

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

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JUNE 15, 1900.

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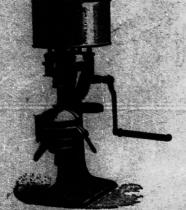
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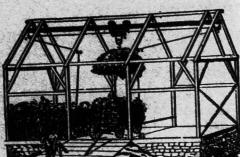
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VOL XXXV.

LONDON, ONT., AND WINNIPEG, MAN., JUNE 15, 1900.

No. 504

EDITORIAL.

The Dominion Experimental Farms.

The thirteenth annual report of the five Domin-Experimental Farms has just reached us. It braces nearly 450 pages, giving details and ults of much useful work. Dr. Wm. Saunders. e Director, who from year to year visits nearly quarters of Canada, points out that the position of the farmer in the community, and the intellince and success with which he carries on his rk, are steadily improving, while the farm home becoming more attractive, and the family surled with greater comforts. The Director goes n to state that "the farmer now seldom sells coarse ins from his farm, but converts these, by feeding, nto concentrated animal products, and thus retains elements of fertility which these crops have aken from the land and restores them to the soil n the manure. He thus supplies for future crops such plant food in a readily available form." This a sound principle on which to anchor, and we are lad to note in connection with the Experimenal Farm system, as indicated by this report, an creasing attention being paid to live-stock husandry and the growing of crops for that purpose. Too much attention cannot be paid to the question f the economical production of meat and milk of d quality by determining the best types of nimals for the purpose, the use of the most suitable oods and methods of feeding. Look, for instance, t the effort of the Agriculturist, Mr. Grisdale, to certain the exact returns and cost of keeping the lairy herd at the Central Experimental Farm where the modest net profit of \$10 per cow is own), or the extended details which Mr. Robertn, Superintendent of the branch farm at Nappan. ives of a similar trial with the herd of dairy cows der his charge, and for further particulars of which we would refer the readers to our dairy epartment in this issue. It should make the verage dairyman stop and think about what his wn cows are doing or are not doing to see that ne of these cows at Nappan yielded a net profit \$27.83 in the year, while others fall as low as \$2.68. he latter cow, too, gave nearly 5,000 pounds of nilk, which would probably put her away above he average Ontario factory cow, judged by some sureau of Industry returns once published, so that here is little doubt that many cows are making heir owners poorer, but who seem to cling to them rith deathlike tenacity. Why not weed out these nprofitable bovine servants?

The experiments in early, late and medium owing, reported by the Director, have been conucted long enough to show the advantage of owing all the crops, if possible, on the farm within n days after the ground—prepared by fall plowing is ready for seeding. It might have been further ointed out that want of tile drainage is responsible ragood deal of late seeding and lessened yield. Remarkable results are reported from plowing own green clover. The average increase in grain fter the plowing under of green clover was, for the rst year when oats were used, 11 bushels 1 pound r acre, and in 1899, when these same plots were wn with barley, the average increase was 8 bushels pounds per acre. An increase of 28 per cent. in e potato crop, where clover had been plowed own, was also shown.

The fertilizer plot experiments, which have been oing on for ten or eleven years, disclosed incidendly that soil to which no barnyard manure was oplied became greatly depleted of humus and ower to hold moisture, and its conditions favorble to plant growth were very much lessened. With wheat, barley, oats, corn, mangels and trainings the best results were obtained from barnard manure, as compared with various artificials, ad, furths rmore, fresh manure gave equally goodfact, better—results, ton for ton—the latter being

the case in most instances—than when well rotted.

These farms have done, perhaps, their very best work in encouraging tree-planting. During the comparatively brief period of twelve years, since the Experimental Farms were founded, these useful institutions have laid the foundation for a great advancement in tree-growing in Canada in the near future. There are now growing on the five Experimental Farms a grand total of about 245,000 trees. There has also been sent out from these farms during the period mentioned to individual lovers of trees, in small lots of about 100 each, 1,261,000 (more than one and one-quarter millions) young forest trees and cuttings and 14,000 pounds (7 tons) of tree seeds, every pound of which, with reasonable care, may be expected to produce from 500 to 800 young seedlings. The results of this work are now everywhere apparent. On homesteads in almost every part of Manitoba and the Territories there are small plantations of forest trees which furnish more or less shelter for the growing of garden vegetables, small fruits and flowers, also for buildings and stock, and at the same time make the dwellings of the settlers more attractive and homelike.

Another exceedingly interesting and valuable feature of this volume is the illustrated report of the Entomologist and Botanist, Dr. James Fletcher, dealing in a very practical way with the myriads of insect and weed foes that confront the farmer in all portions of the country. The section occupied by the Horticulturist, Mr. W. T. Macoun, dealing so fully with the popular and increasingly important fruit-growing interests of the Dominion, will prove valuable for reference on many points. In the latter we notice, in passing, a good idea, viz., the giving of a short list of "Best Vegetables for Farmers," as indicated by the trials made. The reports of the Chemist, Poultry Manager, and the superintendents of the branch farms are also very

Some of the lists of varieties of grains, etc., kept under test would seem to be bewilderingly long. There appears to be almost a mania for potato testing, and some of it is not yet very conclusive, as the report itself states. At the Central Farm, for instance, there were under test no less than 143 varieties, at the Maritime Farm 119, Manitoba Farm 110. Northwest Territories 117, and British Columbia American Wonder, which heads the list as a vielder at the Central and Indian Head Farms, does not appear—under that name, at all events—in the Brandon Farm list, is about one-third of the way down at Nappan, and near the bottom at Agassiz. Surely a good many of these sorts might be eliminated, and much labor saved entirely or else turned in other directions.

Dr. Saunders devotes some space to journeys which he undertook during the year. Of the Doukhobors whom he visited in the course of a 150 mile drive he evidently received a very favorable impression, finding them industrious and well satisfied with their new home in North-west Canada. Contented amid more or less hardship, he found them, moreover, truthful, honest and hard-working, cleanly in their habits—using neither liquor nor tobacco—and, being vegetarians, strong and hardy, the Doctor believes they will make a valuable class of settlers in the districts where they are located, forming prosperous communities that will aid in the development of the country.

The crops in Manitoba and the Northwest, which, though sown under peculiarly favorable conditions, suffered very considerably through the month of May from lack of rain, have greatly improved in the last two or three weeks, refreshing showers having fallen in many districts, and the prospects are now much brighter for favorable returns than they were some time ago. Western Ontario, which felt severely the want of rain through the month of May, has been favored with copious rains, and the crops have made vigorous growth in consequence.

Sunit Dunamanta

Fruit Prospects. The outlook for both tree and bush fruits is especially bright, according to letters published elsewhere in this issue from correspondents in many of the chief fruit-growing centers. Word comes from everywhere that apples, pears and cherries, as well as strawberries and all kinds of small fruits, promise a full yield, while plums and peaches, so far as reports received indicate, are wellnigh a failure. During recent years, however the chief cause of anxiety among fruit-growers has been not so much how to get a crop as to secure a market and favorable shipping facilities. It is true that success in these lines has been secured up to a certain point, but in seasons of a heavy yield, as is promised this year, there is certain to be more or ss glutting of markets at certain seasons, which tells most severely on second and lower grade stock. The letters received and referred to deal helpfully with methods of improving the quality of the best fruit, and reducing the quantity of that of lower grade. Thinning overladen trees and limbs comes in for a goodly share of commendation and comment, the results of which and time to do it are well summed up in Bulletin 66 of Massachusetts Agricultural College, as follows:

"The results of thinning out a liberal amount of fruit from an overloaded tree or plant are: (1) that the foliage becomes more vigorous and more resistant to insect and fungous pests; (2) the remaining fruit grows larger and more perfect in size, color and quality; (3) the larvæ of the codling moth, the insect producing wormy fruit in the apple, pear and quince, and the larvæ of the plum curculio, that produces the wormy plums and cherries, are destroyed in the immature fruit when it drys up or decays on the ground, and much less labor is required to sort and pack the remaining fruit when it is harvested. The price obtained for fruit from carefully thinned trees or plants is certain to be much higher than if all the fruit were allowed to remain unthinned, while the cost of thinning is not much greater than would be the extra cost of the final picking and sorting of so much inferior fruit.

ime for Thinning.—The best time for thinning fruits is as soon as it can be determined what specimens are injured by insects or by any other cause. This time for the apple, pear, peach and plum is early in July. The grape should be thinned as soon as the size of the bunches can be determined, which may be the last of June or the first of July. The amount of fruit to be removed will depend largely upon how much has set. In some cases three-fourths should be removed. With apples and pears the amount of thinning to be done must depend upon the size and vigor of the trees, but all wormy and deformed fruit should be removed even to the extent of taking the entire crop, for in the majority of cases such fruit only serves to increase the number of insects the next year, and will not pay the cost of harvesting if allowed to mature. In thinning the grape, all small bunches should be removed if the fruit is intended for market, as only large, full bunches will sell for good prices, and only a limited amount, depending upon the strength of vine, should be allowed to remain on each cane. In vineyards at full growth from 10 to 20 lbs. of fruit will be all that each vine can mature and retain its vigor.

In many sections last year orchards were almost entirely defoliated by the tent caterpillar, which not only ruined the fruit crop then, but did much permanent injury to the trees. This season a like scourge is threatened in various districts; in fact, in almost all parts heard from this pest is more than ordinarily prevalent. The remedies recommended by the various contributors are sure and simple, and should not be neglected a day longer than the work can possibly be done. While the spray pump is considered by too many an innovation, its value to fruit-growers cannot easily be overestimated, and it behooves every man who grows fruit to appropriate this easily accessible aid to a more profitable conduct of that branch of his farming operations.

Mr. Mark Sprague, Ameliasburg, Ont., who has for twelve years been employed as Instructor of Creameries in Ontario, recently left for the Old Country, in the interest of butter and cheese exTHE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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JOHN WELD, MANAGER.

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Farming Understandingly.

There is a vast difference between farming as your neighbors do and your neighbors farming as The man who studies the culture of crops for a number of years gets, one year with another, what is considered a good yield. His neighbor, however, a fairly good farmer, has given crop growing no particular study, but manages his crop as his neighbors do. It may be, his methods are those which his father followed when the country was new, and high cultivation and a systematic rotation was neither necessary nor practicable. His yield in very favorable seasons may be considered fair, but when adverse weather conditions prevail or there is a more than ordinary prevalence of insect pests for which he has not prepared, his chances for a crop that will pay expenses are rather slim. Both men dispose of their crops at the same market and at the same price per bushel of equal quality. In the one case, the cost of production per bushel has been greatly in excess of the cost per bushel to the farmer who has studied his business and farmed on correct principles. This is particularly true with such crops as corn, potatoes, etc., which can be given tillage during the summer season. With these crops, the difference in the cost of production may be largely due to a difference in tillage.

The thoughtful farmer and the other fellow each realize that the crop requires water in order to grow. The one lives in hopes that it will rain, and the other provides a means of conserving not only as much as possible of the rain that falls, but also of the moisture which remained in the land in spring. Cornell Experiment Station has found that in a dry season a bushel of potatoes requires about three tons of water for its production. The intelli-gent farmer realizes that if he is to get 200 bushels of potatoes per acre, he must somehow manage to provide 600 tons of water for each acre. He has no facilities for irrigation, and his only resource is to make the soil a reservoir. Three hundred tons of water per acre sounds like an immense quantity, but it is estimated that an average farm soil when moist, but not wet, contains fully that quantity in the top eight inches. The moisture is in the form of a film surrounding each particle of soil, and the finer these particles are, the greater quantity of film moisture will the soil hold. It therefore appeals to the understanding farmer that the finer he makes his soil and this is accomplished largely by tillage

the greater are his chances of maintaining a full

supply of moisture, and therefore an abundant

Not only does tillage conserve moisture, but it renders plant food available. It is estimated that an acre of average farm land contains as much plant food as could be bought for \$2,000. Now, the finer the soil, the greater the area will be afforded for root feeding. It is true that only a small portion of plant food in a soil is available for the support of the plants; in fact, it hasto pass through many changes before it can be appropriated. The soil is a factory or laboratory in which the work of preparation is carried on. The chief agents employed in this factory are film moisture, air and heat, and if any of these are lacking in the proper extent and condition, the preparation of food, and therefore plant growth, go on in only a sluggish way. Good tillage does much to hasten the activities of this process by allowing free ingress to the soil of film moisture, air and heat.

Cutting and Curing Clover.

Science and practice alike indicate that clover is one of the very best all-'round stock foods the farmer can grow, as well as being one of the best renovators of the fertility of the soil. They also agree that to secure the greatest amount of nutriment in the most palatable form, the clover crop should be cut early, while in full bloom, dried rapidly in the air by being tossed with the fork or hay tedder and exposed as little as possible to dew or rains after being partially dried, and not too long to a hot sun before being properly put up in moderate-sized cocks, not by rolling into heaps, but by placing even-sized forkfuls level and solid one on top of another so that the whole may settle evenly and the sides droop uniformly all around, thus fitting it to turn rain. Left to sweat and cure in the cocks for two or three days or more, if circumstances are favorable, and turned over an hour or two before being loaded, weather permitting, in order to dry off any dampness in the bottom, the best possible quality of hay may be secured-hay which stock will eat with a keen relish, and for which they will give profitable returns in weight of meat and milk or wool, and, properly prepared, may also constitute a part of the winter rations of hogs and poultry to good purpose.

STOCK.

Sheep Breeding and the Price of Mutton.

Mr. John Wrightson, in the London Live Stock Journal of recent date, writes: "The high price of mutton is certainly a point in favor of large farming and ordinary arable cultivation on an extended scale. Eggs may be over-produced, but not mutton. After twenty years' keen competition with New Zealand and other countries, we see mutton (astonishing to relate) at over 10d. a pound, wholesale, and in the carcass, on the market. This is a curious result, for so long ago as 1879 we were told that mutton would be sent in in such vast quantities as to ruin sheep-farming in England. Several times during the intervening years have we felt the ous of foreign competition, but, strange to say at the present time we seem in as great danger of a mutton famine as in 1883, when mutton made about 1s. a pound. Sheep farmers appear to be in an enviable position just now. The situation is, of course, affected by the low price of grain, for sheepfarming and arable cultivation are in most cases united under one common interest. Arable-land sheep farmers have of late years had to contend, not only with low corn prices, but with shortness of keep. At the present time, the high price of sheep and the improved prospects of keep tend to encourage the hope that the present season may recoup them for past losses.

SHEEP-BREEDING

has always been in itself a profitable pursuit, and long may it so continue. It is not so much that sheep farming on arable land has paid, as that the flock has saved the farmer from loss. The effect of present high prices will probably be greater attention to sheep, and an increase in flocks. We may see ewes dear, as well as rams, and the export trade as well as the home markets enlivened by competition for good animals. Why, in the face of frozen mutton and New Zealand lamb, we have this dearth of fat sheep is not easy to explain; but high wages and prosperity always increase the consumption of meat, and this may account for the want of a sufficient quantity of meat for months.

Whatever the cause, it is for us to supply the Increasing the breeding flocks will not immediately tend to lower prices, but rather the contrary.

Those who want sheep will have to pay highly for them, and those who have flocks will benefit until the wheel turns round and we find ourselves once more over supplied. What takes place quickly in the pig trade will act, although more slowly, in the case of sheep. High prices beget low ones, and rice versa. With sheep, however, the effect is slower, and we may therefore look forward with some confidence to a run of high prices.

Profitable Pork Production -- A Year's Transactions.

To the Editor FARMER'S ADVOCATE:

Sir,-I always wean my pigs at about 8 weeks old. Left longer than this, I find the sows will try to wean them, and this has a tendency to hurt pigs as they do not get as much feed as they require. They should be kept very clean and dry. The best feed I have found is shorts mixed with skim milk or water. It should not be made too thin. I have never had any trouble in this way with pigs. Some little change would be good, such as mangels or sugar beets for winter, and a little clover for sum mer, when suckling. The sow should be fed with bran and shorts very freely after first three weeks it being, perhaps, the best bone food that can be procured. I do not think that leaving pigs with the sow for ten weeks would be any drawback to the sow, only it would be that much longer for her to be idle, if two litters a year are wanted.

Why do not our Experimental Farms some tests on raising hogs from start to finish? In the past very little has been given us as to the cost of raising pigs, and at what age they are most profitable. Nothing has been said regarding sows either before or after farrowing. I have enclosed my statement for last year, which you can publish if you wish. It shows what kind of feed I used and how much, and what profit was realized. I am thinking of making the same trial of pigs on rape and pasture from now to winter, if I can get time

Stock on hand, January, 1899..... 2 395 5

| Sold 18,905 lbs., average price \$4.21 Sows, etc. | | 89 | |
|---|---------|----------|---|
| * | \$1,249 | 02 | |
| Feed consumed: | * | | |
| Shorts, 20 tons 1,472 lbs., average price \$16.38. | | | |
| Corn, 5 tons 1,957 lbs., average price \$13.90. Bran, 2 tons 436 lbs., average price \$14 | | 80 68 | - |
| Chon, mixed from mill, 4 tons 40 lbs. \$15.95 | | 24 | |

15 bushels peas, 50 cents Profit

Fed whey from 90,000 lbs. milk, and received 65 loads of hog manure, which I think is more than

Last year was in some respects discouraging, feed being high and prices for hogs very low; still, I am of the opinion that the hog, under these circumstances, pays the best of any product of the farm. I should be pleased to hear from some of your readers their experience in feeding, with actual pounds of feed and of what quality, and results obtained. WM. J. WHALEY. Norfolk Co., Ont.

P. S.—The FARMER'S ADVOCATE is received, and its store of valuable information is read with much pleasure and profit.—W. J. W.

Raising of Young Pigs.

To the Editor FARMER'S ADVOCATE:

SIR,—Sows before farrowing should, if possible, have free access to pasture, and if not available grow nutritious clovers, such as alfalfa, cut and thrown in quantity to each pen. This is certainly a requisite, as too much concentrated feed is a detriment to brood sows. The week before farrow ing, feed warm slop of bran, shorts and oil cake, and note condition of bowels-that they are free-for all animals' rations should be as nearly balanced as is compatible with feeds on hand or to be purchased, of course, considering cost of same. Never over-

Both sows and young pigs must have exercise, and from personal experience and data gathered on this subject, it is necessary that they have a good run. Our sows are turned out of breeding pens when pigs are about three weeks old, and allowed the run of yard & of an acre, with good, comfortable sleeping houses. The average quantity of feed consumed by different sows and pigs varies considerably, and it is right here where intelligent feed

ing counts. Generally we get best results by weaning pigs at eight weeks, when they, if properly fed with sow, practically wean off themselves. Where sow shows, say at 6 or 7 weeks, that her youngsters are too much of a drain, we find it a physical loss to sow to continue nursing, and a financial loss to us, as she will be so reduced in flesh and generally run down as to be unfit for breeding again for a considerable time. Castrate young pigs when four weeks old. Feed fresh skimmed milk, adding shorts, bran, a little corn meal, and occasionally oil-cake meal, and feed four times daily; also roots and alfalfa when in season, and this feed is successfully fed before and after weaning, and young pigs kept growing until about five months old, when they are rushed, reaching the block at from six to seven months. Mr. Tillson has at present 300 hogs, and out of nine litters in May only lost three pigs; average litters, 9 to 11. I conclude by suggesting cleanlines strictly dry bedding, and access to ashes, salt, sulphur, charcoal, and water at all times, and it is unnecessary to say anything about comfort of our hog pen and the care given to hogs, as you have already published particulars of Mr. Tillson's excel-lent piggery. John D. MacLeay, Manager.

lent piggery. John D. MacLe. Annandale Farm, Oxford Co., Ont

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Fitting Beef Cattle for Show.

To produce good feeding animals of fair size and first-class quality of flesh, evenly distributed, the preparation of show animals must really be begun before they are born, by judiciously mating parents of this description, a proportion of the offspring of which may reasonably be expected to prove suitable for show purposes, if well fed, handled and managed from their early calfhood. The calf intended for a show animal should never be allowed to lose its calf flesh, but should be kept growing and to lose its and weight continuously up to maturity. To this end, there is no food equal to whole milk drawn by the calf itself from the udder of its dam while she gives a sufficient supply to keep it improving, and when she fails to give enough milk for that purpose, an additional nurse cow should be provided. If the cow provided is a very heavy milker, the calf should suck three times a day. so that its stomach may not be overloaded at any time. The calves should run loose in roomy box stalls, and have sweet, fresh clover hay in a rack, and a mixture of bran and ground oats, which they will very early learn to eat, and to which, when they are two months old, a little nutted oil cake should be added, and in winter a supply of sliced turnips. Their pen should be frequently cleaned out, and kept well bedded, and more roomy quarters out, and they grow larger, so that they may get a fair amount of exercise. They should be kept in well-ventilated buildings constantly during the first summer of their lives, the open windows having screens to keep out flies and being darkened if ssary during the day in hot weather, and a supply of clean drinking water should be kept constantly within their reach, that they may drink at will. It is well to halter them occasionally when not more than a month old, and tie them for an hour or two each day to accustom them to being handled, and as they grow older, a little training once a week will teach them to lead quietly and

make them handy before they get strong and hard

to break. A mixture of bran, ground oats and peas

and oil cake, fed dry, as much as they will eat up

clean between feeding-times, should be continued during the whole summer, and a supply of clover, lucerne, vetches and mixed grain in season, cut green, furnished regularly three times a day while they last, after which wellcured clover hay will take the place of these. The calf should suck until eight or nine months old, and, if under eight months old at show time, the nurse cow should be taken to the show with the calf, so that it may not

have any setback.

The first winter's feeding will consist of a plentiful supply of roughage. in the form of good clover hay and chaff or cut straw, ensilage and roots, and a moderate ration of meal and bran. The bulls must necessarily be kept up the year round, but should have a roomy yard or grass paddock to run in part of the time. In the spring, the heifers may go out on grass during the day for a month or two, and be kept in at night, receiving a feed of meal morning and even-When the weather gets hot and flies troublesome, the animals will do better in the stable during be turned o day, and may night until within a couple of months of show time, when it will be

better to keep them in airy, darkened stables day and night, except that they should go out for an hour or two in the cool of the evening and early morning for exercise, if they are tied up during the day. From this time the meal rations may be gradually increased till they are taking all they will safely stand. Attention should be given to the condition of the feet of the should be given to the condition of the feet of the animals at all times, and especially during the last month previous to the date of the show, to keep them trimmed and rasped into good shape, as an overgrown hoof sadly hurts the appearance of a beast, and is apt to make its legs look crooked, if not to grow so. Training to lead well and to stand in the best position to show to advantage is of no small importance, and frequent washing with castile soap or English soft soap and soft water, together with industrious grooming - not with sharp currycombs, but with the brush and a woolen cloth-and latterly by vigorous hand rubbing and constant blanketing to get the hair soft and oily to the touch, are factors which count for more than many are apt to think when it comes to a case of close competition.

While it is well to avoid making the animals excessively fat by the use of a too heating grain ration, which is liable to make them handle hard and lumpy, and to damage their breeding qualities, there is no getting over the fact that the chances of winning are greatly enhanced by having a good thickness of natural flesh to show, and this may be secured by liberal feeding of mixed grains, as oats, peas and barley, and bran and a moderate mixture of oil cake, fed on cut hay and corn. Some feeders place great value on boiled grain feed, and, if fed fresh, there is no doubt it has a fine effect in putting on flesh and getting the hair in good condition, though we are not sure that it is a necessity or that it pays for the extra labor. Getting the animals thoroughly used to the halter and to handling, so

as to be free from nervousness, has much to do with their settling comfortably in strange quarters at the fair, and feeding well and looking their best.

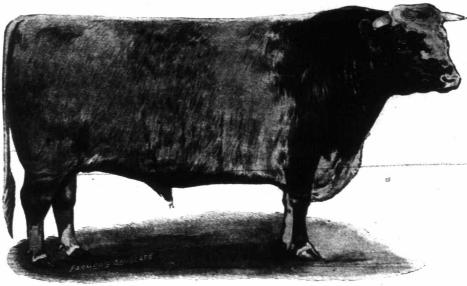
The Breeding of Military Horses.

SIR,-I received a letter from you asking me about the breeding, etc., of the two military horses that won at Toronto Horse Show. Well, I am a dealer in horses, and I do not take much interest the breeding, etc. What I want is the horse, and a great many I handle I do not know what their breeding is, but I have found out the breeding of these two horses, General and Hero, the first-prize cavalry and infantry horses.

General, the cavalry horse, had for his sire Wiley Buckles (Thoroughbred), and his dam was a nice big general purpose mare, which would weigh about 1,400 pounds; did not seem to have much Clyde about her, but looks more like as if she had a

cross of Percheron. Hero, the infantry horse, was sired by Lightning (imported Hackney), and his dam was a half-bred Thoroughbred, a small, breedy mare, with good bone and feet. I find a number of the good kind with that same breeding, and I think there is no better way to breed the good ones. As a rule, breeding like the General's produces carriage and saddle horses, while such mating as Hero came from produces cobs and actors. CHAS, HEAD.

Guelph, Ont. NOTE.—In our report of the Canadian Horse Show it was remarked that the Hackney breed had shown a new field for favor, inasmuch as the registered mare Cassandra, shown by Mr. Robt. Beith, Bowmanville, had won first prize in class for artillery purposes. It now comes to light that the winning infantry horse was also of that breed, being from a Hackney sire. We are not surprised, however, to learn that the blood of the Thoroughbred entered so largely into the make-up of the high-class military horses. A writer, dealing with the breeding of horses in a journal of the distant colony of Australia, points out the difficulty with which the British Government has secured their required number of military horses in that country.



ROBERT THE BRUCE = 22635 =. Five-year-old Shorthorn bull. (See Gossip, page 369.) OWNED BY C. A. ARCHIBALD, TRURO, N. S.

Out of about a million horses in Australia, it has been possible to get only five or six thousand of all sorts, and those obtained have cost three or four times as much as they ought to have cost. The most serious cause of failure to produce the right sort is pointed out as being the lack of any continuous effort to establish a type, while another difficulty has been that of using the blood of the racing Thoroughbred. The writer says:

"All our saddle horses are cross-bred, with a very considerable strain of the racing Thoroughbred, and are really mongrels of the worst kind. The racing Thoroughbred may be, and, no doubt, is, an excellent animal to carry a light weight over a short distance in the shortest possible time, but for every other purpose he is absolutely valueless. A gambling machine pure and simple, that has been bred for hundreds of years on the same lines as our greyhounds, and is about as useful. To try and breed serviceable, weight-carrying saddle horses, using even the most carefully selected Thoroughbred sires, is bound to prove a failure, because only a small percentage of the progeny will be of the type required, and the balance will be valueless nondescripts, unfit for racing, and too weedy for any other purpose."

In Canada, however, we have two classes of Thoroughbreds, as is well illustrated at our larger horse exhibitions where classes are set apart for Thoroughbred stallions, also for Thoroughbred stallions qualified to improve the hunter and saddle stock of the country. It is this latter class that is found more in evidence at the stallion stands throughout the country at this season of the year. and from their use there need be no fear of employing, on suitable mares, such types as the late Wiley Buckles, Wyndham. Monotony, horses that stand fully 16 hands high, deep chested, round barreled, and weighing upwards of 1,200 pounds.

English Shows.

FROM OUR OWN CORRESPONDENT.

The summer show season opened this year with the Oxford County Show at Oxford, on the 16th and 17th of May.

The Shire Horse Classes were very good, Mr. R. W. Hudson, one of your advertisers, being a prominent winner, as were also representatives of the studs of Lord Llangattock, Lord Rothschild, P. A. Muntz, M. P., and F. Crispe. In a small section of *Hackneys*, Mr. H. Livesay with that grand mare, Orange Blossom, took leading honors, and her foal, by McKinley, the champion cup winner for stallions at the last Hackney Show, also secured leading honors in the foal class.

leading honors in the foal class.

The Shorthorn Cattle were very strong, as one would only expect from the fact that in the County and close adjacent thereto are many first-class herds. A useful class of aged bulls, five in number, were headed by Mandarin, from Mr. W. E. Balston's herd; Silver Plate, from Mr. J. Deane Willis', coming in for second honors. Miss Alice de Rothschild led in the two-year-olds with Bashful Youth, a very taking bull of considerable merit; White President, from Mr. L. de Rothschild's, being second. In the yearling class, Mr. Henry Dudding's very extensive and highly-bred herd took precedence with King Alto, a grand calf with splendid hair and typical character, he being also made champion bull, an honor well deserved; Duke Charmingland 93rd, who represented Mr. R. H. Dyke's excellent herd, being a very good second. This is a wonderfully well-bred and symmetrical bull. The old cow class, a useful one, found its leader in Miss Alice de Rothschild's Signet, with Mayflower 3rd, from Mr. L. de Rothschild's, next in order of merit. The last-named exhibitor took similar honors in the succeeding class for 3-year old heifers, with White Socks; premier honors going to Mr. A. Henderson's Grace Darling. Messrs. Garne, whose herd is a very old and noted one, took first place in the 2-yearold class with Aldsworth Jewel, but her right to this place was very keenly contested by Lady 21st, from Mr. Henry Dudding's herd, a heifer of very high merit. The two winning yearling heifers came from Lord Tredegar's and Mr. high merit. C. H. Jolliffe's herds.

In Herefords, the Earl of Coventry secured both the cash prizes for bulls, with Grimm and Chaucer, both of which most creditably represented that well-known herd from whence

they came.

Jerseys.-Lord Rothschild's herd was clearly the leading winner in the Jersey classes, both the champion awards being secured, besides other leading prizes; the Earl of Cadogan, Col. H. McCalmont, M. P., being also well to the fore, as was also the Duke of Marlborough.

Guernseys made a small entry, Mr. E. A. Hambro receiving the premium prizes in both classes with really grand specimens of the breed.

Kerry and Dexter-Kerry, a breed

becoming very popular, made a small but very good entry, Messrs. Robert-son & Son and J. Thorley being the more prominent winners

Sheep.—The breed of the county, Oxford Downs, takes precedence here in the classification, and from its very excellent entry is fully entitled to do so. The yearling ram class was one in which the awards

were contra to the opinion of many of the principal breeders, it being generally considered that the 1st and certainly the 2nd winners, from Mr. G. Roberts, were wrongly placed. Precedence should have been given to Mr. J. T. Hobbs' grand, good fleshed, deep-bodied ram, whose type and character were first-class, his fleece being free from black wool. Two from Mr. J. C. Eady's well-bred flock received barren honors, and one, as good as any in the class, from Mr. H. W. Stilgoe's flock, was entirely omitted in the award list. This ram is a capital one, and should be looked for by any who desire to secure a ram with type, character and fleece. The ram lamb and ewe lamb classes were very good, and the leading pens in both came from Mr. W. J. P. Reading's, whose success was fully deserved. though it was by no means a run-away one from Mr. W. A. Treweeke's two pens of first quality lambs, which were second in these classes. Mr. J. C. Eady's success in the yearling ewe class was again complete, for he, as last year, took both first, champion and second awards with a grand lot of ewes, some of which, if not all, will, as in former years, come over to your side, where they certainly will add further luster and fame to that very excellent flock from whence they came.

The Hampshire Down breed have never been so strongly represented at this Show before, and the general high merit and quality of the exhibits were such that little, if any, difference divided the leading winners. Mr. J. Flower went to the fore in the yearling ram class, being very closely pressed for this place by a grandly fleshed ram from Mr. R. W. Hudson's Danesfield stud, Lord Rothschild's flock securing the third award. In the yearling ewes, Mr. R. W. Hudson had two grand pens of ewes, which went first and third, being divided by a pen from Mr. James Flower's flock. Ram lambs and ewe lambs were of great merit, and the contest for the two first places in both cases rested between the

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Manager.

flocks of Mr. J. Flower and the Earl of Carnarvon, the former winning in both cases. Mr. J. Flower secured the championship and R. N. for the same. Mr. J. Flower

The Southdowns, though about equal numerically with the average entries of previous years, wer hardly of that merit we have sometimes seen at this hardly of that merit we have sometimes seen at this Show. Mr. C. R. W. Adeane was easily first and second and likewise champion with a pair of grandly fleshed rams with good fleeces and skins, one from Sir J. Blyth, Bart., being third. The Earl of Cadogan, with a grand pen of most excellent ewes, took the lead in this class and the female championship also, Sir J. Blyth, Bart., being second. Col. H. McCalmont, M. P., was first with a trio of typical ram lambs; Mr. F. N. Hobgen, with a pen well matched and of nice character. being second. matched and of nice character, being second.

The Shropshires were not at all strongly represented, Messrs. R. P. Cooper, A. Bradburne, and G. L. Foster-Harter being the principal winners; whilst the once highly popular Cotswolds had but a single competitor, Mr. Russell Swanwick, whose entries, which secured premier prizes throughout, were of typical character and good merit.

In the Swine Section, the Berkshires made a grand entry, Mr. Russell Swanwick being a very prominent winner, securing both the breed and the yard championships with Sambo; the Earl of Carnarvon, Mr. R. W. Hudson, Mr. A. Henderson, and Mr. E. Hayter were also very successful, the whole of the entries being of high merit and quality.

Messrs. Sanders Spencer and F. Allmand were winners for Large White, the former taking pre-

Litters Should Suck Till Eight Weeks Old.

To the Editor FARMER'S ADVOCATE:

SIR,-With reference to feeding young pigs before and after weaning, I would say, start to feed your pigs at about 4 weeks old. Make a low, narrow trough, so the pigs will not have to climb into it to get their feed. Put a little warm sweet milk in the trough, only a very little at first, be-cause if they don't drink it up soon it will get sour, especially if the weather is warm. You will soon find out how much they will drink up quickly, and don't give them any to leave. Feed three times a day. In about a week, add a little shorts to the milk, and a little later add some barley meal. Feed in this way till the pigs are 8 weeks old, and by that time they will be ready to wean, and, if properly attended to, should grow right along. Give same kind of feed for a week or two after being weaned. I don't think it would be any detriment to the sow to let pigs suck 10 weeks. York Co., Ont.

THOMAS TRASDALE.

Fodder Crops for Sheep Feeding.

As all who have ever had opportunity of inspecting flocks of the breed are aware, Hampshire sheep are remarkable for the great rapidity with which the lambs grow and put on flesh during the first seven or eight months of their age. No other breed surpasses the Hampshire in this respect—not even the Southdown, which played such a prominent part in the original evolution of the breed. A great feature of the system of farming carried on in that feature of the system of farming carried on in that portion of the south of England (Hants and Wilts, etc.) in which the Hampshire has its home, is the extent to which green fodder crops are cul for sheep-feeding purposes. Leading flockmasters in that part of the country make special arrangements to have supplies of such green foods coming into use at all seasons of the year, and in this way they are enabled to keep their lambs growing unin-terruptedly all through the season. Even in exceptionally dry summers when grass lands get scorched up, and flockmasters in other parts of the country are much inconvenienced in providing food for their sheep, Hampshire breeders are usually more or less independent, because of the admirable provision made by them in having successional crops of green food (rye grass, rape, sainfoin, vetches, etc.) coming in from month to month.

Expert Evidence on Weaning Pigs.

To the Editor FARMER'S ADVOCATE:

SIR,-I am aware that there is a great difference of opinion in regard to age that young pigs should be allowed to remain with their dam. I have no fixed rule, as I am guided largely by the way in which the young pigs are thriving. I have frequently noticed that the milk of the dam does not agree with the young pigs, causing excessive diarrhoea, and in this case we wean the pigs at six weeks, but as a general rule I have found better results by allowing the pigs to remain with the dam until eight weeks old. A great many young pigs are injured by feeding the sow too liberally upon strong, rich food, and not having much evercise in the open air. I would strongly recommend moderate exercise, with plenty of fresh air, which is quite as essential as pure food. After the young pigs are ten days old the sow should be liberally fed upon bran and finely-ground oats, with the addition of a small quantity of ground peas or corn, but great care should be taken that the sow should not receive much grain for about ten days after farrowing. Many young pigs are so seriously injured during this period that they never recover.

J. E. BRETHOUR. Oxford Co., Ont.

Exercise for Swine.

At most periods of their lives hogs need exercise, although the tendency of modern breeding is in the direction of early fattening and making the largest gains on the smallest possible amount of feed. The gains on the smallest possible amount of feed. The sucking pig needs exercise, or plethora and an attack of thumps may be expected. The time when thumps are most complained of is when, after farrowing time, there is bad weather that keeps the litter and the dam confined to the pen, where the former suck and sleep and have no work to do to keep them healthy. In this case, they should be compelled to move about freely in the pen by use of a switch or some such means. In good weather, with room enough to run about out of doors, the litter always gets exercise enough, and rarely has thumps. Growing pigs need some exercise, too, but they can be relied on to take all they need, if given room enough and the weather is not too unfavorable. Breeding stock should always have plenty of exercise, or they will become shy breeders, and the pigs they have will not be vigorous, and they may even become entirely sterile. When hogs get their growth and are put in the yard for fatten-ing is the time when they need exercise least. For the short time that remains before marketing they can both safely and advantageously be kept as quiet as possible. The time is too brief for them to suffer injury for want of exercise, and the feed will have a quicker effect if they do not run it off. The conclusion, therefore, is that hogs need exercise, but no particular pains need be taken to see that they get it, except in the case of young pigs in bad weather, or in that of breeding stock that has been fattened for the showring. The latter, when they reach home after the shows, need reducing, not by cutting off feed so much as by exercise, and in doing this, driving them around the yard with a buggy whip for a while each day is often resorted to.

Weaning and Feeding Young Pigs.

To the Editor FARMER'S ADVOCATE:

SIR,-Re time to wean young pigs and best foods to feed them: I usually let them suck the sow until they are eight or nine weeks old, if they continue to do well, unless I am anxious to get the sow bred gain; if so, I would wean them a little younger. I have had pigs that the sow's milk did not seem to agree with; in that case, I would wean them at four or five weeks old, and put the little fellows on warm skim milk and middlings, giving them out-door exercise if possible. Want of earth and exercise, I believe, is the cause of many disappoint-ments in the hog business. There are also a great many little pigs over-fat just after weaning. While sucking the sow, they suck probably a dozen times in 24 hours, but as soon as they are weaned they have to be satisfied with three or four feeds a day. I believe some are advocating feeding only twice a The results are overloaded stomachs day now. The results are overloaded stomachs, causing indigestion, etc. I have not found any feed for young pigs that suited me better than skim milk and middlings, mixed one meal ahead. I grow a mixture of grain, viz., oats, barley, peas, goose wheat, and flax, that I find a good ration for them as they grow older, having the mixture ground fine. I do not think having the pigs suck until they are ten weeks old is any particular injury to the sow, if she is properly fed, and I think it pays to let them suck just as long as they continue to do well, but I would wean them at any age if they

Middlesex Co., Ont. P. S.-I do not think the best quality of bacon can be produced at six months old, as is claimed to be done by some hog-raisers. -R. H. H.

The Scotch Shorthorn.

The foundation of the Scotch Shorthorn of the resent day may be said to have been laid by the brothers Amos and Anthony Cruickshank, sons of a small miller residing a little outside Aberdeen. The Cruickshank Brothers had as their ideal the production of what may be described as a paying farmer's beast, and the present popularity of the type of cattle which they founded is the best proof that could be given of the success with which their efforts were attended. Writing of the work done

by them, one of their admirers says:

"They did not despise style; but their leading requirements were substance and the power to lay on beef at the right places at the lowest possible cost. Ability to transmit unimpaired to its offspring well-defined structural merit and a sound constitution were, of course, equally aimed at. Low legs, a blocky frame, sound lungs, and sound and vigorous digestion are the conspicuous points of the Cruickshank Shorthorn. Built by practically Scotch farmers on a practical ideal, fed in a Scotch climate on the common produce of the soil, the Scotch Shorthorn is, like his owner, very plain in his tastes, thriving well on any good pasture in summer, and on "neeps" (turnips) and straw in winter, and robust enough to thrive in any climate where a Scotch man or beast finds it profitable to live. Turnips are highly conducive to healthy and rapid growth; the oat straw, from which his master's porridge and cakes have been taken, is also good in its way, and if he gets a good handful or two of good oatmeal or a pound or two of good oil cake along with his "neeps," he will, either pure or crossed, hold his own from start to finish with any other breed.

Death of William Housman.

Very many of the older breeders and students of Shorthorn literature in Canada and the United States, will learn with much regret of the death of Mr. Wm. Housman, on April 9th, at his residence, Prospect House, Distington, Cumberland, England. His father, Mr. R. F. Housman, a man of great literary and artistic attainments, gave his son a fine home schooling. A herd of Shorthorns were kept at Lune Park, and as a lad he was very fond of them, beginning when a mere boy to study and work out their pedigrees, thus laying the foundation of that intimate acquaintance with Shorthorn lore which distinguished him in after years as a writer of books and pamphlets, and for such periodicals as Bell's Weekly Messenger and the English Live Stock Journal, to which he was a regular contributor from 1886 up till the time of his death. He was a man of fine disposition, thoughtful and retiring, very kind and charitable, visiting the poor and the sick up to the last.

The Foal and its Dam.

Horse breeders who kept right along raising foals a few years ago, when the prices for horse were low, are now reaping their reward in a lively demand for their stock at good paying prices. This advance in values has caused a great many farmers to re-engage in horse breeding, and according to what we have been able to learn, they are after the heavy ones hot-foot. While there has been a drain upon the lighter or medium weight class for military purposes, the supply of this sort for sale in the country is many times greater than that of the heavy ones, which includes chunks about 1,000 to 1,300 pounds up to drafters of considerably greater weights. The experience of the present as well as of the past has taught the lesson that the good ones pay greater profits than those of medium quality, notwithstanding the probability that the latter has cost considerably less to rear. To raise a colt cheaply is not true economy, as a cheap colt usually becomes a cheap horse, wanted only for cheap work at a low price. It may be taken as a rule that upon the care bestowed on foals during the early months of their existance will almost entirely depend their immunity from disease and their subsequent vigorous growth and perfect development.

It is acknowleged by those who have had much to do with foal rearing, that very much of its success depends upon the manner in which the mares are treated during pregnancy and immediately before and after parturition. Judicious labor is undoubtedly beneficial, but they must be liberally fed, not only that their own system may be maintained in good condition, but that of the feetus may receive a due amount of nutriment. Grass alone will not suffice, and a certain allowance of oats is necessary. To have thriving progeny the mares themselves should be strong and lively

during pregnancy and after parturition. Many mares are at best poor milkers, and where this is the case the dificiency should be made up in some way. The foods that have been found useful in increasing the flow of milk in the cow will have the same effect upon the milk of the mare. Wheat bran is especially valuable for this purpose if mixed with other and more nutritious foods. Plenty of good fresh grass is one of the very best of aids to healthy and abundant nutrition

for both mare and foal. The chances are many foals this year will be from mares that will be required to do a certain amount of agricultural duty, and it is with these that more than ordinary care is necessary in order to bring the younster along in a thriving manner If it can be avoided, a mare should not be placed in harness for at least ten days after foaling, and then given not more than three hours' work during each half day for some time, or at least until the foal has been taught to take some supplemental food. It is a mistake to make up for a fast of several hours by allowing the foal to receive the entire contents of a gorged udder. Such treatment is likely to do more harm than good by deranging the digestive system of the youngster to such an extent as to make him sick. Especially should a full food be avoided while the many is overheated. full feed be avoided while the mare is overheated It is safe in any case to draw off a portion of the milk before the foal is permitted to take his meal after a few hours' separation. When a mare must do the labor of half a team the foal should be given special attention. It is needless to say the mare should be fed extra well on nourishing foods, and the foal should be early taught to take cow's mik as well as nutritious solid food. As soon as the feal will nibble it should be offered oatmeal from the hand. On account of the indigestibility of the tough fibrous bulls of the indigestibility of the tough, fibrous hulls, these should be sifted out, or it is better still to feed oatmeal such as is used for domestic purposes. Naturally his very limited capacity should be taken into consideration when offering him the grain, but as a general rule the foal may be allowed all it cares to eat up at once In addition to this a small proportion of crushed wheat may be added as well as a springling of oilcake meal or ground flax. Besides the milk his mother gives, from one to four quarts of the same cow's milk daily in two or three feeds will pay well for itself in sending the foal along at a rapid

The foal should be kept housed in a comfortable stall where it cannot injure itself by getting fast or by striving to climb over a door or out of a window

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side by sid year, stra least too l breed infe the best t the best means, for ment wou more reas can be pro tion we w the prese purchased haser cal himself t narents g leshing q improvem upwards h ion of hi keep in ex as long as fattened a more to th will leave of cattle s upon the more. Su a consider farm. Or mongrel b except tha He may b neighbors necessity, brings no stock, but of his co value is lo requires g quality b cattle rece annually a few goo these are excellence leave a t which are keep as m keep whe unprofita sires as u general g and their What is they appl farm as t poultry. when it is bly the re difference all right but not fo are suffic provemer the prese good eno ones which ment is g day so gr comparat percentag alike of t ble to be possible t the prope type, bre type. G in beef, d calves go your best herd app best half judgmen deficient. the dair daily ret butcher: once a st when as

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while the dam is at work. At nights, however, both are better turned out on a grass plot. The foal of a working mare can, if taught to eat well and take cow's milk, be weaned at from three and a half to four months old, with advantage to both, and if her double duty tends to interfere with her getting in foal, their permanent separation may materially aid the mare becoming pregnant, provided she is bred to a sure horse.

Uniformity in Live Stock.

The live stock of the country presents a paradox. It may truly be said to show the highest excellence side by side with the lowest mediocrity. Year by year, strange as it may seem, our farmers (or at least too large a proportion of them) continue to breed inferior, unprofitable animals, though having the best types constantly presented to them, and the best paying types. It cannot be for lack of means, for the male animals from which improvement would come can now be purchased at figures more reasonable than can the inferior ones. can be proved to a demonstration, and for illustration we will take the case of a Shorthorn bull. At the present time, a yearling pedigree bull can be purchased from a good herd for, say \$100. The purhaser can see the sire and dam, and so convince himself that his future sire is descended from parents good alike in symmetry, in milk, and in eshing qualities. That bull will work manifest improvement in his own cattle, and tend to grade upwards his future herd; it will command the attention of his neighbors, and probably pay for his keep in extra service fees. When he has been used as long as the ties of kinship will permit, he will be fattened at the minimum of expense, and realize more to the butcher than his original cost, and he will leave behind him in the farmer's hands a class of cattle superior to those he found when he came upon the farm, and each worth, say, from \$5 to \$25 more. Surely this is a grading up which will make a considerable advance in the annual receipts of a farm. On the other hand, a farmer purchases a mongrel bull of which he literally knows nothing, except that he is told that he is by a pedigree sire. He may be, or may not be. He pays about the same price, or possibly buys him for a trifle lower. The neighbors fight shy of him, or only use him from necessity, or from his fee being a nominal one. He brings no improvement to the bulk of the farmer's stock, but he deteriorates the produce of the best of his cows. Either the herd stands still, or its value is lowered by his use. When done with, he requires greater expenditure to get fat, and his quality being poorer, his price to the butcher is lower. Taken all round, he has decreased the cattle receipts of the farm, and the owner becomes annually poorer. In most farmers' herds you find a few good cows of greater merit than the rest, and these are kept at a profit; you find a few of moderate excellence, which possibly pay for their keep and leave a trifle over; and you find a percentage which are kept at a loss, which neither pay for their keep as milkers, nor do they clear their fattening keep when they go to the butcher. And yet these unprofitable cattle are bred from, in alliance with sires as unprofitable as themselves. The result is a general grading downwards. All alike deteriorate, and their selling prices are materially reduced. What is the reason? Here are two courses, and they apply equally to all the other animals of the farm as to cattle—to horses, sheep, pigs, and to poultry. Why should not the upward one be taken when it is so manifestly the best paying one? Possibly the reasons are various: Lack of judgment; indifference; they did for my father, why not for me; all right enough for gentlemen with long purses, but not for me. But if any or all of these reasons are sufficient, whence has come the manifest im-provement in the live stock of the country during the present century? If the animals of 1800 were good enough, why should we have the improved ones which 1900 presents? And if this latter argument is good, why should not every farmer of today so grade up his cattle that, in place of having a comparatively few remunerative cows and a greater percentage of non-paying ones, they should be all alike of the higher type? Just as it has been possible to breed these half-dozen good ones, so it is possible to breed all good, if the right materials and the proper steps are taken. Get a male of the right type, bred true to type, and he will get true to his type. Gradually get rid of the unprofitable females in beef, do not rear any of their produce, but let the calves go in yeal. Rear only the female calves from your best cows, and year by year you will see your herd approaching the type of what was once your best half dozen. It does not need capital, only judgment Note in what respect your dams are deficient, and select a sire good in that defect. Let the dairy be ever to the front, for that brings a daily return, but the animal goes but once to the butcher: the other essentials will come naturally once a start has been made. We knew a man who, when asked if he had done so and so, invariably replied, "No, it just wants starting on." That is the key to the whole question. Once a start is made, it is astonishing how things fall into line. The best farmer's dairy herd in the country has been built up on these lines. Its owner had no capital, only a determination that he would not own a moderate animal, and he has won. The herd today presents a splendid object lesson to all farmers. Where he has led, others can follow. -Agricultural

Live Stock at Paris.

There is certainly a feeling of considerable disappointment with the small number of British live stock entries made at the Paris Show. In a way, this, of course, is not surprising, when, no matter what they may make, the whole must be sold there, as none return alive to Britain. Though the entries are not numerous, they are more general than their numbers would have led one to anticipate. Judging from the names of the enterers, Shorthorns will be represented by a couple of entries, Red Polls by one or two, and Herefords by one. Sheep entries are rather larger, Southdowns taking pre-eminence with three entries; Shropshires follow with a couple of entries, whilst Lincoln Longwool sheep, Kent or Romney Marsh and Hampshire Downs will be represented by a single entry each. The swine breeders of England appear to be also represented by a single entry, whilst the various breeds of poultry have nine separate entries.

Speaking generally, the cattle entries, which are largely of the continental dairy and general purpose sort, number 2,140 head, sheep 800 "lots," and swine about 300 head.

Horn Fly Remedies.

Regarding remedies for horn fly, we have never found anything more effective than the mixture of seal oil and crude carbolic acid, in the proportion of a tablespoonful of carbolic acid to a quart of oil. It is a good deal of trouble to apply this remedy, the simplest way being to apply with a brush. To be an effective remedy, it should be applied about twice a week, but it will be found a great help if applied once a week. I do not know of anything which will prove effective against these pests that does not entail a good deal of trouble, O. A. College. G. E. DAY, Agriculturist.

O. A. College.

FARM.

A Fruitful New Brunswick Farm.

On the occasion of a visit to St. John, N. B., in September last, some notes were taken by the writer on the beautiful and fertile farm of Mr. James Manchester, of that city. Mr. Manchester is the chief partner in one of the leading mercantile establishments of St. John, but being an Englishman, and raised upon a farm in the Old Country, he evidently likes the smell of the land, and devotes considerable attention to the operations of his farm, which is beautifully located on the shore of the Bay of Fundy, some four miles from the City. The farm comprises 200 acres of strong clay land, most of the portions under cultivation being systematically underdrained, and farmed under a rotation suited to the crops which succeed best in the Province, which are oats, barley, hay, turnips, potatoes and parsnips. Heavy crops of clover are raised in most seasons, and made into hay of high-class quality, which is fed principally to the dairy cows and to beef cattle, a few of which are fattened each year. Green oats are also largely used for fodder in summer as a soiling crop when pastures fail, and are made into hay for winter feeding when clover fails, producing a large bulk of palatable fodder, the pulped with pulped wi fed either whole or cut and mixed with pulped roots, with a sprinkling of bran and meal. Besides the manure produced on the farm from the feeding of stock, commercial fertilizers have been used to a considerable extent, as well as mussel mud from the sea shore, and gas lime (composted with the barnyard manure), and also coarse-ground bone dust, which latter has been found especially valuable and satisfactory

As an evidence of the high state of fertility to which the farm has been brought, the following extracts were made from the record of crops produced. From a plantation of Early Rose potatoes, 151 yards long and 32 yards wide, drills 30 inches apart, uncut seed, 115 barrels of merchantable potatoes were gathered. From less than 7 acres of land 623 bushels Black Tartarian oats, second remove from imported seed, was harvested. From 2 acres and ½ rod of land, and 3 bushels and peck of barley sown, 1271 bushels were threshed, eighing 50 pounds to the bushel. Two hundred and forty-seven barrels of mangels were taken from measured half acre of land.

These returns from land not naturally rich, but requiring skillful management, serve to show the possibilities of well-directed farming in producing bountiful crops, which are a source of pleasure and satisfaction to the husbandman.

Testing Fertilizers at Ottawa.

Dr. Wm. Saunders, Director of the Dominion Experimental Farms, in his report of the work at the Central Farm, Ottawa, gives in the following tables the results of special trials with fertilizers. The barnyard manure used was composed of about equal proportions of horse and cow manure. Trials were made with barley, oats and corn, as well as those given below.

PLOTS OF WHEAT. The seed sown on the wheat plots from the beginning has been in the proportion of 1½ bushels per acre, excepting in 1804; and the varieties used were as follows: In 1888-80-90 and 1891, White Russian, and in 18923, Campbell's White Chaff. In 1894 the Rio Grande wheat was used, and shortly before sowing, it was tested as to vitality and found to be deficient in germinating power,-less than half the

kernels sprouted. As it was not practicable then to secure better seed, double the usual quantity was sown, namely, 3 bushels per acre, which gave a proportion of growth on each plot of about the usual thickness. In 1895, 1896, 1897, 1898 and 1899, Red Fyfe wheat was used in the usual quantity of 1½ bushels per acre. In 1899 the Red Fyfe was sown May 5, came up May 13, and was ripe from August 17 to 20.

The season of 1899 was moderately favorable for the growing of spring wheat at Ottawa, and has given in most instances crops above the average.

EXPERIMENTS WITH FERTILIZERS ON PLOTS OF WHEAT, ONE-TENTH ACRE EACH.

| , : | 12TH SEASON, 1899. VARIETY, RED FYFE. | | , | AVER YIELD TWEE YEA | FOR VE | |
|---|--|------------|-----------------------|------------------------------|---------------------|-----------------------|
| Fertilizers applied each Year. | Yie of Gra | | Yield of Straw. | | ield of rain. | Yield of Straw. |
| * | Pe Acr | | Per Acre. | | Per cre. | Per Acre. |
| Barnyard manure (mixed | Bu.1 | bs. | Lbs. | Bu. | lbs. | Lbs. |
| horse and cow manure) well rotted, 12 tons per acre each 1888; 15 tons per acre each year after until 1899—no manure was used that season | 23 | 40 | 5,280 | 21 | 10 | 3,839 |
| manure was used that season | 27 | 40 | 5,910 1,300 | | 264-12 1711-12 | 3,883 1,849 |
| Unmanured | | 35 30 | 2,470 | | 2211-12 | |
| per acre. Thomas' phosphate, 500 lbs. nitrate of soda, 200 lbs. per | : | 20 | 2,490 | | 318-12 | 2,842 |
| acre Barnyard manure, partly rotted and actively ferment ing, 6 tons per acre; Thomas | 3 | | | | | |
| phosphate, 500 lbs. per acre composted together, inti | 2 | | | | | |
| mately mixed, and allowed to heat for several days be | - | | | | | 1 |
| fore using, applied each year until 1899, no manure or phosphate were used that season. Thomas' phosphate, 500 lbs. nitrate of soda, 200 lbs. | 21 | 10 | 4,445 | 18 | 266-12 | 3,206 |
| wood ashes, unleached, 1,00 lbs. per acre Thomas' phosphate, 500 lbs. | 12 | 50 | 3,880 | 12 | 4310-13 | 2,372 |
| wood ashes, unleached, 1,500 lbs. per acre | . 10 | 50 | 3,260 | 10 | 424-12 | 1,980 |
| 1, 500 lbs. per acre Mineral superphosphate, No | - 11 | 3 0 | 2,175 | 11 | 366-12 | 1,809 |
| 1, 350 lbs.; nitrate of soda 200 lbs. per acre | . 14 | 5 | 3,110 | 12 | 57 11-15 | 3,011 |
| 1, 350 lbs.; nitrate of soda 200 lbs.; wood ashes, un | - | | | | | 0 = 90 |
| Unmanured | . 9 | 30 5 | 3,840 2,685 | | 55 10-12 40 5-12 | |
| Bone finely ground, 500 lbs. Bone finely ground, 500 lbs. | . 12 | 15 | 2,635 | 11 | 432-12 | 1,900 |
| wood ashes, unleached, 1,50 lbs. per acre Nitrate of soda, 200 lbs. pe | U | 35 | 3,315 | 15 | 92-12 | 2,360 |
| acre | . 12 | 30 | 2,550 | 13 | 1711-1 | 2,320 |
| Muriate of potash, 150 lbs. pe | . 15 | 10 | 2,800 | 15 | 195-12 | 2,067 |
| Sulphate of ammonia, 300 lbs | . 15 | 50 | 2,940 | 12 | 52-12 | 2,332 |
| Sulphate of iron, 60 lbs. pe acre | . 11 | 30 | 1,690 | 12 | 263-12 | 1,881 |
| ride) 300 lbs. per acre Land plaster or gypsum (ca | 14 | 20 | 1,810 | 13 | 205-12 | 1,486 |
| cium sulphate) 300 lbs. pe | . 11 | 30 | 1,880 | 12 | 30 | 1,880 |
| Unmanured in 1889; minera superphosphate, No. 2, 50 lbs, per acre, each year since | 00 e. 13 | 50 | 2,400 | 12 | 332-15 | 1,895 |
| | - 1 - | - 1 | -1- | | ed on | this plot |

*Finely-ground mineral phosphate was used on this plot from 1883 to 1897. Thomas' phosphate in 1898 only.

PLOTS OF MANGELS AND TURNIPS.

In conducting these experiments the roots only have been taken from the land, the tops have always been cut off and left on the ground to be plowed under, so that the plant food they have taken from the soil may be returned to it. One half of each one tenth ages plot in the series has half of each one-tenth acre plot in the series has been devoted to the growth of mangels, and the other half to turnips, and these crops have been alternated from year to year. The preparation of the land has been the same for both these roots. It was plowed in the autumn after the crop was gathered, gang plowed deeply in the spring after the barnyard manure had been spread on plots 1, 2 and 6, and after gang-plowing the other fertilizers were spread by scattering them evenly over the surface, after which it was all harrowed with the smoothing harrow, then made in ridges 2 feet apart, rolled and sown.

In 1889, the variety of mangel used was the Mammoth Long Red. In 1890, three varieties were sown: 15 rows of Mammoth Long Red, 6 of Mammoth Long Yellow, and 6 of Golden Intermediate on each plot. In 1891, each plot again had three varieties: 18 rows of Mammoth Long Red, 3 of Yellow-fleshed Tankard, and 6 of Golden Tankard. In 1802, 1803, 1894, 1895, 1896, 1897, 1898 and 1899, one variety only was used, namely, the Mammoth Long Red. About I pounds of seed were sown per acre, each year. In 1899 the mangels were sown May 8, came up May 17, and were pulled October 16.
Two varieties of turnips were sown on the half

plots devoted to these roots in 1889; 25 rows of

Carter's Prize Winner, and 2 rows of Carter's Queen

of Swedes, and in 1890, a single variety, Carter's

Elephant Swede. In 1891 six varieties were sown:

3 of Imperial Swede, 6 of Champion Swede, 4 of Purple-top Swede, and 4 of East Lothian Swede.

In 1892 the Improved Purple-top Swede only was

sown, in 1893 and 1894 the Prize Purple-top Swede, in 1895 the Imperial Swede, and in 1896, 1897, 1898 and 1899 the Prize Purple-top Swede. The land used for the turnips, which are usually sown later than the metallic state.

than the mangels, was prepared in the same man-ner and the fertilizers spread on it at the same time

as for the mangels. It was then allowed to stand

until the day before sowing, when it was gang-plowed shallow or cultivated to kill weeds and

loosen the soil, ridged, rolled and sown. In 1899 the

turnips were sown June 7, came up June 12, and

were pulled October 20. In most instances the yield

of both turnips and mangels in 1899 was below the

EXPERIMENTS WITH FERTILIZERS ON ROOTS; PLOTS

OF MANGELS AND TURNIPS, ONE-TWEN-

11TH SEASON, 1899. VARIETIES.

West East Half Plot Half Plot

Mangels, Turnips Mam oth Purple

Red:

17 800

15 1,300 5 1,320

12 1,200

11 1,460

13 800

5 1,060

7 1,980

6 120

5 1,820

*Finely-ground mineral phosphate was used on this plot from 1888 to 1897. Thomas phosphate in 1898 only,

360

Purple-top Swede: Weight

15

140

7 540

11 1,140

13 760

800

Per Acre Per Acre Per Acre

Tons. lbs. Tons. lbs. Tons. lbs.

AVERAGE YIELD

FOR ELEVEN YEARS.

Mangels, Weight of Roots. Turnips, Weight of Roots

60 22 1,174 15 183

15 607 6 1,863

9 1,436

21 1,090 8 1,587

13 1,732

644

17 1,799 13 536

13 1,725 11 1,730

9

10

12 280 10 1,472 9 1,012

9 120

14

10

80 10 196

9

12 985

10 1,520 9 1,520 13 1,150 11 737

7 460 12 415 9 1,900

21.620

10 1,508

520

351

TIETH ACRE BACH.

average of past seasons.

Fertilizers applied each Year.

Barnyard manure, well rotted, 20 tons per acre each year until 1899;

each year until 1899;
no manure was used
that season
Barn yard manure,
fresh, 20 tons per acre
each year until 1899;
no manure was used
that season
Unmanured...
Thomas' phosphate,1,000
lbs. per acre.
Thomas' phosphate,1,000
lbs.; nitrate of soda,
250 lbs.; wood ashes,
unleached, 1,000 lbs.
per acre.

fermenting, 12 tons per

acre; Thomas' phosphate, 1,000 lbs. per acre, composted together, intimately mixed and allowed to

heat for several days

before using, applied each year until 1899; no manure or phos-phate was used that

season*..... Thomas' phosphate,1,000

lbs.; sulphate of pot-ash, 200 lbs. in 1889 and 1890 (substituted by

1890 (substituted by muriate of potash, 250 lbs. in 1891 and subse-

quent years); nitrate of soda, 200 lbs. per

Mineral superphos-

stiphate of potals and 1890 (substituted by muriate of potash, 250 lbs., in 1891 and subsequent years); nitrate of soda, 200 lbs. per acre.

Mineral superphosphate, No. 1, 500 lbs.

per acre..... Nitrate of soda, 300 lbs.

per acre...... Sulphate of ammonia,

Bone, finely ground, 500 lbs.; wood ashes, un-leached, 1,000 lbs. per

Wood ashes, unleached,

2,000 lbs, per acre..... Common salt (sodium chloride), 400 lbs, per

Mineral superphos-

nitrate of soda, 200 lbs. per acre.
Mineral superphosphate, No. 1, 500 lbs.; woodashes, unleached, 1,500 lbs. per acre.
Mineral superphosphate, No. 1, 500 lbs.; muriate of potash, 200 lbs. per acre.
Double sulphate of potash and magnesia, 300 lbs. per acre in 1889 and

lbs, per acre in 1889 and

189) (muriate of pot ash, 200 lbs., substi-tuted each year since); dried blood, 250 lbs.

mine ral superphosphate, No. 1, 500 lbs. per acre. Wood ashes, unleached, 1500 lbs.; common salt (sodium chloride), 300 lbs.; respectively.

lbs. per acre
Mineral superphophate, No. 2, 500 lbs.

peracre

phate, No. 1, 500 lbs. nitrate of soda, 200 lbs.

300 lbs, per acre.... Unmanured......

phate, No. 1, 500 lbs.; sulphate of potash, 200

6 rows of Lord Derby Swede, 4 of New Giant King,

[By Frank Sherman Peer, in his new book on Soiling.]

Necessary Tools, Etc.-My own experience in soiling twelve to fourteen head of cattle and four horses may be briefly stated as follows: The cutting was done with a D. M. Osborne self-rake reaper No. 3. I began with a scythe, then the mowing machine, but the reaper was the thing, throwing it off in gavels in the best possible way to facilitate handling, and where it will wilt without drying out. Monday morning, for instance, the farm team is attached to the reaper, and cuts in twenty or thirty minutes enough feed to supply the stock for two days. This reaper was used for three seasons for this purpose, also for cutting the ensilage corn. Nowadays the self-raking reaper has generally been supplanted by the self-binders. I have letters from several binder companies, saying that they will guarantee their machines to cut the green crops for soiling, and no doubt they can. It need not and should not be bound. The improved corn cutters leave little to be wished for in the gathering of the corn forage for soiling or ensilage, and the work and expense of harvesting are with these machines reduced to a minimum.

Delivering to Barn.-A one-horse lumber wagon, truck or half truck with wheels two and one-half to three inches wide will be found to be of great service, and will answer the purpose until the number of head soiled reaches twenty five or more. when a two-horse wagon with wide low trucks (which is also most useful in harvesting ensilage fodder) will be found advisable.

The box for the wagon I had in use for this purpose was a double one; the upper box was put-on in four separate pieces (two end and two side boards) which projected over the sides of the main

Feeding.-There is but one satisfactory way of feeding soiling crops, and that is to the cattle fastened in their stalls. Each cow gets her share, with no running or chasing about. She eats what with no running or chasing about. is put before her, and is satisfied. She is in the best possible position to be milked, and her greater comfort is assured.

Caution in Feeding.—There is more danger of feeding too much at a time than not enough. There is no doubt but that here lies the reason of many discouraging results in soiling. Of the three great mistakes a beginner is apt to make-i. e., feeding soiling crops in open racks, sowing too much at a time, and feeding too much at a time-the latter is probably the greatest mistake of the three.

A cow with more fodder (especially green forage) in her manger than she can eat up clean at the time, will go hungry sooner than eat it after she has breathed upon it for a time. This, of course, causes a shrinkage of milk, and is, I am sure, the reason why the soiling system has, in some cases, been condemned by some who suppose their cows abundantly provided for when their manger stands full of feed. They cannot understand how it is that their cows do not do as well at soiling as at pasture, and they jump to the natural conclusion that the cow or cows are pining pen pasture, and if they turn them out they would undoubtedly gain in milk for a day or so; then they would say that their cattle do better at pasture than at soiling. The trouble has been that their cattle have been hungry in the midst of plenty. After a cow breathes on forage left in a manger for a time, it becomes very distasteful to her, while to the feeder it looks bright and fresh, and she gets no more, perhaps, until hunger compels her to eat

Whatever you do, always remove from before the cows all that is left in the mangers before giving them a fresh feed. You will be surprised some time to see a cow go greedily at a fresh feeding at noon when you have taken from her manger what she failed to eat in the morning.

If there is anything left in the manger, pass it over to the hogs. They will be very pleased to have

Manner of Feeding. - Experience has taught me that, to produce the best results from milch cows, they should be fed four or five times a day. Five feedings, in my experience, have given better results than four, and just as good as six.

To think of feeding cows five times a day, when the usual custom is to feed but twice, may seem like a great task, but by systematizing the work it will be found not nearly as difficult as one may imagine.

Let us follow a day's work in feeding fourteen head of cattle five times a day-i. c., at 5 and 8 a.m., noon, and at 4 and 7 p. m. Enough feed has been delivered to the barn the evening before for the first morning feed, which the cows find in their mangers when they are let into the barn from the yard or paddock or orchard where they have spent the night. After breakfast the farm team is attached to the reaper, and in twenty minutes or half an hour has cut enough forage to last two days, and has gone on to its regular farm work. I found a boy fifteen or sixteen years old quite able to do the extra work of drawing, feeding, cleaning stables, etc., and have about six or eight hours a day to devote to the regular farm work. After

breakfast the boy feeds calves, pigs, etc., and at 7.30 with the one horse wagon goes to the field and draws to the barn the 8 o'clock feeding, which he delivers into the mangers from the wagon, and leaves upon the wagon enough forage for the noon feeding. The boy is now at liberty to work else where on the farm or in the dairy. At noon the forage that was left on the wagon is given to the cows, a work of ten or fifteen minutes. Other employment is found for the boy until 3.30, when he goes to the barn, puts the horse to the wagon, and delivers to the cattle their 4 o'clock feeding. He then draws in enough forage for the 7 o'clock feeding, and the first (5 o'clock) feeding for the following morning. He then cleans the stables, assists in milking, and at 7 o'clock gives the final or fifth feeding to the cattle, which is quickly done. This ends the day, with the exception of turning the cattle out at 8 o'clock for the night. They have free access to water in the yard when let out for the night. They require no more water during the

y. In thus relating my own method and practice in providing for fourteen head of dairy cows, I am well aware that it might not be suited in every respect to every other man's case. It is hoped, however that it will give my readers a correct knowledge of the general principles of the system, so that those who may wish to adopt it will have a guide, if not an absolute rule. The things insisted upon as absolutely essential to success may be summed up as follows:

First.—Feeding the cattle in their stalls day. times, turning them out at night.

Second.—Sow every week during April, May, and June enough ground to supply a week's feeding Third.—Remove all forage left in the mangers

before each fresh feeding. Fourth.-Feed five times a day all the cattle will

Fifth.—Supply perfect ventilation. Open stable doors at night. Keep doors and windows closed day-times, the latter darkened to exclude the flies. (But this can only be done when the barn is properly

These five rules are laid down as the cardinal principles. As to all the rest, use my experience as a guide, and better it wherever you can. Anyway, adopt any method that will best serve the five

Hay Substitutes Without the Silo.

To the Editor FARMER'S ADVOCATE:

ventilated.)

SIR,—The outlook for a good hay crop this year is anything but promising, and the farmers all over the country will have to look to another source for feed to make up the deficiency. Most of us have had a fairly good lesson of late years, and a short hay crop doesn't catch the up-to-date farmer in the same predicament as it did years ago. Since the silo was introduced, corn has come more and more into favor with the stockmen and dairymen all over Ontario, until now it has become one of the principal crops they grow. There are still some farmers who keep a lot of stock and have no silo, either through prejudice or some other cause, and the result is they do not grow as much corn as they ought to, owing to it being such a hard crop to save without a great deal of waste, unless one has a silo. For the benefit of those farmers I will give my experience with a good crop of corn I grew and fed and had no silo.

To begin with, we sowed the corn about the 24th of May, with a common grain drill, ten spouts, closing them all up but the third spout from each end. By doing that it leaves the rows about the right width to cultivate, and you can drive the same as if sowing grain. We set the drill to sow 21 bushels, which, with only the two spouts running, sowed about 2 pecks to the acre. It was fit to cut about the 10th of September, and as we cut it we drew it to a field near the barn, shocking it up in good big shocks, say about three to a load. As we shocked it we had a rope with a ring on one end, to pull the top of the shock as tight as possible before tying with a double thickness of binder twine. Fifteen acres of very stout corn was treated in this manner and left till winter, when it was drawn in as required, enough being brought in and cut up to last about three days. To draw it in during the winter, all that is required is a chain slipped over the shock and a horse hitched on. After it was cut up in a pile we mixed enough for one day's feeding with pulped turnips or mangels and chop, a layer of each alternately, the whole lot being thoroughly mixed and a little salt thrown on. Then we put on from four to six pails of boiling water, or as hot as we could get it, leaving it in this way for 24 hours before feeding. From the 15 acres, with the addition of roots and chop, we wintered 30 head of stock, 20 of them being milk cows supplying milk to the city. There is no doubt that the foregoing has more manual labor about it than the silo, but I doubt if the stock would relish the silage any better than they would the corn treated in that manner. There was no waste of corn and no turnipy tasted milk from that mixture. Each cow got a bushel, or & little over, twice a day, with some hay at noon. I would say in conclusion, to those who have not a silo and who do not treat their corn in this manner, to try it this winter, and I am sure they will be well repaid in saving of feed and also in the condition their cattle will be in. Wentworth Co., Ont.

knowing than kills Sumn and of C to fallow stumps thorough If the la thereby to becom too cont summerback into less the r days, the Fallo food. So be lost, a monthsmakes Exp'l St

JUNE 15

Weeds

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Tillage Notes.

Weeds Do Not Persist in Well-tilled Lands .-The first and greatest value of tillage is to put the soil in such condition that plants can grow, and then to keep it so. Incidentally, it prevents those plants from growing which we do not want—the weeds. Usually the process is reversed; weeds make us till, and we get the other benefits without knowing it. The best tillage prevents weeds rather

Summer-fallowing is a Means of Cleaning Land and of Correcting Mistakes .. - It may be necessary to fallow the land in order to clear it of stones, stumps and brush. But after the land is once thoroughly subdued, summer-fallowing is very rarely necessary if the land has been well handled If the land has been plowed when too wet, and thereby has become lumpy, if it has been allowed to become foul with weeds, or if it has lost heart by too continuous cropping with one kind of crop, summer fallowing is a good means of bringing it back into condition. The better the farming, the less the necessity of summer-fallowing. In the old days, the poor tillage tools rendered fallowing more sary than it is to-day.

Fallowing is tillage; and tillage liberates plant food. Some of this plant food may leach away and be lost, although the small rainfall of the summer months—during which time fallowing is practiced—makes this loss slight.—Bulletin 174, Cornell Ag. Exp'l Station.

Millet and Hungarian Grass.

I will give my experience with millet and Hungarian grass, as I have raised both for ten years, and they are the only hay fodder I have fed my thirty-five milch cows for five years in the winter months. I seed from the fore part of May to the middle of June. I prefer to seed in May, as the crop then matures early in the season, while the days are still long to help cure it. I sow from onehalf bushel to three-fourths bushel per acre on good ground. I like plenty of seed, so the grass will not grow too stalky, as it makes better hay. I have my ground well harrowed before seeding. I harrow once after seeding, and then roll or plank it. I cut my millet or Hungarian as soon as it is nicely headed out, as I do not want the seed to mature. It would be in swath one whole day before it is raked and bunched up. I let it stand four or five days after it is bunched, if the weather is good for haymaking, so that it will be well cured. I think millet (German) and Hungarian (which I prefer, as it matures earlier) the best fodder for cows we can raise. I do not say they are better than good clover hay, but better than timothy hay for milch cows. I have plenty of timothy hay, but I prefer the millet or Hungarian for feeding dairy animals. I have thirty acres sown this year.—L. W. Trumbull, in Farmer's Review.

Spraying for Mustard.

A number of farmers in England and Scotland who practiced spraying wild mustard with copper sulphate last year for the destruction of that tenacious pest, have replied to a set of questions sent them regarding their conclusions, which summed up as follows:—That charlock can be destroyed in growing crops, without injury to the latter, by spraying with 50 gallons 2-per-cent. solution (2 pounds in 10 millions of the solution (2) pounds in 10 gallons of water) of pure sulphate of copper per acre; that the best time to apply this is when the charlock is young and from 2 in. to 6 in. in height; that where charlock is destroyed the grain crops are improved. The principal causes of failure, it is added, are spraying too late, using insufficient solution, and using impure sulphate of copper. For the effectual eradication of charlock a second sprayind is necessary about a fortnight after the first, to catch plants that come up after the first spraying and those that somehow escaped the full dose of copper that was intended for them. Far better results are obtained in following the drill rows than in crossing them, especially when the grain gets high, as each row acts as a sheltering wall to the charlock standing behind it. A horse with small feet and a cart with narrow wheels do least injury. As the grain that is crushed is very susceptible to the spray, this point should not be overlooked.

Our Trade with Britain.

During the month of May the imports from Canada to Great Britain consisted of 6,725 head of cattle, valued at £112,630; 267 sheep and lambs, valued at £534; 482 300 cwt. of wheat, valued at £163,572: 51,800 cwt, of wheat meal and flour, valued at £26,675; 43,400 cwt. of peas, valued at £14,001; 52,314 cwt. of bacon, valued at £106,143; 14,788 cwt. of ham, valued at £32,722; 621 cwt. of butter, valued at £2,710, 32, 225 at £2.710: 26.225 cwt. of cheese, valued at £68,672: and 115 horses, valued at £3.450. The total value of imports amounts to £1,036,212. The exports totalled £377,733. Compared with May of 1898 and 1899, an enormous decrease in the import of butter is shown. There is also a slight decrease in the imports of cheese, but a large increase in bacon.

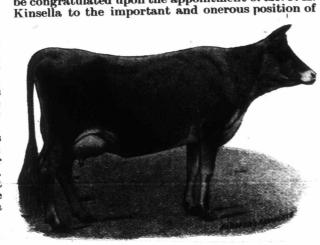
Keep the cultivator going in the corn and root crops once a week if possible, and especially as soon after a shower of rain as the ground is dry enough to work without sticking. This will tend to keep the production of the production and will the moisture in the soil from evaporating, and will hasten the growth of the crop.

DAIRY.

J. A. Ruddick Returning to Canada.

It is a matter for very great congratulation that Hon. Mr. Fisher, the Canadian Minister of Agriculture, has been enabled again to secure, in connection with the work of his department, the services of Mr. J. A. Ruddick. When he went to New Zealand in the latter part of 1898 to assume the dairy commissionership of that enterprising colony, we expressed the regret that so valuable a man should be lost to this Dominion, for we had long regarded him as one of the most valuable men that ever entered the public dairy service of this country. With the added experience and observation he has had in the Antiodes he should be able to render Canadian dairying still better assistance now. Our New Zealand exchanges speak in the very highest terms of the good work he accomplished there, and that without any "blowing," ostentation or friction, and admit that his place will be difficult to fill. "He will take with him," says the Canterbury Times, "the best wishes of everyone with whom he has come in contact in New Zealand." This same journal intimates that Mr. Ruddick's reasons for returning to Canada are chiefly domestic, Mrs. Ruddick never having enjoyed good health there. Certain it is that Mr. Ruddick will do credit to any department assigned to his care. J. A. KINSELLA PROMOTED.

It is gratifying to know that another Canadian has been appointed to the position rendered vacant by Mr. Ruddick's resignation in New Zealand. This osition having been given to Mr. J. A. Kinsella, formerly of the Kingston, Ont., Dairy School, and rormerly of the Kingston, Ont., Dairy School, and late Superintendent of Dairying in Assiniboia under Prof. Robertson, one of the leading papers of the Island, the New Zealand Mail, in announcing Mr. Kinsella's appointment, says: "The Agricultural Department, the factory managers of the colony, and all concerned in the dairy industry, are to be congratulated upon the appointment of Mr. J. A. Kinsella to the important and onerous position of



GOLDEN SULTANNE 146282, IMP. Two-year-old Jersey cow sold at T. S. Cooper's sale, at Coopersburg, Pa., May 30th, for \$1,600.

Chief Dairy Commissioner, left vacant by the resignation of Mr. Ruddick. Mr. Kinsella, who is still quite a young man, has been connected with the industry from his very boyhood. About nine months ago he came to New Zealand from Canada, where he had previously occupied an influential position under the Dominion Government. He was engaged by the New Zealand Government as Suparintendent of the Government Dairy School, but has been mainly engaged up to the present in giving general instruction to factory managers throughout the Colony, and has won universal esteem by the energy and courtesy with which he has discharged his duties. A pleasing evidence of the good opinion in which he is held by those engaged in the dairy industry was, we understand, to be found recently in the number of telegrams received by Mr. Kinsella in the number of telegrams received by Mr. Kinsella from various parts of the Colony, expressing the hope of the senders that he might be appointed to the vacancy. The new Commissioner is thoroughly experienced in the practical manufacture, on the most scientific lines, of both cheese and butter, a dual qualification which is rarely found in dairy experts." experts.

Use of the Milking Tube.

The milking tube may be very useful and necessary in some cases, such as an extremely sore or an injured teat or one having an obstruction in it preventing the milk from being drawn by the ordinary means, or it may be used in the case of an extremely hard milker with the object of improving the cow in that regard, but should be used only as a last resource, and then with great caution, as by its careless use many good cows have been ruined.

The teats of cows vary in size and length, and it is manifestly unwise to run a three-inch tube the whole length up through a teat two inches long, as the udder may by this means be injured at the base of the teat, causing inflammation which may ruin the quarter, if not the whole udder. Then, great care should be used to clean the tube both before and after using it by dipping it in hot water, as germs may accumulate upon it, which will carry disease to the udder. It should not be used with dirty hands, and should be oiled before using, and introduced into the teat very slowly and carefully. While it remains in the teat, gently rub and squeeze

the quarter to cause the regular flow of milk into the milk cistern, when it will pass out through the tube. But its use should be discontinued just as soon as possible, as there is always more or less risk in using it, and the cow is liable to give less and less milk from the quarter the longer it is used. If used properly and only when really necessary or in cases f emergency, it may be and in many cases has been valuable, and it is well to keep one on hand, but for general use, or when carelessly handled, it is liable to prove worse than useless.

Butter -- From the Stable to the Table. BY MISS LAURA ROSE.

ARTICLE VII.

THE PACKAGE AND MARKETING OF BUTTER. Butter may be well and carefully made, but if there is a lack of neatness in the final finish of it, a serious loss may be sustained. Our eyes first see, and our opinions and judgment are often formed before either the sense of smell or taste has been consulted. It is a good thing to please the eye. If we like the appearance of an article, we are more apt to be prepared to like the taste of it.

For the local market there is no package neater or more convenient than the brick-shape pound prints. They pack into a basket without injury to ne form, and they cut into nice squares for the table. If the print is properly adjusted the weight can

be relied upon, although butter at different temperatures, bulk for bulk, will vary. Soft, spongy butter will be lighter than that of a firm, close texture. It is well to occasionally weigh a print. I like the print, when wrapped, to weigh 161 ounces. The extra one-half ounce allows for evaporation or shrinkage. Fill the print by pressing down on the butter, which has been rolled out to about three inches in thickness on the worker. Always have a nice smooth surface when beginning to fill the print, gathering up the scraps to finish filling.

Scrape off the bottom evenly with the butter

Wrap the prints in the best parchment paper, which has been wet in clear, cold water. I have

heard ladies say that grocers objected to the paper. I think it is only the case where inferior paper is used. I have seen paper so poor it appeared like nothing but tissue paper, and could only be removed from the print in strips, bringing with it considerable butter. Good parchment paper should have a sweetish taste, and when wet should be tougher and not so easily torn as when dry. If you are making a large enough quantity of butter, and the quality is No. 1, have your name or that of your farm or dairy printed on your paper. In taking it to a grocer, customers soon get acquainted with the brand will sel for it soon get acquainted with the brand, will ask for it and be willing to pay a cent or two more a pound for that particular make, and it is the maker who should receive the additional profit.

If by any accident your butter is not up to the

usual high standard, you should not run the risk of injuring your good reputation by wrapping it in your printed paper. Have some plain paper on hand for such occasions, and sell the butter for what it will bring, being honest in the matter with your dealer.

In conversation last week with one of the leading grocers in Guelph, he said that when he found a buttermaker who brought him first-class butter, he supplied that person with his printed paper free of cost. Of course all butter done up in this special paper was guaranteed to be of No. 1 quality, and he impressed that fact on the maker as well as on the purchaser. Where it is possible it is well to have private customers, delivering the butter direct to them, receiving the cash and saving the commission

If you dispose of your butter on the market place, see to it that not only the butter, but the basket and yourself, are as neat and clean as can be. A buyer first looks at the one who has the butter for sale, then at the butter.

Endeavor to get your butter to the consumer as soon after making as possible, although it is well to allow it to stand one day in order to firm up. Butter absorbs odors almost as readily as milk or cream, and should be kept in a clean, well-ventilated place. Some find it necessary to pack butter for winter use, although it is better if fresh butter can

be had all the year round. The butter needs to be of extra good quality to pack. Any defects are likely to further develop in the butter while being kept.

It is well to give butter for packing two washings in order to free it of all curdy matter, for it is the curd which so soon decomposes and gives the butter the "off" flavor.

Salt slightly heavier for packing—1½ oz. when salting in the churn, and 1 oz. when on the worker. Work the butter twice. Pack into new crocks or butter tubs. The crocks should be thoroughly scalded and a strong brine allowed to stand in them. The tubs or firkins are usually coated with paraffin; if not, they should receive the same treatment as the crocks. It is well to line the tubs with heavy parchment paper which has been soaked for several hours in salt water. Pack the butter very firmly into the tubs or crocks to within half an inch of the top. Cover with parchment paper, then put on a thick layer of salt. Moisten the salt sufficiently to make a paste, tie down with several thicknesses of paper and keep in a cool, clean, dark place.

This week, when in Toronto, I made it a point to call on a number of large grocery and dairy com-mission men, and had personal talks with them regarding the buying and selling of butter, especially that received from farm dairies.

Mr. Marshall, of the firm of Rutherford &

Mr. Marshall, of the firm of Rutherford & Marshall, said they could handle large quantities of dairy butter at creamery prices if the quality could always be depended upon. I questioned him with regard to the defects in the butter.

regard to the defects in the butter.

He said the "off" flavors were mainly due, in his opinion, to keeping the milk in badly-ventilated rooms or where it comes in contact with vegetable odors, etc., also that in many cases the cream was allowed to become overripe, giving the butter a cheesy flavor.

In talking with J. J. Fee with regard to the color and salt, he said they did not find much fault with the color, as it was more even of late years, but that still some people persisted in using coarse, inferior salt, there being no excuse for it when good dairy salt is so chean.

Another large firm told me they paid from onehalf to one cent more for butter in pound prints, but in the summer time, unless the butter was shipped in refrigator boxes, they preferred the crocks or tubs or even the large rolls, as it could be handled better without becoming soft or untidy.

I found the grocers still took in a great deal of poor butter, for which they had to pay a good price. "I could not offend the customer, you know!" I said, "Whatever do you do with all this inferior butter?" "Sell it to the bakers, although the really first-class ones will not use it, and what we cannot dispose of in that way we pack, and it is shipped to the fishermen in the Lower Provinces."

Every man I spoke to said there was always a good market for gilt-edged butter, and that it always brought from two to five cents more than

the poor quality.

Let it be the aim of each buttermaker in this Province to produce butter of the very highest grade, and only can this be done by exercising the greatest attention and care in every detail of its progress from the stable to the table.

How Do Your Cows Pay ?

The above is a question that it will pay dairy farmers to answer; nor do we mean simply the herd generally, but the individual cows composing it. In season and out of season, editorially and through correspondents, and on one occasion by a valuable trophy offered for public competition, the FARMER'S ADVOCATE has sought to teach discrimination against the cow that does not give a good return for the food consumed and to crowd her to the block. The cost of keeping cows is a vital question. We note that Mr. J. H. Grisdale, Agriculturist at the Central Experimental Farm, reports that during the past year twenty five cows were milked the number of days in lactation varying from 49 to 365, or an average of 284 days per cow. The total milk sold was 135,346 pourds, which, valued at current factory prices, amounted to \$1,280.47. This makes an average of \$51.22 per cow.

Valuing the feed stuffs as follows: Bran and meal \$15 per ton, ensilage \$2 per ton, roots (mangels) \$2 per ton, clover hay \$5 per ton, chaff \$3 per ton, pasture \$2 per month per cow, dry cows \$2 per month per cow. The cost of maintaining the herd for the year was \$1,030.51, or an average of \$41.22 per cow. This leaves a net average profit of \$10 per cow.

In this connection, dairymen will also be interested in the experiment carried on by Mr. Robt. Robertson, Superintendent of the Experimental Farm at Nappan, N. S., to show whether a fairly good herd would pay for the food consumed and leave a balance on the right side. The trial began Nov. 28, 1898, and continued till Nov. 27th, 1899. The meal feeds fed, most of which were bought, cost: wheat bran \$18 per ton, pea meal \$27 per ton, corn meal \$24 per ton, chop (oats, barley and peas) \$22.50 per ton, the whole averaging, as per proportion fed to cows, 1½ cents per pound. Roots were estimated as worth 5 cents per bushel, and corn ensilage at \$1.66 per ton, and hay at \$5 per ton. The daily ration for cows in full milk in winter was: ensilage and roots, 30 pounds, 2½ cents; hay, 20 pounds, 5 cents; bran and meal, 8 pounds, 9 cents, making a total cost of 16½ cents per cow per day.
When not milking in winter they were charged \$2 per month. From June 1st to July 15th they were on pasture day and night, and from July 15th to Sept. 15th stabled during the day and on pasture at night, and from Sept. 1st to Nov. 1st stabled at night and on pasture during the day. After June 15th pasture failed, and they were fed green food. When milking in summer they were charged \$1.50 per month, and \$1 per month when dry and running in the bush pasture. Each cow's milk was weighed every day, and tested from time to time with the Babcock test. The milk was sent to the Nappan Dairy Station, where the butter produced was credited at the rate of 20 cents per pound, less 4 cents for making and milk drawing. Skim milk was fed pigs and calves, and was valued at 15 cents was fed pigs and calves, and was valued at 15 cents per 100 pounds. The milking period varied from 210 to 364 days, and the pounds of milk per cow from 9,373 pounds to 4,444 pounds. The highest credit was earned by a Holstein cow, being \$83.01, the next being an Ayrshire grade, \$82.83; the lowest an Ayrshire grade, \$16.51. The cost of keep per year per cow ranged from \$33.55 to \$58.29. The

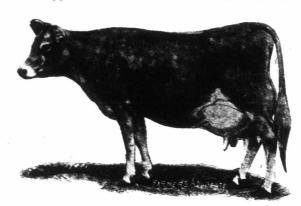
highest cost to keep was an Ayrshire grade, \$58.29, and next, the Holstein that topped the list as a producer, but the latter gave the largest net profit for the year, \$27.83, the lowest on the list being a grade Ayrshire, showing a profit of only \$2.68. When we find such a startling difference in a herd of 30 cows, it should awaken dairy farmers to a sense of the importance of knowing what their cows are actually doing, and what profit, if any, they are earning. There is reason to believe that hundreds of cows in every county are actually being kept at a loss to their owners.

The Cow End of Dairying.

It is practically certain that no matter how intelligently, carefully and well the product of our dairy herds in milk, butter and cheese is managed, we shall fail to make the best of our opportunities in dairying if slipshod methods are practiced in the care of the cows and in the provision and preparation of their food in order to produce the greatest quantity of milk at a minimum of cost. We are fully persuaded that in the case of the great majority of dairy herds of this country the owners come very, far short of realizing the profit they might, firstly, from the lack of care and judgment in the breeding and selection of their cows, and, secondly, from mismanagement in the feeding and care of the cows.

The question of breeds and breeding is an important and interesting subject—one on which there is room for difference of opinion, and which it is not our purpose to discuss in this article; but the matter of testing the cows to learn definitely whether they are paying their way decently or not is now so simple that there is little excuse for going on with our work bfindly or with inglorious uncertainty, and if, by testing, we find that there are inferior producers in the herd consuming as much food as the superior producers, it is clearly in order to insist upon their expulsion and the substitution of a more profitable machine as soon as practicable.

The apparent indifference of so large a propor-



GOLDEN LAD'S SOLID GOLD 149162, IMP.
Three-year-old Jersey cow sold at the Cooper sale for \$1,000.

tion of dairy farmers to the quality of their cows is one of the surprises of the business, and is, no doubt, one secret of the comparatively small returns they receive for the labor and feed expended on them. We know it is easier to moralize in this way and to give gratuitous advice as to getting rid of the unprofitable cows than to do it, but the present high prices for butchers' cattle would seem to make it a specially favorable time for feeding off the worst producers, and if the beef boom has that effect, it may prove a blessing in disguise to dairy-men. It is one of the advantages of dairy farming that the idle and incompetent cows can be disposed of in that way, and may not be in the end a total

The matter of keeping up a uniform flow of milk during the year is one of the most important in dairying, and one in which it seems most farmers fail, and that failure is made generally in the summer months. Most dairy farmers feed well in winter, keeping their cattle in comfortable stables, giving them liberal rations of meal and succulent food in the form of roots or ensilage, so that a fairly steady flow of milk is maintained. The fresh pastures in the spring make the cows flush up and milk generously for a while, but in most seasons and in all sections in some seasons there are terms of drought, when the pastures dry up and flies torment the cows, and they fall off rapidly in their milk, if some provision be not made in the form of succulent food or extra food in some form for supplementing what they get in the fields, and it is certain the cows will not, taking the years as they come, do nearly their best work unless provision be made for them in this way. This may be done either by growing green crops, as alfalfa, clover. mixed grains and corn in turn, to be cut and carried to the cows or by putting in a sufficient supply of ensilage to fill this want in the dry time in summer, and it seems to us that the silo presents the simplest and most effectual and satisfactory solution of this problem.

Time is so much an object in the summer that cutting and carrying food for a large herd of cows would seem to be expensive and inconvenient, but

if fairly estimated, would doubtless be found less so than at first sight appears. Corn ensilage, when corn is well matured, gives both grain and succulence, and is probably the cheapest food we can produce, taking into account the cost of seed, the weight of the crop per acre and the increased flow of milk. Having it convenient to the stable, it can be fed so quickly and with so little outlay of time that it seems to be the best and cheapest food, all things considered, even in summer when pastures fail; and for that matter, we believe it has bee demonstrated that it will pay to feed the cows both ensilage and a light ration of meal all through the summer. Mr. Tillson, of Tilsonburg, Ontario, last year, by feeding half a winter's ration of ensilage and grain, made his cows average 1,220 lbs. more milk than in the previous year, which, if milk is worth a dollar per 100 lbs., gave him \$12.20 extra per cow for the 150 days of summer feeding. He reckons the extra cost of feeding thus: 20 lbs. ensi lage, at 10 cents per 100 lbs., equals 2 cents per day; 5 lbs. grain feed, at 60 cents per 100 lbs., equals 3 cents per day; making the extra cost 5 cents per day, which, for 150 days, would be \$7.50 Deducting this from the value of the extra quantity of milk, he has a net balance of \$4.70 per cow, or on his 55 cows, \$258.50. And the extra manure, he considers, would more than pay for the extra labor

By the way, the milk record of this herd, as published in our columns last year, furnishes a striking illustration of the possibility of improving the working capacity of a dairy herd by judicious selection, breeding and feeding. Mr. Tillson reported that the milk product of his 55 cows, mostly grades, in 12 months and 3 days was an average of 11,472 lbs. per cow, which is nearly four times the product of the average of the cows of the country, and shows how lamentably the average dairyman is falling short of his opportunities.

Those who are not provided with a silo will, perhaps, raise the objection that it is expensive to build, but we know from experience that a plain stave silo with a capacity of 70 to 100 tons can be built for \$75 to \$100, and some men have built them for less money. If that is more money than a farmer has to spare, it is just a question whether he would not be justified in borrowing the amount and trusting to the probability of improved returns from his dairy operations to pay off the debt in due time. The point we have wished to make in these

The point we have wished to make in these remarks is the paramount importance of keeping up a steady flow of milk throughout the season, for we think all will agree that it is almost, if not quite, impossible to bring a cow up to her best work again after she has been allowed for a month or more to fall off in her milking by reason of an insufficient supply of food and a fight with flies, causing her to run down in condition, and necessarily to expend nearly all her energies in sustaining life.

If the old adage be true, that what is worth doing is worth doing well, then it is worth the effort to keep the cows milking somewhere near their full capability during the whole term of lactation, and we feel safe in saying it will pay to do so.

Raising Calves on Whey.

The increasing demand for young cattle, but especially for those possessing a fair proportion of beef blood, is leading many dairy farmers to use beef-bred sires and to raise the male calves for stockers. On farms where the milk goes to a cheese factory, the calves are liable to be slighted and stinted unless some special precaution is taken to supply the needs of the growing animals. While it might in a certain degree return a profit to retain a quantity of whole milk for the calves until they are a few weeks old, yet if almost as good results can be gained by using cheaper product the wise dairyman is apt to resort to that method. The nearest approach to the natural food of a calf obtainable on such a farm is undoubtedly whey, if properly fed and properly supplemented, but some care is necessary to get good results. A thrifty calf may commence to receive whey when four or five weeks old, but this is a critical time and great care must be exercised not to overfeed and sicken the calves by the change. When commencing to feed whey it should compose a part of the milk ration whey it should compose a part of the milk ration and have mixed with it a small quantity of cooked oil meal and fine shorts. The whey should be increased gradually as well as the oil meal, while the milk is decreased. About two quarts at first, gradually increased to four or five quarts, is better than more. It is better to allow the calves to go a little hungry than to overfeed. A person's judgment must determine when a calf has had a comfortable meal. It is well to have a trough set up about two feet meal. It is well to have a trough set up about two feet from the ground for a mixture of bran and choppe oats or other grain. Access to a little nicely-cured hay or wilted soiling crop has its advantages even while the calves are on pasture. It is better to keep them in darkened sheds in the day time during the hot months of summer when flies are troublesome and a supply of salt should always be provided. The aim should be to raise good calves that will sell at a fair price, rather than to save expense by feeding them poorly. The whey should always be fed sweet and warm and the vessels from which they drink should be scalded out daily so as to be kept sweet

June 15,

THINNING

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GARDEN AND ORCHARD.

Fruit Prospects.

THINNING THE CROP-TENT CATERPILLARS AND THEIR DESTRUCTION - SPRAYING.

It will be of interest to fruit-growers everywhere to learn what are the prospects for crops of various fruits throughout the chief producing areas of the country. Below we publish letters from authors in various districts, who touch upon not only the probable crop returns, but indicate as well some measures that are being adopted by the more provident in order to increase the returns. Thinning fruit has not yet been generally practiced, but its advantages where the fruit has set unduly heavy

have been sufficiently proven to warrant its adoption. While weight of crop is of importance, the chief consideration should be to secure fruit of first quality, and to this end both the thinning of the overladen trees and the destruction of insects should be carefully looked after. The following letters are worthy of the perusal of every farmer who grows even a small quantity of fruit.

GUELPH (ONT.) DISTRICT.

To the Editor FARMER'S ADVOCATE: DEAR SIR,—I may say that the prospect for a crop of apples this year is unusally bright. The weather has been favorable for the setting of fruit; and, if spraying is followed up as it should be, we will probably have a repetition of the crop of '96. Pears and cherries are fairly well loaded, but plums are going to be scarce. All of the small fruits, raspgoing to be scarce. All of the small fruits, rasp-berries, currants, gooseberries, strawberries, etc., promise a fine crop. All we need now is occasional showers to bring them up to their best. With regard to thinning fruits, I believe it would be advisable to watch carefully those trees

which are likely to overload, and then thin the small fruit judiciously to avoid over-bearing, which not only gives second class fruit, but so taxes the vitality of the tree as to make it impossible for it to bear an annual crop. The best time for thinning is as soon as the fruit is set sufficiently to show what the crop is most likely to be, or when the

apples are about the size of a hickory nut. Both the Forest and American Tent Caterpillar have been unusally numerous this spring, and, unless active measures are taken to hold them in check, they will certainly do very serious harm to fruit and forest trees. Thorough spraying with Paris green will more or less keep them in check, but we have found that in addition, it is well to go over the trees and remove the tents. This should be done early in the morning or at some time of day when the caterpillars are not feeding and when

they will all be found in the nests. We believe that spraying will be more generally practiced this year than ever, and we have had numerous applications for information as to spray-H. L. HUTT.

ing mixtures and apparatus. Ontario Agricultural College.

BURLINGTON DISTRICT.

To the Editor FARMER'S ADVOCATE: Sir, —Regarding prospects of fruits in the Burlington District, present indications point thus: Apples good, pears good, plums poor to fair, peaches poor, grapes fair to good, currants fair to good, raspberries fair, strawberries fair, black-

For the amateur with only a few trees, thinning the fruit when partly grown would, I think, be desirable and practicable. several thousand trees, I am inclined to think that the most economical plan is to thin by pruning that is, at the annual pruning in the spring—and thus reduce the amount of wood, and therefore the number of fruit buds.

The Tent Caterpillar threatens to be a serious pest here unless effective means are taken to destroy it. The Codling Moth too is on the increase and certainly must be fought. As to remedies for the caterpillar, the one I have practiced for years, and which I believe to be the best one, because sure, is to crush them in their nests by hand. As soon as the tents or webs are large enough to be seen, I send a man through the orchard with a ladder of suitable length for each orchard. In the course of another week or ten days he goes through again, and when very prevalent he goes through again the third time. The first time is the best, as the leaves have not unfolded sufficiently to obstruct the view of the nests, and everything can be seen.

The practice of spraying is, I think, slowly on the increase. It is also, I think, being done more carefully and judiciously than in the past.
Fruit Exp. Station.
A. W. PEART. Fruit Exp. Station.

CENTRAL ONTARIO.

To the Editor FARMER'S ADVOCATE: SIR,-1 beg to submit the following extracts from my notes of observation in this section. The spring weather opened up about a week later than usual, but since warm weather started in May the weather has been all that could be desired-Italian skies by day and Australian coolness by night, so that farmers got all their crops in with a rush, the land being in fine condition for the seed. The lack of rain has somewhat retarded the sprouting of some varieties, and old meadows will be light; but we had a splendid warm rain all last night, which will undoubtedly improve all kinds of crops. From the 20th till the last of May, our orchards were a perfect forest of glory, as nearly

every apple, pear and cherry was one immense bloom. Plums, however, in most cases had no bloom whatever, so that instead of shipping large quantities as formerly, we will become importers this season in that line. Apples and pears will undoubtedly exceed any former season if present indications count for anything. Small fruits have set well and I believe will be a full crop.

Thinning apples and pears must be attended to good samples are to be obtained, and the best time, in my opinion, is as soon as possible after the bloom is all off the trees, as this gives a better chance to the remaining fruit; and as none but good samples will pay the orchardist, the thinning should be attended to early. My system is to use a step-ladder, a good pair of straight scissors, and a smart hand. The work is not very difficult. Many of our varieties are such heavy bearers that we cut off five or six and leave one, and even then there are too many left to get the best results. The Tent Caterpillar is evidently on the increase, and the utmost diligence must be observed if we don't want our orchards and plantations to be devastated by their ravages. The Codling Moth and the wormy apple go hand in hand and heart to heart; and who likes a wormy apple? Ugh! The only sure remedy, the safest and the cheapest, is the frequent use of the spray pump and Bordeaux mixture with Paris green, the formula of which everyone who is interested must have read.

I am experimenting with pure arsenic and sal soda on part of my orchard, as it is cheaper, and I think more effective on all worms, grubs, beetles, etc., than Paris green. More people are spraying this year than formerly, and I think with beneficial R. L. HUGGARD.

Ontario Co, Ont.

NORTH-EASTERN ONTARIO.

To the Editor FARMER'S ADVOCATE: SIR,—The prospect for apples, plums, cherries, and grapes is very good, also for currants, raspberries, strawberries, and gooseberries. Heavy crops of these fruits are expected.

It would pay to thin fruit on varieties which bear heavily. Thinning should be done shortly after the fruit sets. Some varieties should be thinned more than others, and it should be left to the judgment of the fruit-grower as to what proportion

The Tent Caterpillar will not be very troubleome this year in this district, nor is there any other insect injurious to fruit which is very prevalent this season so far. The best remedy for the Tent Caterpillar is Paris green, as recommended in the Spraying Calendar issued by the Central Experimental Farm.

I have not noticed that spraying is being more enerally practiced this season than heretofore, but should judge it is from the large orders which I believe the pump-makers have had for their machines. W. T. MACOUN,

Central Exp. Farm, Ottawa. Horticulturist.

WENTWORTH CO., ONT. To the Editor FARMER'S ADVOCATE:

SIR,-From present indications, apples will be a very heavy crop; both fruit and leaf are free from fungus, and looking very healthy. Pears, plums, peaches and cherries also promise a full crop. They are also free from fungus, and very little damage has been done by Curculio. The Tent Caterpillar has been more numerous than other years, and the Canker Worm has done considerable damage to the apple orchards near Hamilton.

MURRAY PETTIT. LAMBTON CO., ONT.

To the Editor FARMER'S ADVOCATE:

SIR,-The prospects for a large crop of apples are exceedingly good in this district. from heavy showers which usually fall during the blossoming season allowed a large percentage of blossoms to set fruit. This is particularly noticeable in regard to Greenings, and Baldwins have perhaps set least fruit of any. Pears will be a medium crop, and plums a rather light yield, except in some favored orchards; peaches an entire failure here this season. Small fruits generally promise well; raspberries, which are now just in blossom, present the finest appearence they have done for years, the winter being especially favorable for them; strawberries, which are just beginning to ripen, are finely loaded, but the average in berrygrowing districts is scarcely more than 25% of that of last year.

For apple trees which are too heavily laden, if rather bushy, thinning can be most readily performed by summer pruning in the month of June, this is especially beneficial in regard to Ben Davis. This also has a tendency to cause trees to form fruit spurs for next season, so that regular bearing usually follows a moderate performance of

We have never noticed the Tent Caterpillar more numerous than this season. In our nine-year-old apple orchard of 250 trees there was scarcely a tree that did not have at least one tent, and many had two and three. A thorough spraying with Bordeaux mixture containing 5 ozs. of Paris green to the barrel, just before the blossoms opened, destroyed every caterpillar in sight, and the trees and fruit are making a remarkably fine and healthy growth. Unsprayed orchards in this district stand a great risk of being defoliated by the Tent Caterpillar. No other method of destroying them is half so speedy or efficacious. We sprayed our 250 apple trees, 100 three-year-old trees

of other fruits, and destroyed every nest of cater-

pillars in ten hours. Much more interest is being displayed in regard to spraying this season than ever before; still, few farmers can find the necessary time for doing the work at this particularly busy season. The writer has been offered by many farmers most handsome remuneration to come and spray their trees, but home interests would not permit. There is certianly an opening here for some energetic person in each neighborhood to coin a good many dollars for a few

weeks of careful and comprehensive work.

June 6th. E. F. AUGUSTINE. June 6th.

CENTRAL NORTHERN ONTARIO.

There is every prospect at present for a good crop of fruit in this locality. There was a great profusion of bloom on apples, pears and cherries. The weather was fine and warm when the trees were in bloom, and the bees worked hard every day, and as a result the fruit is setting well. Early apples, especially Duchess, will be an immense crop, judging from present appearances. Pears and cherries also give promise of a good crop. Plums in this immediate locality have not done so well. The fruit buds on all except the hardy varieties seem to have been injured by cold in the winter, and have not blossomed well. Currants will be a full crop. Raspberries and blackberries have wintered well, and promise a full crop. Of course these are just beginning to bloom. Strawberries have wintered well, and have had very favorable weather during bloom have had no injury from frost, and promise a full

With respect to the thinning of fruit that has set too heavily, I cannot speak from experience. No doubt it would greatly improve the quality and market value of the fruit, but I have not practiced it to any large extent. The trouble is toget time to do it, when there is so much work pressing, wages

high and help scarce.

The tent caterpillar is plentiful in many localities, and where not attended to will do serious ties, and where not attended to will do serious. damage. People who spray their orchard properly have no trouble with them. They will make little headway on trees when the leaves are well covered with Bordeaux, even without Paris green. But if with Bordeaux, even without Paris green. But if the trees are sprayed well just before the blossoms open, with Bordeaux mixture, using instead of the usual formula of 1 oz. Paris green to 10 gals. water, double the quantity (say 8 ozs. to the 40-gal. barrel of mixture), or even more, using plenty of lime and testing the mixture with the ferrocyanide of po-tassium, the caterpillars will be destroyed Many neonle spend more time poking around with a pole people spend more time poking around with a pole and a rag on the end of it, soaked in coal oil, trying to kill caterpillars, than would be required to spray the orchard properly. People are rapidly finding out the value of a thorough spraying of fruit trees, and there is a general desire for information on the subject. There is a great increase in the number of G. C. CASTON. sprayed orchards this year. Simcoe Co., Ont.

SOUTH SIMCOR DISTRICT.

Apples of all varieties have set an enormous load of fruit. Pears, a small crop. Plums bloomed very sparingly. Cherries will be a fair crop. Small fruits promise to be abundant, though the English varieties are mildewing in spite of abundant and continuous applications of Bordeaux mixture. Three acres of strawberries close by are loaded with

Spraying is practiced here more than ever Many orchards last year were entirely stripped of their foliage by the tent caterpillar. These orchards bloomed very sparingly this year.
The country seems to be alive with these caterpillars this year. Wild cherry trees by the roadside and neglected orchards are actually swarming. A variety of this caterpillar has attacked the maple trees in some places. I sprayed two apple trees literally covered with tent caterpillars about an inch and a half long with ten ounces of Paris green to a coal-oil barrel of water, in which was put milk of lime. I visited these trees a few days afterwards, and could not see a caterpillar. I am therefore of the opinion that Paris green will kill the tent caterpillar at any age, if the solution or mixture be made trong enough, and lime will preserve the foliage from the effects of Paris green. I have used fourteen ounces on my gooseberry bushes without any bad results. Of course, the quality of the Paris green varies.

STANLEY SPILLETT, Experimenter. South Simcoe Sub Station.

What to Do with Cheap Berries.

It is a frequent occurrence with fruit-growers to have the price for berries go below the cost of production during a glut in the market. What to do at such times, and with the Saturdays' pickings becomes a serious problem. Raspberries can be evaporated. Strawberries have been made into jam by J. O'B. Scobey, a successful Washington grower, who told of his results at the winter meet. ing of the Northwestern Fruit Growers' Ass'n.

He had 12 acres of strawberries in bearing in 1898, His first picking brought \$4 per crate and subsequently dropped as low as 50 cents, so that he stood to loose money on his entire crop. He went to the stores, found 250 pint fruit jars, bought a sack of sugar and on his kitchen stove made 250 pints of strawberry jam. These went onto a closet shelf and stood there forgotten until the following spring. He then sent to San Francisco for some

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It may be that excessive kind treatment has been the very cause of the refusal to bear. They have grown too much and are yet in the wood-making business, rather than in fruit-bearing. It may be that the variety is not an early-bearing one, and the proper time to bear has not come. The climate

may be one which does not favor early bearing.

If either of the two latter is the cause, a little more time may put things to rights. However, the bearing of such trees may sometimes be hastened by the same means that will be recommended for excessive wood growth. This is to check. There are several ways to do this. Some advise cutting back some of the roots, but I do not like this plan, because it permanently cripples the tree. I have known iron spikes to be driven in the body, and sometimes the bark is pounded, which makes ugly scars. Neither of these methods seems advis-

The plan which I have followed with success and without permanent injury, is girdling in early summer time. This should be done in June. A single cut may be made with a knife through the bark, entirely around the trunk, at any convenient place, or two or more such cuts may be made. If a ring of bark several inches wide is peeled off entirely around the trunk of an apple or pear tree at this time of year no harm will follow, for a new bark will soon form over the wound. Another very good plan is to remove long strips of bark about two inches wide, pointed at both ends, and leaving spaces of bark of oout the same width.

Any of these will cause a checking of the flow of ap and an unusual formation of fruit buds, instead of an excess of wood buds. The trees of the stone fruits are much more sensitive to injury and will not safely endure such treatment as has been described; nor do they usually need anything to force them into bearing.—H. E. VanDeman, in Vick's Magazine.

ENTOMOLOGY.

The Municipality vs. the Codling Moth and Other Insects.

At the late session of the Legislature of Ontario an Act for the prevention and destruction of certain noxious insects was adopted, providing that upon the recommendation of the Minister of Agriculture, the Lieutenant-Governor-in-Council may make such regulations for the purpose as may be deemed advisable, which will have the force of law in all municipalities adopting the Act by by-law. actual utility of the Act will therefore depend upon local interest being aroused sufficiently to bring pressure to bear upon municipal councils to pass the necessary by law. Where this is done, the Act requires the appointment of inspectors by the municipalities adopting its provisions, whose duty it is to inspect all orchards and enforce the regulations. In case of non-compliance, the inspector may cause the work to be done and report the cost to the Council, who are empowered to enter the sum on the collectors' roll against the owner and collect the same in the same manner as other taxes. The occupant or owner of every lot affected is to be furnished, by the municipality, with a printed copy of the Act and the regulations made under it, and also with a copy of the by-law and the name and address of the inspector. A fine of from \$1 to \$20, or, in default, imprisonment, is to be imposed upon persons interfering with inspectors in the discharge of their duties. In view of the extent of the ravages committed by the codling moth and other injurious insects, it is to be hoped that rural municipalities, more especially the fruit-producing districts, will see the desirability of adopting the Act and taking prompt measures for the enforcement of its provi-

The first order-in council approved by His Honor the Lieutenant Governor (on May 24th, 1900) under the new Act makes the following regulations for the prevention and destruction of the Codling Moth:

1. It shall be the duty of every occupier of a lot within the municipality, or if the land be unoccupied, it shall be the duty of the owner of such lot, within one week after receiving notice as provided for in the Act, to place bands (as hereinafter described) upon the orchard frees located upon said lot, as follows: Upon all bearing apple trees and pear trees, and upon all orchard trees of bearing age within 40 feet of such bearing trees.

2. The bands shall be made of "burlap" "sacking," or similar suitable material, and shall not be less than 4 inches in width, and of three thicknesses, and shall be securely fastened at a convenient point between the crotch of the tree and the ground.

3. The occupant or owner shall have these bands removed and inspected, all larvae therein destroyed, and the bands replaced at intervals of not more than two weeks during the months of June. July and

POULTRY.

Feeding, Cooping and Caring for Growing Chickens.

There is no better surrounding for a chicken range than a fruit orchard in sod. The shade provided, as well as the green food and insect life, supplies suitable supplements to the daily rations given at the hands of the poultryman or poultrywoman. Suitable coops should be provided for their shelter. A coop 21 feet high at back, 31 feet in front, 31 feet wide, from 6 to 10 feet long, will answer well. The back and ends should be boarded solid, and the roof made rainproof, and the front covered with smallmesh poultry netting. There should also be an opening against the roof at back, which should be covered with netting. Fowls are then safe from minks, skunks, weasels, rats, etc., and have a free circulation of air. The coops should also have board floors, which should be cleaned once in two or three days and covered with fresh sand. Coops without floors do well on dry ground if moved to a clean location once in four or five days. It is well to provide roosts about a foot from the ground, of 2-inch stuff rounded on top. A coop of the above dimensions will accommodate two or three hens with the hatches of five or six.

The chicks should be allowed their liberty to roam from the time they are quite young, and not be overfed on grain too easily gotten. When past their chick food, feeding twice a day with a mash consisting of corn meal, middlings and bran, about equal parts, scalded, and the third meal of cracked corn, wheat or screenings, fed in litter so they will have to work for it, provides a day's ration that will tell favorably on the growth of the youngsters. When the chicks are six weeks old they will no longer need the hens, which should be removed. leaving the home to the brood. They will ramble considerable distances during the day, but return to their coops to roost at night until they are well

Care should be taken that the chickens are never crowded, and the necessity for cleaning at regular intervals should never be lost sight of. Droppings and decayed food form favorable breeding places for lice, and if lice once appear there will be much trouble in getting rid of them. By the ravages of lice the constitution becomes weakened, and the least adverse weather, that would not affect a strong chicken, will produce cold in the head and other troubles in those of weakened constitutions. Troubles of this sort may easily be cured if the origin of the cold be reached, which is not so much the adverse weather

as the lice. Throughout the growth of the chicks it should be remembered that the main considerations are grit, fresh water, and cleanliness, and those who ear this in mind will raise strong chicks with big frames which will be fit for the market-early laying chicks, that will pay their way throughout the winter, and vigorous stock from which superior chicks may be bred the next spring.

A Word of Warning: Beware of Red Lice, or Mites!

They were unknown to me until last spring, and I think they are, without exception, the greatest pest poultry can have. I address myself to thos who look upon their advent as of no consequence. To those, I say Beware! I noticed them first under my sitting hens and on them. I changed the straw frequently, and burnt it, washed the eggs, saturated the nests with coal oil, sprinkled the hens with insect powder or sulphur; still, the mites

When the hatching was ended, I burnt 2 lbs. of sulphur in the house, thoroughly whitewashed it, and used coal oil plentifully round the roosts and nests-all to no effect. Early in November I determined to make a still greater fight. I took the entire interior of my house to pieces, every nail was drawn and every board carried out and thoroughly scrubbed with hot water and carbolic acid and then scalded. (I used the pig boiler for heating the water.) I disinfected all my fowls with a very strong preparation, and also used the same over the entire house-ceiling, walls, and floor. My house is grout and mortar between boards, and, to my horror, since the warm weather came I notice the mites creeping out from between the boards. I have been corresponding with Mr. Gilbert, of the Experimental Farm, and I am now following his advice and spraying with a solution of corrosive sublimate, but as it is a deadly poison, we have to use great caution. The solution is prepared as follows: corrosive sublimate, 4 ozs.; common salt, ozs. Dissolve in two to four quarts of water. When completely dissolved, dilute to 25 gallons Sprinkle thoroughly every nook and crevice. hope this article may benefit others. It will at least show that mites are harder to exterminate than one

Have you cleaned out the pens and put on a coat of whitewash: How sweet and clean everything sinells, and how much better everything looks The hens appreciate these things, and the eggs will tell the story.

Ottawa, from the 143 varieties of potatoes grown for comparison in uniform test-plots last year were very good, the best yielding sort, American Wonder, a late white variety, of good quality, producing at the rate of 640 bushels 12 pounds per acre; while the poorest gave 240 bushels 36 pounds per acre. American Wonder produced 52 bushels 48 pounds per acre of unmarketable tubers. The Horticulturist recommends the following for farmers:-Extra Early: Early Ohio (pink), Earliest of All, Bovee, and Burpee's Extra Early (pink and white). Early: Everett and Rochester Rose (pink), Early Puritan (white). Medium: Carman No. 1 (white), Empire State (white). Late: Late Puritan (white), American Wonder (white), Rural Blush (pink). The average yield per acre from the 143 varieties was 410 bushels 47 pounds, which is 291 bushels 47 pounds more than the Ontario average of 119 bushels. Had these varieties been grown in acre plots, the yields would not have been so large, but considering the fact that the poorest variety of the 143 tested yielded 85 bushels 36 pounds more than the average for Ontario, it seems remarkable that larger crops are not produced throughout the country. The soil in which the potatoes were grown was a sandy loam, and, while in good state of cultivation, it is not what would be called rich, although it was given a good dressing of barnyard manure in the spring of 1898. A crop of tobacco was taken off the same land in 1898. The soil was plowed in the autumn of 1898, and again in the spring of 1899, when it was also disk harrowed and harrowed twice with the smoothing harrow before planting. The drills were made about 6 inches deep and 24 feet apart, and the sets, which had at least three eyes, were of good size and were dropped l foot apart, each variety occupying one row 66 feet long. The potatoes were covered with the hand hoe to insure the most uniform conditions. The potatoes were cultivated when required throughout the summer, but were not hilled up. They were sprayed with Paris green and Bordeaux mixture to destroy the potato beetle and prevent blight. The potatoes were planted on May 22 and 23, and were dug on October 5, 6 and 7. There was no scab or rot. We notice that in 1898 an experiment was begun in planting potatoes at different dates, beginning when the main crop was put in and continuing at intervals of two weeks until August 23, 1898, and July 23, 1899. An early and a late variety were used in each case: Early Norther (early) and Irish Daisy (late) in 1898, and Early Norther and Rural Rush in 1899. There was a regular decrease in the yield from each planting. For the two seasons the average yield of marketable potatoes per acre for the May 26th planting was 330 bushels 26 pounds; June 9th and 10th, 253 bushels 39 pounds; June 23rd and 24th, 139 bushels 2 pounds. Intario pots

labels, pasted them on, took a couple of sample jars

Last season as soon as the price dropped to \$1.50

per crate (24 qts. wine measure), he began to put am, having built a homemade oven or furnace.

He had bought glazed pans or trays, and 10,000 pint cans. This output was sold in N. J. Plans are made to put up 100,000 pints this season.

Potato Growing at the Central Experi-

mental Farm.

The yields at the Central Experimental Farm,

to town and closed them out at 25 cents per pint.

to us getting the best results from June planting, with less trouble from the bugs. The highest yielding varieties during the past

six years were as follows:

1894 - Burpee's Extra Early, 364 bushels, 1895 - American Wonder, 385 bushels, 1895 - Late Puritan, 455 bushels, 1897 - Holborne's Abundance, 402 bushels, 1898 - Holborne's Abundance, 393 bushels,

American Wonder, 640 bushels.

The New Insecticide.

The FARMER'S ADVOCATE, London, Ont:

GENTLEMEN,-In reply to your enquiry as to whether green arsenoid is superior to Paris green for the treatment of leaf-eating insects, I beg to say that up to the present I have not considered it wise to recommend any substitute for Paris green. This material is now so thoroughly well known by farmers and fruit-growers that there is no difficulty in getting them to use it upon trees and other crops liable to be attacked by foliage-eating insects. Green arsenoid is one of several compounds which have been lately introduced, and which certainly are valuable insecticides. They differ principally from Paris green in their chemical composition, the omission of acetic acid making it possible to produce them at a slightly lower figure without injuring their insecticidal qualities. I can quite understand that the makers of arsenoid poison might claim that this material is better than Paris green. It is slightly cheaper, and appears to remain in suspen-sion a good deal longer than Paris green when mixed with water. It has, too, the bright green color of Paris green, which is a safeguard against it being mistaken for less dangerous compounds when left about by careless people. Green arsenoid is apparently very similar, if indeed it is not identical with arsenite of copper. Yours very truly,

J. Fletcher, Entomologist and Botanist.

Central Experimental Farm.

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TRIX.

Feeding Young Chicks.

When a child on the farm, it was my duty to mix alarge pan full of corn meal into a dough with cold water and feed the chickens. We raised a great water and reed the chickens. We raised a great many chicks on that food, with the addition of what

they picked up in a free range of the farm.

Now I never fed raw corn meal. I think it is much better for them when it is baked into a bread that crumbles easily. To make the bread, mix with buttermilk, using twice as much soda as one would if baking for the table. The bread will be rather if baking for the taute. The bread will be rather vellow if the double portion of soda is used, but this does not matter. For a change, an occasional feed may be baked very hard and soaked in skim milk. The skim milk given them to drink is also There is nothing better than table scraps for the chickens, young or old, but in these days we have learned to use the "left overs" in so many ways that the scraps from the table would suffice for a very small flock.

Very small chicks will learn to eat wheat, and it is excellent to alternate with the corn bread. If they have a free range they will pick up all the green food they need; if they are confined in small lets compathing of the kind must be found in a lots something of the kind must be furnished them. I find that they will eat chopped radish tops greedily. Last spring the alluring catalogue description of a mammoth radish induced me to try it. The tops proved to be mammoth indeed, but the roots were about the size of one's little finger. However, they made such an abundance of green food for my poultry that I thought them worth the room they had in the garden and the cultivation that had been

given them. Feed but little at a time and feed often is a good rule to follow, especially for the first six weeks of the chick's life. Five times daily is not too often, if they are kept in an enclosure. After the weather becomes warm a hen who may roam where she will on a farm will almost raise her brood without regular feeding.

VETERINARY.

Milk Fever Treatment.

To the Editor FARMER'S ADVOCATE: DEAR SIR,-In the April number of the FARM-RR'S ADVOCATE I notice an article on the prevention of milk fever, by Mr. Hilgert. It is not my purpose to critisize the treatment as given, but rather to suggest improvements. My practice for the past nine years has been largely a mixed one, and I have had considerable experience with milk fever. Mr. Hilgert's plan of preventive treatment is very good, and goes far towards lessening the number of cases, but I wish to add a few suggestions to his treatment after the case has developed. He advises the use of nux vomica in grain doses. Now, in order to get any effect from this drug, even in a healthy animal, would require at least 30 or 40 grains, and a cow suffering from milk fever will take dram doses -viz., 60 grains—every two hours for 24 or 36 hours without any ill effect. It is almost incredible, in fact to what an extent this drug may be pushed in some cases. The effect of nux vomica is a nerve stimulant, and an animal in the comatose condition of milk fever will take very large doses without showing any marked action from them. During the progress of the disease the natural functions of different organs and glands are greatly inpuired, and consequently absorption of medicines in the stomach is lessened. For this reason the administration of too many or too much treatment is to be avoided. I would, therefore, suggest that the hot tea, molasses and raw oil and turpentine, as recommended by Mr. Hilgert, be dispensed with. It is advisable to give a good purgative as soon as the animal is seen to be effected. For this purpose the one mentioned by Mr. Hilgert cannot be the one mentioned by Mr. Hilgert cannot be improved upon, viz, salts, jalap and ginger, with water. By giving nux vomica in dram doses with alcohol or whiskey, as further suggested by Mr. H, and carefully following his other lines of treatment, the owner is doing all that any non-professional man can do, and with fair chances of success. Trusting that Mr. Hilgert will not take offence at what I have written, and thanking you for your valuable space. I am.

HERBERT S. PERLEY, V. S. valuable space, I am, Govt. Vet. Inspector. Ottawa, Ont. Probably the greatest weakness in the treatment of milk fever cases by mouth is the inability of the cows to swallow soon after a severe attack sets in. Medicine given under these conditions is liable to find its way into the bronchial tubes and the lungs and suffocate the animal. Even if the medicines were gotten past the lungs into the stomach, the action of that organ is so dormant that after a certain stage the patient receives no benefit from it, but dies as though nothing had been done for her. The newest treatment for milk fever—parturient apoplexy—and one which is meeting with marked success when given due trial is the Sahmidt treatment, which consists trial, is the Schmidt treatment, which consists principally of injecting into the udder, through the teats, potassium iodide. It has been given a thorough trial by J. H. Tennent, V. S., of London, Ont., who reports his cases treated in 1890 in the Journal of Veterinary Archives. Below is the Doctor's introductory remarks, three sample cases

Yours truly,

out of fifteen treated, and his conclusions: The same instructions as to care and the same antiseptic precautions were used in each and every case unless otherwise specified.

"Schmidt'streatment and our mode of applying it are as follows: Procure a clean vessel (a quart fruit sealer will do, and we prefer something of this kind, as it can be kept closed until the udder is prepared to receive it). Put into the vessel a quart of boiling water, and when cooled to a temperature of 100° to 101° F., add formalin, 1 dram, and potassium iodide, 2 drams; shake gently and it is ready for use.

"Remove all the milk possible from the udder, then wash the udder and teats with an antiseptic wash; also the instrument, which consists of an ordinary bulb enema syringe (human), to which is attached a teat siphon—a jeweller brazing a shoulder on to a siphon so as to fit the end of the shoulder on to a siphon so as to fit the end of the syringe. The siphon is passed up the milk duct to the teat, and eight ounces of the solution of potassium iodide-formalin and water is injected into each quarter of the udder. In emptying the contents of the syringe into the gland, air is admitted. I have seen no bad results, but would not advise too much air to be forced in, as it might be the means of infection of other germs.

"If the patient is down and unable to rise, a clean cloth should be placed under the udder to keep it out of the stable litter.

"Care.-Place the animal in a position on the sternum, and endeavor to keep her so by bundles of straw, etc.; clothe the body according to the season; turn her from side to side every five or six hours. The udder is to be hand-rubbed or kneaded every hour, so as to ensure distribution throughout the entire gland. The solution is not to be milked out of the udder before eight or ten hours, when a second injection may be given if required.

"Remove feces from the rectum. If urine is retained over twelve hours use the catheter. And in no case must medicines be administered by the mouth until the patient is well able to swallow. We give no medicine by the mouth unless the patient is able to stand. Cold water may be given ntities frequently if the patient will during convalescence consists of something light, nourishing, and easily digested. If constipation is present two or three days after the commencement of an attack an ordinary physic drench may be given.

"The other medicinal treatment will be given with each case.

"Case I.-February 28th, 1899. Saw cow at 9.30 p. m. Down, unable to rise. Eyes amaurotic and all other symptoms well marked; pulse 96 and strong; temperature 101° F. Calved thirty-six hours previous. Extracted six quarts of blood from the jugular with difficulty. Gave aloes barb. one ounce, sod. chlor. one-half pound., spts. eth. nit. two ounces, water one quart. Injected udder.

nit. two ounces, water one quart. Injected udder. Left eth. nit. to be given in two-ounce doses every five hours. Usual directions as to care, etc.

"March 1st, 10 a.m.—Still down; symptoms much better; bowels moving freely; urine high colored; pulse 98 and weaker; temperature 100° F. Two quarts from udder. Respirations normal. Injected udder. Left ath nit two owners to be given as udder. Left eth. nit., two ounces, to be given as before, and same care, etc. 8 p. m.—Had been up twice during the afternoon; had eaten a little and drank some water; found her ruminating slowly. Pulse very fast and weak. Temperature 102° F. Partial sweats on body; eyes discharging a watery Partial sweats on body; eyes discnarging a watery fluid. Ordered three ounces of whiskey and left nux vomica to be given in one ounce doses, with the whiskey, every four hours.

"2nd, 10 a. m.—Cow up and doing well, eating and drinking; pulse strong, 60; temperature 100.5"
F.; not much milk from udder. Left pulv. nux yom, and bicarh, ginger, and gentian one dram

vom., sod. bicarb., ginger, and gentian, one dram each, to be given with one ounce of whiskey three times a day. Three days after the owner reported the cow doing well, but not as large a flow of milk

as he expected. "Case VII.-June 10th, 7.30 a. m. Had calved forty-eight hours previous; placenta had been removed thirty-six hours after calving, when one removed thirty-six nours after calving, when one pound of mag sulph. was given. Fat, and medium milker; down, unable to rise; pulse 92; temperature 100.2° F,; respirations natural. Injected udder, and left liq. am. acet., two ounces, to be given eight hours afterward. 6 30 p. m.—Still down; symptoms favorable. Injected udder, and left liq. am. acet., two ounce doses to be given every six hours.

two-ounce doses to be given every six hours. "11th.—Owner reported cow up and doing well. Gave six powders of sod. bicarb., gentian, ginger, and nux vom., one dram each, a powder to be given

three times a day.

"CASE XV.—November 13th, 11 a. m. Holstein cow, fat, and very rich milker; calved twenty-four hours; down and completely helpless; pulse imperceptible; temperature 1° F. below normal, Injected udder, and instructions as to care; nothing to be given by mouth. 8 p. m.—Cow up; symptoms much better; injected udder; same care. Left liq. am. acet., two-ounce doses, every five hours.

am. acet., two-ounce doses, every nive nours.

"14th, 9 a. m.—Cow up and doing well. Left powders same as Case VII. In three days owners reported bowels constipated. Gave mag. sulph., one pound; aloes barb., three ounces. The cowneds a complete recovery.

made a complete recovery. "The above is a correct report of all the cases of parturient apoplexy treated by us during 1899. Of the fifteen cases treated, thirteen cows are alive, and I am of the opinion that if the owners had not interfered the other two would have recovered. Case I did not give as large a flow of milk this season as usual. In Case VI. the hair all fell off of the tail. In Case VII. one quarter of the udder was hadly swollen for a few weeks, but came all right. You will notice that Case V. and all cases since

received very little medicine. They were our worst cases, and made the speediest recoveries. Cases previous to Case V. were not so severe, and were tardy in their recovery, due, I think, to pouring down too much medicine. In the future we will give no more medicine than the case actually requires, and then not until the patient is able to stand or well able to swallow. The greatest difficulty with us in severe cases is to keep up the heart's action, and have had best results from nux vomica and whiskey, given in doses and frequency according to the case.

[NOTE.—Dr. Tennent, on being interviewed on June 11th, informed us that he has treat d eleven cases since those reported in the above article. In none of these was medicine given by mouth until the cows proved their ability to swallow by voluntarily taking a drink of water, and most of them had so far recovered as to get onto their feet. Some of the cases were so bad that swallowing in the early stages of treatment was quite impossible. Every one of the eleven cases have recovered.—ED. F. A.]

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties 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. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Veterinary.

NO NAME, NO ANSWER. If Reader, Wellington Co., who wishes advice regarding an unthrifty horse ten years old, is or becomes a subscriber to the FARMER'S ADVOCATE, and sends us his name and address, we will endeavor to furnish him the best information at our command. We invariably adhere to the rule laid down at the head of our Questions and Answers department.

GLANDERS. SUBSCRIBER, Chickney, Assa :- "Can you supply me with any information on the following points: I have just had two horses shot for glanders. As soon as I noticed any discharge, I isolated them and sent for veterinary surgeon of the Mounted Police, and have burnt all surroundings where they were isolated. In the stalls where they were before I noticed any discharge, I first washed were before I noticed any discharge, I first washed everything with chloride of lime, then I mixed a box of Gillett's lye in two pails of water and scrubbed everything. The police veterinary advised whitewashing with 1½ gills of crude carbolic in a pail of water and made into whitewash with quicklime. This I have done.

"1. Will it now be safe to put other horses in the stalls?

"2. How long will the germs be contagious?
"3. What will prevent the other horses from developing the germs if they should have absorbed them, as they all drank from same water tub before I noticed any discharge?

"4. Is the test with mallein positive proof of the

"5. Where diseased horses have fed on prairie,

will prairie fire destroy all possibility of con-Your manner of cleansing and disinfecting your stable appears to have been sufficiently thorough

to insure destruction of all disease germs that may have been lurking therein; but, to make it perfect ly safe, it will be well to leave the stable or stalls unoccupied for at least two weeks after the work of disinfection has been performed, at the same time admitting plenty of fresh air.

2. The virus of glanders, after being separated from the animal, will retain its activity for various periods, according to the nature of the conditions to which it is subjected. A moist atmosphere and a temperature of 68° to 75° Fahr, will preserve the virulence of the germs for a long period of time.

The dried nasal discharge from a horse suffering from glanders has been known to convey the discharge from glanders has been known to convey the discharge from glanders has been known to convey the discharge from the first few days of the it had ease to a healthy horse sixty-five days after it had been separated from the infected animal. Sunlight or hot and dry atmosphere and good drainage are conditions which are very unfavorable to the longevity of the glanders bacillus.

3 If sufficient virus has entered the circulation to overcome the contagium-destroying properties of the blood, there is no known treatment, either external or internal, that will prevent the ultimate development of the disease. It is, however, of much importance to endeavor to maintain the healthy condition of your horses by proper feeding, cleaning and regular exercise in the open air. You should also strictly observe the hygienic measures necessary to keep your stable and its immediate surroundings in a sanitary state.

4. Mallein is not absolutely infallible as a test for glanders, but when properly applied it is gen-

5. Fire is a wonderful disinfector and purifier, erally reliable. and in the case you mention it would be most likely to destroy all disease germs with which it came in contact.

W. A. DUNBAR, V. S., Winnipeg.]

ENLARGEMENT ON CANNON BONE.

HORSEMAN:—" I have a colt two years old that got kicked on the cannon bone lest year. There is

got kicked on the cannon bone last year. There is still an enlargement on the spot where it was kicked, although thoroughly healed up. The skin is very thick on that part, and the bone seems to be a little larger than the other leg. Do you think anything can be done?"

Injuries such as kicks inflicted upon a bone that

is not protected by muscles sets up inflammation of the bone and its fibrous covering. An exudate, the result of the inflammation, is thrown out, and becomes organized; the periosteum (the bone covering) becomes thickened, and in many cases there is an increase of size in the bone itself, due to organization of ossific matter. After the inflammation subsides, the enlargement thus formed becomes quite visible and hard, yet not painful This lump is not reduceable to any great extent, but may be reduced slightly by absorption, which can be hastened by friction or irritation, as the application of blisters. If there be a thickening in the skin, as you intimate, it can be reduced by repeated blistering. The preparation used and details for blistering have been given so often in these columns, a repetition is unnecessar

J. H. REED. STERILE BOAR.

SUBSCRIBER, Elgin Co., Ont.:-"I have a boar, six years old, that has been a great stock hog all his life till about two months ago, when he failed to get any more pigs. Last year he went to fifty sows, this year so far about thirty. I have kept him, ever since I got him. in an outside yard. I fed mostly on corn this winter, as I had no roots for him. He will serve sows, but he will mount several times before he serves them. He is in good condition. Will he become useful again, or can I do anything

We have known boars to be useful as breeders till 10 or 11 years old. If anything will help your hog it will be a run on grass and moderate fe with ground oats or barley and shorts or bran mixed with a moderate quantity of milk or swill. Do not use him for a month, and give him a grass plot where he can have abundant exercise.]

ACTINOMYCOSIS. G. G., Wellington Co., Ont.:—"I have a two-year-old heifer. Last winter a lump grew on her jaw size of a hen's egg. Gave iodide of potassium till she run at the nose, also painted lump with iodine. Lump went away, but now lumps from the size of an egg to size of a bean have come on her hind leg on hock joint, hard but movable. Please

[There is little doubt that your heifer was affected with actinomycosis (lump jaw). In such cases, where the bone is not involved, the administration of potassum iodide in sufficient doses to cause its physiological symptoms (one of which you mention) will often effect a cure. It is impossible to state (without a personal examination) whether the lumps now present have any connection with the former trouble. While it is possible such may be the case, it is rarely seen. If not in the immediate vicinity of the joint, it would be well to carefully dissect them out and treat the wounds until healed with a 3-per-cent. solution of carbolic acid in water. If the joint be involved, the operation must ve very carefully performed. If you do not care to operate, they may be considerably reduced, or probably entirely removed, by the repeated application of iodine, or, better still, by the injection into their substance, with a hypodermic syringe, of a solution of iodine, say 1 dr. to 1 oz. alcohol. I think it would be wise to have her examined by a veterinarian. You have a good practitioner in your village.

CHRONIC COUGH, WITH A TENDENCY TO HEAVES.

J. H. REED.

A SUBSCRIBER, Stormont Co., Ont .: "Would you please give me a remedy for a horse that has a hacking cough. It coughs more frequently while travelling down hill or if it stands in the stable awhile. It is all right otherwise, is a good traveller while on level road; is eight years old; is not short in the wind."

[A cough presenting such symptoms as you describe is often a forerunner of heaves, especially if the horse be a heavy feeder, as is usually the case. Be very careful about the quality of his food. Feed well-saved timothy hay; avoid clover hay unless well saved. Feed only moderate quantities of hay; do not allow him all he will eat, and dampen it with lime water, which is made by slacking a lump of lime in a pail or other vessel, then adding water and stirring well with a stick. After the undissolved lime settles at the bottom, the clear liquid left is lime water. Dampen his grain with this also, and give every night, in damp food or boiled oats, one of the following powders: Take of pulverized opium, 3 ounces; pulverized liquorice-root, 3 ounces; pulverized digitalis, 12 drams; arsenious acid, 8 drams. Mix, and divide into twenty-four powders. This treatment will probably arrest the disease.

J. H. REED.

THRUSH IN HORSE'S FOOT.

I. C. B., Middlesex Co., Ont.:-"Can you give me a cure for a long standing case of thrush in a horse about ten years old?

Keep the horse's feet clean and dry, pare away dead particles of the frog, and apply calomel freely to the diseased parts twice a week.

Miscellaneous.

MARE KICKS OVER THE TONGUE.

SUBSCRIBER, York Co., Ont.: "Could you give me advice how to fix a mare to keep her from kick ing over the waggon tongue when hitched double. She is a very quiet beast in the stable.

[We leave this question for our ingenious and generous horsemen to answer. We will be pleased to receive and publish various tried methods of dealing with this and other vices of horses.

BLACK NOSES IN SHORTHORNS,

G. E. L., Newdale: "Kindly inform me through your columns what is your opinion of a black nose on a pedigree Shorthorn bull. Some say that a black nose is a sign that the animal is not pure ured Shorthorns? If not, from what herd is it likely to originate?"

[There is a very strong prejudice against black or smudged noses in Shorthorns, and yet they occur occasionally even among high bred cattle. Would not care to use a bull with a black nose on pure bred females, as the objection might re-occur too frequently in his get, detracting somewhat from their value as breeding cattle. There could be no reasonable objection to the use of such a bull on grade or common stock. This black nose which so persistently crops out from time to time has been attributed by some as a result of the "alloy" or outcross of Galloway blood introduced during the Colling's time (over 100 years ago) into one or two of the families of their herd; but this seems ex-tremely improbable. The following clipping is from Lewis F. Allen's History of American Cattle, published in 1887:

"It is supposed by many persons that a dark or black nose indicates impurity of blood. This is not always so. A black or even a dark nose is not desirable in a breeding Shorthorn, because they are decidedly unfashionable, and to a breeder of choice animals they are unsalable at almost any price. Yet many of the purely-bred Shorthorns (so admitted) of a century ago, and even less, had some black noses among them. With all modern breeders the dark noses have been sedulously bred out of their herds, their repugnance to them often going so far as to slaughtering them in calfhood. Custom has obtained so far as to rule a black-nosed Shorthorn out of competition with the drab, creamcolored or yellow noses as prize animals. colored or white nose is also objectionable, though not to the same extent, as indicative of a want of stamina in the animal, while a black or dark nose indicates hardihood and good constitution. ders, in his new book on Shorthorn cattle, says black or clouded noses, although not evidence of impure breeding, are avoided as much as possible by careful breeders. Such a minor point, however, as a clouded nose will not deter a man of good judg-ment from using an animal that is exceptionally desirable in vital particulars."]

BOYS AND THEIR PONIES,

Boys, Tripler Farm, C. B.:-"We three boys have two Sable Island ponies. We got these last summer. They were not very fat then, and they were troubled with insects a good deal. So we got them clipped last fall. We have been trying to fatten them all this winter. We gave them oats pretty freely; do you think that would hurt them? They had a touch of lampers a little while ago, but that was looked after, and they are all right now. We do not know their exact age, but think them about 4 or 5 years old. What would you advise in such a case?

[We presume the boys know what they want, but we would not advise being in a great hurry to get the ponies fat. So long as they are thrifty and eling well, there need be no anxiety about them. A fat horse is more liable to be sick than one in moderate flesh, and, as a rule, is more easily wearied, especially in warm weather. There is no better feed for either a pony or a large horse than oats with a little wheat bran, and good sweet hay, with an occasional boiled feed, and roots for the winter season. Now that the pasture season is here, grass can take the place of hay and roots, while the grain could well be reduced to one feed per day when the ponies are idle, to two or three feeds if they are given much driving. Two quarts of oats and one quart of bran should be considered a good meal for a pony. If the ponies again become lousy, they should be well washed with one or other of the sheep dips advertised in our columns. They should not be housed near poultry, unless special pre-cautions are taken to keep the fowls free from CEMENT FLOOR.

F. W. S., Grey Co., Ont :- "I have just got a stone wall built under a building for a horse stable. It is on a dry site, with a good fall and a drain of small stones under the wall. Will you please inform me through the FARMER'S ADVOCATE if a cement floor will stand by just putting in some gravel on the clay to level it up without small stones under the gravel? How thick should the cement be? Should the sand used be very coarse or not? Do you know anthing about the merits of the Owen

Sound cement?

[When preparing a foundation for a cement floor the clay should be moistened and well rammed and then covered with two inches or more of either coarse sand or gravel, or broken stones mixed with either of the above; any of these will make equally satisfactory foundations if well rammed. The coarse concrete should be about three inches thick, well rammed down. This should be covered with a smooth, stronger concrete from a quarter to one inch thick, according to the strength of floor required, See Farmer's Advocate, June 1st issue, page 323. Gravel or coarse, sharp sand are to be preferred to fine sand. When fine sand is used a greater proportion of cement is necessary in order to secure the same strength of cement. While we have not had personal experience with Owen Sound cement, we believe it to possess all the qualities of a satisfactory cement.

WHAT CROP FOR PASTURE ?-COW PROBABLY SUCKING HERSELF.

W. J. C., Simcoe Co., Ont.:-"1. I have a field of clover that I intend plowing under in June and sowing part in rape. Could you tell me what would be best to sow for cows and horses, and how much seed per acre? The ground is sandy loam, and in rather poor condition. What time should I sow, and how long till it would be fit for pasture?

2. I have a cow that is going dry in one quarter of bag. The teat is all right, but the milk comes down very slowly. When udder is full, the one quarter looks as if it had been milked. There is no ump nor any appearance of anything ailing it.

The best crop we know of, and the one we are using for August pasture, is Hungarian grass and millet, half of each, sown half a bushel of seed per acre. If sown when the ground is moist, so that it germinates quickly, and the following weeks are at all favorable for growth, the crop should be fit to pasture in from six to seven weeks.

2. The probabilities are the cow is sucking the quarter that comes in slack. It would be well to tie her for a couple of days, so that she cannot reach her udder with her mouth, and note the result. If she is taking her own milk, she should have a contrivance attached to her that will prevent a continuation of her act. A recently-recommended plan is to place a surcingle around her body and a strap on her neck, attaching the two by means of a stout piece of wood 3 feet long along her side.]

GRAIN TO COWS ON GRASS.

R. H. L., Middlesex Co., Ont .: "Would you kindly give me your opinion, through the columns of your paper, what is the best way to feed meal to milk cows on the grass, whether in form of mashes or dry, or is it profitable at all when cows are on good pasture?

Repeated tests of the utility of feeding grain to cows on pasture have led experimenters to the conclusion that there is no profit in feeding grain in any form while the pastures are good. In the first of a series of trials at Cornell Experiment Station, the meal-fed cows gave less milk, but an equal amount of fat with those getting no grain, on the same pasture. The next season the lot receiving grain and that without grain did equally well. The third trial was made with a herd of cows owned by a New York farmer. The cows had been rather poorly fed previous to the test. The cows were fed grass, millet, fodder corn, etc., in season, and half the herd received four quarts of mixed chop each per day, in addition. The chop-fed cows gave enough milk extra to pay for the grain they ate. Between feeding chop dry and in slop, there seems to be practically no difference in results obtained. The above information is taken from Prof. Henry's valuable work, "Feeds and Feeding."]

FORAGE CROP FOR CATTLE IN BRITISH COLUMBIA.

B. GREENE, Yale Dist., B. C.:-"Would you answer through your columns the following questions? 1. Is there any plant suitable for cattle that can be sown with red clover on irrigated sandy loam to give it stability? Clover grows so rank that half of it is left on ground. I have used timothy, but do not like it for cattle."

In the place of red clover, alsike may be sown, which would be less liable to waste by lodging. Along with it Western rye grass (Agropyrum tenerum) or Brome grass (Bromus inermis) should answer the desired purpose well. The sowing of these grasses should to a certain extent be considered an experiment, as they do not answer equally well under all conditions. It might be well to consult the Superintendent of the Experimental Farm at Agassiz, B. C., as to which are the best grasses for that Province.]

QUANTITY OF SKIM MILK FOR PIGS.

SUBSCRIBER, Peel Co., Ont .: - "Can you inform me what is considered the proper quantity of separated milk per day to feed to pigs at from six months of age in order to produce the best results in pork production. Is excessive consumption of milk in proportion to other foods undesirable, and what should the proportion of milk and mixed grains be in a balanced ration?

[For young pigs just weaned, from four to five pints of skim milk to one pound of wheat middlings will be found very satisfactory.

As the pigs grow larger, the quantity of skim milk may be reduced; and we have had excellent results from feeding about two pints of skim milk to every pound of meal. Of course a somewhat larger quantity of skim milk could be used if available, but I do not think it wise to exceed five pints of skim milk to a pound of meal.

O. A. C., Guelph.

APPLICATIONS FOR FLIES ON STOCK. A. P., Durham Co., Ont .: "Would you please send me a recipe to kill flies on cattle and horses? At the bottom of the "Stock" department of this issue appears a note from Prof. G. E. Day, dealing with treatment for flies on cows. For horses, that application is not practicable. We have found it well to have a bottle of sheep dip mixed up in the stable, and just before going out in the mornings and after dinner moisten the coats of the horses with the dip. A very light application of coal oil is also good.

SCOTCH AGRICULTURAL PAPERS SUBSCRIBER, Barnston, Que.—You would probably find what you desire in the Scottish Faymer, published at 93 Hope St., Glasgow (10 shillings a year), or the Aberdeen Free Press, Aberdeen, Scotland. Write to those addresses for sample copies.

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MARKETS.

Toronto Markets.

Conditions show great improvement in general trade. At our markets business was very brisk at firm or advanced prices, especially in the hog department. The run was large-1,114 cattle, 1,648 hogs, 284 sheep, and

Export Cattle.—The quality of export cattle was very good veral lots of very fine exporters being offered and sold

Choice lots of cattle were sold at \$5.00 to \$5.25 per cwt. The bulk sold at \$4.75 to \$4.90 per cwt.

bulk sold at \$4.75 to \$4.90 per cwt.

Mr. A. M. Buck purchased one load of export cattle, average 1,360 lbs. each, at \$5.25 per cwt. Messrs. Dunn bought five loads of export cattle, weighing 1,340 lbs. average, at \$5.20 per cwt. Mr. Wm. Levack bought 11 carloads of export cattle at prices ranging from \$4.60 to \$5.12\frac{1}{2}\$ per cwt., average 1,300 lbs. each. Mr. W. H. Dean bought four carloads of exporters, 1,200 to 1,960 lbs. average, at \$5.00 to \$5.15 per cwt.

Butchers' Cattle.—Choice picked loads of butchers' cattle, enal in quality to export, not so heavy, sold at \$4.30 to \$4.50

Butchers' Cattle,—Choice picked loads of butchers' cattle, equal in quality to export, not so heavy, sold at \$4.30 to \$4.50, average weights 1,000 to 1,100 lbs. This is about 20c. advance on the last few weeks. Trade was brisk and prices held firm. Good and medium cattle sold at from \$3.50 to \$4.50 per cwt.—cows, heifers and steers. Common butchers' cattle sold at \$3.00 to \$3.50, while poor and inferior were hard to sell at \$3.50 to \$3.50 per cwt.— \$3.75 per cwt.

Mr. Alex. Levack bought one carload of best butchers' cattle, 1,150 lbs. average, at \$4.40 to \$4.60 per cwt., the top price for the day. Mr. B. Passmore, Elmsdale, Ont., bought one load of mixed steers and heifers, 1,050 lbs. average, at \$4.25 per cwt. Bulls.—Heavy export bulls sold at \$4.35 per cwt. Light bulls sold at \$3.60 to \$3.70 per cwt. Mr. W. Levack bought one load of export bulls at from \$3.75 to \$4.35 per cwt. Mr. F. O'Boyle sold one bull, 1,300 lbs., at \$3.90 per cwt., re-sold at \$4

Feeders.—Only a fery few on offer. Steers weighing from 1,100 lbs. to 1,200 lbs. in good demand by farmers at \$4.25 to \$4.50 per cwt. Light feeders weighing 800 to 1,000 lbs. sold at \$3.80 to \$4 per cwt. Mr. W. H. Reid, Bowmanville, bought two loads of feeders at \$4.25 per cwt.

Stockers.—Yearling steers, 500 to 600 lbs. weight, in good demand; sold at \$3.25 to \$3.60 per cwt. Heifers, black, white and mixed colors, 500 lbs. average, sold at \$2.75 to \$3.25 per cwt. Mr. Wm. Murby shipped one car of feeders to London, Ont., paying \$4.25 per cwt.

Sheep.—Deliveries good, over 300 on offer. Prices steady, at \$3.50 to \$4.25, and \$3 to \$3.50 for bucks. Mr. Westley Dunn bought 200 sheep at \$4 per cwt., and 50 spring lambs at \$3.75 per head. Mr. S. H. Reynolds, Bowmanville, Ont., sold 25 sheep at \$4 per cwt., and three spring lambs at \$5.50 per cwt. Mr. A. McGrumman, Orillia, Ont., sold 18 sheep at \$4 per cwt., 10 spring lambs at \$3.50.

spring lambs at \$3.50.

Lambs. — Yearling lambs were steady, at \$4.50 to \$5.25; picked lots of ewes and wethers at \$5 to \$5.25 per cwt. Spring lambs in good demand, and wanted at \$2.50 to \$4 each.

Calves. — In good demand, only 30 on offer, at from \$2 to \$8 per head. Mr. W. Dunn purchased 20 at an average of \$7 per head.

Milk Coves. — In fair supply, at from \$25 to \$50 per head. Mr. P. Holland bought one cow at \$52, a very choice milker. Mr. L. Jones paid \$54 for a choice milk cow. This is the top price at this market for some time.

Hogs.—The price brings supplies to this market; trade very Hogs.—The price brings supplies to this market; trade very good; demand still active; prices firm and advancing. To-day the price is \$6.87\frac{1}{2}\$, with an advance of a York shilling next week, making the price \$7 per cwt. for choice singers; that is, a hog 160 lbs. to 200 lbs., not above and not below these weights—long lean singers, off cars, unfed or watered. There is only a slight advance in other sorts. Thick fats, \$6.37\frac{1}{2}\$; light fat, under 160 lbs., \$6.25; corn fed, \$6; sows, \$3.75; stags, \$2; unculled car lots, as they run, \$6.75 per cwt. From each load of hogs that arrive in this market there are always a few stores and thin hogs. These are not wanted, and are culled at \$5.50 per cwt. Mr. W. I. Crowe, Tara, Ont., sold 67 hogs, selects, at \$6.87\frac{1}{2}\$ per cwt.

| Following t | able shows | current and | comparativ | re prices for |
|---------------|------------|-------------|----------------|---------------|
| live stock: | | | | 4.200 |
| | Extreme | Two | 1899 | 1898 |
| | to-day. | weeks ago. | same date. | same date. |
| | Per cwt. | Per cwt. | Per cwt. | Per cwt. |
| Export cattle | \$5 121 | \$5 00 | \$ 5 00 | \$4 60 |
| Butchers' | | 4 35 | 4 65 | 4 30 |
| Bulls, | | 4 35 | 3 871 | 4 00 |
| Feeders | 4 50 | 4 60 | 4 60 | 4 121 |
| Stockers | 3 75 | 3 90 | 3 50 | 3 90 |
| Sheep | 4 25 | 4 25 | 3 75 | 3 25 |
| Lambs | | 5 50 | 4.50 | 4 00 |
| Hogs. | 7 00 | 6 371 | 5 00 | 5 20 |
| 11080 | Per head. | Per head. | Per head. | Per head. |
| Milk cows | | 50 00 | 45 00 | 45 00 |

..... 10 00 10 00 8 00 The export trade in cattle for the week ending June 7th, 1900, is as follows: cattle, 2,515; sheep, 767; horses, 400, for the

British army.

Dressed Hogs.—There were 150 hogs offered at \$7.75 to \$8 per cwt. The following will give the comparative price of dressed hogs for the years:—1882, \$8.07 per cwt.; 1883, \$7.03; 1884, \$5.90; 1885, \$5.90; 1892, \$7.80; 1893, \$7.80; 1896, \$4.80; 1897,

\$6; 1893, \$6.

Wheat firmer; 650 bushels on offer, and sold as follows:

Wheat sold at 67c. to 69c. per bushel; 250 bushels

of red sold at 67c. to 69c. per bushel; 200 bushels of goose sold at 7lc, per bushel.

Oc. per bushel.

Barley quoted at 40c. One load sold at 41½c. per bushel.

Oats.—200 bushels sold at 31c. to 32c. per bushel.

Peas scarce and wanted, at 59c. to 60c. per bushel.

Bran.—City mills quote bran at \$15.50, and shorts at \$16.50.

Canadian, 43c. per bushel; American quoted at 44c.

on track.

Hides.—The market is not quite so firm; calfskins and wool are quoted at 1c, per lb. lower than two weeks ago. No. 1 green, per lb., 8c, to 9c; No. 1 green steers, 8½c, to 9½c.; No. 2 green steers, 7½c, to 8½c.; No. 1 cured, 8c, to 8½c.; calfskins, 7c, to 9c; sheepskins, 80c, to \$1.20; lambskins, 20c.; wool, super, 17c, to 18c.; wool, super extra, 18c, to 2lc.

Strucberries.—Mr. H. M. Bowslaugh, of St. Catharines, Ont., was the first arrival on this market with Canadian strawberries, purchased by Wm. White & Co., Front street. The fruit was in fine condition, and brought 15c, per box. Eight cars of U.S. A. berries have been delivered in Toronto.

Hay. The market firm, at \$10 to \$11.50, about 30 loads.

Straw. - Very little on offer, in sheaf, at \$3.50 per ton.

Butter. - There is a good steady demand for best dairy butter for local trade. Dairy tubs, 13c. to 15c. for choice; small dairy pound prints, 15c. to 16c. per lb.; creamery pounds, at from 18c. to 19c, per lb.

Cheese. - On this market 10c. per lb.

June 11, 1900.

Lambton Co., Ont.

Meadows are looking well, the late showers proving most beneficial. Spring crops are exceptionally good. Winter wheat presents the poorest appearance it has done for years. The weather has been very unfavorable for rapid growth, and the fly is doing great damage. One farmer who put in 25 acres will reap little more than bread and seed, having plowed under a portion, and turned his stock into one large field. Redroot is getting very prevalent here. A number have plowed down wheat and meadows this spring to destroy it. A large acreage of beans has been planted

Dr. Saunders' Trip to the West.

The Director of the Experimental Farms has returned from the West, where he has been inspecting the branch Experimental Farms at Brandon, Man.; Indian Head, N.-W. T.; and

Agassiz, B. C.

On arrival at Agassiz, Dr. Saunde's found the farm in very good condition. The grain crops were well advanced, wheat was 6 to 8 inches high, and barley and oats, which had been sown later, from 3 to 4 inches. Corn and roots were also well up and making thrifty growth. The clover was nearly ready to be cut for hay. The fruit crop was progressing satisfactorily. The early cherries were ripening, and the later ones well advanced. The cherry crop promises to be a good one. Apples and pears had set fairly well and will probably turn out an average crop. Some varieties of plums were heavily laden with fruit, while others were bearing very sparingly. On the whole, it is believed that the plum crop in the coast climate of British Columbia will be about an average one, and far in British Columbia will be about an average one, and far in advance of that of last year. During the time of the Director's visit to Agassiz, the experimental orchards were gone carefully over, and were found to include in all more than 2,600 differover, and were found to include in an inore than 2,000 different sorts of large fruits. Arrangements are being made to shortly publish the list of these fruits, with the notes that have been taken on their quality, which will, no doubt, be of great value to the fruit-growers on the Pacific Coast. On May 24th, during the time of Dr. Saunders' visit, there was a large excurvalue to the Fruit-growers on the Pacific Coast. On May 24th, during the time of Dr. Saunders' visit, there was a large excursion from Vancouver to the Agassiz Farm, and he thus had the opportunity of meeting many of the residents of the Coast, who expressed their high appreciation of the useful work being done at this Experimental Farm. The ornamental grounds on the farm were in gay attire. The Rhododendrons were in gorgeous bloom, the Laburnums thickly hung with their golden flower clusters, and the Magnolias were very handsome. The Weigelias, Syringas and Deutzias were very handsome. The Weigelias, Syringas and Deutzias were large in growth and covered with bloom, while the Hollies, Yews, the different species of Cypress and Spruce, and the highly-colored and gracefully-cut Japanese maples, all added to the beauty of the scene.

On the return journey, the branch Experimental Farm at Indian Head, Assa., was visited. The grain crops here were found well advanced, but fields in exposed places had suffered considerably from wind storms. The drought also which prevailed all through the Northwest Territories and Manitobahad lessened the growth usually so rapid at this season. Under the influence of genial showers which fell about that time, the grain was fast recovering from the injury sustained, and no permanent damage to the crop was anticipated. The

Under the influence of genial showers which fell about that time, the grain was fast recovering from the injury sustained, and no permanent damage to the crop was anticipated. The value of the forest shelter belts on this farm for protecting the grain from injury was very marked. It was found in this instance that a belt of trees about 15 feet in height protected the crop for about 750 feet; that is, about 50 feet for each foot in height. Trees and shrubs wintered well, and have made a vigorous growth this spring. At the Experimental Farm at Brandon, Man., the crops looked well. While the drought was rather severe and strong winds had prevailed to some extent, still, very little injury had resulted. The wheat was from 4 to 5 inches high; barley and oats 3 to 4 inches—all of good color and vigorous growth. The forest trees had made excellent progress, and many of the ornamental shrubs were in bloom. Masses of tulips and other perennial flowers made the grounds around the Saperintendent's house very attractive

The crops generally throughout Manitoba and the Northwest Territories are very promising.

Central Experimental Farm, Ottawa, June 9th, 1900.

Special Prizes at Toronto Fair.

The Toronto Industrial Exhibition Board has unanimously accepted the offer from the Massey-Harris Company, offering \$500 in prizes for five years, as follows:

Dairy cattle, fat cattle, sheep, each best judging by farmers or farmers' sons under 25 years of age, judging to be done by score card and submitted to the official judges, competitors to give any explanations required; \$50 divided into three prizes for each class.

for each class.

The best collection of injurious Canadian weeds, the work of the exhibitor, open to children under 15 years of age, to be certified to by teacher or some other prominent person in the neighborhood of the child's home; the method of mounting, labelling, and general appearance of the collection to be taken into consideration in awarding the prizes.

The best collection of insects injurious to Canadian agricultation when the volume men and women. It years or

The best collection of insects injurious to Canadian agriculture or horticulture, open to young men and women, 21 years or younger; certificate to be furnished if required: method of mounting, labelling, and general appearance of collection to be taken into consideration in awarding prizes.

Photography: open to all amateurs and professionals; the best and most artistic agricultural landscapes, showing one or more Massey-Harris machines at work in the picture.

Poultry, eggs, and birds, open to exhibits by farmers' wives and daughters, and wives and daughters of exhibitors.

Horses; bareback riding, on horses that have never won public money in a race, owned and ridden by farmers or farmers' sons, engaged exclusively in farming not less than 50 acres; to be shown in a walk, trot and gallop; \$50 divided.

Scout horses, to be ridden by members of the Canadian militia, rough riders, Mounted Police, or farmers' sons; rider to dismount and fire rifle over horse's back, remount and cause horse to recline, fire rifle over horse's back and remount; \$50 divided into three.

divided into three.

Architecture, for the best set of plans for farm barn, suitable for farm of 100 acres; building to cost \$800 to \$1,000; open to farmers, their wives, sons and daughters; \$50 divided into

three.

Architecture, for the best set of plans for farmhouse, suitable for farm of 100 acres; building to cost \$2,000; open to farmers, their wives, sons and daughters; \$50 divided into three.

Grain, for the best collection, consisting of fall wheat (red or white), spring wheat, barley (6-rowed), barley (2-rowed), oats (black or white), and small field peas, all the growth of the exhibitor; two bushels of each; distinct from other entries.

Western Ontario Crop Prospects.

Western Ontario Crop Prospects.

The frequent showers and warm weather of the past fortnight have had a wonderful effect on vegetation throughout most districts in Western Ontario, writes a correspondent who has made a short tour of the country. Farmers were just beginning to despair over the long-continued early drought when a moist, growthy season set in, since which the growth has been really phenomenal. With few exceptions, the meadows already promise a good yield, clover being well in bloom, and timothy is shooting up rapidly. Pastures are growing luxuriantly, which has a stimulating effect on the milk flow, and the nights being cool, and good water plentiful, factories have as yet had little trouble with tainted or sour milk. All the spring grains have made a grand start, and fall wheat has made greater improvement than was ever expected. Taken all round, this is the only crop that promises to be below average. Large numbers of fields to the west will not, states our correspondent, yield half a crop, while others will probably come up to what would give the grower three-quarters of a satisfactory return, providing the price of wheat were to reach a decent figure. As it has been, it would pay better fed to hogs. Corn, of which there is a large area, has germinated well, and the outlook for roots, potatoes and other garden truck is most promising. There is a great show for fruits, small and large, with the exception of plums, with which it is evidently an off year. Weeds are naturally growing apace, and insects of all kinds are unusually voracious.

Shipping Dressed Beef to Chicago.

Shipping Dressed Beef to Chicago.

A new experiment is being tried at the Union Stock Yards, Chicago. The International Packing Co., which owns and operates a plant in Sioux City, Ia., in addition to the one it has in Chicago, recently shipped a big lot of dressed beef and mutton from their Iowa house to Chicago, and the first day on sale 200 sides of beef and 200 sheep were disposed of at a profit sufficiently large to induce continued shipments. Talk about "shipping coals to Newcastle"—what is shipping dressed beef to Chicago?

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

| ronowing table sne | ows current a | na compar | wine ma | STOCK |
|--------------------|----------------|-----------|-----------|--------|
| prices: | | T | op Prices | _ |
| • | Extreme | Two wee | | |
| Beef cattle. | prices now. | ago. | 1899 | 1898 |
| 1500 lbs. up | \$5 10 to 5 65 | \$5 55 | \$5 60 | \$5 15 |
| 1350 to 1500 lbs | | 5 50 | 5 60 | 5 20 |
| 1200 to 1350 lbs | 4 75 to 5 60 | 5 60 | 5 50 | 5 00 |
| 1050 to 1200 lbs | 4 50 to 5 60 | 5 40 | 5 35 | 4 95 |
| 900 to 1050 lbs | | 5 30 | 5 20 | 4 90 |
| Fed Westerns | | 5 45 | 5 55 | 4 90 |
| Stillers | | 5 25 | 5 10 | 4 75 |
| Hogs. | | | | |
| Mixed | 4 90 to 5 20 | 5 35 | 3 92 | 4 32 |
| Heavy | 4 85 to 5 20 | 5 35 | 3 95 | 4 37 |
| Light | 4 90 to 5 171 | 5 30 | 3 95 | 4 25 |
| Pigs | 4 00 to 5 10 | 5.10 | 3 80 | 4 00 |
| Sheep. | | 34.5 | | ø |
| Natives | 3 50 to 5 50 | 5 50 | 5 25 | 5 00 |
| Western | 4 75 to 5 10 | 5 35 | 5 10 | 4 90 |
| Yearlings | 5 50 to 6 00 | 6 00 | 5 25 | 5 50 |
| Lambs | 4 50 to 6 75 | 6 50 | 6 65 | 6 35 |
| Colorado lambs | 6 75 to 7 40 | 7 55 | 6 65 | •••• |
| Spring lambs | 4 75 to 8 00 | 8 50 | 7 50 | 6 60 |

whole, were never so prosperous.

Since warm weather has come there has been a much weaker demand for ewes, which have declined 40c. to 50c. this

week.
The season for wooled Colorado lambs is about at an end.
Their place is being taken by spring lambs from Kentucky,
which are selling at \$7 to \$7.50.

which are selling at \$7 to \$7.50.

Hog prices are now at a low point, but dealers expect values to go higher, as there is a strong demand for provisions, which have lately advanced

"Prices of live hogs are getting nearer those of product, and will get still nearer," says a packer. "The cash trade in product is light." Other packers assert that they are having a good demand for product from the south.

Many dealers are advising feeders to hold their cattle for awhile, and not rush them in on the strength of the recent advance in prices. The scarcity of Texas cattle and the demand for good to choice \$50 to 1,050 lb. native feeders has forced the prices of light and handy weight beef cattle up so that the spread between 1,000 to 1,100 lb. and 1,400 to 1,600 lb. beef cattle is narrower than usual.

A commission man who lately returned from the cattle

is narrower than usual.

A commission man who lately returned from the cattle grazing country of the Indian Territory says he expects a few cattle from the Territory to come to market during June, and for a general movement to set in early in July. He also expects the Territory to send in the usual number of cattle this year, for the reason that many were held over and wintered there

Foot and Mouth Disease in Argentine.

The Review of the River Platte of April 21st, in reference to the outbreak of foot-and-mouth disease in the Argentine Republic, says: "The passage of another week does not find very much definite news to record in regard to the epidemic which promises to do so immense an injury to the agrarian interests of the Republic. The disease, however, appears to be getting steadily a wider range, and it would be but little matter for surprise were it to spread over the whole of the country, although it is sincerely to be hoped that it may be possible to confine its area. The mildness of the nature of the disease, however, remains still noticeable, and while in foot and in mouth practically all the signs of the disease known by that name are present, it is remarkable that there are few, if any, cases recorded in which symptoms have made their appearance on the udders. It seems hard to believe that a disease which only made its appearance in January should have extended in so short a time over so wide an area, and it seems more probable that it has been lurking in some parts a good while longer, and while, if observed, some measures would doubtless be taken to cure the disease, there are too many estancias where the appearance of the disease would not cause any alarm in the minds of either proprietor or major-domo." Regarding the scarcity of milk and the increase in the price of butter which have occurred, our contemporary anticipates that more attention will in future be paid to dairying, and that an attempt will be made in the direction of producing a good "dual purpose" cow.

Guelph Cattle Fair.

The recent monthly June cattle fair at Guelph, Ont., was one of the largest held there in recent years, the grounds being taxed to their utmost capacity. Some twenty carloads or over were delivered. They were purchased principally as follows: Strachan, 3 loads; F. Barber, 1; White, 6; Murphy, Toronto, 2; W. Hamilton, 2; O'Neil, Elmira, 3; W. Green, Kingston, 1; McGraw, St. Johns, and Hurley, 1; and probably one or two more. In addition to the foregoing, Barber & Simpson shipped a couple of double-deckers of pigs. The price of the exporters ran from 4½c. to 5c.; butchers' cattle, about 4c. Live pigs brought from 6½c. to 6½c. Milch cows sold from \$30 to \$45. It is estimated that close on to \$25,000 changed hands for cattle, and close on to \$4,000 for pigs. close on to \$4,000 for pigs.

A Great Market.

A Great Market.

Even those who are engaged in shipping to the Union Stock Yards, Chicago, cannot failed to be impressed with the tremendous vitality of the trade there and the gigantic outlet always open. "Too great to be glutted," is a terse comment recently made, which is well backed up by the following official statement: "Monday, May 14th, furnished a good demonstration of this fact when 25,791 cattle, 28,691 hogs, and 26,403 sheep, or a total of over 80,000 animals, arrived in one day, yet prices remain practically almost unchanged. No other live stock market in the world could have withstood such an enormous run in proportion without a disastrous break in prices. Not only were prices not materially changed on that day, but the markets of the following two days were strong and active, showing that Monday's heavy run produced no unfavorable effect on the week's market values.—Drovers' Journal.

The Future of Cattle.

The future of Cattle.

The improvement in demand for cattle is due to two causes—an increasing population, on the one hand, of beef eaters, and a decreasing meat supply of cattle, hogs and sheep, on the other. There are 20,000,000 more beef-eaters in the United States to-day than there were twelve years ago, and as these days are days of prosperity, the per capita of consumption is rapidly increasing. With this indisputable fact staring us in the face, we find the number of beef cattle in the country is smaller by 11,000,000 than it was twelve years ago. Population has increased 30 per cent.; cattle are being marketed at least one year younger than formerly, which in itself cuts down the supply considerably.—From an address by Col. F. M. Woods at the Kansas City Hereford sale.

Australian paper: "Chemical extraction and the application of steam power to alluvial mining constitute two virtual discoveries which are destined to go on from year to year adding to the gold yield of Australasia for some considerable time to come. There is good reason for the hope that the Northern Territory will benefit very largely by the operations of those capitalists who have undertaken to apply the steam dredger to the work of extracting profits from ground hitherto considered too poor for alluvial mining.

"The amount of gold won in South Australia, including the Northern Territory, during the year 1898 was 31,961 ozs. For the past year the exact figures are not yet to hand, but it is regarded as certain that they will show a decrease amounting to very nearly, if not quite, two thousand ounces equal to a value of close upon eight thousand pounds. This unfortunate result is undoubtedly due almost entirely to the suspense and uncertainty caused by the purely speculative concessions granted by the Government for the exploitation of immense areas of land in the territory supposed to contain gold. The privileges granted were hawked about in London (England), and large operations in mere scrip-values were conducted from hand to hand. Scrip-vaines were conducted from hand to hand. Thus the old story was repeated of 'mining on 'Change' seriously retarding legitimate mining on the gold fields. More recently, however, not only the gold fields. More recently, however, not only have arrangements been entered into for the working of alluvial deposits in the extreme north of the Territory, but the returns from the various quartzmining properties at Arltunga, in the extreme south, have been so encouraging and consistent as to give substantial ground for the belief that a large

and permanent industry will be built up."

It is also interesting to read that "There was a time, indecd—namely, in the year 1853—when Victoria alone yielded 3,150,021 ozs., or not far from double the rate at which Western Australia is now producing the precious metal; but that was at a date when the other parts of Australasia were adding but very little to the total yield. Roughly speaking, the addition to the wealth of Australasia owing to the augmented productiveness of its gold mines during 1899 may be set down as three millions

Queensland has long since passed Victoria as a gold producer, and last year the yield of the northern colony was 947,227 ozs.'

There are some towns, at one time prosperous in gold and coal mines, but which are now but sadly reminiscent little places — Newcastle, Bendigo, Ballarat, and Geelong. Bendigo and Ballarat retain some traces of their former wealth, in their beautiful public gardene and edifice. The main beautiful public gardens and edifices. The n street of Ballarat is enormously wide, the finest, it is said, in the Colonies. To quote from an account: "Australian towns have not generally any history. Ballarat is an exception. It was there that the miners, headed by Peter Lalor, sustained a bloody siege against the English troops in 1854. They were beaten, but their rights were acknowledged, and their defeat turned into a victory. Peter Lalor, wounded in the shoulder, took refuge in the Bush. A price was put on his head, but he managed to escape pursuit, and, after the general amnesty, he became successively Member of Parliament, Minister, and President of the Legislative Assembly of Victoria " In critic of this life of this life. Victoria." In spite of this bit of history, Ballarat is very sleepy. Bendigo, they say, is more lively, but not so pretty. Geelong slumbers heavily, but at one time, it seems, they dreamed of making it the capital of Australia, but that honor slipped onto Melbourne.

Now perhaps we've given enough about mining and mining towns out here, but, somehow, we in Canada do not seem to hear so very much about Australia. It is easy enough to keep in touch with the Coast or with the States or Europe, but not so with places so very far distant. Much accruing from the immense distance of Australia from all these them. these other places is noticeable with Australians, many of whom concern themselves very little with news in the Old World. Max O'Rell, in his latest book, "John Bull & Co.," recounts as follows: "I was talking one day to an Englishman who had been established in the Colonics nearly fifty years. been established in the Colonies nearly fifty years. We talked about Europe, and I had occasion to mention Bismarck and a few other well-known names. I verily believe he had never heard of any of them before. of them before. Presently I said to him, 'Perhaps you do not take much interest in the things that

I shall soon have been fifty years in this country, and now I can do without Every 2.

and now I can do without Europe altogether. Yes, to our minds, all this is due to distance. How often does one come across people in America

cried, tragically, "as he's strapped his own traps and carried down his own portmanteau, and he off to the war! I'd have lost a whole month's wage sooner than this 'ere should have happened. Supposing he's killed, and I've got to remember that he waited on hisself the last morning!" He waited happened as the homeometric than the waited on hisself the last morning!" He "Ain't he cheerful?" said Mary, the housemaid.
don't look as if he meant to be killed."

don't look as if he meant to be killed."

"Oh! they none of 'em mean to be killed, but that don't make bullets blank cartridges," Perkins answered, grimly.

In the meantime; mother had dressed. She had borne up bravely throughout. Once, though, her lips had trembled; that was when the sound of Bob's gay whistling had reached that was when the sound of Bob's gay whistling had reached her ears. But even then, loving pride had flashed into her eyes and choked down sorrow. Her boy was brave – brave and true; and duty, she knew full well, would find him a hero.

She wondered if father, who was in the dressing-room.

and duty, she knew full well, would find him a hero.

She wondered if father, who was in the dressing-room, could hear the sound. She would like to have called to him, only she was just a little hurt at his apparent unconcern at his son's departure. But after all, she thought, he was only a son's departure. But after all, she thought, he was only a man; he could not know a mother's heart; his breast had not man; he could not know a mother's heart; his breast had not cried with joy when the little feet had taken their first not cried with joy when the little feet had taken their first not cried with joy when the little feet had taken their first not cried with joy when the little feet had taken their first not cried with joy when the little feet had taken their first not cried with joy when the little feet had taken their first not eried with joy when the little feet had taken their first not eried with joy when had felt of her son! He was such that day, and how proud she had felt of her son! He was such had looked up at her with round eyes of wonder; then, when her meaning came to him, he had not hesitated a moment, he had thrown back his little head, and, with a scream of delight, walked bravely forward right into her loving, waiting arms. And now—now—. She brushed aside her tears, for she heard father coming.

father coming.

Father entered the room quickly, but paused on the thresFather entered the room quickly, but paused on the threshold. To tell the truth, he had thought mother downstairs.
He had been trying to remember that day when Bob had
ridden the new pony for the first time so pluckily, whether the
lad had been breeched or not. He knew the picture was on
mother's dressing-table, and he had come in to look at it, and
there stood mother with the photograph in her hand.

"Humph!" exclaimed father, "so you have not gone
down?" and his voice was not conciliatory, for he felt that
everyone that morning, himself included, was wearing his
heart on his sleeve, and a sense of lost dignity was irritating
him.

heart on his sleeve, and a sense of lost dignity was irritating him.

Mother's heart swelled at the tone; she put down the photograph and looked up at father with a look in which reproach and sorrow mingled, and then suddenly she turned aside, and her hands busied themselves among the brushes and trays her hands busied themselves among the brushes and trays on the dressing table, for her quick eye had detected that on the dressing table, for her quick eye had detected that To think of it! He, the soul of precision, to thus betray him self. But there his abstraction stood confessed. And oh, how mother loved him for it! He had been such a stoic, too. Well, mother loved him for it! He had been such a stoic, too. Well, there was no accounting for man's ways, but, thank God, he had put on odd boots that morning. She no longer felt lonely in her grief. He cared, too; his heart was aching also for their son's departure. Oh, those blessed odd boots!

But she knew his nature, and stood for a moment wondering how best to tell him of his mistake without annoying him. And presently mother, on her way downstairs, tapped at the dressing-room outer door. "One of your lace boots," she said. "Then she waited until she heard father swearing softly to himself. Then she knew matters would right themselves, and went downstairs.

At breakfast somehow nobody had much to say. Bob

stairs.

At breakfast somehow nobody had much to say. Bob wanted to talk, but felt that his one topic—his luck at being sent to the front—would not be exactly congenial to his listeners. So he refrained, and ate a hearty breakfast.

He would carry the memory of his last meal away with him to the far-off land. The tender face of mother, smiling bravely from behind the bubbling, steaming urn; the daintily spread table; the pleasant, luxurious room, with its handsome pictures; the broad bow window, from which he could see the dear old garden where he had played as a child; the loving eyes of Nell beaming upon his across the table. Yes, home was home, although he was the luckiest subaltern in the service.

service.

By and by the trap was at the door, and the servants gathered in the hall to wish him good luck and godspeed. Bob shook hands with them all and thanked them, and then he stood with mother in the porch—alone. He could not see her face distinctly for the mist across his eyes; and the next moment he and father were walking quickly down the drive, along which the dogcart was going slowly forward to await them at the gates beyond. Father remarked that the new gamekeeper was giving satisfaction, and that there was every prospect of the covers yielding better sport the next autumn. "We shall have you home again before then, my boy," he said.

said. "Rather, sir!" answered Bob; "we shall not take long to

settle this little affair."

At the lodge, the gamekeeper's four boys were standing in At the lodge, the gamekeeper's four boys were standing in a row. They had three-cornered paper hats on their heads, and wooden swords in their hands, and they greeted Bob with sundry salutes and hurrahs. And Bob laughed, and gave them a penny each. "You must keep up your drilling." he said. "We shall be wanting new recruits in the regiment by and by." And then the gate was opened, and Bob climbed to the back seat of the cart. Far away at the house something fluttered white from a window, and Bob took out his hand-kerchief and signalled back again. Then the boys cheered afresh, and the trap turned into the lane, and home was already a thing of the past.

a thing of the past.

As they drove through the village there was not a doorway
As they drove through the village there was not a doorway
that had not someone standing on the threshold to bid him

Tis the young squire off to the war," they cried one to the

"Tis the young squire off to the war," they cried one to the other, and the men's eyes flashed and their voices rose; but the women's eyes filled with tears as they saw him drive past. "God keep him," they said, "and comfort his mother's heart!" For they knew that the men gave willingly their lives for their country, but that the gift of the women was something dearer than life.

And ell the while Rob's heart was signing to birm to all.

country, but that the gift of the women was something dealer than life.

And all the while Bob's heart was singing to him: he did not know that the song had come down to him from the longago time when the Sea Kings had gone forth with their battle songs to be the terror and conquerors of distant lands. He did not know; but so it was, and 'twas a goodly heritage, of which Bob in his joy and impatience recked little.

So the station was reached and the last good-by spoken; and father grasped Bob's hand. "You will—do your duty, father said; "I am sure of it."

And Bob's face flushed. "Thank you, sir," he answered, in a husky voice; "and—my love—to mother."—Clifford Mills, in the Pall Mall Magazine.

Farm Lost, Strayed or Stolen.

The Bangkok Times announces that a large floating island on the Mekong or Cambodia River, in Siam, recently slipped its moorings, and has not been seen or heard of since. There were a number of trees three feet in diameter on the inland, and the and was under cultivation. The owner has been hunting diligently for his property, but has not been able to hear any tidings of it. It undoubtedly went down the river with a freshet and has either stranded or gone to pieces.

We beg to acknowledge the receipt of a letter from "A Farmer's Wife," relating to a recent article, "Her Money Makers."—Editor Home



Arbitrary English Language.

Arbitrary English Language.

We'll begin with box, and plural is boxes, But the plural of ox should be oxen, not oxes. The one fowl is a goose, but two are called geese. Yet the plural of mouse should never be meese. You may find a lone mouse or a whole nest of mice, But the plural of house is houses, not hice. But the plural of house is houses, not hice. If the plural of man is always called men, Why shouldn't the plural of pan be called pen? The cow in the plural may be cows or kine, But bow, if repeated, is never called bine. And the plural of vow is vows, never vine. If I speak of a foot and you show me your feet, If one is a tooth, and a whole set are teeth, Why shouldn't the plural of both be called beet? If the singular's this and the plural is these. Should the plural of kiss ever be nicknamed keese? Then one would be that and three would be those; Yet hat in the plural would never be hose. And the plural of cat is cats, not cose. We speak of a brother, and also of brethren, But, though we say mother, we never say methren. But, imagine the feminine, she, shis, and shim! So the English, I think, you all will agree, Is the greatest language you ever did see.

— The Comme inguage you ever did see. __The Commonwealth.

Ordered to Africa.

All the doors in the corridor were still closed—all except mother's. She had left hers ajar through the night, in case Bob, waking, had called her name. But Bob had not called; he had slept like a top.

Presently the gray dawn grew pink, and little shafts of light crept through the Venetian blinds, picking out the pictures on the walls, the mirror of the wardrobe, and the gallant figure of Bob himself on the mantelpiece, photographed in full uniform.

Mother's vigil was ended. She rose softly, slipped on her ssing gown and slippers, and stole along the corridor to

Bob's room.

Boblay, six foot of British manhood, yellow-haired, straight-limbed, deep-chested, sound asleep.

The few dreams that had visited him had been sweet to the heart of a soldier. Not a shadow of fear had disturbed his heart of a had been assisting in killing the enemy by shrap-slumbers. He had been assisting in killing the enemy by shrap-nel, rifle and bayonet, in thousands, and now they lay around him like corn after the sickle, and Bob smiled and awoke, and him like corn after the sickle, and Bob smiled and awoke, and saw mother standing looking down upon him. It was no unusual sight to see her there; yet, to-day something stirred in his breast, and Bob put up his arms and drew her head down to his breast.

"My baby-my boy!" mother murmured. "Oh, my darl-Bob bore it with admirable grace, but he did not like it-not a little bit; and as soon as he could he wriggled himself free and asked the time.

free and asked the time.

There was time and to spare, and mother said, if he did not mind, she would like to read one of the morning Psalms to him; it would comfort her, she said. And Bob consented, like him; it would comfort her, she said. And Bob consented, like him; it would comfort her, she said. And Bob consented, like the gentleman he was, and lay still while she read, thinking what pretty hair she had—it fell in a long plait right below her waist. Then she kissed him again, and went; and when he was quite sure he could count on isolation, Bob got up and wandered among the litter of uniform cases and portmanteaus that lay about the floor. Then he took up his Glengarry, and putting it on, regarded his reflection in the mirror with computing it on, regarded his reflection in the mirror with compliancency. And his pride must be excused, for he was a newly-fledged subaltern of twenty years, recalled from leave to rejoin his battalion, which sailed on the morrow for the seat of war. Having adjusted the cap at every conceivable angle, he

Having adjusted the cap at every conceivable angle, he replaced it and continued his toilet. His cheeks were perfectly innocent of beard, and twenty minutes saw him fully attired, immaculate in a brand-new suit, and the stiffest and highest of shiny white collars.

shiny white collars.

Just at this moment a knock came at the door, and his sister, his junior by three years, entered the room. It was easy to see she had been weeping, but Bob expected as much, and in his heart did not resent it. He put his arm round her waist and bised her.

"Nearly time to be off," he cried, with almost brutal cheer-ness, and turned to strap his portmanteau, whistling a

fulness, and turned to strap his portmanteau, whistling a martial ditty.

Nell sat down on the edge of the bed and surveyed the array of baggage with mixed feelings. She was very proud of Bob. He was a dear hero; but if only the war were over and he back again, crowned with glory! Other girls' brothers had gone, and—well, she would not let herself think. She wished she had been kinder to Bob in the days gone by. Now the little she had been kinder to Bob in the days gone by. Now the little unthought-of omissions would be ghosts to haunt her conscience till he was back again. She would like to have told Bob she was sorry, but she knew he would laugh at her for a little goose; and, besides, it would look as if she felt this was indeed good-by; so she choked back the lump in her throat and sat with brave eyes stoically watching Bob, who stood in the window examining his revolver.

But, strive as she would, she could not check the thoughts that the sight brought to her minds. Bob with a revolver in his hand—yes, but far away in the midst of the dun and smoke of battle, surrounded by the foe; dauntless, wounded, bloody—dying—dying! With a little cry she rose to her feet.

Bob, who had been taking careful aim at the glass globe, turned at the sound. "Halloo!" he exclaimed, "what's up, Nell! You look as if you had seen a ghost. Then his eyes followed her gaze. "Little coward," he cried, teasingly. "I believe you got funky at the sight of this revolver."

Nell stopped short on her way to the door, then she gave a queer little laugh. "Well, perhaps I did," she said, and went quickly from the room.

Bob went back and finished his packing; then he caught

queer little laugh. "Well, perhaps I did," she said, and went quickly from the room.

Bob went back and finished his packing; then he caught up his portmanteau and helmet case and went downstairs.

In the hall, Perkins, the man-servant, met him, and hurried forward with a scared face. "Oh, sir," he cried, reproachfully. "you shouldn't, really, sir! I wouldn't have had it happen for worlds, sir," he said, pathetically, as he took the case and portmanteau from Bob's hands.

"Oh, it is all right, Perkins," Bob answered, with splendid condescension; whereupon one of the housemaids, who was a witness of the scene, hurried off to the kitchen below.

"He's down," she exclaimed, breathlessly, "a-carrying of his own portmanteau and looking as handsome and cheerful for all the world as if he was a-going to be married, instead of off to the war."

the war." Poor dear!" said cook, as she turned the chops; "poor ocent dear! Perkins hurried down at this moment. "To think," he up constant class of peol but world t All who that never

JUNE 15, 1900

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even, who have never for years communicated with their homes in England. Formerly, of course, there was expensive postage and slow transit—all so different now—but out here in Australia nothing different now—but out nere in Australia nothing can make the journey really short, and thus it is that you meet many who are, as it were, cut off from their people in the Old Country far more than are we in America, and although, of course, many never lose sight of their home and people, but keep never lose sight communication, amongst the average up constant communication, amongst the average class of people, Australia has become not only home, but world to them.

All who have visited Australia seem to agree that never was there a more hospitable country, that never was short with each other in showering good things upon one. Their lavish generosity, too, when any public call for help is made is characteristic. They have given immense sums towards the war in the Transvaal, although the home calls upon the purse have been most urgent. Within the last few months disastrous bush fires have destroyed hundreds of miles of property, sheep, cattle and crops, and rendering many families homeless and penniless. But all calls seem to be homeless and penniless. But all calls seem to be responded to, and, after all, is there any country, at least that one knows anything about, where generous help is not ready? "One touch of nature makes the whole world kin." There lies the keynote—sympathy—human, God-given sympathy.

Historical.

GREAT WARS FROM LITTLE CAUSES. Although war, as moralists teach us, is the last argument nations should resort to in settlement of their disputes, it has frequently been brought about by trifles light as air, little incidents from which have resulted awful sacrifice

of life. "With what streams of blood has the failure of a few drops of ink been avenged. Those were the words of a great writer lamenting the bitter war between Poland and Sweden in the 17th century. The King of Sweden, in reading a despatch from the King of Poland, noticed his own name and titles were followed by two "et ceteras" while three were appended to the name of the King of Poland. He took this in such bad grace that he declared war, and the strife was carried on for

It has frequently been stated that the accidental spilling of a glass of water caused the wars of the Spanish Succession. The circumstances of the occurrence were as follows:
At a great State ball in Paris, Mrs. Masham

was holding in her hand a glass of water, which was spilt over the Marquis de Torey, whereat he, thinking this premeditated, took umbrage. Recriminations followed, disaffection set in between the English Ambassador and the French Country of the English Ambassador and the French Government, who came to loggerheads. Hence the war.

The loss of a teapot once plunged the Empire of China in civil war which lasted for nearly a hundred years, devastating the land, and causing the destruction of thousands of lives. A great Chinese potentate was travelling in an obscure region of the celestial domain, and he, like the man going down from Jericho, fell among thieves, who robbed him of everything, including his beloved teapot. An appeal to the Chinese Emperor resulted in the speedy return of all the goods except the teapot; but having great influence at Court, the nobleman persuaded the Emperor to send a body of soldiers to recover it.

When the soldiers arrived, the inhabitants of the districts which the bandits infested took sides with the latter, and, the faction spreading, the whole country was ablaze.

The fact that the Venetians at one time chose to shave their ching was primarily responsible for a shave their chins was primarily responsible for a war with Turkey. The Turks swear by the beard of Mahomet, but when the Venetian Ambassador who was to sign the treaty ceding the supreme power over Candia to Turkey was asked to take this path, he werlied that it was not the oath of his oath, he replied that it was not the oath of his countrymen, that in Venice the men wore no beards. "Neither do the baboons," was the astonishing answer. It so stung the Venetian that he refused to sign the treaty and in the bloody received. to sign the treaty, and in the bloody protracted struggle which followed as a consequence, the lives of more than a hundred and fifty thousand people

were sacrificed. A Gorge in the Rockies.

At this time of the year a "scenery" picture always seems appropriate, and where can one find more beautiful scenery than amongst the Rockies? This picture gives a graphic view of the grandeur the awful grandeur (to use a well-worn term) of these districts. During the past few months the these districts. During the past few months the "Travelling Notes" in the Advocate have described so much of the Rockies "scenery" that we feel sure this picture will be doubly interesting. There is a this picture will be doubly interesting. There is a saying, "What would the world be without books?" and one might easily add. "What would the world be without pictures?" The rugged rocks, the lofty trees, the rushing torrent—all are brought before our eyes in this picture with wonderful vividness and truth. vividness and truth.

"Do people ever have corns anywhere except on their feet?" "Why, yes: farmers have corn in the



There's Room for Two.

Trudging along the slippery street, Two childish figures, with aching feet And hands benumbed by the biting cold Were radely jostled by young and old. Hurrying homeward at close of day Over the city's broad highway.

"'Come under my coat,' said little Nell,
As tears ran down Joe's cheeks, and fell
On her own thin fingers, stiff with cold.
'Tain't very big, but I think 'twill hold
Both you and me, if I only try
To stretch it a little. So now don't cry!'

The garment was small, and tattered, and thin, But Joe was lovingly folded in Close to the heart of Nell. who knew That stretching the coat for the needs of two Would double the warmth, and halve the pain Of the cutting wind and the icy rain.

'Stretch it a little!' Oh, girls and boys, In homes o'erflowing with comforts and joys, See how far you can make them reach— Your helpful deeds and your loving speech,



A GORGE IN THE ROCKIES.

Your gifts of service and gifts of gold ; Let them stretch to households manifold."

A Lookout Regiment. Do you remember the story of the Magic Mirror in our last number? Now, to make sure that none of you use any of the glass from that mirror, either as windows or spectacles, I am going to start a new society.

Of course, you are all anxious to be soldiers, in these warlike times. How would you like to enlist in a corps called the Lookout Regiment?

1. Each soldier must be on the lookout for a chance of doing a kindness. 2 Each soldier must be on the lookout for good

qualities in other people.

There are only two rules, you see, and surely they will not be hard to keep. If you want to enlist, send me your name and address and two one-cent send me your name hadre, which you can wear.

send me your name and address and two one-cent stamps for a ribbon badge, which you can wear.

Any soldier who is under fifteen years of age may compete for a prize. The first prize competition will close on the last day of August. Prizes will be given for the best letters telling about some act be given for the best letters telling about some act. or acts of kindness done by some of your acquaint-ances, not by yourselves. I don't want you to make your own kind actions public. Address your letters, Cousin Dorothy, Box 92, Newcastle, Ont.

Cousin Dorothy, Box 92, Newcastle, Ont.

I will publish the names as they come in, so you will be able to see how our army is growing, Anyone may join, and I hope you will hunt up recruits among your schoolfellows for our Lookout Regiamong your schoolfellows for our Lookout Regiment. The more the merrier. You will find plenty ment. The more the merrier. You will find plenty of kindnesses to write about, if you are on the of kindnesses to write about, if you are on the just everyday things. If God is not too great to

notice and reward even such a small kindness as the giving of a cup of cold water, we ought not to forget to say "Thank you" when people are kind and thoughtful to us. Do you think your mother stands for hours working in a hot kitchen because she likes to work? I think it is because she forgets hereals alterethen in making things comfortable she likes to work? I think it is because she forgets herself altogether in making things comfortable for others. Why does your father get up so early and work hard all day? Is he working for himself, or is he trying to provide you children with clothes and bread and butter? Some people grumble because roses have thorns. Other and more sensible people are very glad to see that thorns have roses. There are plenty of pleasant things to be found in There are plenty of pleasant things to be found in the world, if you are on the lookout for them.

"There are nettles everywhere, But smooth green grasses are more common still; The blue of heaven is larger than the cloud."

I am not asking you to look for nettles or clouds, but rather for the beautiful flowers of kindness, which bloom everywhere. Keep your eyes open and a scribbler handy, and you will be able to collect enough material in a month to fill a dozen

Don't forget my new address. COUSIN DOROTHY.

A Little Boy's Plan.

"If I had made the calendar," said Bobbie yesterday,
"I sort of think I'd have it fixed in somewhat different way.
I'd not have put the Christmases so very far apart;
I think that six months 'tween' em would please any young-

"And scattered through the other months I'd have a On which we'd decorate the house and gayly ring the chimes;

Chimes; On which we'd have, not Santa, but some other Saint like him, Who'd go about and gratify our every little whim.

Who'd bring us cakes and candy in the middle of July;
Who'd bring us cars and wagons when the June sun's
in the sky;
Who when September came about would bring us

Who when September came about would be lots of things.
To make us all as happy as a band of Brownie Kings. "It wouldn't be like Christmas altogether, for, you

know. July would find the country warm and without any snow, The man for June could enter by the coal hole, just as

we Expect dear Santa Claus to come in by the chiminee. "In this way we'd have lots of things a-coming all the

year,
And waiting for the Christmas-time would not be
long and drear,
And best of all, we'd not wear out our toys, and I am The old ones would be newer when we gave 'em to the poor."

THE QUIET HOUR.

The Grand Motive.

Strange that we creatures of the petty ways,
Poor prisoners behind these fleshly bars,
Can sometimes think us thoughts with God ablaze,
Touching the fringes of the outer stars,
And stranger still that, having flown so high,
And stood unshamed in shining presences,
We can resume our smallness, nor imply
In mien or gesture what that memory is."

What a constant struggle some lives are, a weary treadmill existence of monotonous duties performed over and over again. To do duties performed over and over again. To do
the same work every day, apparently making
no progress, with no particular object in
view, with nothing to look forward to, unless
it may be the hope that death may put a stop
to this drudgery. What a deadening existence
for an immortal soul which is made in the image of

"It is all very well to talk," you may say, "but what can we do to ennoble and uplift such a life of

Did you ever hear of the terrible "sweat-shops Did you ever hear of the terrible "sweat-shops" where men, women, and even children toil frantically year after year, without pure air, without exercise, without the smallest change of work to rest tired muscles or refresh aching hearts? They are not cheered by the beauty of God's changing world, as you are. They only see the bare ugliness of a cramped world made by man, a world that never varies in its dreary monotony. Even the sunshine can hardly force its way in, to brighten upthings a little. Such a life as you can hardly conteive of, you who fly from one task to another, drinking in, all the time, the beauty and fragrance of the country. toilsome work?"

of the country.

Are those lives always utterly joyless and miserable, then? No, thank God! One kind of sunshine can creep in even there and beautify everything. Sometimes the pale face will flush with pleasure, Sometimes the pale face will flush with pleasure, Not a single change may have been made the weary heart will beat faster, the dull existence brighten. Not a single change may have been made in the work or surroundings, and yet the fair blossom of love can bring true joy even there. Love is som of love can bring true joy even there. Love is a great magician, able to change anything to gold a great magician, able to change anything to gold. Human nature is the same to-day as it was when "Jacob served seven years for Rachel, and they seemed unto him but a few days, for the love he had to her."

But there is a higher love that can do greater things still. A love which has made men and women rejoice in the midst of sufferings too awful for description. This is not a sentimental fancy, it

is an historical fact, which has astonished the world over and over again. But the love of God is not only able to triumph over death, it can also fill the dreariest life with gladness. Do not imagine that you love God if you care nothing for your fellow-creatures. "If a man say, I love God, and hateth his brother, he is a liar; for he that loveth not his brother whom he hath seen, how can he love God, whom he hath not seen?"

Love is a flower that may be cultivated in any climate, and it often seems to flourish best in dark and cloudy weather. In families where selfishness and quarrelsomeness reign supreme while all goes well, sorrow and adversity reveal unexpected depths of tenderness. When pain and death step over the threshold of the home, "brother clasps the hand of brother" and love comes out from his over the threshold of the home, "brother clasps the hand of brother," and love comes out from his hiding-place. But why should we wait for such a painful awakening? Why, not keep our love for each other strong and vigorous all the time? It will not get shabby with use like our Sunday clothes or best parlor carpet. If it is used every day and all day, it only grows brighter and more beautiful. Poor thing, it will get very weak and faded if it lives always in the dark.

"We have careful thoughts for the stranger,"
And smiles for the sometime guest;
But oft for 'our own'
The hitter tone,
Though we love 'our own' the best."

We can be bright and amusing if a visitor be We can be bright and amusing if a visitor be present, but for our own family we keep only fretful tones, sharp words, or a dead silence. We can be neat and even dainty in dress if a stranger is likely to see us, but for the loving eyes of father or mother any kind of untidiness will do. We can brighten the house with flowers, smiles and cheery words, if we only think it worth while. Worth while! What are we put there for? Does God intend us to be drudges and slaves? Are we not His children, and will He be satisfied with a forced, sullen obedience? Would any earthly father?

People are often cynical about men's motives. They may say that the hope of selfish advantage, in this world or the next, is a stronger inducement than any other. Put this theory to the test. If a house is burning down, and to enter it means almost certain death, tell the crowd that thousands of dollars are inside for the taking. Who will attempt to go in? Say that a woman or child or helpless invalid is there, and see how many will be eager to risk their lives in trying to save another who may be an entire stranger. Are they moved by any thought of reward in this life or in the hereafter? Surely not. We may not all dare to risk our lives in trying to save another, but we all feel that we should like to be brave enough. Even those who deny their Maker understand this impulse which as often impelled reckless and hardened men to lay down their lives for others, and "greater love hath no man than this, that a man lay down his life for his friends." Men who profess to think that this life is all, do not hesitate to risk that life loyally and readily when duty calls. If they believed their own theories, would not their action be the height of folly? Yet, who dares to condemn? Do we not all understand the paradox that he that loseth his life so nobly really finds it? This divine impulse to save others at any cost of suffering to themselves is strong in men-although only a few are brave enough to carry it out in action—and it is one proof that they are the children of Him whose name is

believe most strongly in the inherent nobleness of human nature, which is made in the image of God.

Give, for God to thee hath given; Love, for He by love is known; Child of God and heir of heaven, Let thy parentage be known."

HOPE.

Recipes.

GOOD SPICE CAKE.

Two eggs, 1 cup molasses, ½ cup sugar (brown), 1 cup cream, 2 teaspoons baking powder, half a nutmeg, 1 teaspoon ground cloves, 1 tablespoon butter, flour to thicken, rather more than layer cake.

BOILED CUSTARD WITH RHUBARB.

Beat the yolks of three eggs lightly; stir into them 2 small tablespoons cornstarch dissolved in a little milk, and I teacup of sugar. Bring two quarts of milk to a boil, then take off the fire and add the eggs, etc., a little at a time; put all on the stove again until thickened. Stir in the whites, beaten lightly, and flavor.

RHUBARB AND BANANA JELLY.

To one pound of red rhubarb (cut in pieces) add one cup of sugar, half a cup of water, and 11 tablespoons of gelatine. Bake or stew the rhubarb, and add the other ingredients. Take a cupful of bananas (sliced), add the juice of half a lemon, half a cup of orange juice, half a cup of sugar, and 11 tablespoons gelatine. Mix the juices and sugar, and melt the gelatine in a little water. When beginning to set, fold in a cup of whipped cream and put in a mold with the rhubarb in layers.

LEMON BISCUITS.

One cup butter or lard, 2 cups sugar, 2 eggs, a pinch of salt, 2½ cups sweet milk, 5 cents' oil of lemon, and 5 cents' baking ammonia. Let the ammonia dissolve in the milk all night (or at least a few hours), and mix all with enough flour to thicken and roll out like cookies. Cut with square cutter. Half this quantity is enough to make at once for an ordinary family.

STRAWBERRY PUDDING.

To a large teacupful of finely-powdered bread crumbs add the yolks of four eggs and a quart of milk. Stir these together, flavor with vanilla, and bake. When it is done, remove it from the oven and spread on the top a thick layer of strawberries which have been slightly mashed and very well sugared, and over this a meringue of the white of the eggs sweetened and flavored to taste. Return to the oven and brown lightly.

STRAWBERRY PUFFS.

With the fingers rub into one pint of sifted flour a generous tablespoonful of butter and add a pinch salt and one and one-quarter teaspoonfuls of baking powder, and then stir in sweet milk enough to make a soft dough, little more than half a cup. Roll the dough out to about half an inch in thickness and cut into squares. In the center of each piece put four or five berries. Fold the dough over to cover the fruit, and roll lightly between the hands until it is a round ball. Place the ball on an earthen plate and put the plate in a steamer and cook fifteen minutes. Serve as soon as they are taken from the steamer, accompanied with strawberry

He was a Hero.

A country gentleman, going his rounds after his dinner, in the dusk of the evening, saw a great snake coiled up in his garden. With singular snake coiled up in his garden. With singular bravery and presence of mind, he immediately got an ax, cut the creature into a hundred pieces, turned to the house, told everybody about his exploit, and went to bed. Next morning his gardener came to him in great tribulation.

" Well, George?" "A curious thing has happened in the garden,

sir. "Yes, George."

"It's cut to pieces, sir. Some villain must ha' dont it. "A villain, George! Twas I did it, with my own hand, George!

"You, sir?" "Yes, I, George. I don't suppose there's another man in the country with the pluck to do it but myself.

"To do what, sir?"

" To cut to pieces and kill that frightful snake." "Lawk, master! 'twasn't a snake-'twas only the garden hose!

Waltzing Mice.

The Japanese have a queer little domestic animala black and white mouse, with pink eyes. The peculiarity of this breed of mice is that when other baby mice are just beginning to walk, these are beginning to waltz; and they keep up their waltzing r nart life.

If several mice are put together, they often waltz in couples; sometimes even more than two join in the mad whirls, which are so rapid that it is impossible to tell heads from tails. If the floor of their cage is not smooth, they actually wear out their feet, leaving only stumps to whirl on. These remarkable whirls seem to be as necessary to the waltzing mouse as a midair somersault to the tumbling pigeon.

Chickens Recognize Whistle.

A curious spectacle is afforded travellers on the Monon railroad at this town, the junction of the main line and the Indianapolis division, says a correspondent at Monon, Ind. Two of the through trains, carrying dining cars, meet here, and the dining cars are set out. The cooks clean their kitchens, throwing the refuse overboard, and the chickens in the neighborhood come and feed on the scraps. There is not a chicken within a half mile that does not recognize the whistles of the engines pulling the passenger trains, and when they are sounded for the station it is the signal for the chickens to come running, flying over fences and hustling pellmell to get on the ground for the feast.

Paper Teeth.

Paper teeth are made by a dentist in Lubeck, Germany. One of his patrons has a set which has been in use for thirteen years, and gives complete

Hotel Porter-The man in No. 14 says the rain leaked down on his bed last night and soaked him to the skin. Manager-Charge him a shilling on his bill for a bath.

Puzzles.

(The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—lst-prize, \$1.50; 2nd, \$1.00; 3nd. 75c. For original puzzles—lst, \$1.00; 2nd, 75c.; 3rd, 50c.

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham. Ont.]

1-ENIGMA. The poor and needy find a "friend" in me,
The sailor his "direction" when at sea,
The tired traveller "shelter," "peace," and "rest."
And they that mourn find "comfort," and are blest.
The spendthrift finds a "home" wherein to stay.
Now, what am I? I'm seen most every day.

ROLLY. 2-DIAMOND

1, a letter; 2, a kind of Chinese tea rolled up like tobacco; 3, an iron frame to confine type; 4, a beautiful Indian tree with fragrant flowers; 5, a Turkish coin about three fifths of a British penny in value; 6, that part of the cereal plants which contains the flowers and seed; 7, a letter.

ROLLY. 3-CHARADE.

Twelve ounces make a FIRST.

Said little Julius Cæsar.

I learned that in school to-day
From Junius, the teacher. He SECOND me great sums to do
In business calculations
About TOTAL, instalments, weights,
Liquidation and sequestration. IKE ICICLE. 4-CHARADE. 4—CHARADE.
Old Mrs. Sippi lived in Alabama,
Close by old Wak.a-we's SECOND.
Oft I've seen her feasting on banana,
Oft to her cottage we she beckoned.
She was very jealous of old Mr. Sippi;
Many a time she'd told her trials to me,
How "FIRST ever spent his evenings flirting
With that charming young Miss Souri."
The affair throughout the State was TOTAL,
And Mrs. Sippi bowed her head in shame
When the report became far from local.
She curses ever the day she changed her nar She curses ever the day she change

5-BEHEADINGS. Behead a flower, and leave a fluid.
Behead separately, and leave a portion.
Behead to rave, and leave an insect.
Behead the conception of a thing in its most perfect state, ad a knavish fellow, and leave a place where troops lodge.
The beheaded letters will form a noted city.

6-RIDDLE. I am good, I am bad, I am high, I am low; I travel with you wherever you go;
I stay with a rat in its hole, or a mouse;
I dwell with Lord Minto in Government House;
With kings and with emperors, princes and tsars,
I sail on the ocean or ride on the cars. Wherever they go and whatever they do, I'm always along with them, helping them through. There's no one so lowly, there's no one so high; There's naught that can crawl, there is naught that can fly; There's naught that can move on the land in the se That owes not its very existence to me. The beets in the garden, the lily and rose, The corn and the clover—whatever man grows; The trees in the forest, the shrubs on the hills. I am a great secret to all but to Him In whose sacred presence the brightest is dim. Men of science have sought me, and seek me in vain-They do not, and cannot, my secret explain.

7-PALINDROME. On the sand seashore Water dashes, Over all the lee shore Spouts and splashes. When a fort I raised up Waves submerged it. Or a flagstaff braced up,

Answers to May 15th Puzzles.

habit se la h e l b o w s e m e n 2-Hit-her-ward. 3-Tom-John. 4- r s j w \mathbf{w} j s \mathbf{r} Each letter is the initial of a bird. s r w j j w r s A double thread. -A double infead. - Kidnap. - Credit, tired, tied, edit, tied, diet, die, Ed, d. Procrastination. 9-General Cronje.

SOLVERS TO MAY 15TH PUZZLES. M. R. G., "Diana," "Sartor," Lizzie Conner, "Ike Icicle," cGinty," "Flo," "Dixie," Sila Jackson, Edna McKinnon.

ADDITIONAL SOLVERS TO MAY 1ST PUZZLES.

Edna McKinnon, "Dixie," "Ike Icicle," Lizzie Conner.

COUSINLY CHAT. "McGinty" would like some sort of composition contest ter than "Memory Gems." What do the other cousins better than Paris. - Some one mailed answers from this office bearing

Paris.—Some one mailed answers from this office bearing no name. Who owns them?

"Flo."—You have followed our rules very well, and we are pleased to number you in our circle. (1) "Delete," (2) "abbr.," and (3) "phon." mean (when in the puzzles) as follows: (1) that one or more letters are to be taken from the original word, (2) that the form used is an abbreviation only, (3) that the word is simply used according to sound. Your rebus was not quite up to the standard, but try again.

"Dixie" is very welcome to our Corner, and we hope she will be successful in winning a prize.

Edna.—A tiny girl is also very welcome.

M. N.—What's the matter in your corner of the globe?

363

OUNDED 1866

s not quite up

we hope she

ne globe!

lows: (1) that rinal word, (2) at the word is

The Prince of Wales' 2-year-old Shorthorn bull, Pride of Collynie, a light roan of excellent parts, bred by Mr. Duthie and sired by Pride of Morning, won the male championship of the breed at the Bath and West of England show

GOSSIP.

hreed at the Bath and West of England show this month.

Referring to the shipment of 10 Shorthorns on May 5th, per SS. "Lakonia," by Messrs. Alfred Mansell & Co., live stock exporters, Shrewsbury, England., consigned to Mr. Robert Miller, Stouffville, Ont., it consisted of several good young bulls and 2 heifers, viz., "Rob Roy," a roan bred by Messrs. W. & J. Peterkin, by Merry Hampton 73063. from Jessica 3rd by Scottish Archer 5983; "McNaughton," a good red bull, bred by Mr. N. L. Napier, by Watchman 11828, from Cleopatra 4th by Prince of Fashion: "McIntosh," a red bull, bred by Col. Munro, by Kruger, dam Mabel by Vice, Chancellor 56681; "King Robert Bruce," a fine roan, also bred by Messrs. Peterkin, got by Commodore 65286, out of Queen 6th by Lord Lollo 59337; "Hector MacDonald," a red bull, bred by Mr. J. Grainger, sire Coral Prince 74278, dam Medal Groat 2nd by Marksman 70945; "Golden Opportunity," also roan, bred by Messrs. Macrae, by Golden Cup 72608, from Golden Thought 2nd by Cyprus 6639; and "Black Watch," a grand red, bred by Mr. J. Durno, by Remus 73102, out of Rose of Elbe by British Leader 60417. The heifers were: "Lady Maid 3rd," bred by Mr. Napier, by Watchman 71828, from Red Lady by Better Luck 65149, and "Fancy 7th," a red heifer, bred by Mr. J. Young, sire Alan Gwynne 66699, dam Fancy 2nd by Portland of Cluny 61472. This latter heifer had a good calf at her side, bred by Mr. P. L. Mills, sired by Scottish Prince 73393. Messrs. Mansell & Co. have just received advice by cable that these cattle have arrived safely at Quebec.

A. W. Smith, Maple Lodge, Ont., writes: "We have recently sold an excellent lot of

actived safely at Quebec.

A. W. Smith, Maple Lodge, Ont., writes:
"We have recently sold an excellent lot of
Shorthorns and Leicesters to Messrs. Ellison &
Ford, from Utah, U. S. A., consisting of four
grand bulls and an exceptionally good lot of
Scotch and Scotch-topped heifers, mostly in
calf to imported "Knuckle Duster." One of
the bulls was by Caithness, and his dam was the
first-prize cow at the Provincial Dairy Show at
London in December last; another was the
fifth-prize calf at Toronto last fall. He was
from same dam as Caithness, and got by
Abbottsford, also a stylish two-year-old by
Caithness, dam by Lavender Prince. The
fourth bull was a very handsome red calf out of
the 5th-prize cow at Dairy Show, and got by
Lord Lossie 22nd, now at the head of the Exp.
Farm herd at Brandon, Man, The heifers
comprised some choice things of the Cruickshank Lovely family and other Scotch-topped
Bates of our best milking families. To fill up
the car, these gentlemen took a very choice
bunch of Leicesters, which would make a good
showing even in the best Canadian shows.
They had not seen any Leicesters before, and
were so delighted with the appearance of our
flock, they could not go without a selection
from them. Mr. Dissenger, of Canoja, N. Y.,
got a fine bull, strongly bred in milking qualities. Another good one goes to Mr. Lapany, of
Easton, Maine, U. S. Mr. J. D. Clement & Son
got a good young Lovely bull by Caithness, and
Mr. Peter McDonald, Amberly, Ont., got a
sturdy, well-shaped son of Caithness and our
best milking cow.

THE GERLAUGH SHORTHORN SALE. hest milking cow.

THE GERLAUGH SHORTHORN SALE.

The sale of Shorthorns from the herd of Mr. C. L. Gerlaugh, of Osborne, Ohio, held at that place, May 23rd, was a pronounced success. A large representation of breeders attended, and the bidding was spirited and prices good. Canadian breeders were represented by W. D. Flatt, Hamilton, and Arthur Johnston, Greenwood, who did some plucky bidding. Mr. Flatt secured the imported cow, Meadow Beauty 6th, a roan 4-year-old, by Lord of the Meadow, at \$1,200, the second highest price in the sale. Imp. Bessie 151st, a roan 3-year-old, by Sittyton Pride, sold for \$1,525, the highest price, to C. M. Casey, of Missouri. Two imported bulls sold for \$900 each, the highest price for bulls. Twenty-two imported cattle THE GERLAUGH SHORTHORN SALE. price for bulls. Twenty-two imported cattle made an average of \$781.55, and the thirty-eight head sold brought \$20,690, an average of \$541.77. CLYDES AT CASTLE DOUGLAS.

made an average of \$781.55, and the thirty-eight head sold brought \$20,690, an average of \$54.77.

CLYDES AT CASTLE DOUGLAS.

Clydesdales made a good show at Castle Douglas spring meeting, April 5th. The striking feature of the show was the prominence of the get of the famous stallion, Baron's Pride. In a capital class of 2-year-old stallions, the first, second, third and fifth prizes went to sons of this great sire. The first and champion of the section, Baron's Crown, shown by Mr. H. Webster, and bred by Mr. Wm. Hood, was first here and at the Royal last year. He is up to a right size, has splendid feet and legs, and moves well. The second winner, Baron Robgill, a beautiful colt with rare quality of bone, stood second at the Highland, his dam being the noted mare, Princess Alix. Third also went to Messrs. Montgomery for Pride of Morning, a bonnie colt bred by Mr. A. McKay, Bruchag. The fourth was Mr. Wm. Crawford's brown colt by King O'Kyle, and his dam by Sir Everard. In yearling colts, Messrs. Montgomery won 1st and 2nd with sons of Baron's Pride. The first was bred at Barcheskie, from a MacMeekin mare. The second bred by Mr. Stephen Hunter, Whiteleys, and out of a mare by Handsome Prince. The 3rd went to Mr. Jas. Picken, Torrs, for Kit Kennedy, a good, massive colt by Cawdor Cup, from a Crusader mare.

In the brood mare class, Mr. A. B. Matthews' brown mare, Queen of Beauty, was 1st, and in the yeld class, Mr. L. Pilkington's Maid of Honor, by The Royal Standard, won 1st. Three-year-old mares were a strong class, and the 1st prize and female championship of the show went to Mr. Thos. Smith's (Blacon Point) Jennie Deans, by Baron's Pride, and 2nd to Jubilee Fashion, shown by the same owner. She was 2nd at this show and at the Royal last year, and is by Montrave Chief; dam Belle of Fashion. Two-year-old fillies were strong in number, but not in quality. First went to Sir H. E. Maxwell for a bay filly by King of the Roses. Mr. Thos. Smith had the second, by Baron's Pride, out of Fickle Fortune's Princes, and

Don't Guess At Results.



This man knows what he did and how he did it. Such endersements as the following are are a sufficient proof of its merits.

Oshawa, Minn... Feb. 22, 1898.

Dear Sirs:—Please send me one of your Treatise on the Horse, your new book as advertised on your bottles. English print. I have cured two Spavina and one Curb with two bottles of your Kendall's Spavin Cure in four weeks.

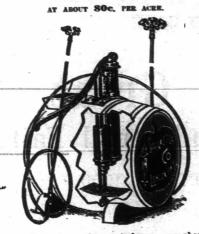
FRANK JUBERIEN.

Price, \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for KENDALL'S SPAVIN CURE, also "A Treatise on the Horse," book free, or address

DR. J. B. KENDALL CO., ENOSBURG FALLS, VT.

Wild Mustard and Potatoes

MAY BE KILLED BY SPRAYING WITH A



Spramotor Co.,

London, Can. 68-70 King St.,

The second of a series of combination auction sales of stock was recently held at Orillia, Ont., sales of stock was recently held at Orillia, Ont., but a company of officials and others who attended to witness its working, report that it was not a success. "The lack of success seeming to be due to lack of confidence." Twas ever so with such experiments in this country. What can be done to inspire confidence? Echo answers, what? Suppose we apply to the Government for a grant!

answers, what? Suppose we apply the ernment for a grant!

A GREAT DAIRY COW GONE.

The death of the great Holstein-Friesian cow, Rosa Bonheur 5th (1127, H.-F. H. B.), occurred last month at the Michigan Agricultural College farm. She was a few days over 12 years old when, owing to an attack of paralysis in her limbs, she was killed. In her sixth year she is reported to have made the following remarkable record of milk production: 1 day, 106.75 lbs. milk, 3.22 lbs. fat; 1 week, 726.25 lbs. milk, 20.47 lbs. fat; 10 days, 1,033.5 lbs. milk, 28.75 lbs. fat; 30 days, 2,989.5 lbs. milk, 82.16 lbs. fat She was an unusually large cow, her weight at the time of this test being 1,750 lbs., and at one time her weight reached 2,070 lbs. For a period of 6 weeks she averaged 97.66 lbs. milk daily, during which time, being a very large animal, her daily consumption of food was: silage, 114 lbs.: corn meal, 12 lbs.; oatmeal, 9 lbs.; bran, 3 lbs.; oil meal, 9 lbs.; roots, 27 lbs.

meal, 9 lbs.; bran, 3 los.; on meal, 9 los.; translated by 27 lbs.

The Beaver Post Hole Digger.—In these days of post and wire fences, the digging of the holes is considerable of an item, provided the work is undertaken in the ordinary method with shovel, spade, and crowbar. With the Beaver digger, which takes the place of all these tools, the work is much lightened and facilitated. The digger consists of two steel shovels joined together above the blades by means of a hinged bar. The digger has sufficient weight that, when it is dropped into the hole with a little force, it settles down several inches, according to the hardness of the soil. The handles are then drawnapart, which forces the blades together, enclosing the soil. It is then lifted out, the handles returned to their upright position, delivering the soil, and the process is repeated. In this way, in ordinary soils, a dozen 3-foot holes are put down per thour, and a greater number in easy digging. We have used this implement in clay, and like it well. The digger is advertised in this issue by Hall & Son, 70 Spruce St., Toronto. Read

GOSSIP.

EF In writing to advertisers, m

At a sale of Shorthorns made by J. C. Shrop-shire, at Montrose, Kentucky, May 25th, thirty-two females made an average of \$156.25, and the 57 head sold averaged \$122.30.

James Boden, Farm Manager for Mr. R.P.R. ford, St. Anne de Bellevue, Quebec, advertises for sale the imported champion Ayrshire bull, Napoleon of Auchenbrain, winner of first prize and sweepstakes and head of 1st prize herd at Toronto, 1898; also a fine 2-year-old bull and three choice bull calves of last fall, all of which are fitted for show bulls, having been reserved for that purpose. This statement is a guarantee that they are well up to the standard of first-class, as Mr. Boden is acknowledged to be one of the best judges of Ayrshires in America. Mr. Reford's farm is close to St. Anne station, G. T. R. and C. P. R., 20 miles west of Montreal.

LARGE SALES OF HEREFORDS.

Col. Jay L. Torrey, President of the Embar Cattle Co., who organized "Torrey's Rough Riders for service in the Spanish-American war, paid two visits to Guelph, Ont., in May, and purchased 60 Herefords from Mr. Alfred Stone, 5 Douglas St., Guelph, and 17 from the F. W. Stone Stock Co., including the show bull, Picture 27th, a reserve bull, 2 cows, 2 heifers and one calf. These cattle were shipped to Wyoming on May 21th, and occupied four cars. Col. Torrey is a candidate for the Vice-Presidental nomination on the Republican ticket.

OFFICIAL TESTS OF HOLSTEIN-FRIESIANS. TO THE GAZETTE,—The following tests, from Jan. 1 to Feb. 1, 1900, are uniformly made by representatives of agricultural colleges or experiment stations at the homes of the cows; the length of each test is seven consecutive days; the butter-fat is determined by the Babcock test, and the butter estimated—first by the 80-per-cent, rule, and second by the 85.7-per-cent-

test, and the butter estimated—first by the super-cent. rule; and second by the 85.7-per-cent. rule:

Summary. — Eight cows, five years old or over, average per cow, 444.6 lbs. milk containing butter-fat equivalent to 18 lbs. 7.3 ozs. butter at 80 per cent. fat to the pound, or 17 lbs. 3.7 ozs. butter at 85.7 per cent. fat to the pound.

One cow between four and five years old produces 442.1 lbs. milk containing butter-fat equivalent to 22 lbs. 5 ozs. butter at 80 per cent. fat to the pound.

Five cows between three and four years old average per cow 409.3 lbs. milk containing butter-fat equivalent to 17 lbs. 7.9 ozs. butter at 80 per cent. fat to the pound, or 16 lbs. 3.2 ozs. butter at 85.7 per cent. fat to the pound, or 16 lbs. 3.2 ozs. butter at 85.7 per cent. fat to the pound.

Ten cows under three years old average per cow 296.5 lbs. milk containing butter-fat equivalent to 12 lbs. 2.6 ozs. butter at 80 per cent. fat to the pound.

The two most remarkable are those of Beryl Wayne, a cow between seven and eight years old, with a product of 24 lbs. 3.8 ozs. butter, 80 per cent. fat, and of Lillih Pauline De Kol, a cow about three and one-fourth years old, with the unprecented product of 24 lbs. 7.4 ozs. butter, 80 per cent. fat, or 22 lbs. 9.9 ozs. butter at 85.7 per cent. fat, or 92 lbs. 13.3 ozs. butter at 85.7 per cent. fat, or 92 lbs. 13.3 ozs. butter at 85.7 per cent. fat, or 92 lbs. 13.3 ozs. butter at 85.7 per cent. fat, or 92 lbs. 18.1 ozs. butter, 80 per cent. fat. to the pound.

At my request, both these cows were re-tested by Prof. C. B. Lane, of New Jersey Station, and the first tests fully confirmed.

Oncida Co. N. Y.

SOME WINNERS AT THE BATH AND WEST OF

SOME WINNERS AT THE BATH AND WEST OF ENGLAND SHOW.

Oneida Co., N. Y.

SOME WINNERS AT THE BATH AND WEST OF ENGLAND SHOW.

The classes of cattle, sheep, and pigs are said to have been unusually strong at the above show held at Bath, June 1-4. Following is the order of the winners in classes in which many Canadian breeders are interested:

Shorthoras Bulls, calved in 1896 or 1997: 1, H. R. H. the Prince of Wales, K.G. (Stephanos); 2, C. W. Brierly (Ben Ledi); 3, J. D. Willis (Silver Plate).

Bulls, calved in 1898: 1, H. R. H. the Prince of Wales (Pride of Collynie); 2, D. H. Green (Lavender Yet); 3, Miss Alice de Rothschild (Bashful Youth).

Bulls, calved in 1899: 1 and 3, W. J. Hosken (New Year's Gift and Royal Sovereign); 2, J.D. Willis (Bapton Sentinel).

Cows: 1, W. J. Hosken (Countess of Oxford 14th); 2, C. W. Brierly (Autumn Queen); 3, D.H. Mytton (Silene).

Cows in milk: 1, D. H. Mytton (Silene); 2, Col. Makins (Welsh Gem); r and hc, L. de Rothschild (Mayflower 3rd).

Heifers, in milk, calved in 1897: 1, L. de Rothschild (White Socks).

Heifers, calved in 1898: R. and W. T. Garne (Aldsworth Jewel); 2, H. Dudding (Lady 21st); 3, J. D. Willis (White Heather).

Heifers, calved in 1899: 1, Lord Tredegar (Lassie 3rd); 2, J. D. Willis (Victorine); 3, L. de Rothschild (Mayflower). The male championship went to the Prince of Wales' 1st-prize 2-year-old bull, Pride of Collynie.

Shropshires — Shearling rams: 1, R. P. Cooper; 2 and hc, A. Tanner; 3, W. F. Inge. Ram lambs: 1, P. L. Mills; 2, R. P. Cooper; 3, D. Gibson Shearling ewes: 1, P. L. Mills; 2, A. Bradburne; 3, W. F. Inge. Oxford Dourns—Shearling rams: 1, 2, and r, J. T. Hobbs; 3, W. A. Treweeke. Ram Lambs: 1 and 2, R. W. Hobbs; r and hc, W. A. Treweeke. Shearling ewes: W. A. Treweeke. Shearling ewes: M. A. Treweeke. Shearling

PLEASE MENTION FARMER'S ADVOCATE.

HURSEMEN! THE ONLY GENUINE IS

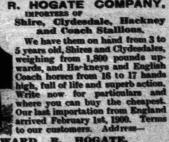
Lawrence, Williams Co.

Lawrence, Williams Co.

Lusis & Proporties for the CLEVELAND.O. The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. The Safest, Best BLINTEIL ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Biemishes from Horses and Cattle, SUPERSEDES ALL CAUTERY or FIBLING. Impossible to produce sear or blemish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with fail directions for its use. Send for free descriptive circulars.

THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

EDWARD R. HOGATE COMPANY,



EDWARD R. HOGATE, 264 Arthur St., TORONTO, CAN., Barns: 84 and 86 George Streets.

SHOW AYRSHIRES FOR

As we are not going a show any cattle at the fair this year, we will sell the imported prize innin bull, Napoleon of Auchenbrain, champion and hea of first-prize herd at Toronto, 1838. Also first-clus 2-year-old bull and three choice bull calves of lar fall. These are all fit for the showring, as we kell them for that purpose. For prices and particular come and see, or write.

St. Anne de Bellevus Farm close to St. Anne Station, Quebec. G.T.R. & C.P.R., 20 miles west of Montreal.

GOSSIP.

AYRSHIRES AT CASTLE DOUGLAS

At the Castle Douglas spring show, held April 5th, the Ayrshires were judged by Messrs. W. P. Gilmour. Balmangan. Borgue, and Robert Oeburne, Wynholm. Lockerbie. There has mever been a better show of Ayrshires at Castle Douglas. In the cow-in-milk class, Messrs. A. & W. Kerr, Old Graitney, were first with Jenny of Old Graitney, which last year was third. Mr. William Murray's second, from Borrowmoss, Beauly IV., by the Knockdon bull Scottish Prince. occupied the same place last year. Mr. Wm. Stroyan, Culcaigrie, Twynholm, was third with the cow which stood first a year ago; and Mr. Andrew Mitchell, Barcheskie, was fourth with a cow not before shown. For uncalved cows, Mr. Stroyan stood first with the cow that stood second a year ago, and Mr. Andrew Mitchell was second with a cow shown last year. The placing of the three-year-olds in milk gave the judges some trouble, and they handed the task over to Mr. James Howie, Hillhouse, for settlement. He placed Sir Mark J. MT. Stowart, of Southwick, first with a good helter showing a fine vessel, especially behind, and first-class teats. Mr. Andrew Mitchell, Barcheskie, was second with an equally good cow, bred by Mr. Harper, but excelling rather in fore vessel. Mr. John M'Dowall, Kelton Mains, was third and fourth. The best female Ayrshire in the show, and one of the best uncalved queys shown for many a day, was leader in the class for three-year-olds, uncalved. She was bred and is owned by Messrs. A. &. W. Kerr, Old Graitney, is named Senorita, and was got by Peter of Whitehil. She was an easy first, and won the female championship. A typical Ayrshire with a gay head and good neck, a wealthy body and a first-rate vessel, lying very level, carried well forward, and showing well-caught up behind, with promise of excellent teats, she is a helifer to be reckoned with. Mr. Murray, Burrowmos, was second with Mar, Murray, Burrowmos, was second with Mar, Altray, was third and fourth. In the two-year-old helifer class Messrs, R. & P. Wardrop, Garlaff, third. The class for two-y

ion sale on May 30th of Mr. T. S. ard of imported Jersey cattle, at his over Farm, Coopersburg, Pa., was, as red letter description. less, at \$300, and the 3-year-old Golden Lad's Pretty Rose, which brought \$1.325, and was the gem of the sale in breeding and individual merit. She was bought by Dr. C. E. Still, of Kirkville, Mo., in partnership with Michael Hilgert, of \$t. Joseph, Mo., who purchased 12 head at \$6.525, including Rosette's Golden Lad, the highest priced bull in the sale, at \$300, and the 3-year-old cow; Golden Lad's Solid Gold, at \$1.000. The second highest priced cow was the 7-year-old Golden Lad's Pretty Rose, which brought \$1.325, and was purchased by M. S. Beltzhoover, of New York. The stock bull, Golden Lad's Champion, a noted Island prizewinner, which it was generally expected would run into four figures, fell at \$25 to the bid of Mr. E. A. Darling, President of the A. J. C. C., who, it is said, would have followed him to more than double the money if he had had competition. Six of the imported bulls brought prices ranging from \$400 to \$300, an average of \$340, and the 18 imported bulls, many of them quite young calves, an average of \$375 each. Twenty-one of the females sold for \$400 to \$600 each, or an average of \$372. Forty-seven imported cows averaged \$413. One cow came to Canada, viz., Uncle Peter's Columbine, purchased by Mrs. D. L. White, of London, at \$205. The 7-months bull calf from this cow was considered one of the best young bulls in the sale, and brought \$350. He is Uncle Peter's Gold Mine, and was bought by Still & Hilgert for a show bull. The total sum realized for the \$90 head of imported animals, young and old, was \$25,570, an average of \$355, and the whole number sold (98 head), including 9 young things of Pedro blood, made a grand total of \$33,390, and an average of \$340 per head. Truly a great sale.

LIVE STOCK AT THE GREAT BUFFALO SHOW IN

Pan-American Herald:—"There was some thought a few weeks ago that the live stock display at the Pan-American would suffer next year on account of the Exposition which Toronto contemplates holding during next summer, but Director General Buchanan has placed himself in communication with the gentlemen at the head of the Canadian Exposition, and

himself in communication with the gentlemen at the head of the Canadian Exposition, and has made such arrangements that both cities will gain. There will be no clash of dates, and the breeders and owners from across the border realize that the Exposition on this side will be a marvellous aid to their smaller enterprise. They have signified their intention of having representation at the Pan-American for the four months which will intervene before their gates will be opened, and in that time they will persuade Canadians to bring their stock to Buffalo, and will invite the owners to ship it back to Toronto after the judging has been done at Buffalo.

In connection with the show of cattle, Superintendent Converse has decided to put on a very comprehensive dairy test as a special feature. The milk given each day by each cow will be carefully weighed and measured, and against the production will be charged the amount of food consumed. Then the cream will be separated from the milk and the amount of pure butter produced will be credited to the various animals. This test will be started on June 3, and will continue for fourteen days, and though no official announcement has as yet been made of it, many breeders have already written to say that they desired to enter animals in the competition, and a number of breeders' associations have asked per mission to offer special cash prizes and valuable trophies.

In the giving of the prizes, both for this test

mission to offer special cash prizes and valuable trophies.

In the giving of the prizes, both for this test and in the general judging of the animals, great care will be taken to see that the most competent and critical judges in the country are chosen. It has already been decided to give over \$20,000 in cash prizes, and besides that sum of money there will be gold and silver trophies of great value and beauty given both by the Exposition management and also by various breeders' associations.

The horse show will be carried through on a scale of splendor. There will be a great showing of the blooded stock of the country. Each winter Madison Square Garden in New York outvies the grand opera at the Metropolitan Opera House in the gathering of the wealth and fashion of the nation, and as the Pan-American horse show will be some months prior to the Metropolitan show, it is expected that the men from the east who yearly seek occasion to show their equine pets will send their finest animals to Buffalo."

PLEASE MENTION FARMER'S ADVOCATE. om

The Wonder of the Age.

ALL EYES ARE ON THIS INVENTION.



The Genuine Tolton Pea Harvester with NEW PATENT BUNCHER at work. Harvesters to suit all kinds of mowers, with all but

Self-delivering Bunchers.

Harves'ing in the most complete manner from eight to ten acres per day. Every Machine Warranted. Our Motto: "Not How Cheap, but How Good" No drilling holes in Mower Bar or Inside Shoe. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send them direct to

TOLTON BROS.

GREATEST ANNUAL ON EARTH!

ALL THE MARVELS OF THE AGE

TO BE SEEN AT

Canada's Great Exposition and Industrial Fair.

AUGUST 27th to SEPT. 8th, 1900.

BEST PRIZE LIST on the CONTINENT. ENTRIES CLOSE AUGUST 4TH.

The People's Annual Holiday Outing.

New Attractions. The Latest Inventions and Improvements. Novel Features from all parts of the world. Instruction, Recreation and Pleasure. Nothing like it. Everybody will be going as usual, or making an exhibit, and why not you? Don't be behind your neighbors. It's the last of the century.

CHEAP EXCURSIONS ON ALL LINES OF TRAVEL.

For Prize Lists and Entry Forms, address

H. J. HILL, Manager, Toronto. ANDREW SMITH, F. R. C. V. S., President.



WE will pay freight on all orders we receive during June and July at our regular price, or we will accept notes on reliable parties, payable in 2, 4 or 6 months' time. This offer is good for only the two months named. We guarantee our Cooker to cook more feed and heat more water in less time and with less fuel and attention than any cooker made. with less fuel and attention than any cooker made

with less fuel and attention than any cooker made.

Take advantage of our | Improved Reliable Food Cooker, special offer and get the | Tank Heater and Steam Generator, one of the greatest feed savers, labor savers and money nakers the feeder can possibly have. Cooks a barrel of ground feed in 30 minutes; 25 bushels of ground corn in 2 hours; heats a barrel of water hot enough to scald hogs in 20 minutes; will heat water in tanks 100 feet from Cooker. Used and recommended by feeders throughout the United States and Canada. Highest awards at Omaha Exposition in 1898, and at Toronto, Canada, and at Dallas, Texas, in 1899, and at State Fairs everywhere. Sold on a positive guarantee. Your money back if it does not come up to the contract. Send for 1900 Century Catalogue and introduction price. The Rippley Company proved its claims to superiority by taking first premiums at the Chicago, St. Louis, and Cedar Rapids Poultry Shows in Jan., 1900. It has no flues to rust out or leak. No scorched feed if you use it. The best machine of any kind proves the cheapest in the end. Write us at once for new Breeders' Supply Catalogue.

Rippley Hardware Co., Box 100, Grafton, III.

Herefords for Sale. Rosedale Stock Farm.

Three or four one-year-old bulls. Cows and heifers.

The Plains Farm, Arkell: Moreton Lodge, next the O.A.C, College: containing 200 to 250 acres each.

The F. W. Stone Stock Co. Guelph, Ont., Can.

CLYDE AND SHIRE HORSES. SCOTCH SHORTHORNS. LEICESTER SHEEP.

A choice lot of Leicester ewes and rams with superior quality and as good blood as is obtainable. My motto, "The best it none too good."

J. M. GARDHOUSE, Highfield P. O.

Malton Sta. G.T.R. om Weston Sta., C.P.R.

eterinary CAUSTIC



Lump

FOR SALE: 3-YEAR-Hackney Stallion



D. & O. SORBY, GUELPH, ONT.

THORNCLIFFE Stock Parm

The largest stud of Clydesdales in Canada, headed by the Champion Stal-lion of all ages,

"LYON MACGREGOR."



Stallions and Colts

From the best blood in Scaland and Can Ayrshire bulls and helfers from imported stock.

Jersey heifers and bull of as, sired by the prize winning bull, Distinction's solden. Best milking strains, with good teats.

A visit to Thorncliffe will well repay you. ROBT. DAVIES, Thorncliffe Stock Farm, TORONTO.

CONTAGIOUS ABORTION

WEST'S FLUID

In several of the finest herds of prize stock in the country; but as it would injure the reputation of the breeders, they will not give written testimonials. These statements are facts.

Write for circular on this disease, specially prepared by a V. S. Headquarters for "STANDARD" Sheep Dip-Manufacturers: The West Chemical Company, Agents Wanted, om TORONTO, ONT.

Hillhurst Farm.

Scotch Shorthorns.

Scottish Hero and Joy of Morning.

BRED BY W. DUTHIE, COLLYNIE. Oldest Stud of Hackneys in America. Shropshire, Dorset Horn and Hampshire Down Sheep.

M. H. COCHRANE.

Hillhurst Station, Compton Co., P. Q.

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A reliable and speedy remedy for Curlys, Splints, Syavins, Sweeny, etc., etc., in Horses, and Lump Jaw in Cattle. "See pamphletwhich accommanics accommanics."

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first-prizes at Toronto and

London, and also a silver medal given by the English Hackney Horse

Hackney Horse
Society. Five
Clydesdale
colts, two coming 1 year old,
two coming
2 years old, one
coming 3 years
old. Also a
years old.

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any of the best Catalogues in Canada are oduced by us. Latest type faces, designs, naments, and modern machinery.—Best America. Up-to-date covers designed, special artists without extra charge.

London Printing & Litho. Company, Ltd., LONDON. ONTARIO.

SCOTCH SHORTHORN BULLS AND HEIFERS HERD ESTABLISHED IN 1872. res as imported Royal George and imported have put us where we are. Imported Blue now heads herd.

A. & D. BROWN. ELGIN COUNTY. -om IONA, ONTARIO.

H. SMITH, - Hay, Ont.

FOR SALE.

Exeter Station on G. T R., half a mile from farm,

W.D.FLATT,

Hamilton, Ontario, Can., Importer and breeder of

Shorthorn Cattle.



GOLDEN FAME (IMP.) -26056- (72610). My herd is one of the largest in America, both imported and Canadian-bred. A very choice selection of both sexes always on hand for sale. Personal inspection invited. Address all communications:

JAMES SMITH, Mgr., Millgrove, Ont. R. R. Station and Telegraph, Hamilton, on main line Grand Trunk RR.

John Miller & Sons, BROUGHAM P. O.

and TELEGRAPH OFFICE,

OFFER FOR SALE....

4 Imported Clydesdale Stallions. 10 Scotch-bred Shorthorn Bulls.

.... PRICES REASONABLE. Claremont Stn., Pickering Stn., G.T.R.

C.P.R. Correspondence Invited.

BonnieBurnStock Farm Forty rods north of Stouffville station, Ont., of-fers for sale Shorthorn bull calves and yearling heifers, Shropshire lambs and shearlings (both sexes), om D. H. RUSNELL, Stouffville, Ont.

SPRINGBANK FARM. Shorthorn Cattle, Oxford Sheep, and Bronze Tur-eys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

HAWTHORN HERD OF DEEP-MILKING SHORTHORNS. We are offering 5 young bulls for sale, of first-class quality, and A1 breeding. Wm. Grainger & Son, - Londesboro, Ont.

SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topsman = 17847 =, champion at Winnipeg, Toronto, London and Ottawa, 1899. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply



T. E. ROBSON, Ilderton, Ont.

SHORTHORNS.

One red bull, 21 months old; one 6 months old; also a number of heifers.

A. P. ALTON & SON,
Burlington Jet. Station. Appleby P. O., Ont.

PLEASE MENTION FARMER'S ADVOCATE.

NOTICE.

Windmill Bearings. To the Editor FARMER'S ADVOCATE:

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—We notice in your issue of May 15th a letter from Mr. Lawrence on the subject of windmill bearings, and, as we went into this subject very fully some years ago, are glad to give your readers the benefit of the result of our investigations as to whether roller bearings are or are not an improvement upon babbitt bearings. Let us say first, that we are thoroughly impartial in this matter. It is our interest to furnish, as it is the interest of every manufacturer, just exactly what the people want, always taking care that the machinery offered shall be in every particular the best of its class and most suitable for the work it has to do. Outside of this, there could be no possible reason on earth why any manufacturer should not furnish whatever class of goods are most in demand. The weak point about roller bearings is their inability to retain oil in a fluid state, and the necessity that consequently arises of frequently oiling them. Let us look into this further. If any of your readers will sketch a section of a roller bearing, he will see that the shaft is in contact with each roller at one point only, and that the rollers and the outer cases are also in contact at only one point in the circumference of each. Let us see how this works out in figures: Suppose a 1-inch shaft with 10i-inch rollers, running in a 1i-inch case, the circumference of the shaft is 3i inches, and the ten rollers 767 inches, and of the outer case, 45-7 inches, makes a total of 15-5-7 inches, and the ten rollers 76-7 inches, and of the outer case, 15-7 inches, makes a total of 15-5-7 inches, or a little less than 1i-6 of the total of the bearing surface. In other words, 5-6 of the lubricated surfaces is exposed to the air to get dry, gum up, and stick. What sort of a bearing is this to put on a windmill? Compare this with a good Babbitt bearing, where all the surfaces are in close contact and the oil is absolutely protected from the air, and also remember that the leading feature about windmills in

ment under all circumstances.

A year ago one of our roller bearing competitors published the following, and the original of this will be shown to any enquirer: "The introduction of the roller bearings is one of our innovations, and this innovation, like the bearing itself, will last as long as windmills are used." This is taken from a publication issued in March, 1899, just one brief happy year ago, and by the time they got through their first winter's experience, they wrote as follows: "Roller bearing prove very satisfactory for light work, but our mill is such a powerful machine that our customers have a powerful machine that we have not colled and after standing and the exposed surfaces getting dry and gummy, they run very stiff until olded a

H. CARGILL & SON,

CARGILL, ONTARIO.

The largest herd of Imported Scotch Shorthorn Cattle in Canada.

SEVENTY-SIX HEAD DURING 1899.

13 BULLS.

63 FEMALES.

A LL imported females of suitable age bred before leaving Scotland. Catalogue free, Correspondence or personal inspection invited, Address as above. Cargill Station half a mile from barns, on Grand Trunk Ry.; 70 miles north-west of Guelph.

Scotch Shorthorns and Shropshire Sheep

OFFER FOR SALE: 1 imported bull, extra good; 3 imported cows, with calves at their side and in calf again; 6 home-bred bulls, fr.m 5 to 15 months; 40 home-bred cows and heifers. All of breeding age have been bred to imported bulls. Our Shropshires have wintered well, and our lambs this season are a strong, thrifty bunch. 5 rams carried over from last season are in good shape. Correspondence or a personal visit solicited. Catalogues on application.

Burlington Junction Station and Telegraph Office, G. T. R., within half a mile

GOSSIP.

The F. W. Stone Stock Co. shipped on May 24th seventeen head of choice pure-bred Hereford bulls, cows and heifers to the Embar Cattle Co., Wyoming. These cattle were selected by Col. Jay L. Torrer, president of that company, during his two visits to Canada in May. The Stone Co. also shipped on June 5th to Qu'Appelle, N.-W. T., the Hereford bull, Gara Chief 4th. This is a very fine animal, and the kind suitable for the Northwest trade.

4th. This is a very fine animal, and the kind suitable for the Northwest trade.

Alex. Hume & Co., Menie, Ont., write:—"One of the most important recent sales of Ayrshires was a lot of four cows to W. E. H. Massey, Dentonia Park Farm, Toronto, all deep milkers and breeders of prizewinners, viz., Lady McNeill, an 3-year-old cow, granddaughter of old Viola III. imp., the cow that won so much fame in her day in the hands of Jas. Drummond, Petite Cote, Montreal. She is a heavy milker, carrying an udder of unusual size, and dam of 1st-prize bull calf under six months last year at Toronto, Kingston, and elsewhere. She had just dropped a very fine bull calf at time of sale, which we reserved. White Queen, a 6-year-old cow; her two calves that have been exhibited at Toronto when six months old, both won first prize, and we have her calf just dropped the day before she was shipped, which promises to make as good as any calf she has had. Pearline, a 4-year-old cow, herself a prize-winner at Toronto every year, except last year, when she was dry, and we did not take her out. Her dam was a prizewinner at the World's Fair at Chicago; her calf we also reserved. Eva, a 6-year-old cow, large, and heavy milker, had calved about a week before being shipped, and we also have her last calf, which is nicely marked and a strong one. These were selected by Mr. Ketchen as being a useful lot, as well as of choice breeding, and we feel sure he made a good selection, as all are heavy milkers and good breeders.

A BIG IMPORTATION OF SHORTHORNS.

A BIG IMPORTATION OF SHORTHORNS.

A BIG IMPORTATION OF SHORTHORNS.
From our Old Country exchanges we learn that Messrs. W. G. Pettit & Son, of Freeman, Ont., have purchased in Scotland for importation, about 70 head of Shorthorns, selected from a number of well-known herds, including those of Messrs. Marr. Cairnbrogie; Young. Tillbouries; Wilson. Pieriesmill; Simmers, Whiteside; Merson, Craigwillie, and Law, New Keig. We hope to give fuller particulars in a future issue of this, one of the largest importations in recent years. tations in recent years.

SHROPSHIRES AT HOME.

SHROPSHIRES AT HOME.

At the Shropshire County Show, held at Shrewsbury, May 23rd and 24th, the prizes for Shropshire sheep were awarded as follows: Shearling rams: 1 and 4. A. E. Mansell; 2 and hc, Mrs. M. Barrs; 3, R. P. Cooper; r and hc, W. F. Inge. Rams, any other age; 1, R. P. Cooper; 2 and hc, A. Mansell; r. A. S. Berry; hc, A. Bradburne, J. Harding; c. T. Fenn. T. S. Minton. Five shearling rams: 1, P. A. Muntz, M. P.; 2, W. F. Inge: 3, Mrs. Barrs; r, R. P. Cooper. Five shearling ewes: 1, W. F. Inge: 2, Mrs. Barrs; 3. A. Bradburne; 4, R.P. Cooper; r. P. A. Muntz, M. P. Five ram lambs: 1, A. Mansell; 2. J. Harding; 3, W. Thomas; r, G. L. Foster-Harter. Five ewe lambs: 1, G. L. Foster-Harter. 2. A. E. Mansell; r, J. Harding; hc, R. P. Cooper, W. Thomas.

A VALUABLE IMPORTATION OF SHORTHORNS,

A VALUABLE IMPORTATION OF SHORTHORNS, A VALUABLE IMPORTATION OF SHORTHORNS, Messrs. H. Cargill & Son, Cargill, Ont., write: "We landed safely at quarantine, Levis, Quebec, on the 17th May, 52 head of Scotch Shorthorns; 47 females and 5 bulls. They are a very promising lot, and we think probably the best we have imported. There are a number of prizewinners at the leading spring shows, both bulls and females. Their breeding is the best obtainable in Scotland, and all were selected by Sylvester Campbell, of Kinellar, a thorough judge of Shorthorns, both as regards individuality and pedigree. The following celebrated prizewinning bulls are represented in the lot, by their get or blood, viz.: Pride of Yame (73238), Marengo (69068), Prince of Rettie (71248), Clan Alpine (60485), Waverly (68972), Royal Star (71502), Brave Archer (70018), Prince of Archers (71240). Craibstone (66885), etc., etc. These cattle will reach home about ist of August. Catalogues will be issued in due course, and will be mailed free to any address upon request. unassailable.
Thanking you for the space you have given us, and with best wishes for the success of your valuable publication, we remain, Yours truly.

Ontario Wind Engine & Pump Co., Ltd.

August. Catalogues will be issued in due course, and will be mailed free to any address upon request.

PLEASE MENTION FARMER'S ADVOCATE.

PLEASE MENTION FARMER'S ADVOCATE.

Maple Lodge Stock Farm

ESTABLISHED 1854.

SHORTHORNS—An excellent lot of young

LEICESTERS—Imported and home bred-

ALEX. W. SMITH.

MAPLE LODGE P. O., ONT. SHORTHORN CATTLE

AND LINCOLN SHEEP:
Imp. The Baron at head of herd. Seven you builts for sale—good once. Also a few females. Seven all imported from H. Dudding, Eq.; the selection of the sale of the selection o

J. T. GIBSON,

DENFIELD, ONT. SALE: 50 Shorthorns of all ages and both sexes. Founded on

good Scotch-bred cows, upon DAVID MILNE, which have been employed Scotch bulls for 20 years. - ETHEL, ONT.

Scotch Shorthorns

Strathroy Station : Farm 1 mile north of the town.

Pure Scotch Shorthorns for Sale. Two bulls and fifteen months old, and three two-year-old and two one-year-old heifers. All right. Good ones. Meadowa's station, C. P. R. S. J. PEARSON & SON, Meadowvale.

5--Shorthorn Bulls--5

From 9 to 15 months. Also a few choice year-ling and 2-yr-old heifers, among which are grand, thick-fleshed and choicely bred animals, mostly solid red colors. Speak quick, for they will not last long.

PVILLE STATION, G. A. BRODIE, BETHESDA, ONT.

& S. NICHOLSON SYLVAN P. O., PARKHILL STATION.

Scotch Shorthorns, imp. and home-bred.
The Imp. Clipper bull, Chief of Stars, heads the herd.
Eight extra good 2-year-old heifers for sale, in calf to
Chief of Stars (72215). Inspection Invited. JAS. DORRANCE,

SEAFORTH, ONTARIO,

Shorthorn Cattle and Berkshire Pigs Young stock always for sale.

Scotch-topped

SHORTHORN BULLS 8

O And a few females, sired by Revenue and Bonnie Lad. a son of (imp.) Blue Ribbon.

JUI

FOR SALE:

Six choice young Shorthorn bulls—bargains for quick sale. A few heifers could be spared,
-0 E. JEFFS & SONS, Bondhead, Ont.

SHORTHORNS

Cows and heifers, some of them the same family as the first and second prize cows at Provincial Dairy Show, F. MARTINDALE, York P.O., Ont

Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale. Herd headed by imported Christopher 28859, and Duncan Stanley = 16361 =. Grand milking cows in herd. Also a number of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS. CALEDONIA, ONT.

ASHTAN FRONT VIEW STOCK FARM.

Four Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome. A. J. WATSON, Castlederg, Ont. C. P. R. Station and Telegraph Office, Bolton; or G. T. R.,

Shorthorn Bulls

FROM 8 to 17 months old.
Red; in good condition.
Also thick young cows, bred to Imp. Prince William. R. MITCHELL & SON,

SYDNEY FISHER. 17-y-o ALVA FARM, KNOWLTON, P. Q.

Herefords for Sale

Choice young bulls, from 1, to 2½ years old, and show bull, 3 years. Also Moreton Lodge Farm,

Plains Farm, Arkell, Containing from 200 to 250 acres each

The F. W. Stone Stock Co., GUELPH, ONT., CANADA.



75 HEAD

Herefords

Producers of Money makers in the feed lot.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. H. D. SMITH, COMPTON, QUE.

Kicking Gows.

Stop your cows kicking, increase the flow of milk by the use of

SORE TEAT SALVE.

Positively prevents chapped teats, warts, and caked bag or udder. Price, 25c., 50c., and \$1, per tin.

WM. MOLE, Veterinary Surgeon, 443 Bathurst St., TORONTO

DON JERSEY HERD.

Offering choice young Bulls and Heifers by Costa Rica's Son.

DAVID DUNCAN,

DON, ONTARIO. Nine miles from Toronto Market. -0

ST. LAMBERT OF ARCFOST 36943 whose sire was 100 Per Cent.; dam St. Lambert's Diana 69451. Official test, 18 lbs. 6 ozs. in seven days. A few choice young bulls and heifers rich in his blood, from deep and rich milking dams, for sale at moderate prices. Tuberculin tested. H. E. WILLIAMS. Sunnylea Farm.

FOR SALE:

Jersey bulls from tested and prizewinning dams, and sired by our champion bull. They are fit to head any show and dairy he d. Also a number of young A. J. C. C. cows, and a few unregistered cows and heifers—grand family cows. Write now for prices, stating what you want.

B. H. BULL & SON, Brampton, Ont. G. T. R. & C. P. R. Stations, 20 miles from Toronto.

GOSSIP.

At a sale of 24 registered Jerseys, property of C. L. Boyer, Finleyville, Pa., May 22nd, an average of \$69.50 was made. The bull, Oonan's Tormenter Lad, and a cow sold for \$170 each, and another cow at \$145.

Five breeders of Jersey cattle in Indiana and Ohio contributed to a list of animals included in an auction sale at Indianapolis, May 21th, which was fairly successful, fifteen head selling at prices ranging from \$100 to \$185; the fine cow, Ruth d'Or, going to Judge Bradbury, of Ohio, for the latter price.

Mr. Richard Gibson, Delaware, Ont., shipped on June 11th, 12 Shorthorns selected from a number of Ontario herds, including his own, for the stock ranch of Mr. W. E. Cochrane, at High River, Alberta. The stock went out in one of the Breeders' Association shipments, in charge of Mr. Ed. Forster, of Brampton.

At the auction sale of range-bred Herefords from the San Rafael ranch of Mr. Colin Campbell, Lochiel, Arizona, held at Kansas City, May 15th, 87 head sold for an average of \$145.45. From the fact that the cattle were branded, under size, and in ordinary flesh, the sale was a remarkable one. The range of prices was from \$85 to \$200. All were females except bull calves

At the dispersion sale, on May 22nd, of the herd of Galloways belonging to the estate of the late Mr. James Cunningham, Tarbreoch, Dalbeattie, Scotland, 40 head made an average of £31 5s. 1d., the highest price being 80 guineas for the 7-year-old cow, Dora of Drumhill, bought by Mr. R. Wilson, of Kilquhanty. Major Wedderburn-Maxwell, of Glenair, got Maggie Lauder II., a 3-year-old cow, at 60 guineas, and Mr. Graham, of Edengrove, the 2-year-old heifer, Miss Emily 3rd of Durham Hill, at 40 guineas.

Hill, at 40 guineas.

Brethour & Saunders report the Oak Lodge herd of Yorkshires in fine condition, with sales very numerous and prospects very bright for a heavy fall trade. They have on hand over three hundred pigs, of different ages, and can supply any age that customers may require. The Oak Lodge Yorkshires are bred upon sound principles. Easy-feeding qualities, and the ideal bacon hog have been the objects sought in the building up of this herd, and these characteristics are now firmly fixed in the produce of this herd, and they are now generally known as the Oak Lodge type. See their change of advertisement in this issue.

At the annual sale of Shorthorns from the herd of Mr. J. Wood, of Williamsport, Ohio, on May 2tth, 47 head sold for an average of \$208.20; 34 females averaged \$217.05, and 13 bulls, \$184.60. The highest price, \$500, was paid for Imp. Golden Wreath 9th, a roan 2-year-old heifer, by A. Alexander, Morning Sun, Iowa. The same price was paid by R. M. Lawson, of Virginia, for the red-roan 3-year-old bull, Young Victor, by Victor of Browndale.

The imported Jersey cows illustrated in this

Young Victor, by Victor of Browndale.

The imported Jersey cows illustrated in this issue represent two of the animals included in Mr. Cooper's recent great sale of Jerseys. The 2-year-old Golden Sultanne, the highest-priced animal in the sale (\$1,600), was photographed some ten days before calving, and her udder development was not then nearly as great as on the day of the sale, when it is said to have been immense for a heifer of her age. Her sire was a double grandson of the noted Golden Lad, and her dam, Sultanne 9th, a first-prize winner over the Island of Jersey. The 3-year-old cow, Golden Lad's Solid Gold, the third highest-priced cow (\$1,000), was photographed with her first calf. Her form and udder is that of a cow well along in years, and is really phenomenal. She is a daughter of Golden Lad, 1st prize-over the Island, and sire of the bulls winning 1st over the Island in the last nine years with the exception of two years, when his sons won second and third prizes.

The American Southdown Breeders' Asso-

The American Southdown Breeders' Association, in annual session, was represented by a larger membership than for a number of a larger membership than for a number of years. The financial reports show that during last year the business of the Association greatly exceeded that of any previous, and the prospects for increased business and prosperity during the coming year was never brighter. Rules of entry were so amended that an animal may be recorded in the name of its owner at time of registry instead of in the name of its owner at time of birth; penalty fees for registry by members was made \$1.50 instead of \$1.50, for registry made after July first of the year following birth; and registry fees for imported animals was made the same for animals bred in the United States and Canada. It was decided that a meeting of the Association be oren in the Clinest states and Canada. It was decided that a meeting of the Association be held in Buffalo.N.Y.,during the Pan-American neid in Bullaio.N.Y., during the Pan-American Exposition. Officers were elected as follows: President—Jerome A. Leland. Springfield, Ill.; Secretary—Juo. G. Springer, Springfield, Ill.; Treasurer—Harry H. Devereaux, Springfield, Ill. Vice-Presidents for Canada: J. T. Wilkinson, Chilliwack, B.C.; T. C. Douglas, Galt, Ont.; Hon. Geo. A. Drummond, Montreal.

Hon. Geo, A. Drummond, Montreal.

A. D. Foster, Halloway, Ont., writes:—"I have some very fine Holstein calves, dropped this spring. Amongst them is the 3-months-old Keyes Count Pietertje, a son of that noted cow, Maggie Keyes; also a fine bull calf from Helena Hengerveld De Kol. This young cow was sired by Manor De Kol. and I feel safe in saying is the strongest bred De Kol cow in Canada, as her dam and grandam are both sons of De Kol 2nd: also a fine bull calf from Pride of Pietertie. also a fine bull calf from Pride of Pictertje. This young cow's milk in a recent test showed 3.4 per cent. fat. My sales have been good of late. Sir Pietertje Burkey De Kol went to James Harriot, Souris, Manitoba, and Sir Pietertje Pride to Mr. G. A. Ross, Foxboro, Ont.; also one cow and heifer calf to Mr. Morley H. Shibley, Chatterton, Ont. The old stock bull, Sir Pietertje Josephine Mechthilde, will be exchanged with Mr. B. Mallory for his imported bull, De Kol King. His dam is Woodland Bell, and he is sired by De Kol Artis. If you have any stock to sell, advertise in the Advocate and you will sell it. 2nd : also a fine bull calf from Pride of Pietertje

DIAMOND JUBILEE WINS THE DERBY. DIAMOND JUBILEE WINS THE DERBY.

The Prince of Wales' horse, Diamond Jubilee, won the Derby race and stakes of 6,000 sovereigns at Epsom, May 30th, 1900. He is full brother to the Prince's horse Persimmon, which won the same trophy a few years ago, and is a son of St. Simon and Perdita. The Duke of Portland's Simondale, also by St. Simon was agond in the race.

Simon, was second in the race,



NORTH NATION MILLS, P. Q.

Ayrshires, Jerseys, Shropshires, Berkshires

Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Fawn's Son 2nd of St. Anne's heads the Jerseys. The young stock are all from time tried dams.

AND COMPANY.

IMPORTERS AND BREEDERS Laurentian Stock and

Pine Grove Stock and Dairy Farm,

Stock Farm.

ROCKLAND, ONTARIO.

Scotch Shorthorns and Shropshires. The imported Missie bulls, Marquis of Zenda and Scottish Pride, at the head of herd, assisted by British Knight. We have a few extra good young bull calves that will be ready for the coming

JOS. W. BARNETT, Manager,

We can be reached either by steamboat, the C. P. R., or C. A. R.; the C. A. R. making connection with the G. T. R. at Coteau Junction. Rockland is our station on all lines.

Ayrshires and Yorkshires.

A. E. SCHRYER, Manager.

We now offer 2 yearling BULLS, bred of heavy wilking dams, and are light-colored. A few choice Feb., 1900, bull CALVES of same breeding and in good shape. We could fill a limited number of orders for FEMALES. In Yorkshires we offer 1 yearling boar and 2 six months old, also young pigs of either sex. Prices very reasonable to quick buyers. Correspondence solicited.

Hoard's Station, G. T.R. ALEX HUME & CO., Menie, Ont.



BREEDER OF -Jorsey Cattle (St. Lamberts). Some fine young bulls for sale at farmers' prices, if taken at once. Also Cotswold sheep.

GLEN ROUGE JERSEYS.

WILLIAM ROLPH, Markham, Ont., offer twelve Jersey Bulls and Heifers (pure St. Lamberts) out of tested cows. Grand individuals. Prices right

JERSEY CATTLE

That will put

Money in your pocket.

MRS. E. M. JÓNES,

Brockville, Ontario, Can,

JERSEY BULLS.

High-class show bull, Prince Frank's Son 48758, A.J.C.C., 3 years old. Ist prize at Western Fair, London, as a calf, and as a yearling. Probably the best show bull in Canada to-dav. Sire 3 times a sweepstakes winner at Western Fair; dam a pure St. Lambert, Also yearling bull, St. Lambert of Ettrick 55395, A.J.C.C. Handsome and richly-bred. Also handsome bull calf, eligible to register. Price right for quality. Come and see, or write.

W. G. LAIDLAW. Wilton Grove, Ont.

3 Holstein-Friesian Yearling Bulls FOR SALE

Prices right. Apply to
WILLIAM SUHRING, Sebringville, Ont

For Sale:

The Holstein bull calf. Keyes Count Pietertie, nov 3 months old. Price, \$75. His dam is Maggie Keyes. She has the second largest three-year-old milk record for one year in the world; also a butter record of 26§ lbs. in 7 days. Also a bull calf from a daughter of Manor De Kol.

A. D. FOSTER, Halloway, Ont.

BROOKBANK

Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred. GEO. RICE, Currie's Crossing, Ont Oxford Co.

Maple Glen Stock Farm.

The home of officially tested, Advanced Registry, dairy test and showring win HOLSTEINS. A grandson ning herd of Sylvia HOLSTEINS. cf Carman Sylvia now for sale. Price is in keeping with breeding and performances. C. J. GILROY & SON,

Brockville, on C.P.R. or G.T.R. Glen Buell, Ont

MAPLE HILL HOLSTEIN-FRIESIANS

Three Yearling Heifers, sired by Colanthus Abbekerk 2nd, and in calf to Daisy Teake's King (brother to Daisy Meake's Queen, the great test and show cow).

Three Bull Calves, sired by De Kol 2nd's Paul

De Kol Duke, the great butter-bred bull; dams, the fine show cows, Lady Akkrum 2nd, Cornelia Artis, and Madge Merton.

G. W. CLEMONS, St. George, Ont.

WE WANT TO SELL A FEW Holstein Heifers, coming 2 years old

THEY are of the or a few young Cows. largest producing strains, fine individuals, and bred to as good bulls as there are living. We have a few bull calves and yearling bulls also for sale.

HENRY STEVENS & SONS.

Wm. Willis, NEWMARKET, YORKSHIRES AND HOLSTEINS:

Boars and sows, not akin, from 2 to 6 months, from prizewinners at Toronto and local shows. A 3-year-old bull, of the Tirania family; and young stock at

R. HONEY, Warkworth, Ont.

KEEP THE BOYS ON THE FARM BY sending them to Meadowside Farm, Carleton
Place, to see J. Yuill & Sons' stock. Eightyfour Ayrshires, second to none in the world for milk
production Thirty-two Shropshire ewes and two
rams which are from prizewinning stock. Fourteen
Berkshires of the bacon type; and a grand flock of
B. P. Rocks. Also two good Collie pups, 4 weeks old.
J. YUILL & SONS, Props., Carleton Place.

Maple Cliff Dairy and Stock Farm.

Breeders of FOR SALE: AYRSHIRES, 1 yearling and 6 bull calves from 2 to 8 months old. TAMWORTHS, Boars and sows, 6 to 8 months old,

Improved and sucking pigs.

BERKSHIRES. Booking orders for young pigs. and sucking pigs.

R. REID & CO., Hintonburg. Farm 1 mile from Ottawa. Electric cars to farm. on

Ayrshire Bull Calves of 1899

One bull 5 months and young calves 2 to 3 weeks, from some of our best imported cows. Will sell at

ROBT. HUNTER, Manager to W. W. Ogilvie. LACHINE RAPIDS, om N

AYRSHIRE CATTLE.

KAINS BROS., Byron, Ont. (R. R. London) re offering a number of grand young bulls, prize are offering a number of grand young bulls, prize-winners; also a few choice females. Prices right.

WM. WYLIE Importer and Breeder of High-class Ayrs The winnings of this herd last season (1889) were 37 prizes, 17 of them being firsts; also gold and silver medals at the leading fairs in Canada. The sweepstakes at Toronto, London and Ottawa belong to this herd—one imported bull, 13 imported females and a number of A1 home-bred animals. A few choice cows, heifers and calves for sale at moderate

WM. WYLIE, Howiek, P. Q.

SHROPSHIRE RAMS AND RAM LAMBS

From Tanner, Minton and Bradburn foundation. Uniform and first-class in quality, size and covering. ESTATE JAS. COOPER, Kippen, Ont.

EUROPEAN ADVERTISEMENTS.

FAMOUS ALL OVER THE WORLD. ALFRED MANSELL & CO., LIVE STOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to ALFRED MAN-SELL & CO., Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont.,

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. 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. PLEASE MENTION FARMER'S ADVOCATE, Cables - Sheepcote, London.

DUNDED 1866

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OLSTEINS :

kworth, Ont.

THE FARM

e Farm, Carleton, stock. Eighty-he world for milk re ewes and two stock. Fourteen I a grand flock of oups, 4 weeks old. arleton Place.

Stock Farm.

oull calves from 2 6 to 8 months old, or young pigs.

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Howiek, P. Q. RAMS

MBS

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SEMENTS. HE WORLD.

& CO.,

EXPORTERS,

hipped to all parts
ALFRED MANd, or to our AmeriStouffville, Ont.,

l Sheep Breedt or Romney Association,

he Southdown

t, Exporter and gistered stock ported on com-nd all enquiries

JSE, ARUNDEL ONDON W. W.

Kippen, Ont.

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ER, UNE RAPIDS. EUROPEAN ADVERTISEMENTS.

HAMPSHIRE DOWN SHEEP.

GREAT ENGLISH

Pedigree Sales

July, August, and September, 1900.

WATERS & RAWLENCE, Salisbury, Eng. Will sell by auction during the season

50,000 PURE-BRED EWES, LAMBS and RAMS.

Including both rams and ewes from the best regis-tered prizewinning flocks in the country. Commis-sions carefully executed. Address:

Waters & Rawlence SALISBURY, ENGLAND.

The Danesfield Pedigree Stock

IMPORTERS desirous of securing selections of either Shire horses, Aberdeen-Angus cattle or Hampshire Down sheep should inspect the stud, herd and flock, property of Mr. R. W. Hudson, which are kept in the highest degree of purity that care and selection can produce, at Danesfield, Marlow, Bucks, England. Specimens of horses, cattle and sheep have been largely exhibited at the principal English shows during 1899 with very prominent success. For full information, etc., apply:

MR. COLIN CAMPBELL.

ESTATE OFFICE,

DANESFIELD, MARLOW, BUCKS, will be happy to make arrangements for inspec-tion, or to quote prices.

CASSWELL, Laughton, Folkingham, Lincolnshire,

breeder of Lincoln Long-woolled 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 Ram Sale," 1895 and 1897. The 1896 rams were all sold for exportation. Ram and ewe hoggs and shearlings for sale, also Shire horses, Shorthorns, and Dark Dorking towls. Telegrams: "Casswell, Folkingham, Eng." Station: Bilingboro, G. N.-R.

Shropshire Rams and Ewes

Newly imported from the greatest English breeders. Home-bred rams and ewes of best quality. Scotch Shorthorns and Clydesdale horses for sale at moderate prices, and in large numbers, by

ROBERT MILLER, STOUFFVILLE, ONT

IMPORTATION

Of Shropshires for Fairview Farm in July. Our D. J. Campbell will select and import. Only choice rams and ewes will be brought out. Tis the good ones that please customers first and last.

We breed them and import them.

Orders can now be booked for imported stock, and some good rams are now at Fairview. JOHN CAMPSELL. Woodville. Ont., Canada.

Shropshires...

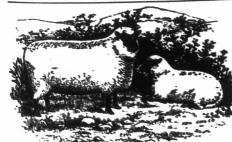
Ram lambs for sale, at reasonable prices.

GEORGE HINDMARSH, AILSA CRAIG, ONT.

Oxford Down Sheep

Flock Established 19 Years. Animals of all ages and both sexes for sale, reasonable. Rams to head flocks a specialty. HENRY ARKELL.

ARKELL P. O., ONT. Guelph: Telegraph and Telephone.



GOSSIP.

PIGS AT OXFORDSHIRE SHOW.

At the Oxfordshire Show, held at Oxford, May 16th and 17th, Berkshires made an admirable display, especially in the senior boar and breeding sow classes. There were ten entries in the class for boars of a year old and upwards, headed by Mr. Russell Swanwick's Sambo, which won also the champion prize as best Berkshire pig exhibited. The boars of Lord Carnarvon and Mr. Hudson, placed next to him, were also of grand character, and it was the subject of remark that the high excellence of the class has seldom been surpassed at any show. The junior boars were a creditable lot also, the winners of Messrs. Jefferson, Swanwick, and Fricker deserving their positions. The breeding sow class had no fewer than twenty-three entries, ten of which were noticed. Mr. Henderson came to the front with Buscot Stumpy, of Mr. Swanwick's breeding; Mr. Hudson being second, and Mr. Hayter third. They were all deep, well-shaped animals of excellent flesh, several of the others being highly deserving. There were five pairs of sows under nine months, those of Messrs. Fricker, Tomkin, and the Earl of Carnarvon being selected. The pens of pairs littered this year were thirteen, six of which received notice. Mr. Hayter's pen was at the top, Mr. Jefferson winning the other two prizes.

The other department for any pure breed except Berkshires was limited to two classes. That for boars had five entries, and Mr. Sanders Spencer won both premiums with his fine, deep Large White Holywell Royalty 2nd, and his Holywell Rosador, of the Middle White Breed, of remarkably high quality. He also carried off first prize for breeding sows with a nice Middle White specimen, Holywell Middlesboro' 2nd; Mr. F. Allmand getting second premium with his Large White Wrexham Venus. The champion prize for best sow of any breed exhibited was won by Mr. Henderson's Berkshire Buscot Stumpy.

NOTICES.

Given Best of Satisfaction, Keyser, W. Va., Oct. 10, 1899.

The Lawrence Williams Co., Cleveland, Ohio: Please send some advertising matter for your CAUSTIC BALSAM. I have sold several bottles, and it has given the best of satisfaction. I was the first one around here to carry it in stock. Please send some cards, banners, etc.

it in stock. Please send some cards, harders, etc.

Eggs in Cold Storage is the title of a well gotten-up pamphlet prepared by Madison Cooper, Minneapolis, Minn. It contains some 88 pages, divided into seven chapters, headed as follows: Temperature, Humidity, Circulation, Ventilation, Absorbents, Package, and Remarks. The various phases of the subject are dealt with in a practical and scientific manner, and presented in an interesting form. Among other things dealt with, it is pointed out that eggs should be gradually cooled to a cold storage temperature and warmed gradually when taken from the storage, because sudden changes of temperature have a detrimental effect on the welfare of the egg. The best temperature in which to keep eggs for an extended period is about 30 degrees Fahr. The pamphlet sells for 10 cents, and is worth more to those who are interested in refrigeration for eggs.

to those who are interested in refrigeration for eggs.

Long-Established and Progressive. — We have received from the Sawyer & Massey Co., of Hamilton, Ont., a copy of their 6th annual catalogue, descriptive of threshing machinery and engines, certainly one of the most useful and attractive ever issued by that old and reputable establishment. The engravings are very clear and fine, giving an accurate, but not overdrawn, idea of the merits of their machinery, and particularly the nature of its internal construction, and of such modern features as the popular pneumatic stacker, grain elevators, baggers and self-feeders. We have no hesitation in commending a study of this catalogue to our readers. This Company also makes a specialty of high-class roadmaking machinery, such as graders, stone crushers and rollers, for which there is now a great and growing demand by municipal corporations, as well as individuals. Copies of catalogues, with any other particulars desired, may be promptly obtained from the Company.

Larimer Ditching Plow. — There are few

any other particulars desired, may be promptly obtained from the Company.

Larimer Ditching Plow.—There are few localities where some underdraining is not needed, and few farmers who will not admit this to be a fact. Many low-lying and springy spots that produce little year after year, and also hinder operations in the remainder of the fields in which they are situated, would have been drained years ago had not the task seemed too great. Men in such positions—and there are many—will welcome the Larimer ditching plow, manufactured by Scott Bros., Williamstown, Ont. This implement, which was advertised and illustrated in our June 1st issue, is destined to fill a long-felt want, as it makes the difficult and expensive part of ditching cheap and easy by having the work done by horses. There is yet time to get one of these plows and put 100 rods of drain in the field for turnips, without delaying the sowing unduly late. At any rate, ditching, as well as subsolling, can be done in the fall at a rapid rate, and thus prepare wet, sour spots to blossom as the rose and yield abundantly in 1901 and following years.

Soiling Crops and Ensilage.—Having had

wet, sour spots to blossom as the rose and yield abundantly in 1901 and following years.

Soiling Crops and Ensilage—Having had many years of satisfactory experience with the practice of soiling stock, Mr. F. S. Peer, the well-known dairy stock authority and writer, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, and the well-known dairy stock authority and writer, has put into form a new book on agriculture, has put into form a new book on agriculture, has put into form a new book on agriculture, and well-known dairy stock authority and writer, has put into form a new book on agriculture, and well-known dairy stock authority and writer, has put into form a new book on agriculture, and well-known dairy stock authority and writer, has put into form a new book on agriculture, and the well-known dairy stock authority and writer, has put into form a new book on agriculture, and the practice of soiling stock, Mr. F. S. Peer, the well-known dairy stock authority and writer, has put into form a new book on agriculture, and the practice of soiling stock, Mr. F. S. Peer, the well-known dairy stock authority and writer, has put into form a new book on agriculture, and the practice of soiling stock, Mr. F. S. Peer, the well-known dairy stock authority and writer, has put into form a new book on agriculture, and the practice of soiling stock, Mr. F. S. Peer, the well-known dairy stock authority and writer, has put into form a new book on agriculture, and the practice of soiling stock authority and writer, has put into form a new book on agriculture, and the practice of soiling stock authority and writer, has put into form a new

Summer Hill Herd



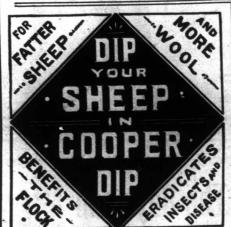
The largest herd of pedigreed Yorkshires of the large English type in Canada, Purity of breed, size, and general excellence is my motto. One hundred awards with one hundred and five exhibits at 7 shows in 1899. A choice selection of young boars and sows of all ages for sale; also boars fit for service, and pregnant sows. Fifty breeding sows, of which 25 (twenty-five) are imported; also three imported stock boars bred by such noted breeders as Sanders Spencer and Philo L. Mills. Am also using two Canadian-bred stock boars, first prize at Toronto in 1896-99. Express charges prepaid. All stock carefully shipped and guaranteed as described. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont. D. C. FLATT, MILLGROVE, ONT.

Ayrshires, Guernseys, Yorkshires and Shropshires are our leaders.



ALL high-class, pedigreed stock. Those desirous of purchasing thoroughbred animals should write for particulars at once. Orders booked now in rotation for present and future deliveries. Address-

ISALEIGH GRANGE FARM, Danville, Quebec. T. D. MCCALLUM, MGR. J. N. GREENSHIELDS, PROP.



Superior to all liquid Dips.

25-gal. pkt., 50 cts.; 100-gal., \$2.00. If druggist annot supply, send \$1.75 for 100-gal. pkt. to

EVANS & SONS, Montreal or Toronto.

n application to-COOPER & NEPHEWS, 142 Illinois St , Chicago.

Write for pamphlet.

LITTLE PATENT FLUID (NON-POISONOUS) SHEEP DIP AND CATTLE WASH

THE ORIGINAL

Non-Poisonous Fluid Dip

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

For sheep.

Kills ticks, maggets; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

Cattle, horses, pigs, etc. Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection. No danger, safe, cheap, and effective

Beware of imitations.

Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET.

Robert Wightmam, Druggist, Sound. Sole agent for the Dominion. -om

PLEASE MENTION FARMER'S ADVOCATE, BOX 290. Om WOODSTOCK, ONT

SMITH EVANS, GOURGER,

Breeder and import-er of registered Ox-ford Down Sheep. Se-lections from some of the best flocks in Eng-land. Stock for sale at reasonable prices. Inspection invited. 6-1-y-0



Spring Brook Stock Farm.

rive choice september pigs by imp. Whitacer Crystal, Royal winner. One choice sow in farrow. Young pigs, pairs and trics, not akin, from imported prize winning boars. Stock of best quality. Prices right. Write at once for prices.



WATERLOO CO. -O NEW DUNDEE, ONT.

Snelgrove Berkshires.



SNELL & LYONS.

SNELGROVE, ONT.

Large English Berkshires.

sows from imp, prizewin-ning sires and dams. Write for prices. O H. BENNETT & SON, St. Williams, Ont

Berkshires and Tamworths

My herd has Varna Duke and Manor Lad'
Berkshire at head, with equally well-bred sowa.

My have the blood of imported Nimrod,
Middleton Mimulus, and O. A. C.
Tamworths 110 (the silver medal sow at London
in '96), her son Parkhill Prince, and Nimrod
imp. at the head. Write for what you want
W. I. TUMELTY, Madoc, Out,



Berkshiles Large, lengthy, English type.
Spring pigs ready for shipment. Boars fit for service.
Sows ready to breed. GEORGE GREEN.



H. J. DAVIS.

GOSSIP.

The American Oxford Down Record Association offers the following special cash prizes to Oxfords this year: \$250 at the International Exhibition, Chicago; \$50 at the Provincial Fat Stock Show, Guelph; \$30 at each State Fair in the U. S., and each Provincial Fair in Canada, where the Oxford breed is allowed a separate class.

separate class.

A consignment of Oxford Down sheep have recently been selected and shipped by W. W. Chapman, of Fitzalan House, Arundel street, Strand, London, to the order of Messrs. H. Cargill & Son, of Cargill, Ontario. These are field sheep in store condition, and the measure of their quality and breeding can readily be seen from the list of their sires, among which is Jubilee Blazer, bred by W. J. Treadwell, and purchased at \$425 in 1897; Young Jumbo, bred by Mr. J. T. Hobbs, from whose noted flock the whole consignment was selected, was first-prize two-shear ram at the Maidstone Royal Show in 1899. This ram was by Jumbo, for whom Messrs. Hobbs gave W. J. Treadwell \$500.

Experience has proven to the satisfaction of hundreds of breeders that it pays to advertise their stock continuously, and that a constant appearance of one's business before the public is better than intermittent efforts. A breeder should have his name 'and his herd name in the advertisement whether he has anything special to offer for sale or not. This keeps him in the mind of buyers, who are more likely to remember him when they want anything in his line of breeding than one who only advertises occasionally—the regular advertiser becomes a sort of acquaintance. Advertising is also cumulative—that is, it spreads a breeder's reputation over a wider field from year to year, as new readers are yearly added to the list of a paper's subscribers, and his name thus becomes a household word in thousands of homes over a territory even greater than the circulation of the medium used, because it is talked of by those who read to at least as many more.

many more.

Mr. J. P. Harsha, of Kansas, in a letter to Mr. Frank B. Hearn, Secretary of the Galloway Breeders' Association, writes: — "In February, 1894, I purchased fifty-six Galloway heifers, not recorded, but most of them eligible; all were bred to registered bulls, and brought and raised fifty-four calves. I bought a bull, McBeth of Lyon, from E. W. Thrall. I used him five years on the original fifty-six cows, and raised 259 head of cattle. I bought another bull from Guy McCandless, Chase County, Kan., to use on the old bull's heifers, and from them I had equal success. My business being such that I had to close out my stock business this spring, I have sold everything but 125 calves one year old. These I will' pasture until fall and sell them. Sales to date run a little over \$21,000, and I expect to get about \$4,500 for the 125 head, making over \$25,000 worth of cattle raised and sold in six years. I raised enough hogs to pay running expenses, and also pay the original cost of cows.

worth of cattle raised and sold in six years. I raised enough hogs to pay running expenses, and also pay the original cost of cows.

Under date of May 30th Messrs. H. Cargill & Son, Cargill, Ont., write:—"Our Shortborns have come through the winter remarkably well, and are about to go out on the grass in good breeding condition. Sales have been numerous during the winter season, especially so for heifers and cows in calf or with calves at foot, consequently we have not so many calves about as we had expected to have. During the season just closed we had 43 calves come on the farm, the last one arriving on the lith May, only 20 of which we still have. They are a beautiful lot, and sired by such bulls as Count Sunbeam (74303, a grandson of Scottish Archer (3983), bred by Mr. Duthie; Silver King (75632), a Marr-bred Roan Lady, by Wanderer (60136), a Cruickshank bull, the sire of the 330 guinea bull, Scottish Champion (7538); Silver Plate (75633), the best of the bull calves of 1898 in the first-class Inverquohomery herd of Mr. Bruce, a Rosewood, sired by Waverley (68072), sold by Mr. Duthie to J. Deane Willis, of Bapton Manor, at a long price, by whom he was shown at Newport this spring, winning first prise in a strong class of 16, containing the first prise in a strong class of 16, containing the first prise Birmingham bull and other cracks. Lovat Champion (74948), by Lord Lovat's great breeding bull, Royal Star (71502), whose get were the winners at all the spring shows this spring, and sold for an average considerably over £100. Mr. Duthie has repeatedly refused yery tempting offers for this bull, the strongest possible evidence of his estimation of him. Soottish Champion (7598), the highest priced bull at the Duthie-Marr sale of 1898, bred by Mr. Marr, and sought by Mr. Duthie at 330 guineas, sired by the Cruickshahk bull Wanderer (90138). Bapton Conqueror (7381), Mr. Duthie's choice of Deane Willis' crop of calves of 1898, out of which the Royal winner, Bapton Emperor (73982), was afterwards drawn, count Arth



"NATIONAL" NO. 1 HAND POWER.

THE National is an up-to-date machine, leading all others in separating cream by centrifugal force. It is the farmers' choice, because it runs easy, skims fast and clean, and makes a perfect cream, containing any per cent. of butter-fat desired. It is also easier to clean than any other. The National is built of the very best material suitable for the construction of a high-speed machine, and with proper care should last a lifetime. The bearings are interchangeable and easily adjusted. Every machine is guaranteed to do good work, and a trial of the "National" is solicited before purchasing any other. The already large sale of the "National" and the growing demand for it, shows how much the Canadian farmers appreciate a Canadian-made machine that does its work so easily and well, and at the same time returns such a large profit on the small investment. Ask for the "National"; try it and buy it.

THE CREAMERY SUPPLY CO.,

GUELPH, ONT.,

MESSRS. CAMPBELL & GLENN,

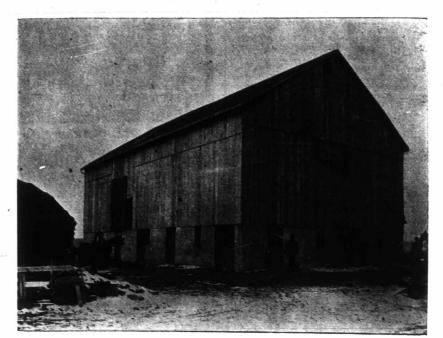
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Agents for the Counties of Middlesex and West.

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GOOD BARN.

With walls 11 feet high, and arched root-house under driveway. Walls



Barn of John McFarlan, Leesboro, Ont. Size, 50×80 feet; w lls 11 feet high. Walls and Floors built with Battle's Thorold Cement.

READ WHAT MR. MCFARLAN SAYS:

ESTATE OF JOHN BATTLE, CEMENT MANUFACTURERS, THOROLD, ONT.: LEESBORO, ONT., DEC. 22, 1889. Dear Sirs,—It is with pleasure I testify to the good qualifies of your Thorold Cement, having used it in building the concrete walls of my barn, size 50 x 80, walls 11 feet high, with root-house under driveway 11 x 42 feet, arched roof. The work was done under the supervision of Mr. Walter Lambert, and the floors under Mr. N. B. Hagar. I consider the work is a credit both to them and to you. I have no hesitation in recommending your Cement to these requiring its use.

John McFarlan.

Estate of John Battle, Thorold, Ontario.

Yorkshires and Berkshires.

IN YORKSHIRES: Young pigs both sexes, not akin, from Cioderella and Oak Lodge Queen (imported) families. IN BERKSHIRES: Young pigs both sexes, not akin, from a Teasdale-bred sow and a Cox-bred sow. Guaranteed as described. Write for prices. JAS. A. RUSSELL,

PRECIOUS CORNERS, ONT.

Yorkshire Sows.

We are offering sows, due to farrow in June and July, of excellent quality, at \$12 to \$15, registered. We will book orders for Suffolk and Shropshire rams and ewes for fall delivery.

Plymouth Rock Eggs for Hatching. \$2

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ODGE Type of Yorkshires



We have now on hand a large herd of pigs of different ages, and they are as good as we have ever offered. The winnings of this herd have been greater than all other herds combined at the largest Cana-

All stock shipped to order, fully guaranteed.

Brethour & Saunders, Burford, Ont., Can. OXFORD HERD OF POLAND-CHINAS

The home winners Having again won the sweepstakes at Toronto, London, Ottawa, and Provincial Fat Stock Show, we are offering

again young boars and sows of superior quality; bred along the same lines as our winners. W. & H. JONES,
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First - Class Stock

of all ages and

either sex. Address TAPE BROS., Ridgetown, Ont.



Tamworths



I have for sale at present pigs of both sexes, from six weeks to five months old, of the choice of the same to the est breeding, at reasonable prices. For full particulars write to

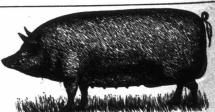
J. H. SIMONTON, Box 304, CHATHAM, ONT.

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Fourteen sows and boars, two months old, at \$5.00 each, from prizewinning stock. Order at once or they will be gone.

D. J. GIBSON,

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One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices.

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Sows. farrow in June and 2 to \$15, registered, and Shropshire rams

Hatching. \$2

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Ridgetown. Ont. GEORGE. NAM, ONT.,

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rths. months old, at \$5.00

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From Plymouth Rocks, Wyandottes,
Leghorns, Brahmas, Cochins, Langshans, B. Minorcas, Spanish, S. Dorkings, Houdans, B. R. Pile and Indian,
Game, Hamburgs, Red Caps, Bantams,
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EGGS, EGGS Mammoth Bronze Turkeys, Barred and White P. Rocks. Have also for sale young Chester White Swine. W. E. Wright, Glanworth, Ont.

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The "Tobacco" Spray.

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Manufacturers of the

Waggoner Extension Ladder.

Extension and other

Step Ladders, etc. Only first-class goods. The "Wag-goner" is the only satisfactory Ex-tension Ladder made. Light, strong, convenient, and cheap. For stack-ing, or for picking apples and for general use about the farm, the Waggoner Ladder is unequalled. Made in all lengths. logue and price list.

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est Stock Food Factory in the World. Address INTERNATIONAL FOOD CO, MINNEAPOLIS. We occupy 15 for Capital Pald in, \$300,000.00.

ASK YOUR DEALER FOR AN

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Warranted first-class and up-to-date in every respect.

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GOSSIP.

G. A. Brodie, Bethesda, Ont., breeder of Shorthorn cattle and Shropshire sheep, writes: "Shorthorns are doing well. Have a few good young bulls ready for service, which I offer at reasonable prices. A nice crop of excellent bull calves coming on for next season. Have also some good Shropshire ram and ewe lambs which will be for sale in the fall."

also some good Shropshire ram and ewe lambs which will be for sale in the fall."

An Ottawa correspondent says that Mr. Robert Beith, M. P., is proposing a scheme for improving the horse stock on the Canadian Northwest ranches. Mr. Beith's idea is that the Government ought to establish an experimental horse ranch, which should teach the natives how to breed the right class. If placed in charge of competent men it ought to be a paying enterprise from the outset, not to speak of the healthy effect it would have on horse breeding in this country. With the prospect that our Canadian militia will be reorganized on a mounted infantry basis, and with Great Britain looking this way for army remounts, Mr. Beith is convinced that there will be a large and constantly expanding market for Canadian horses, provided they are of the right sort. Another proposal Mr. Beith has made for the improvement of the equine standard in Canada is that prizes should be offered by the Government for the best sire of each year. This prize scheme has been in operation in England for fifteen years, and the War Office declares that the benefits have been remarkable.

Visitors interested in Shorthorn cattle at the World's Fair at Chiesgo in 1893 will remem.

war Office declares that the benefits have been remarkable.

Visitors interested in Shorthorn cattle at the World's Fair at Chicago, in 1893, will remember the incident of Geneva, the little daughter of the late Col. T. S. Moberley, of Kentucky, leading into the show-yard arena the ponderous bull, Young Abbottsburn, winner of the grand championship prize as best bull of all beef breeds. The seven years intervening have made sad history for the family of Col. Moberley. Some three or four years after the event above referred to the Col. lost his life by drowning in a heroic effort to save this life by drowning in a heroic effort to save this little girl from a like fate. The child was saved, but during last winter she sickened and died. The sad announcement is now made of the death, on May 19th, of Mrs. Moberley, the death of her daughter, added to her grief over the death of her husband, proving more than she could endure, and it is said she died of a broken heart. Those who had the pleasure of meeting Mrs. Moberley at the World's Fair, and those who knew her more intimately, will remember her as a singularly bright, intelligent and amiable lady. Only the son, Neville, survives of the once happy family.

The noted Shorthorn bull, Robert the Bruce

member her as a singularly bright, intelligent and amiable lady. Only the son, Neville, survives of the once happy family.

The noted Shorthorn bull, Robert the Bruce = 28635=, illustrated on another page in this issue, owned by Mr. C. A. Archibald, Truro, N. S., is a massive roan bull of excellent quality of flesh and hair, with deep ribs, long, level quarters and stately appearance. He was born April 3rd, 1895; bred by H. J. Elliot, Danville, Quebec, who purchased his dam, imported Mimosa = 24832=, and her white bull calf, Silver Chief, by imp. Indian Chief, from Mr. Arthur Johnston, of Greenwood, Ont., and left her at Greenwood to be bred to imp. King James = 29837= before being shipped. The resulting offspring was the bull Robert the Bruce, afterwards sold by Mr. K. Elliot, of Hespeler, Ont., who used him a season or two in his herd with good results, and in whose hands he developed into a bull of great substance and grand quality, and who sold him in the winter of 1886 for \$350 to Howard Dunlap, of Stewiscke, N. S., and in the same year Mr. Archibald, being in need of a show bull to head his herd at the Provincial fair, succeeded in securing Robert the Bruce, imp. King James in securing Robert the Bruce at a long price, He has only been beaten in his class by his half-brother, the white Silver Chief, owned by Mr. Bovyer, of P. E. I., and at the Provincial exhibition at Halifax in 1899 he stood at the head of Mr. Archibald's first prize herd. The sire of Robert the Bruce, imp. King James in the same year Mr. Some pen, for its continued to the same year Mr. Some pen, for its continued to the provincial exhibition at Halifax in 1899 he stood at the head of Mr. Archibald's first prize herd. The sire of Robert the Bruce, imp. King James in the same year Mr. Some pen, for its continued to the provincial exhibition at Halifax in 1899 he stood at the head of Mr. Archibald's first prize herd. The sire of Robert the Bruce, imp. King James exhibition at Halifax in 1899 he stood at the head of Mr. Archibald's first pr

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PURE MANILA, 650 FEET, SPECIAL MANILA, TIGER. STANDARD.

Farmers! Don't be taken in. There is none "just as good." These twines will not bunch at the knotter, and a Binder will run all day without stoppage, thus saving time, annoyance and a "lot o' cussin'."

We pack our twine in bags of the size of ordinary grain bags, and we are not ashamed to put our name upon it. Don't take any other.

CONSUMERS' CORDAGE CO.

Limited.

MONTREAL.



TO READERS OF THE ADVOCATE:

"Are: you improving your farm by fencing?" "Will it save you time and money to have a Post Hole Digger?" The Beaver Digger will do the work under the most adverse circumstances from three to five times as quick as any other tool now in use. Will dig any sized hole in the driest of sand or hardest of clay. Will chop off roots like an axe, or take a stone six inches in diameter out of a post hole. Built of solld iron and steel. Write us for prices and circulars.

Hall & Son, Toronto, Ont.

Send for Illustrated Price





Hay Fork Outfits at all prices: in fact, lower than wholesale prices. If you want an outfit, buy at once, and get



Threshers' Supplies Belting of all kinds. Machine Oil in all size vessels, at lowest prices.

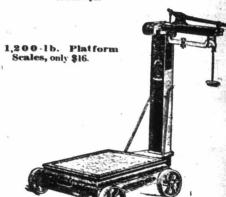








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FOR WALLS AND FLOORS.

WRITE us before designing and laying out farm buildings. State number and kind of stock to be kept, and give size of stables. We will send sketch of basement floor, showing how to use to advantage the room at your disposal. Our system of ventilation is being adopted by the leading stockmen. Fully covered by Letters Patent, but to our patrons we make no charge.

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Famous Magnet

WOOD FURNACE.

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THE GREATEST HEATER MOST ECONOMICAL.

Large Firing Door accommodates rough wood.

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When it looks like rain you carry an umbrella. Some time ago it looked like "business." Those who took our advice and carried a business education are getting the benefit. Those who didn't, wish they had. Get an education that will be of use to you all your lifetime. Our business course is just what you need. Send for catalogue, which contains full information regarding this course to the mation regarding this course, to the



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One pair Mailed Free.

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Weekly Sailings.

AMIDSHIP SALOONS, SPEED AND COMFORT. The Second Cabin accommodation on the ste of this Company is very fine. Passengers can make a cheap and very comfortable trip to Paris by using this accommodation. The through rate, Montreal to Paris, being \$43.75.

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LIVE STOCK AUCTIONEER The undersigned is prepared to conduct pure bred auction sales. 20 years' experience. References John I. Hobson and Alfred Stone, Guelph; Jas. Hinter, Alma, and Mossom Boyd, Bobcaygeon. These Ungrams, Care Mercury Office. Guelph, Ont.

THE AMERICAN WELL WORKS AURORA ILL - CHICAGO - DALLAS TE

Cream Separators.

NEW CENTURY "ALPHA" DISCS?

An Unsolicited Testimonial,

COWANSVILLE, APRIL 27th, 1900.

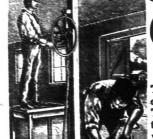
Gentlemen,—The Alpha Cream Separator bought from you received, and is now running in my factory. I wish to say I am delighted and surprised. I am delighted with the way the machine is running and fine work it is doing. I am surprised that any man building a butter factory could be induced to buy a Russian or Tubular separator, with the Alpha separator on the market. Two hundred dollars per year and a Russian Tubular free of charge would not induce me to take out my Alpha machine. I regret to say I have a Sharples Tubular in my factory. I am pleased to say I have an Alpha separator also in my factory. With the Alpha we can separate cream in fine shape. With the Tubular we can partly separate and partly churn the cream. My buttermaker claims it does neither to his entire satisfaction. THE CANADIAN DAIRY SUPPLY CO., MONTREAL, P. Q.:

POWER ALPHAS SENT ON TRIAL FOR 30 DAYS.

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SHEEP SHEARING REVOLUTIONIZED. Chicago Sheep Shearing Machine

The only Sheep Shearing Machine ever invented.

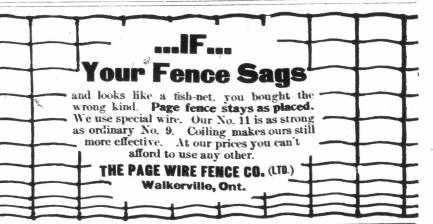
The day of the old fashioned hand shears is past. Over one million sheep shorn last season with this machine.

Thousands of testimonials. No sheep owner can afford to shear the old way. Saves from one-half to one pound wool from each sheep. Pays for itself the first season.

Be humane and don't butcher your sheep. Requires no experience to constant. experience to operate. Send for large illustrated circular.

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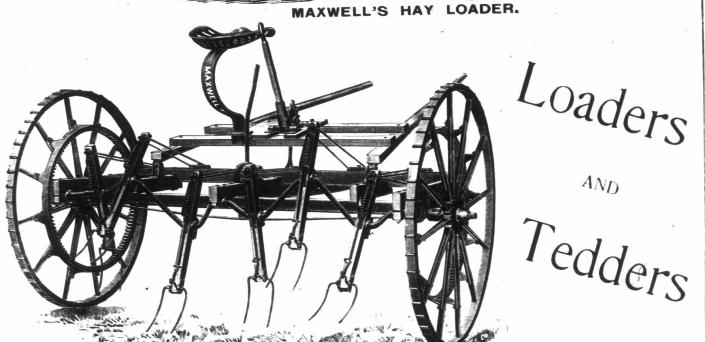
Maxwell's Hay-Making Machinery

MOWERS: Front and | 3 1-2 to | Front and

HAY **RAKES**

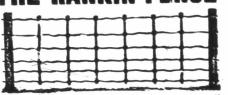
> 8 TO 12 FEET.





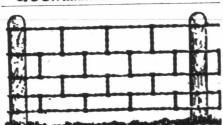
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David Maxwell & Sons, St. Mary's, Ont., Can.



is a coiled Spring wire Fence containing all the latest improvements, is easily and rapid-ity erected without any expensive tools or previous experience. All particulars in Our Catalogue.—Write for one.

AGENTS WANTED. THE RANKIN FENCE CO. 275 St. MARTIN ST., MONTREAL.



V E nave been supplying our patrons with good fences for 15 years, and to-day we take no tack seat. Can supply all wire fencing or our celebrated Patent Portable Picket and Wire Fence. Prices from 40c. a rod. A postal card will fetch along our price list.

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Coiled and other FENCE WIRE

The GEM Fence Ma chine for only \$5.00. Agents wanted. Write McGregor, Banwell & Co., WINDSOR. - ONT

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BINDER TWINE from the Central Prison, for the season of 1900, will be sold to FARMERS or FARM BINDER TWINE from the Central Prison, for the season of 1900, will be sold to FARMERS or FARMERS or LUBS for their own use in any quantity, from one bale to any number required, at the following prices per lb.: "Extra Standard," in bales of 50 lbs. each, 9 1-2c. "Farmers' Special," in bales of 60 lbs. each, 11c. Cash must accompany every order, or be received before twine is shipped; freight in all cases must be paid by purchasers, and orders will be accepted for full bales only. In cases where a farmer orders a greater quantity than is required for his own use, the order must be signed by the persons joining in the order, and the amount required by each must accompany it, as well as the Post Office address of each applicant. The twine is well manufactured, every pound guaranteed of serviceable quality, and if any prove faulty in use, on being returned money will be refunded. "Extra Standard" is held only in small quantity, but "Farmers' Special," which will prove of special value to farmers using it, is in liberal supply. Orders uddressed to "The Warden, Central Prison, Toronto, will receive prompt attention.

JAMES NOXON, Inspector of Prisons,

JAMES NOXON, Inspector of Prisons, Parliament Buildings.

Toronto, June 1st, 1900.

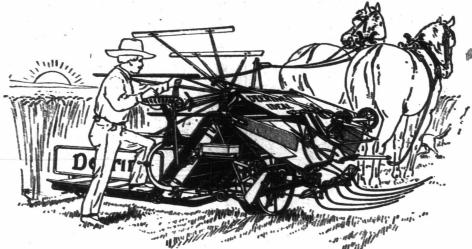
PLEASE MENTION FARMER'S ADVOCATE.



DEERING BINDER TWINE



THE MACHINES THAT MADE AMERICA FAMOUS.



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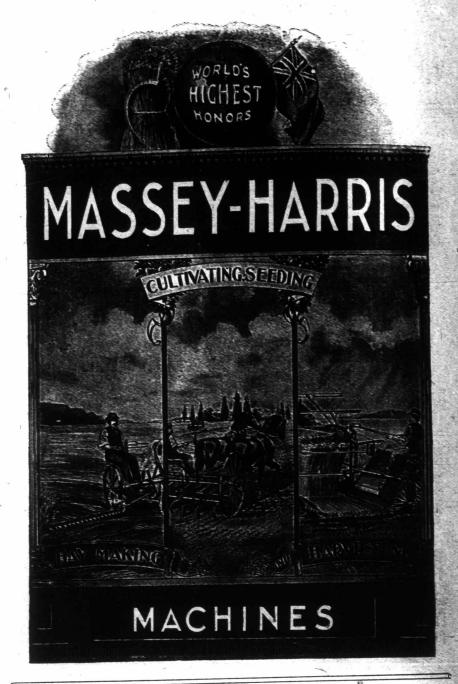
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