young things of both sexes from strictly first-class cows of DeKol, Empress Josephine Meothilde, and other famous butter families.

-0- G. W. CLEMONS, ST. GEORGE, ONT.

HOLSTEINS FOR SALE

Do you want the blood of DeKol 2nd or Netherland Hengerveld? These two cows have produced more butter in seven days than any other two cows that have been officially tested. Their daughters are large producers. Sons of these two great cows head our herd. Animals of all ages and richest breeding. Come or write.

HENRY STEVENS & SONS, Lacona, Oswego Co., N. Y.

BROOKBANK HOLSTEIN HERD

50—Champions for Milk and Butter—50

A number of desirable young BULLS on hand from eight months to two months old, from our great milkers. Write for just what you want. Females of all ages. Also yearling Poland-China Boar, Currie's King, to be sold to make room for a new importation.

A. & G. RICE, Oxford Co., Ont. -0- CURRIE'S CROSSING.

Holstein Heifers

One and two years old. Also a choice three-months Bull Calf, out of Cecelia Princess; and a choice litter of Chesters, two months old.

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AYRSHIRE AND RED TAMWORTH SWINE.

Still a few choice young bulls for sale, and a grand lot of Tamworth boars ready for service. Write us now and secure one.

GALDWELL BROS., Briery Bank Farm, Orchard, Ont

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Breeder of high-class AYRSHIRE. Youngstock always for sale; bred from the choicest strains procurable. Breeding stock selected from the most fashionable strains and prize-winning stock of the day. Farm located at Howick, Que. 5-1-7-0

AYRSHIRE AND YORKSHIRES!

AYRSHIRE.—Choice young stock of either sex, from superior milking strains, on hand. YORKSHIRE.—Several litters of young pigs, equal to any we have ever had, ready to ship, and we only ship the best. Orders solicited, which we will promptly and honorably fill, as we guarantee stock as described. If in need of anything in Ayreshires or Yorkshires, write us.

ALEX. HUME & CO., BURNBRAE, ONT. Importers and Breeders. -0- Heard's Station, G.T.R.

AYRSHIRE CATTLE, BERKSHIRE PIGS

The bull Tom Brown and the heifer White Floss, winners of sweepstakes at World's Fair, were bred from this herd. Young stock for sale. Also Leicester Sheep and Berkshire Swine. 5-1-7-0

D. BENNING & SON, Glenhurst Farm, WILLIAMSTOWN, ONT.

FAIRVIEW STOCK FARM.

Ayrshire Cattle and Berkshire Pigs.

Traveller of Parkhill at the head of herd, while my herd is descended from cows purchased of Mr. David Benning; are modern in type, and are of the choicest milking strains. Write for prices of young bulls and heifers.

DAVID LEITCH, Grant's Corners, Ontario. Stations—Cornwall, G.T.R.; Apple Hill, C.P.R.

Maple Cliff Dairy and Stock Farm

Ayrshire cattle, Berkshire & Tamworth pigs. Two bull calves dropped in February. R. REID & CO., Nintonsburg, Ont. One mile from Ottawa. -0-

AYRSHIRE BULLS

We offer for sale the fine bull, Baron Neidpath—2296—calved April 18th, 1896, from imported Bessie 2nd of Auchinbrair, and by Beauty's Style of Auchinbrair (Imp.). Also two calves, dropped in Aug. and Nov., '97, and one Feb. and two Mob. calves, all sired by imported bulls; with one exception, from imported cows.

THOS. BALLANTYNE & SON, "Neidpath Stock Farm," STRATFORD, ONT. Farm adjoins city, main line G. T. Ry. -0-

GLENGARRY STOCK FARM

JOHN A. McDONALD, Jr., Williamstown, Ontario, BREEDER OF

HIGH-CLASS AYRSHIRE.

My aged bull, Sir Donald, is now for sale, as I am through with him. He can be had at a bargain. Lancaster Station, G. T. R. -0-

CHOICE LOT AYRSHIRE BULL CALVES

Sired by Douglas of Loudoun, bred by D. Morton & Son, Hamilton. Prices right. F. W. TAYLOR, -0- WELLMAN'S CORNERS.

Ingleside Herefords.

UP-TO-DATE HERD OF CANADA!

Send for illustrated catalogue. Address—

H. D. SMITH, Compton, Que 17-7-08

GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared. Address: SYDNEY FISHER, 17-7-08 Alva Farm, Knowlton, P. Q.

EASTVIEW GUERNSEYS

A few Bull Calves out of full sisters of "Ada of Eastview." B. R. BROW, EASTVIEW FARM, CHARLOTTETOWN, P. E. I.

GOSSIP.

Mr. Wm. Grainger, in writing to advertisers, mentions the "Farmer's Advocate."

WM. GRAINGER & SON'S SHORTHORNS.

Approaching the residence of Mr. Wm. Grainger & Son, Londonboro, Ont., we saw well-marked signs of improvement going on around the already extensive buildings at Hawthorn, and as we arrived the crowds of people assembled doing justice at the heavily laden tables arranged on the lawn soon convinced us that this was the occasion of a barn-raising, which Mr. Grainger had previously told us of, and from what we saw of the structure we will feel disappointed indeed if at its completion we do not find one of the most modern equipped breeding establishments in the Province. Everything has been well considered in the designing, and nothing for comfort, health or convenience has been overlooked. From the good-natured, jolly crowd of neighbors, we are certain of the esteem in which Mr. Grainger and his enterprising son are held in that beautiful section of country.

For the first time we were in right humor to appreciate the merits of the herd we came to visit, which now number some 30 or more animals, the origin of which was the worthy cow (of national repute) 2nd Fairmaid of Atha, by Proud Duke, and out of Fairmaid of Atha. The females of the family have been retained, and bred from time to time to such sires as Lord Stanley, Prince of Strathallan, Evergreen Prince 3188, Britannia Duke 10th 9776, Truce Bearer 15335, Waterloo Duke 24th 14280, Golden Nugget 17548, and to-day Beau Ideal 25554, the worthy son of Sittytan Stamp (Imp.) 18963 (66368), and out of imported Bessie Lass 24824, by Banner Bearer 49034, is doing service in the herd. He is now three past, and apart from what we have previously said of him, we wish to add that he has improved beyond our expectations. He is a low-set, thick, evenly-fleshed animal, with his full share of quality, especially in the region of the loins, and carries his substance through in a remarkable manner, his calves coming in deep rods and roans. Judging by what is learned from the owners of his dam, they should possess extraordinary dairy qualities, and do much to maintain that quality so strongly established in the Fairmaid family. The Fairmaid females are in all the bloom they promised a year ago, and have yielded another crop of calves. Notably among them we saw the two-year-old Kitty Clay, by Golden Nugget, and out of Red Britannia (a daughter of the World's Fair dairy test cow), which promises to develop into one of the very best cows ever raised in the herd. She was bred to Beau Ideal to calve in the fall, and from the ancestral records much may be reasonably expected of her. Of equal quality and equally well advanced is the yearling Red Britannia 2nd, by Beau Ideal, and out of Red Britannia 2nd, a heifer full of quality, carrying out the well-filled substance of her sire, having a grand back, and the rich, deep color predominant in the herd. Ten calves had arrived, four of which were bulls, and although quite young they are stamped with the unmistakable type of their sire, and we will feel disappointed if they do not do their share to maintain the reputation won by the herd. A yearling bull, Laird of Duncrie 26955, by 17th Prince of Thule 21157, and out of Red Rose, by Conqueror, with pedigree tracing through the noted Strathallan family, is now held for sale.

E. GAUNT & SON'S SALE OF SHORTHORNS.

The dispersion of the "Ample Shade" herd of Shorthorns, at St. Helen, Ont., on June 22nd, was favored with model weather and a good attendance of breeders of this class of cattle from many parts of Ontario, while Mr. E. S. Butler, of Ridgeway, Ohio, added to the interest of the sale by bidding freely and buying a handsome quartette of heifers. The cattle were in good condition and form, and were readily taken at fair prices, the highest price being made by the four-year-old cow Missie of Neidpath 16th, who fell to the bid of Capt. T. E. Robson, Iderton, at \$215. The two-year-old bull, Admiral = 24556-, was taken by Mr. P. Maloney, Metropolitan, at \$195. The average of \$113 for 33 head is a very creditable one. We give below a list of the animals, with prices and buyers.

COWS. Caprice, 5 yrs.; J. A. Cramer, Shakespeare; \$175. Fanny Buckingham, 6 yrs.; H. Smith, Hay; \$130. Ethel Buckingham, 10 yrs.; W. G. Pettit, Freeman; \$100. Melody, 7 yrs.; Jas. Thompson, Belton; \$150. Caprice 2nd, 4 yrs.; Jas. Thompson; \$150. Leona, 6 yrs.; Hon. J. Dryden, Brooklin; \$130. Gwendolyn 2nd, 1 yr.; Harry Smith; \$70. Caprice 3rd, 1 yr.; Hon. John Dryden; \$100. Caprice 4th, 1 yr.; Harry Smith; \$85. Melody 2nd, 1 yr.; Hon. John Dryden; \$130. Mina Buckingham, 2 yrs.; W. G. Pettit; \$130. Gwendolyn, 3 yrs.; W. G. Pettit; \$120. Starlight's Snowdrop, 6 yrs.; Wm. Ritchie, Teeswater; \$100. Gloxinia 7th, 1 yr.; Peter Story, Conn; \$75. Emblem, 2 yrs.; J. Webster, St. Helen's; \$90. Gloxinia 6th, 3 yrs.; W. G. Pettit; \$150. Gloxinia 2nd, 7 yrs.; A. W. Smith, Maple Lodge; \$85. Lystra, 3 yrs.; A. C. Patterson, Lucknow; \$130. Ideal 3rd, 2 yrs.; John Ross, Mt. Forest; \$65. Ada Buckingham, 6 mos.; E. S. Butler, Ridgeway, Ohio; \$75. Gloxinia 8th, 6 mos.; E. S. Butler; \$85. Bridesmaid, 7 mos.; E. S. Butler; \$100. Lady Lovell, 10 yrs.; A. Montague, Thamesford; \$165. Missie of Neidpath 16th, 4 yrs.; T. E. Robson, Iderton; \$215. Missie May, 6 mos.; E. S. Butler; \$90.

BULLS. Admiral, 2 yrs.; P. Maloney, Metropolitan; \$195. Lord Gloster, 1 yr.; J. J. Coleman, Markdale; \$150. Chancellor, 5 mos.; J. Broadfoot, Seaford; \$100. Lord Lovell's Heir, 1 yr.; H. McKay & Sons, Lucknow; \$125. Commodore, 6 mos.; W. G. Pettit, Freeman; \$85. Lord Rav, 10 mos.; R. Smith, St. Helen's; \$80. Harold, 6 mos.; W. R. Bowman, Mt. Forest; \$50. Gen. Lee, 6 mos.; John Joynt, St. Helen's; \$45. Twenty-five females averaged \$113.8 bulls averaged \$104; 33 animals averaged \$113.

BRITISH ADVERTISEMENTS.

SHROPSHIRE SHEEP

KNOWN THE WORLD OVER AS

THE FARMER'S SHEEP

LEAN, JUICY FLESH, best and heaviest fleeces of all DOWN SHEEP, very prolific, good nurses, robust constitutions, and noted for early maturity.

N. B.—The best GENERAL PURPOSE SHEEP in existence, and splendidly adapted for crossing on Merino, long-wool or cross-bred ewes when an IDEAL FREEZER is wanted.

FAT LAMBS.—For breeding fat lambs the Shropshire ram is unrivalled, and for that purpose it is extensively used in all parts of the world.

THE SHROPSHIRE will thrive and do well where any other sheep can exist, and no breed has such a Record for Readily Adapting itself to any Country and all Classes of Pasture.

A list of Shropshire sheep breeders entered in the last volume of the flock book may be obtained from ALFRED MANSELL & CO., Secretaries of the Shropshire Breeders' Assoc., SHREWSBURY, ENGLAND. -0-

J. E. CASSWELL, Laughton, Folkingham, Lines, breeder of Lincoln Long-wool Sheep, Flock No. 46. The flock was in the possession of the present owner's great-grandfather in 1785, and has descended direct from father to son without a single dispersion sale. J. E. Casswell made the highest average for 20 rams at the "Annual Lincoln Beam Sale," 1895 and 1897. The 1896 rams were all sold for exportation. Ram and ewe hogs and shearlings for sale, also Shire horses, Shorthorns, and Dark Dorking fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingsboro, G. N. R. -0-

W. W. Chapman

Secretary of the National Sheep Breeders' Association. Secretary of the Kent or Romney Marsh Sheep Breeders' Association. and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered Stock personally selected and exported on commission; quotations given, and all enquiries answered. Address—FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London. -0-

MICA AXLE GREASE

lightens the load—shortens the road. Makes the wagon pull easier, helps the team. Saves wear and expense. Sold everywhere.

West's Fluid Non-Poisonous!

Cheapest and most effective Sheep Dip, Cattle Wash, and Preventive for Hog Cholera. Universally used for the immediate destruction of Ticks, Lice, Fleas, Mange, and all insects upon Sheep, Horses, Cattle, Pigs, Dogs, Chickens, etc. Price, \$1.50 per imp. gal.; five gals., \$6.50. One gal. makes 75 gals. for dipping sheep.

THE WEST CHEMICAL CO., TORONTO, ONT.

Agents wanted in all counties. -0-

Shropshire Sheep

AND Chester White Hogs

W. E. WRIGHT, o GLANWORTH, ONTARIO.

HENRY ARKELL, ARKELL, ONTARIO.

Importer and Breeder of Registered Oxford Down Sheep.

Animals of all ages and both sexes for sale at all times. Price reasonable. -0-

IF YOU WANT OXFORD DOWNS,

of any age or either sex, write us for prices. All our stock are from the best English-bred animals. PETER ARKELL, -0- TEESWATER, ONT.

SHEEP BREEDERS' ASSOCIATIONS.

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEV-ERENG, Sec., Lafayette, Indiana. 54-7-08



CHAMPION CLYDESDALE STALLION

McQUEEN



We have a number of first-class mares and fillies of this breed in foal to the above stallion. We also have for sale a number of other choice stallions—Clydesdale, Standard-bred, Thoroughbred.

GRAHAM BROS.,

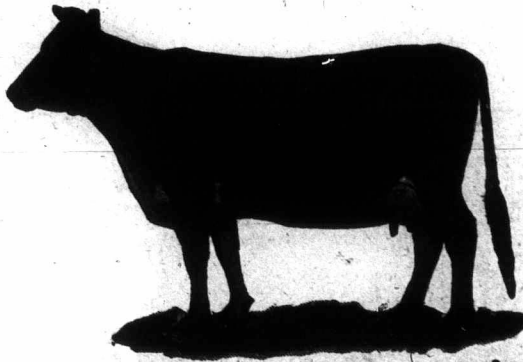
Claremont, Ontario. 25 miles east of Toronto, on C. P. R. 4-12-08

DENTONIA PARK FARM

W. E. H. MASSEY, Proprietor.

HIGH-CLASS REGISTERED JERSEYS.

The following offered for sale to make room for additional imported stock soon to arrive: ST. LAMBERT OF HIGHFIELD No. 45994, a handsome bull, in fine condition; solid fawn color, black points; born March 3rd, '95; sire Kari of St. Lambert No. 31586; dam Niobe of St. Lambert 2nd No. 96304.



A FEW GOOD COWS HEIFER AND BULL CALVES.

Prospective buyers should visit the farm. Full information given on request. Apply—WM. PATTON, Supt., Coleman P. O., Ontario. Farm located near East Toronto.

WILD BRINO 10073. Record 2:19 1/2

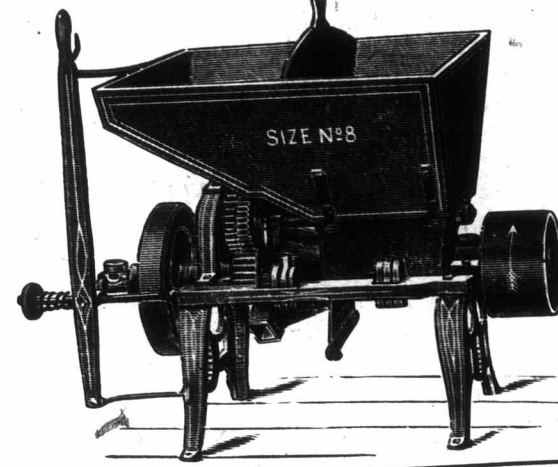
(CANADA'S GREATEST) NOW OWNED BY WILDWOOD STOCK FARM.

DETROIT, MICH. 85 & 87 Congress St., West, Detroit, Mich.

With ordinary mares in Canada, Wild Brino has demonstrated his ability to sire extreme speed. Among his get are: Little Jim 2:13 1/4, Dorothea 2:19 1/4, Estarita 2:19 1/4, Altar 2:19 1/4, Colina 2:20 1/4, Sarina 2:20 1/4, as two year olds, and Mo's 2:20 1/4 and Wilderocous 2:20 1/4 as two year olds, and other two second prize. At the Toronto exhibition of 1891 five of his get raced, two winning first money and three second money. Five others were exhibited in the show ring, three took first prize and the other two second prize. At the Breeders Meeting at Hamilton, Ont. same year, five of Wild Brino's get raced, three taking first money and two second money. Terms \$25.00 At Windsor, Ont. Thursday of each week. Special attention given cash with usual return privileges. Special attention given to mares while with us but at owners risk only. Write us when and how you ship and our men will meet boat or train. Write for tabulated pedigree of Wild Brino. We also have the best bred thoroughbred stallion this side of Kentucky, "KALBAR." Terms \$100.00 cash, return privileges. Tabulated pedigree on application.

Mrs. E. M. Jones

OFFERS A FEW CHOICE JERSEYS OF RARE BREEDING. Two Yearlings, in calf. Three Heifers, 1 to 9 months old. Three Bulls, 2 to 18 months old. MRS. E. M. JONES, Box 324, BROCKVILLE, ONTARIO, CAN.



CORN COBS AND GRAIN.

Our Grinder first crushes the cob and then grinds it. The hopper is so arranged that small grain and cobs can be ground together. This machine will even grind out hay and cornstalks. Do not get two machines to do your grinding when you can get one machine which will do all kinds of grinding, and do it better than any other machine in the market. We manufacture also TREAD POWERS, THRESHERS, HAY PRESSES, FEED CUTTERS, CIRCULAR SAW MACHINES, ETC., ETC. MATTHEW MOODY & SONS, TERREBONNE, ONT. QUEBEC.

SHROPSHIRE

Offering Ram and Ewe Lambs from imported sires, also a few Ewes. GEO. HINDMARSH, AILSA CRAIG, ONTARIO.

A CHOICE LOT OF lengthy, large English Berkshires from six weeks to three months old. Pairs supplied not skin.



YORKSHIRE Sows in pig of good breeding. Boars and sows, 3 months old, not skin, from prize-winning stock. Write H. J. DAVIS, Box 290, Woodstock, Ont., breeder of Yorkshires, Berkshires, Shorthorns, and Shropshires.

MENTION FARMER'S ADVOCATE.

OAK LODGE HERD OF YORKSHIRES



Highest quality of bacon hogs, profitable to the feeder, and correct type for the packers. Orders now being taken for young pigs suitable for exhibition purposes. Largest herd in Canada to select from. Write for prices. J. E. BRETHOUR, BURFORD, BRANT CO.



YORKSHIRES AND BERKSHIRES My Yorkshires were founded on the noted prize-ring producer, Maud G., and are the best lot I ever owned. My Berkshires are of Baron Lee and Enterprise strains. R. G. MARTIN, Marysville, Ont.

GOSSIP.

Mr. Ernest H. Godfrey has been appointed Secretary of the English Central Chamber of Agriculture, to succeed Mr. R. H. Row, who has received an appointment in the Board of Agriculture.

Hon. Sydney Fisher, Dominion Minister of Agriculture, accompanied by Dairy Commissioner Robertson, expects to spend some time in England this month looking into the markets for Canadian products.

J. A. S. Macmillan, Brandon, has purchased from N. P. Clark, St. Cloud, Minn., the three-year-old Clydesdale stallion, Burnbrae, to replace Ross McGregor, whom he had the misfortune to lose by inflammation.

W. C. Shearer, Bright, Ont., writes under date of June 14th: "I am having good results from my advertisement with you, as I have sold all our eggs laid since May 1st, and have had to use eggs for the table and cooking bought from the store. See my new advertisement on 'I am worth swine.'"

A party of sixty servant girls to fill positions in Manitoba and the Northwest recently left Glasgow, Scotland, under the auspices of the Canadian Government, and under the supervision of a Canadian lady. Other parties are coming out from time to time.

Michigan has a law governing horse breeding, its provisions being equally applicable to the owner of stallions and breeders. The law gives the owner of stallions a first lien on mares bred to his horse as security for service fees, and also stops the owner of stallions from collecting a fee if there has been any misrepresentation of pedigree of sire.

Mr. Captick, Carnforth, writes: "Mr. Wilkinson, of Snab Green, Lancashire, has had the misfortune to lose one of his brood mares through foaling. A Jersey cow was chosen to act as foster-mother for the foal, evidently to the full satisfaction of both, as the foal is thriving admirably, and the Jersey appears to be proud of her trust, and shows considerable anxiety if it should be temporarily absent."

Mr. W. D. Platt, Hamilton, Ont., writes that he has sold from his Trout Creek herd of Shorthorns to M. W. Moran, Arnprior, Ont., the fine young bull, Gold Brick—26945—of the favorite Strathallan family, a son of the Golden Drop bull, Delancey—23387—and of Daisy of Strathallan, by Allan, a first prize Royal winner. Mr. Moran is to be congratulated on securing so good and promising a young bull, and one so excellently bred. Mr. Platt has also sold to Ira Johnston, Balmoral, Ont., the useful young cow Winter Queen and her charming heifer calf. She is of an extra good milking strain, and is herself a wonderful milker.

Mr. Robt. Beith, M. P. of Bowmanville, Ont., has done his own breeding stud and neighboring hobby horse breeders a valuable service in securing from E. W. Twaddell, Dayton, Pa., for this season at least, the three-year-old Hackney stallion Squire Rickell. He is chestnut in color, and was sired by the noted Cadet. His dam, a great show mare, is a brother of Danegelt; in fact, this colt comes from one of the greatest maternal lines in the stud book, and remembering that his sire, Cadet, is one of the best daughters of Danegelt's Fireaway's get, Mr. Beith is to be congratulated on securing the services of such a stallion in his worthy stud of mares. Squire Rickell is of the wide, deep sort, with high action and great pace.

Mr. A. J. Watson, Ashton Frontview Farm, Castlederg, Ontario, writes: "Please find enclosed the amount for half yearly payment. Herds and flocks at Ashton Frontview are going nicely. They are out to grass, and looking in the best shape they have done for some years. The show pigs are doing extra well, and will make a good show if all goes right. These are the sales made since I last wrote. To Mr. A. E. Cross, of Calgary, two bulls and two heifers, one the show heifer that won second at London as a calf in 1896, and the other a half-sister, both of the Village Rose family, and got by Statesman. These two heifers ought to make a name for themselves in their new home. The two bulls were also of the Village Rose family, and got by Statesman. To Mr. Harvey Snider, of Prairie Flower, bull calf Young Britton, out of the Village Rose family, and got by Statesman. Also a very fine pair of Berkshire sows to W. H. & C. H. McNish, of Lyn, Ont."

THE GLENDALE SALE OF SOUTH DOWNS. July 7th, it will be remembered, is the date of the dispersion sale of Mr. D. H. Dale's excellent flock of eighty registered Southdown sheep at his farm, three miles from the City of London, Ont. No better opportunity has been offered in recent years to secure choice Southdowns, bred straight from selected sires and dams, imported from the fountain-head—the leading flocks of Britain. The outlook for the sheep trade is good, feed is plentiful, railway fares are out in two, and so are freight rates on pedigree stock, all of which is in favor of the buyer, and in favor of a good attendance at the sale.

GEORGE HINDMARSH'S SHROPSHIRE. Twenty-nine of the ninety head of Shropshire sheep we saw at the home of Mr. Geo. Hindmarsh, Ailsa Craig, Ont., are as good a bunch of breeding ewes as can be found. They were directly purchased and founded upon stock from Messrs. Cooper, Campbell & Wright, and from importations from Panmer & Minton. This season's crop of lambs were by a pair of Campbell's, a portion being by the sheep which won the third at Toronto last fall, which Mr. Campbell imported from H. Williams, Shropshire, England, while the balance were sired by a get of the great Newton Lord ram which won the sweepstakes at the Chicago World's Fair. This crop yield twenty-two very choice, well-covered ram lambs, which are in grand form. We also saw a bunch of eleven shearing ewes that would not only be hard to beat, but as a bunch would be hard to equal. They were by imported Prince Royal, a Thonger-bred sheep. We can plainly see that at every move Mr. Hindmarsh takes a step forward, selecting only the best sires, realizing this to be the only sure method of reaching the point he is evidently bent upon, and to which he is rapidly approaching.

HORSEMEN! THE ONLY GENUINE IS



See large advertisement on page 276 June 1st issue, and which is of unusual interest to the readers of the FARMER'S ADVOCATE. And any horseman interested in a reliable remedy can well afford to investigate the matter. The LAWRENCE-WILLIAMS CO. 21 Front Street West, Toronto, Ontario.

ENGLISH BERKSHIRES I I



Come to headquarters for pigs of either sex if you want Berkshires that will make you money. Orders taken for spring pigs. Write for J. G. SNELL, Prices. SNELGROVE, ONT.



ENGLISH BERKSHIRE OFFERING Young boars fit for service, and some young sows ready to breed, and some bred; also young stock of both sexes ready to ship, descended from Crossman importation. W. H. SPENCER, MORPETH, ONTARIO.

BERKSHIRES OF BOTH SEXES READY FOR SHIPMENT. From Snell and Green bred sires and dams. DAVID GANTON, ELMVALE, ONT.

MONTROSE HERD OF BERKSHIRES Carry such blood as Baron Lee 4th and Enterprise. Young stock three months old for sale, and orders for fall litters booked now. J. W. HARTMAN & SONS, ELM HEDGE P.O., GREY CO.

My Berkshires are strictly up-to-date in style, length, quality and breeding. The present crop of young stock by Manor Prince are as good a lot as I ever raised. Prices right. J. B. EWING, Dartford, Ont.

LARGE ENGLISH BERKSHIRES. Imp. Knight of Riverside, Bright Star, and Canada's Glory at head of herd. Boars ready for service and choice pigs two months old. Write to M. BENNETT & SON, St. Williams, Ont.

English Berkshires. Herd headed by three first-prize boars. Large size, strong bone, fine quality, and a choice lot of breeding sows. Orders booked for spring pigs. GEORGE GREEN, Fairview P.O., Ontario. Stratford Station and Telegraph Office.

HEADQUARTERS FOR DUROC-JERSEY SWINE

Our herd secured nine of the first prizes out of the eleven offered at Toronto Exhibition, and a similar portion at London and Ottawa. We are justified in saying we have the best herd in Canada. First-class stock of all kinds for sale at all times. Address—TAPE BROS., RIDGETOWN, ONT.

Oxford Herd of Winning Poland-Chinas.

Having won the herd prizes at Toronto, London, Ottawa, and Brantford Fat Stock Show, we feel justified in stating that we are in a position to offer you what you may ask for from gilt-edge prize-winning stock. W. & H. JONES, OXFORD CO. MT. ELGIN.



GOSSIP.

In writing to advertisers, mention the "Farmer's Advocate."

During the month of May forty-six fresh outbreaks of sheep scab were reported in Great Britain.

At the recent London (Eng.) Crystal Palace Horse Show, American horses made a record by carrying off a large number of important premiums.

One Mr. Vivian Gooch, with five American bred and fitted horses, won eleven first prizes, one second prize, and two championships.

His best horse was Star of the West, who alone won six firsts and one second. Other American exhibitors won good awards.

HARRY SMITH'S SHORTHORNS. The well-kept herd of Shorthorn cattle of Mr. Harry Smith, Hay P. O., now numbers 45 head—fifteen matrons, half a dozen young heifers, a dozen heifer and four bull calves, one yearling and the solid roan stock bull, Abbotsford 186, now five years old, by Blake 15177, and out of Village Blossom (Imp.), a cow which produced probably more prize-winners than any individual in Canada.

Village Lily won wherever shown in 1892 and was sweepstakes cow in Manitoba in 1894. Young Abbotsford was the sweepstakes bull over all beef breeds in the United States, including the World's Fair. Village Hero was a winner in Manitoba in 1894. Mary Abbotsford (a granddaughter) was sweepstakes cow wherever shown in the United States in 1897. The celebrated white steer, Bruce, which won wherever shown last year, including the Brantford Fat Stock Show in competition with the Chicago champion, Jock, was a grandson of the old cow, Vanity, by Village Hero, now in the herd and a winner all over last fall in the cow class, is a granddaughter. Therefore it may fairly be concluded that the Village Blossoms (the predominating family in the herd) have done much not only to advance this herd to the front, but to establish a reputation for the Shorthorn breed on this continent.

Abbotsford's '98 crop of calves are considered to be the best lot ever raised on the farm, and are very growthy and evenly fleshed. Among the Queen of Beauty representatives we saw Bonnie Bree, by Prince Albert and out of Bampton Queen, by Royal Bampton (a Dryden-bred cow, and in his hands won 1st in Toronto in her class as a calf). Bonnie Bree is now in her eighth year and carrying her 7th calf to Abbotsford and due in the fall. Some seven or eight of this family are in the herd, and among them being a choice, evenly-made seven-months bull calf, (Bruce and Bampton) were both out of Bonnie Bree.

Three of the noted Stathallans here make their home. The old cow, Moss Rose of Strathallan, by imported Vice-Consul, is now again safely in calf. (She was also among the first prize winners in her day). Her yearling son by Abbotsford resembles the family much, being thick, low-set, evenly fleshed, and, like his dam, a beautiful roan color. Duchesses of Gloster are represented by a pair of cows and a solid red heifer approaching a year old. The well-known show cow, Vanity, by Village Hero and out of Vista 2nd, has recently been sold to the Hon. Thos. Greenway, Manitoba.

Her two-year-old daughter is now suckling her first calf and promises well to equal her dam, which for three years was placed first in her class at the leading big shows. Prudence, by Prince Albert and out of Vanity, is proving herself immensely popular as a matron. A pair of her daughters are in the herd, and a yearling white steer, by Abbotsford, whose equal we have yet to find and from which something will undoubtedly be heard later. Mr. Smith is at present offering young bulls and heifers by Abbotsford as representing all the above mentioned families.

Visitors to the farm will meet with no disappointment when shown the stock.

CHRIS FAHNER'S BERKSHIRES, CHESTERS, TAMWORTHS AND VICTORIAS.

At the breeding establishment of Mr. Chris Fahner, adjoining the village of Crediton, County of Huron, we found the proprietor busily engaged with his stock, which at present has representatives of the Berkshires, Tamworths, Chester Whites, and the celebrated Victorias, which have been imported within a year from their originators, Mr. George F. Davis, Dryer, Lake Co., Indiana. The boar is now two years old, and a showing winner at the leading State fairs across the line. In conformation he is above the medium in size, possessing good length, and is very active and of good disposition. Mr. Fahner informed us that he had received a very liberal patronage since his arrival on the farm. Of recent importations we saw a young boar of a type which we would expect to develop into an animal of the bacon type at maturity, and to which the young females are being bred. Of this breed two sows were also imported. Beauty Bess 1227 is two years old, and in the showing was never defeated, although exhibited at the Wisconsin, Iowa, Illinois, Indiana, and Ohio State fairs, and others having equally keen competition. In conformation she is, as her name indicates, a beauty, weighing about 600 pounds; clear white skin, very smooth in type; will be bred to Chief to farrow in the fall. The yearling sow, Jubilee, is also due to farrow to Chief. Of domestic birth are a pair of very growthy, well-made four-months sows and a boar, which are held for sale. Of the breed, Mr. Fahner informed us that at an American fat stock show in 1896, out of 75 entries of all breeds, the Victorias captured the first premiums for early maturity, being exhibited by Mr. Davis, and Mr. Fahner considers them capable of producing more pork for the food consumed than any breed he has yet tried, and also states that the enquiry for them has been something enormous, and sales have only been limited by the stock offered. At the head of the Berkshire pens is the three-year-old Snell-bred boar, Star Chief, by which much of the young stock was sired. Among the sows we saw a four-year-old, Daisy, due in August, and a two-year-old, Black Bess, due in July. Among the younger salable stock is a choice, well-marked pair of six-months sows and a boar (not related) from Snell-bred dams, and some half dozen which are younger. In Tamworths a few even-months sows are held for sale, also a yearling boar. Some choice, well-formed young Chester stock was also shown us, and among them were three young boars and a pair of sows rising two months, all registered.

DOLLAR WHEAT

ADVICE TO FARMERS.

The way to obtain a dollar a bushel for your wheat is to have it threshed by a Challenge Separator. See our perfect Barley Bearder. By using our Pea Threshing Attachment you will crack no peas. A full stock of Threshers' Supplies—Belts, Tank Pumps, Hose, &c. Write for prices.

SEE OUR TRACTION AND PORTABLE ENGINES—5 DIFFERENT STYLES.



A thoroughly up-to-date machine—well built, well designed, well finished. Send for Illustrated Catalogue.

THE GEORGE WHITE & SONS CO. (LIMITED), LONDON, CAN.

2 POLAND-CHINA BOARS

Also a pair of six mos. sows, with pedigree running to imported sires. Booking orders for spring stock from showing dams and imported sires.

JOSEPH M. SMYTH, Box 619, Chatham, Ont.

The CANADIAN CORWIN HERD of POLAND-CHINAS

Are in shape to dispose of breeding stock of all ages and both sexes. Also offering a Jersey heifer calf from Snell stock. Poultry a specialty. B. P. Rocks, Brown Leghorns, S. Hamburgs, and Silver and G. Dorkings. Eggs, \$1.00 per setting. Also 50 acres cleared land, with an abundance of natural gas. Kent Co. Ont. CAPT. A. W. YOUNG, Tupperville, Ont.

POLAND-CHINA BOARS

Fit for service, and a few six months sows. Also booking orders for spring pigs, by the imported sire, Corwin Ranger, and Orme.

ROBT. L. SMYTH & SON, FARGO P. O., ONT.

Springridge Poland-Chinas

Now offering the 2-year-old sire, Black-amoor, and a few of his young females, and booking orders for young stock from the royally-bred Goldbug, lately added to the herd.

WM. J. DUCK, MORPETH, ONT.

SPRINGBROOK HOLSTEINS, TAMWORTHS and BARRED ROCKS

Three choice Boars, ready for service, sired by prize-winning imported Nimrod, and a few sows. A lot of nice pigs ready to wean.

One bull, 10 months old, and calves. B. Rock settings from choice mature birds.

A. C. HALLMAN, NEW DUNDEE, ONT.

TAMWORTHS

From imported stock. One yearling boar; one boar and half a dozen sows, four months old, by Algernon 573.

WILLIAM MAJOR, WHITEVALE, ONTARIO, Locust Hill, C. P. R., 3 1/2 miles.

HERMANVILLE TAMWORTHS.

\$100—Parkhill Mab—\$100 HER LITTER FOR SALE, FARROWED JUNE 30th, 1898.

A grand opportunity to high-class breeders to secure diamond-edged stock. Quality of dam and sire considered, no such litter has ever been offered to the swine breeders of the Dominion. Parkhill Mab's sire is O. A. C. 115-439; dam, O. A. C. 110-497. Her litter is sired by the St. Dunstan's College stock boar, King George—818—probably the greatest Tamworth boar in the Lower Provinces.

Parkhill Mab—772—is herself a magnificent animal, thirteen months old, weighs 400 lbs., and is an ideal of the breed. Will receive orders for this litter, to be shipped about Aug. 1st, at \$10 to \$15 each, f. o. b., according to size and quality.

Hermanville Farm, Hermanville, P. E. I.

Woodland HERD OF Tamworths

are in good form this season, and offering young stock of superior quality and breeding of both sexes.

H. REVELL, INGERSOLL, ONT.

P. R. Hoover & Sons, GREEN RIVER, ONT.

BREEDERS OF CHOICE TAMWORTHS. Young boars and sows ready for breeding purposes at prices which should sell them. St. Locust Hill, C. P. R.; Markham, G. T. R. Correspondence solicited.

TAMWORTHS OF HIGHEST QUALITY!

I have the largest herd in Canada of different strains. Choice Boars and Sows from six weeks to three and four months old. Orders booked for pigs from 14 sows and 4 boars. Prices reasonable.

J. H. SIMONTON, Box 304, CHATHAM, ONT.

TAMWORTHS.

Tamworth Boars eleven weeks old, sired by NIMROD IMP. dam Coldstream Garnet, she is bred from prize-winners. For prices write

W. C. SHEARER, Bright, Ont.

Registered CHESTER WHITE PIGS.

Six weeks old, at \$5 each; 11 in the litter.

F. BIRDSALL & SON, BIRDSALL, ONT.

MERTON LODGE

Herd of Chesters and Tamworths are in full bloom, and are offering choice stock of



both breeds and sexes. Also booking orders for coming spring stock.

H. GEORGE & SON, CHAMPTON P. O., ONT.

THE AVON HERD of Chesters

Are in fine form. Orders are now being booked for April litters from notable strains.



Henry Herron, Avon P. O., Ont.

JAMES CHRISTIE, WINCHESTER, ONT.

Breeder of Chester White pigs, the foundation of which was selected with the greatest care and from only the most noted breeders in Canada.



VICTORIAS.

I have now two Imp. Victoria sows in pig; they are in pig by Chief, the boar that won 3rd premium at Wisconsin State Show and 2nd at St. Louis State Show. Write for prices at once.

CHRIS FAHNER, CREDITON, ONT.

GLENHURST POULTRY YARD. EGGS FOR SALE.

White Wyandotte, White Plymouth Rock, Cornish Indian Game, Black Minorcas, Houdan, Black Langshan, White Langshan, Barred Plymouth Rock, Silver Laced Wyandottes, \$1.50 for 15, or \$2.50 for 30. Packed in patent boxes. Will replace at half price any not fertile. Also poultry supplies. Will exchange any of above for first-class Tamworth pigs, any strain. Dorset and Shropshire sheep, Tamworth pigs, Shetland ponies, Jersey cattle, all ages (registered). Prices right.

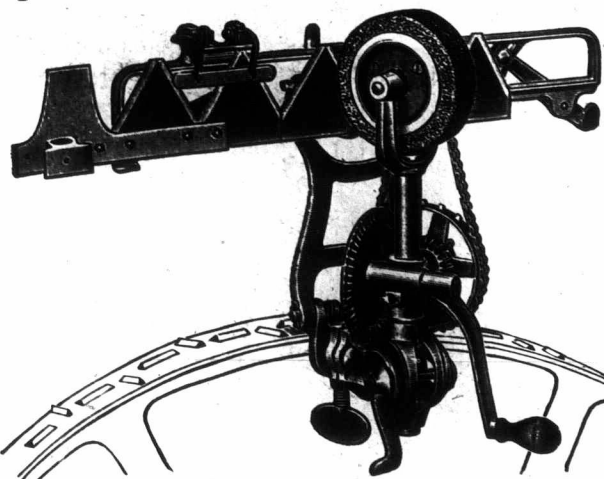
STRATFORD BROS., Brantford, Ont.

Poultry. L. and D. Brahmas, B. and W. Rocks, S. and W. Wyandottes, Black Minorcas, Indian Game and Red Caps. Young stock and eggs from above breeds. Eggs, \$1.25 for 13; \$2 for 26. Satisfaction guaranteed. JACOB B. SNIDER, German Mills.

Send 15c. for Poultry Annual and Almanac to C. C. Shoemaker, Freeport, Ill., U.S.A.



**\$5 SECTION KNIFE GRINDER. \$5**



FOR the sum of \$5 we will sell a machine that every farmer should have at this season, and that is a Section or Machine Knife Grinder. The one we sell for \$5 is the latest improved article for the purpose. The machine may be clamped to the wheel of a mower or binder right in the field, or it may be clamped to a work bench. The wheel is made of the very best of emery, and will last for years. The arm of the mower or binder, with the sections on it, is placed in the grinder, and may be set at any desired angle. The emery wheel may be turned to meet the knives in any position. When the handle of the grinder is turned the emery wheel is turned right up into the corners where the sections meet, doing the work beautifully, making a good job of the grinding, and doing it so easily and so quickly as to surprise you. The grinder is constructed upon improved ideas, the set of the sections and the set of the emery wheel being adjustable to every conceivable advantageous position. Each Section Knife Grinder is carefully packed in a neat box, and weighs for shipment 20 lbs. Besides using this machine for sections, the owner may use it for pocket knives, table knives, butcher knives, axes, chisels, etc. The edge of the emery wheel is flat. Our terms are cash with the order. Send \$5 at once and get one of these machines for use this season. After using it you would not take \$25 for it if you could not get another. Send money by registered letter.

**Binder Twine.** Two weeks we advertised our Binder Twine for sale in this paper. So many persons responded at once with orders that our stock was cleaned right out, and we are unable to replace it this season. Send us \$1 and we will send you our very best extra hollow ground razor by mail.

**Horse Forks.** It is not yet too late to put up a fork outfit in your barn. GET THE BEST. For only \$12.25 we will sell you an entire outfit, consisting of the best and latest improved reversible carrier, one double harpoon fork, 125 feet of the best 3/4-inch manilla rope, 63 feet of the best Russian hemp trip rope, 3 swivel pulleys, 3 pulley hooks, and 12 best rafter track bolts. That makes an entire outfit for only \$12.25. Our terms are cash with the order, and there is still easily time to put one up for this season's crop. Send your order and your money at once. We ship within an hour of the time the order is received, and you will get the best.

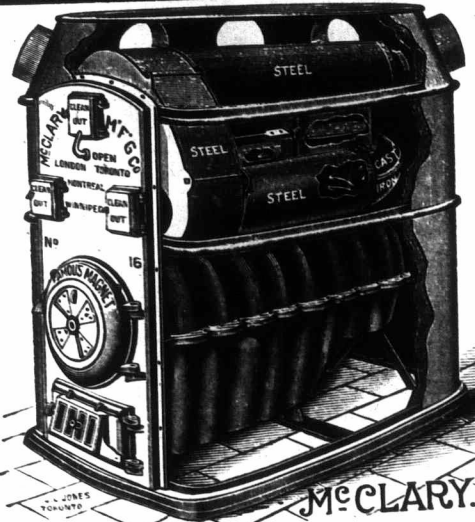
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A new implement, thoroughly tested and endorsed by prominent agriculturists. The most labor-saving tool on a farm. Send for catalogue.

David Maxwell & Sons, St. Mary's, Ontario.



**A Perfect Wood Furnace**

OUR "FAMOUS MAGNET"

Made in 8 sizes, using 3, 4 and 5 feet wood. Will heat from 10,000 to 100,000 cubic feet. Very strong fire box. Large feed door. Extra heavy steel flues with cast heads, which are very easily cleaned. Instant direct or indirect draft. ALL OPERATIONS FROM FRONT OF FURNACE.

You can keep your house warm from cellar to garret, and do it cheaply.

HIGHEST TESTIMONIALS FROM ALL DEALERS AND USERS.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg, and Vancouver.

**ANNUAL SPRING SALE OF POULTRY.** Fifty Barred Rock Hens, bred to produce brown eggs. Price to suit the farmers. Also a few S. C. Leghorn Cockerels. Eggs from B. P. Rocks, Silver Wyandottes and S. C. Leghorns, \$1.00 per 13. Pekin Ducks, \$1.00 per 11. W. R. GRAHAM, Bayside, Ont.

**BRONZE TURKEY EGGS** Farmer's Daughter strain. \$3 per thirteen. JAS. TOLTON, WALKERTON.

**Machine \$10** TO BUILD THE STRONGEST AND BEST WIRE FENCE. 16 to 24 Cents per Rod. No farm rights, royalties or patent stays to buy. AGENTS WANTED. Write for circular. The Bowen Cable Stay Fence Co. NORWALK, OHIO, U. S. A.

**GOSSIP.**

In writing to advertisers, mention the "Farmer's Advocate."

Live stock entries for the Trans-Mississippi show at Omaha close August 10th, and animals must be owned by exhibitor on July 10th.

Lord Polwarth's white three-year-old bull, Border River (60254), won the breed championship in the Shorthorn class at the Edinburgh Agricultural Association Show in June.

W. J. Fleming, late of Prince Albert, N. W. T., one of the proprietors of Fleming's Lump Jaw Cure, having disposed of his Prince Albert drug business, will join his brother at St. George, Ontario, where they purpose henceforth concentrating their energies on the manufacture and sale of Lump Jaw Cure. Mr. Fleming says the trade is developing to such proportions as to require their undivided attention. They have opened an agency in Winnipeg, under the management of Mr. G. Morcer, in the Sandford Block, on Princess street.

**D. G. GANTON'S SHROPSHIRE AND BERKSHIRE**

At the farm of Mr. D. G. Ganton, of Elmvale, Ont., in Simcoe Co., we were pleasantly surprised to find quite so much quality in Shropshires, although we had previously been informed that the best were gone too good for Mr. Ganton. The foundation was laid from an importation made by Mr. C. C. Bridges, Shanty Bay, some five years ago. Later purchases have been made from the flocks of Messrs. Rowat Bros. and C. Laurence. The sires employed have been from the leading flocks in Canada (personally selected). Among them was the ram Duff 50039, by Bar None (imp.), a Davis-bred sheep, which has left a good impression on the flock, being well and evenly covered. The Skinner-bred ram, No. 116 (6338), was employed on a few ewes last fall; also one from the flock of Hon. John Dryden. The ewes are a well-covered, well-matured bunch—even in type, quality and color—and this crop of lambs of the above breeding cannot but be good, and we were not disappointed when we saw them. Mr. Ganton informed us that parties who wish to purchase by correspondence may rest assured of receiving the choicest on hand at time of writing.

In Berkshire pigs, Mr. Ganton established a herd several years ago by purchasing stock from such breeders as Geo. Green, J. G. Small, and others in the front with the breed. Among the brood sows which did much to make a name on the farm was Blossom 2134, by King of the Castle 1837, and out of Last Link 7th 2268. She was purchased from her breeder, Mr. Geo. Green, and from her many of the brood sows on the farm have been retained. Among them we saw a very choice two-year-old sow which is in possession of much good quality, being of the bacon type and nicely marked. We saw three very nice sows carrying their first litters, by Desdemona 3952, by Baron Lee 4th, and out of Happy Belle 2788. Three choice sows and a boar are held for sale that are lengthy, well-marked, even animals.

**CHAS. RANKIN'S SHORTHORNS AND OXFORDS.**

In Simcoe County, on the Penetang Road, midway between Penetanguishene and Barrie, is the well-equipped stock farms of Mr. Charles Rankin, Wyebridge, of some 250 acres of splendid grazing and grain lands, upon which has recently been built a splendid barn of 50 x 84 and 50 x 60 feet, under which are well-arranged cattle stables surrounded by an eleven-foot stone wall, fresh water being supplied through pipes from a spring in an adjoining field. Shorthorn cattle have been Mr. Rankin's favorite breed for upwards of a score of years. The foundation cow, Sonnie's Maid 7666, by Village Beauty, was obtained from Mr. Bennett, Minesing. Since then animals have been purchased from various others of the most noted breeders of the Province, and pedigrees from Miller and others were shown us. Among the sires employed all along have been such animals as Cherry Duke (a Miller-bred bull); Glenlyon, by Doctor Erolldoune, and out of Princess Lovely (also bred by Miller); Sheriff Hutton, by Bonnie Scotland, and out of Blossom; Crimson Chief, by the noted Indian Chief; and to-day the young bull, Klondike of Baltimore 26442, by Village Boy 6th 16369, and out of Ury 15th 25671, stands at the head. He was purchased from Mr. John Isaac at the spring sale, and promises to develop into a useful good animal. Among the present females we saw May Queen 14236, by Glenlyon, and out of Sonnie's Maid. She was bred on the farm, and has proven herself a successful performer. Some of the choicest in the herd are placed to her credit. The bulls are all finding ready buyers when young. She is a large milker, as is evident from her massive udder and the way she brings her calves forward. Her three-year-old daughter, Mabel, by Crimson Chief, is a well-made, evenly-fleshed cow that promises to equal her. And at her feet is a very choice red bull calf by Crimson Chief, five months old. Sonnie's Maid females predominate as the matrons in the herd, and from the family some really good things have been developed. Lady Grace Hutton and Rachel Hutton, both by Sheriff Hutton, were dropped in 1891, and are perhaps the largest and evenest cows on the farm, inclining towards the beefing type. They produce calves yearly. Among the young stock are four young bulls and five heifers, with other cows to hear from. They are a nice lot of reds and roans, and are being reared in vigorous, growthy form. Taking the Shorthorns as a bunch they are a good and even lot, and we have been informed on good outside authority that many prize-winners have not only been reared there but have gone out into stiff competition and been able by their own quality to defend their own and breeders' rights. And from some of the large roan females we saw in the pasture we would expect them to account well for themselves wherever placed.

Oxford sheep have also received some of the attention the past ten years, and stock has been obtained from time to time from the best breeders in Canada.

Berkshires also are admired here, and over fifty head were on hand at the time of our visit, and some choice, well-marked, good young things were seen, the present stock being Premier 4623, by Manor Hero 4117 (imp.), and out of Thrifty 8th 3486. He is a well-marked, strong type of a sire, just reaching his prime.

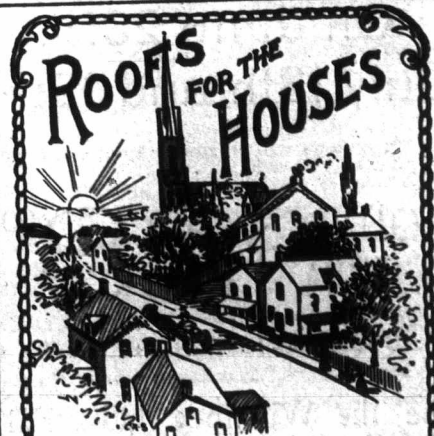
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The system of training is Normal, Specific, Thorough, comprising full instruction and practice in

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On June 28th, July 13th and 19th

Excursions will be run to Manitoba from all points in Ontario.

ROUND TRIP, \$28.00

Good to return in 60 days.

See the Winnipeg Industrial Exhibition, July 11 to 16; Brandon Exhibition, July 19 to 22.

Farmers should avail themselves of this opportunity of seeing the Province of Manitoba. For information, maps, pamphlets, &c., write to

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	Regina ..... \$30 Moose Jaw ..... Yorkton .....
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Going June 28th. Returning until Aug. 27th (All Rail or S.S. Alberta.)  
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**TORONTO ENGRAVING CO.**  
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 CUTS BY ALL PROCESSES  
 LIVE STOCK A SPECIALTY

GOSSIP.

The *Scottish Farmer* of June 11th has the following: "As intimated in our last issue, there is some little movement in the Clyde-dale world, and a few horses have been bought for exportation this season. Mr. Robert Nees, Howick, Quebec, a well-known buyer in other days, has secured two horses, with which he sells this week. These are Ploughboy (10394), which he has bought from Mr. John Crawford, Marshalland, Beith, and Fullarton (8910), which he has bought from Mr. James Kilpatrick, Craigie Mains. The latter was bred by Mr. Finlay Bell, and is a thick, compact horse, with good limbs, got by the \$1,700 champion horse, Prince of Kyle (7155), out of a mare by the good horse Go-Ahead (5362). Fullarton has been shown successfully at local shows, and is especially adapted to stock-raising, having an abundance of good grazing land, well supplied with water, and well equipped with convenient and healthy buildings. The barn, 60x78 ft., has a basement underneath its entire size, which is excellently arranged, well drained, ventilated and lighted, and equipped with all conveniences. Power is supplied by a large wind engine of the latest design (Brantford). Shortthorns have been bred on the farm for four years. The foundation stock was purchased from Mr. David Milne, Ethel, Ont., at the dispersion sale, when a pair of cows, Laura of Molesworth 9887 and Dahlia 11434, were purchased. Laura of Molesworth, by Lord Lovel 2980, and out of Fidget 3013, was in her tenth year when purchased, and raised the present stock bull, Grey Hero 23187, by Perfection, a large, well-formed animal, now three years old, and a glance at his pedigree will reveal the fact that this fellow is richly gotten; his sire was by the noted Barmpton Hero and out of imported Lovely 19th. In conformation, he is a stylishly-built animal, very evenly-fleshed, of good size, standing well on clean, well-made legs. He possesses a gentle disposition. He has proven himself a valuable and sure sire, and on account of his relationship to the young females in the herd he is held for sale. The red bull calf, Duke of Richmond 26079, by Scarlet Violet 21446, and out of Miss Ramsden 3rd 26010, was purchased from his breeders, Messrs. W. & J. Russell, Richmond Hill, and promises to make a forward step in the line. Among the females we saw the aged cow Effie 17646, by Lord Barmpton, and out of Ury 9th 10633. She has proven herself a valuable cow. Of the nine females having been descended from her on the farm but four remain, the others having been sold. Her seven-year-old daughter by Lord George Ingram 7286 is a large, well-made, red cow, now suckling a handsome dark red bull half seven months old. Her three-year-old daughter, St. Vincent Bell, by imported Albert 2663, is due to calve in September to Grey Hero; her last being a red and white heifer calf to Grey Hero, and she has again been bred back to him. Taking the family as a bunch they are a good, useful lot, possessing much good quality, and the kind for which there is a good demand, especially in young bulls. Dahlia, since coming to the farm, raised a pair of females. The three-year-old Pansy, by Rob Roy Perfection 20013, now carries her second calf. The two-year-old white daughter will be bred this fall. An all red registered yearling bull of a good type is held for sale.

J. W. HARTMAN & SON'S SHORTHORNS AND BERKSHIRES.

The 300-acre farm of Messrs. J. W. Hartman & Son, at Elmhedg P. O., in Grey Co., Ont., lies some eight miles to the south of Mesford, and is especially adapted to stock-raising, having an abundance of good grazing land, well supplied with water, and well equipped with convenient and healthy buildings. The barn, 60x78 ft., has a basement underneath its entire size, which is excellently arranged, well drained, ventilated and lighted, and equipped with all conveniences. Power is supplied by a large wind engine of the latest design (Brantford). Shortthorns have been bred on the farm for four years. The foundation stock was purchased from Mr. David Milne, Ethel, Ont., at the dispersion sale, when a pair of cows, Laura of Molesworth 9887 and Dahlia 11434, were purchased. Laura of Molesworth, by Lord Lovel 2980, and out of Fidget 3013, was in her tenth year when purchased, and raised the present stock bull, Grey Hero 23187, by Perfection, a large, well-formed animal, now three years old, and a glance at his pedigree will reveal the fact that this fellow is richly gotten; his sire was by the noted Barmpton Hero and out of imported Lovely 19th. In conformation, he is a stylishly-built animal, very evenly-fleshed, of good size, standing well on clean, well-made legs. He possesses a gentle disposition. He has proven himself a valuable and sure sire, and on account of his relationship to the young females in the herd he is held for sale. The red bull calf, Duke of Richmond 26079, by Scarlet Violet 21446, and out of Miss Ramsden 3rd 26010, was purchased from his breeders, Messrs. W. & J. Russell, Richmond Hill, and promises to make a forward step in the line. Among the females we saw the aged cow Effie 17646, by Lord Barmpton, and out of Ury 9th 10633. She has proven herself a valuable cow. Of the nine females having been descended from her on the farm but four remain, the others having been sold. Her seven-year-old daughter by Lord George Ingram 7286 is a large, well-made, red cow, now suckling a handsome dark red bull half seven months old. Her three-year-old daughter, St. Vincent Bell, by imported Albert 2663, is due to calve in September to Grey Hero; her last being a red and white heifer calf to Grey Hero, and she has again been bred back to him. Taking the family as a bunch they are a good, useful lot, possessing much good quality, and the kind for which there is a good demand, especially in young bulls. Dahlia, since coming to the farm, raised a pair of females. The three-year-old Pansy, by Rob Roy Perfection 20013, now carries her second calf. The two-year-old white daughter will be bred this fall. An all red registered yearling bull of a good type is held for sale.

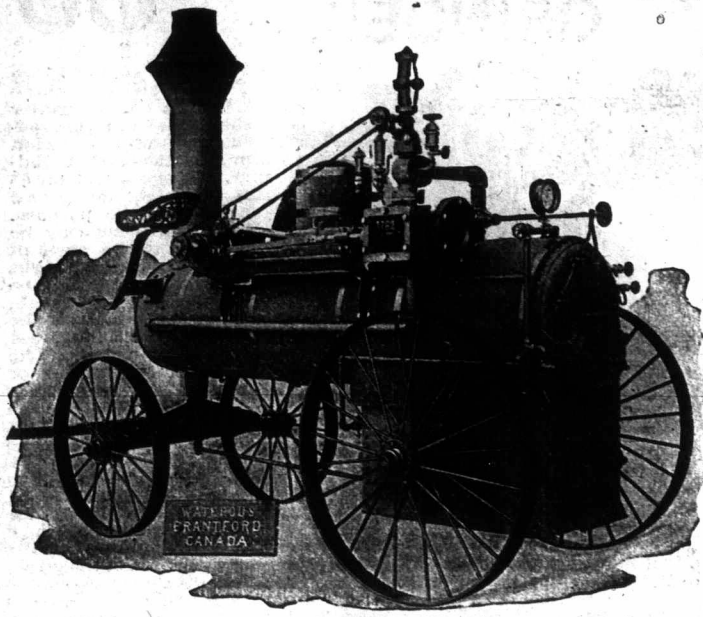
The Berkshires, though not numerous, have been selected with the best of judgment. The foundation stock was purchased half a dozen years ago, and are representatives of the noted Baron Lee 4th and Nutterprise families. Four brood sows in all are kept, and are now in pig to farrow in the fall to Black Knight 4267, by Baron Lee 4th. The two-year-old sow, Miss Kennedy 6322, by Prince Highclere 3385, and out of Daisy Dean, is a very smooth, well-gotten-up animal, full of quality, with very deep sides, smooth shoulders, and well-marked, with a perfect head. Topsy 5761, by Emperor William 2536, and out of St. Vincent Pride 4101, with pedigree running straight to imported stock, is a strong, useful sow. As yet the young stock we saw consisted of 23 month pigs, the litters of the above sows, which in conformation are strongly impressed with their Baron Lee breeding. None but really good animals are sold or retained for breeding, the culls being all sold to the butcher.

Taking the establishment as a whole, we cannot but predict success to the enterprising owners, if energy, perseverance and good judgment count for aught, believing, as they do, that the best are the only safe ones to handle.

DEATH OF BERKSHIRE BOAR BARON LEE 4TH.

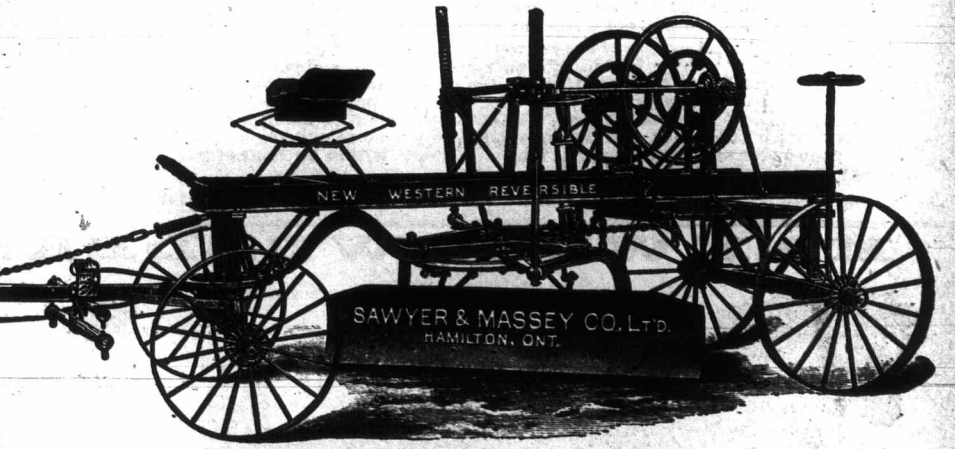
N. H. Gentry, Sedalia, Mo., reports the death of the Berkshire boar Baron Lee 4th 33446, and says: Now that he is dead I can with less fear of criticism express my estimate of him. I think he was the greatest of all the boars I ever bred or used, not excepting his sire, the great Longfellow. Mr. J. G. Snell, of Snelgrove, Ont., Can., made me a visit in April for the purpose of purchasing a boar, and I sold him two, one a full brother to and the other a son of Baron Lee 4th. It will be remembered that Mr. Snell owned and had the use of Baron Lee 4th for more than two years, and he told me when here that he considered him the best boar individually and the best breeder he had ever seen. There has never been a boar in Canada, he said, that had left so many show animals. And the firm of Snells have in the last thirty or more years imported more prize-winners from England than any other individual or firm that has ever been in existence, and it was them that I paid \$1,000 in cash for three Berkshires, Lord Liverpool 221, Royal Duchess 900, and Sovereign Lady 908, Nov. 25, 1875. Since then I have paid them many thousands of dollars for other good ones.

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