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Devoted to Country Life in Canada

The Farming World is a paper for Canada and the United States. It is published in the English and French languages. It is published in the English and French languages. It is published in the English and French languages.

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Single Copies—The Farming World is published weekly, except on Sundays. It is published in the English and French languages. It is published in the English and French languages.

Be sure and read a list of grain harvests, which is given on the outside back page of this issue.

Improve the Spare Moments! You're not quite filled up with work during the winter, are you? In fact, you are likely to have quite a little bit of time to yourself. Well, then, why not use some of this spare time in improving your education along some particular line. Get an insight into commercial work or learn something more about the principles of scientific farming. There are many other subjects that can be studied with the help of the Correspondence School. See advertisement on the front page.

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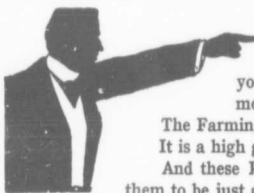
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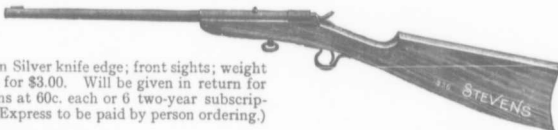
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stock, Rocky Mountain front sight, rear peep sight, very accurate and powerful, length 31 inches, weight 2 pounds. Shoots BB shot or darts. (Express to be paid by person ordering.) Any live boy can earn this rifle in a very short time. Why not try to do so? Why not commence to-day?

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Why not earn a ? Premium to-day ?



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Boys, Send One Subscription, and We Will Send You a Knife. It will be a good knife, nickel-plated, 2 blades—a knife you will be proud of and one which you will find strong and useful. Of course, you are a hustler and you will soon have this knife in your pocket. Let us hear from you soon.

Here is Something for the Ladies. Something which is useful and which we are sure the ladies will appreciate. They are "Housewife's" Shears—nickel-plated blades and Japan handle, 8 inches in length. These shears are well made and are reliable in every respect. We will send these shears, prepaid, to any address in return for 2 yearly subscriptions at 60c. each.

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Many energetic and hustling persons will soon earn many of these valuable Premiums. Will you be one of them?

Do you not think that you should be?

Of course you do! So why not commence at once? We know that you will, and that we will soon have the pleasure of sending you one or more of these excellent Premiums. Write plainly the names and addresses of the persons to whom you wish THE FARMING WORLD sent. Also state what premium you desire. Be sure to give your full address.

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Advertise in **The Farming World**

The Farming World

And Canadian Farm and Home

Vol. XXVI.

TORONTO, 15 JANUARY, 1907.

No. 2.

Expending Money for Horse Breeding

SOME of the horsemen of Toronto seem to be very much agitated over the organization of the new Ontario Horse Breeders' Association, and the fact that it will control whatever grants may be given by the Government to advance the horse industry of Ontario. In our opinion they have little or no ground for complaint. The old Canadian Horse Breeders' Association for years controlled this grant, but it had so many horse societies of one kind and another grafted onto it that it was no longer recognized as a breeders' organization as defined by the Agricultural and Arts Act. Moreover, these non-breeders' societies that were tacked on from year to year, almost one every year for the last few years, were managed and controlled by people in Toronto who had no direct interest in horse breeding whatsoever. No one for a moment, however, questioned their sincerity in endeavoring to do something to forward the industry, but their efforts were largely of a local character and they in no way represented the rank and file of the horsemen of the province.

Something, therefore, had to be done to straighten matters out, and the Government in its wisdom decided upon a new organization identified only with the horse breeding industry of the province, thus placing this important branch of animal husbandry on the same footing as the cattle, sheep and swine breeders' associations, through which Government grants are expended for the benefit of these classes of stock.

If our city friends will reflect a little they will see that it is only by encouraging the breeding of better animals that a Government can best help any branch of live stock husbandry. An organization of butchers in the city of Toronto, because they handle the finished beef animal, is as much entitled to representation on the Cattle Breeders' Association, and to have a say in how the Government grant to that organization should be expended, as are some of the local horse societies that have representation on the Canadian Horse Breeders' Association, and up to the present time have had a say in how the Government grants to that association should be expended.

The kind of work that will do most at the present time to improve the horse industry of this country will be that which will best reach the rank and file of our farmers and induce them to give more attention to breeding a better type of horse.

One way of doing this is to introduce improved breeding stock into the districts where they are most needed and to carry on an educational campaign that will induce farmers to use better sires and better mares for breeding purposes. The main object of all breeders' associations is toward this end, and consequently they form one of the important channels through which public funds may be judiciously expended.

Relieving the Farm Help Scarcity

While the scarcity of suitable help still hampers the eastern farmer in successfully carrying on his farming operations, the situation is, perhaps, not so acute as it was a few years ago. True, good reliable experienced help is not any more plentiful, but there has been, especially during the past year or two, a larger supply of

on farms. \$1,250,000 has been placed at the disposal of this board to assist in this work, and it is expected that from 10,000 to 12,000 people will be induced through this agency to settle in Ontario during 1907. Mr. Robert Verity, 57 Simcoe Street, Toronto, has been appointed chief agent of the board for Canada. He has had several years' experience handling farm help in this country and is well qualified for this special work.

While liberal assistance will be given towards assisting the unemployed to come to this country, it will not be altogether a work of charity. Every man, woman or child placed on a farm in Ontario will be kept track of, with a view to having the money advanced returned as soon as they are in a position to pay it. But this will not be the only

The treatment received as well as the kind of service rendered to the farmer by the help sent him will be noted and a change advised if necessary. In other words, this Central Emigration Board will, through its representative, keep in close touch with everyone placed on farms by it.

The rules and regulations under which the Board works are very strict as to disease and mental and moral character. Every one must pass a strict medical examination before leaving the old country. Their past history will be looked thoroughly into and a certificate must be presented from the chief of police of their place of origin as to their moral character and standing in the district. Already a few have arrived and are men of good character, able and willing to work. They will begin to arrive in larger numbers in February, when the real work of placing them on farms in Ontario will commence.

It is the intention of the British Board as far as possible to place their people on farms through the Farm Labor Bureau of the Ontario Department, which has already a well established agency for securing the names of farmers desiring help. This is wise. To multiply agencies for distributing farm help would lead to confusion, and if it can be done satisfactorily every interest will be better served by an active co-operation between the British Central Emigration Board and the Ontario Farm Help Bureau in this work. The latter has engaged the Salvation Army to take charge of the management under Government supervision of the new immigration shelter at the corner of Peter and Wellington streets, Toronto. The Government guarantees an average of 300 lodgers per week

Renewal Time

At this season of the year a great many subscriptions to THE FARMING WORLD expire. Look up the address on the wrapper of this issue, and if your subscription is due you will confer a very great favor by having your renewal sent in early. Also look up our clubbing and premium offers in this issue. They will save you money.

RENEWAL OFFER

Two years' subscription for \$1.00
One renewal and one new yearly subscription 1.00
One renewal and two new yearly subscriptions 1.25
One renewal and three three months' trial subscriptions 75
Do not delay. Do it to-day.

inexperienced help which our farmers are making use of to the best of their ability. The Farm Labor Branch of the Ontario Department of Agriculture and other reliable agencies have been successful in bringing in from the old land thousands of men willing to work on farms, though knowing little or nothing of the duties required of them. These have been distributed through the regular channels among the farmers of the province, and, though inexperienced, have undoubtedly been of great benefit to the farmer.

Last week the announcement was made that the Central Emigration Board of Great Britain, which is practically under the control of the British Government, will engage in the work of bringing the unemployed of the old land to this country to work

the year round. Preparations are therefore being made to receive a larger number of immigrants this year than in the past and it looks at the moment as if the help problem will not be so serious a one to solve during the coming summer, though farmers should not expect too much in this connection.

Live Stock Arena Badly Needed

The arena question will not drop. Every stockman is interested and sees the need of such a building in which to hold winter exhibitions of all kinds. Just now arrangements are being made for the Spring Stallion Show in this city, and the only available place is the repository, which as far as it goes, is very good, but it lacks one important thing, and that is size, and this will be the more noticeable this year in view of the light horsemen joining with the heavy-draft men in holding a united stallion show. It is somewhat of a reflection upon the efforts of those citizens of Toronto who have been as to have some say in how the present grants in the interest of feeding should be spent, that they have not been able during all the years to secure in their own city a building ample in every way for the holding of this important stallion show, and also the annual spring show, which, we are sorry to say, cannot be held this year because the building is not available for that purpose. If they really wish to do something to benefit the horse industry of this province and their own city at the same time, let them set to work at once to secure this much-desired arena. It is real work, not talk, that counts.

A discussion of the arena proposal naturally brings up the question of the advisability of combining the winter fair and stallion show. In many ways a combination of this kind would be beneficial, but it cannot be brought about until a suitable arena and the necessary accommodation for exhibits are provided. The present buildings at Guelph can barely accommodate the winter fair, and that only in a way that is far from satisfactory, let alone a stallion show as well. The city or town, therefore, Guelph included, that will in the next year or two erect a suitable arena with the necessary accommodation will secure an annual winter exhibition of live stock at least second only to the great Chicago International, and perhaps equal to it, in many respects. The Government might well grant liberal assistance to a project of this kind, provided it is located at a point where the interests of the whole province will be served. We have reached a stage in connection with our live stock industry when a step in advance must be made. Let those interested make a determined effort this winter to-

wards securing somewhere and somehow a suitable arena in which winter exhibitions of live stock and, if need be, dairy and fruit products may be held! This is the one thing needful at the present time to round out the business and make it of the greatest value to all concerned.

A Well-deserved Honor

His many friends throughout Ontario will learn with pleasure that Mr. Robt. Beith, ex-M.P., Bowmanville, has been called to the Senate. It is a well-deserved honor and a tribute to the agricultural and live-stock interests of the country, which he so ably represents.

Mr. Beith was born in 1843 in Durham county, the west riding of which he represented in Parliament for several years, retiring at the last general election in favor of Mr. A. B. Aylesworth, now Minister of Justice. He



HON. ROBERT BEITH

has remained a farmer all his life and has made a specialty of pure bred stock. As a breeder and importer of Hackney horses, he holds a first place on this continent. His horses have on many occasions brought champion honors to Canada, won under the strongest kind of competition at the New York, Chicago and other leading American horse shows. The Waverly stables, thanks to Mr. Beith's careful selection and excellent judgment, have a reputation for good stock that has made animals purchased therefrom prized the country over.

THE FARMING WORLD desires to tender to Mr. Beith its sincere congratulations upon his well-deserved promotion. It is to be hoped that it will be the forerunner of similar promotions in the future and that agriculture and the farmers' interests will receive the recognition they deserve, both in the House of Commons and in the Senate of Canada.

EDITORIAL NOTES

The total number of sheep in New Zealand on April 30th last was 20,

108,471, as compared with 19,120,875 on the same date in 1905, an increase for the colony of 977,296.

A model veterinary college is talked of for the Union Stock Yards, Chicago. The students at such a college would have an excellent opportunity to study the diseases of live stock as shown in the large number of animals handled every year in the yards, though the percentage of diseased ones is not large. The object of the college will be to educate competent meat inspectors for the stock yards and the great abattoirs elsewhere.

The Ontario Government is said to be considering the advisability of establishing at least two agricultural schools at suitable points in the province. They will be miniature agricultural colleges, though how far they will go in the study of agriculture is not stated. It is just a question, however, whether further effort in the way of agricultural education should not be directed more towards encouraging the study of agricultural subjects in rural, public and high schools rather than in developing new institutions for this purpose.

A Familiar Figure Gone

The death of Captain W. F. McMaster removes a familiar figure from the Parliament Buildings in this city. As secretary of the Agricultural Department he was well known to the officers of agricultural societies and other bodies receiving monies through the Department. He compiled the financial reports received from these bodies and in many ways his work came in direct touch with the agriculture of the province. He entered the service of the Department in 1868, where he has worked faithfully ever since, dying at the good old age of 85. He was the first president of the Toronto Industrial Exhibition, and has been an honorary director ever since. The kindly and cheerful old man will be greatly missed by a host of friends.

Lucile was making her first visit in the country.

"What's that?" she cried, as she saw the fireflies.

"We call them lightning bugs. Didn't you ever see any before?"

"No, the bugs in our town ain't lit yet."

Be sure and read the list of piano bargains which is given on the outside back page of this issue.

A little Cleveland tot of three years was put to bed, her first night in New Jersey, by her mother, with the words, "Now go to sleep, darling, and remember the angels are flying about your little crib and keeping you from harm." A few minutes later the patter of little feet was heard and a little white-robed figure emerged from the bedroom. "Why, darling, what's the matter?" said the mother. "I don't like the angels," sobbed the little girl. "Why, dearie, why not?" "One o' th' angels bit me."

Agriculture in Ireland*

The efforts of the Department of Agriculture in Ireland to improve the horses and cattle are similar in principle to the scheme described for the swine, in December 1905 issue. The horses of the country generally are not inferior, but the bulk of the breeding has tended towards producing horses suitable for the saddle and light driving. It has been brought about by an effort to produce superior hunters—which command very high prices—but instead of hunters many of them are only weak and inferior saddle horses, and quite unfit for general farm work. This has resulted in the demand so often heard: "Let the Department give us the old

IRISH DRAFT HORSE."

This horse, once somewhat popular, does not apparently exist in any part of the country at present. I have met those who remember having seen it in their younger days. These horses were evidently well suited for every-

hair on the legs. To meet the crying demand the Department of Agriculture is attempting to evolve a similar breed of horses, but in order to do so resort is had to the lighter and cleaner boned type of Clydesdale. It will probably consume some years before the experiment reaches a successful issue.

The Department sometime since authorized two or three expert horsemen to discover if possible some of these horses, or those having the same type. A mare was purchased, said to be a typical specimen. She was without a pedigree, having changed hands several times. However, at a later date, the pedigree was searched out, when it was found she was sired by a registered Clydesdale. Some in Ireland have a prejudice against this cross, perhaps from experience of some earlier crosses of the coarser sort among Clydesdales, such as were common in Canada twenty years ago. It will not matter

fee, which is not less than £2 nor more than £5, is paid by the Department, thus enabling those whose mares are limited, and hence liable to use an inferior sire, to secure the very best in their county. In other places premiums are allowed, as in respect to bulls.

In these different ways public attention is drawn to the subject of improvement, and much real encouragement given.

There are some counties which have

NATIVE BREEDS

of their own, which are really excellent for special work. For instance, the Wexford horses, although not large, are noted for their endurance and general activity, and can be picked out in some of the cities as they handle the lamular jaunting car.

The Connemara ponies, as they are called, are also most excellent specimens of horse flesh. So much are they valued that the Department at one of their stud farms is taking steps to fix the type and prevent their dis-



Connemara Pony Mares at one of the Department's Stud Farms

day farm work, with weight enough to handle a reasonable load, yet active enough to be useful in driving the gig, or jaunting car to town.

No one seems to know how they were produced, but the best evidence goes to show that two brothers living near each other originated them and supplied the demand for many years. Their families finally passed out of existence and the horse breeding establishments were broken up, with no one to take it up again. The horses were medium in size, having strong but clean limbs, without long hair. They had some style and were active in their movements. The body was comparatively heavy, thus giving draft power.

Undoubtedly they correspond to our general purpose horse, minus the

*This is the fourth and last of the series of articles on this subject written especially for THE FARMING WORLD by the Hon. John Dryden, one of His Majesty's special commissioners appointed to investigate the condition of agriculture in Ireland during the past summer.

what the breeding is, so long as the type is created and continued. The experiment will be watched with much interest.

The schemes for

THE IMPROVEMENT OF HORSES

in Ireland are not the same in each county. The regulations of the Department allow some elasticity to suit local circumstances. In some cases individuals or societies are aided in the purchase of a stallion by a loan from the Department under regulations prescribed in the published rules. When it is decided that a sufficient number of stallions are supplied by private individuals in any county, then the Department encourages their use by selecting, under certain rules, a number of the most superior mares owned by farmers, calling them nominated mares. The selections are made in open competition and among the poorer farmers, whose assessed value does not exceed a sum fixed by the county committee, who have authority to act. These mares are subject to veterinary inspection of a most rigid character. The service

appearance. They are of the pony sort, as the illustration shows, but are wonderfully fleet of foot and carry their load with a vim and determination really wonderful. A couple of good specimens are in use at Glasnevin Agricultural College, and the writer can testify as to their excellent qualities, having proved it by actual experience.

In laying plans for the

IMPROVEMENT OF THE CATTLE

of Ireland, the aim of the Department is given as follows: "The main objects of this scheme are to improve the dairy and store cattle in Ireland by encouraging the breeding or introduction of pure-bred bulls of a high degree of excellence and by inducing associations of farmers or persons of means to purchase high class bulls for the use of small farmers." The amount provided by the Department for any given county depends on three things: 1st, the special needs of the locality; 2nd, the amount provided by local authorities; and, 3rd, the proportion which the local contribution bears to the real capacity



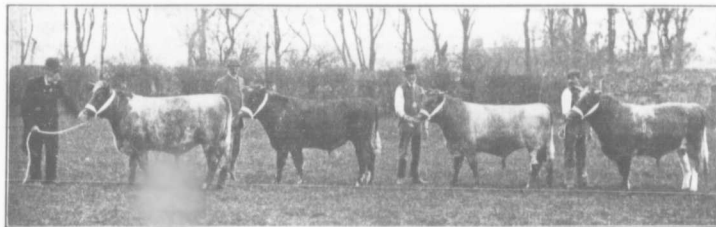
The nine bright children of one Irish home.



Cutting peat for fuel.



Where some Irishmen try to farm.



Four Premium Bulls selected in connection with Government live stock schemes.

of the particular section to render assistance. Unless under very special circumstances no aid is given where the local authorities fail or refuse to contribute.

The joint funds of the local authorities and the Department are administered by a body called the Committee of Agriculture, appointed by the county council of the county. The clerical and other work is performed by a secretary, who directs and handles all the various schemes, devoting his whole time, for which he is paid a regular salary. He is appointed by the county committee.

Upon the energy and efficiency of these secretaries depends very largely the quality of the work and its success in any given county. No person can act as secretary, nor can any scheme be carried out, without the approval of the Department. The Department has power to make loans in exceptional circumstances for the purchase of bulls, but generally this is left to individuals. The largest amount of money is given in aid of

PREMIUM BULLS

—that is, approved bulls for which a bonus or premium is given to the owner of £15 per year to recompense him for the service of thirty cows taken in at one shilling each. This scheme brings the opportunity to obtain superior blood to the poorest owner of a cow, whether he be farmer or laborer.

About 900 approved bulls were scattered over Ireland in 1906, costing the Department well up to £14,000. In other words, the country pays 10s. for every better bred calf produced under this scheme. The bulls used are all inspected and are really useful animals. A fair sample is seen in the illustration.

These constitute the schemes for the improvement of the live stock in Ireland. But the Department of Agriculture does not stop here. They render a similar service in

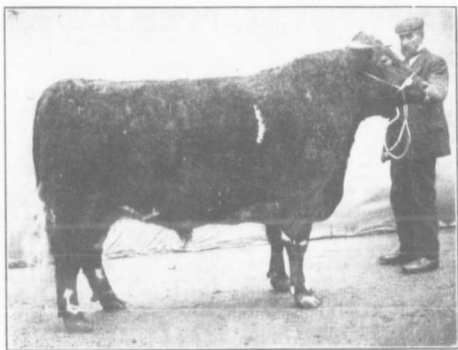
HORTICULTURE

as well as in general agriculture. A farmer has only to indicate his desire to lay out, plant and care for a fruit garden plot, and wishes advice and help, when the expert of the Department appears on the scene to lay out his grounds to the best advantage, designating the varieties best adapted, and superintending the care of it for three years. The trees are furnished at the lowest wholesale price, so that where the farmer has the will to do he is shown on the spot every step of the way.

No important branch of agriculture is neglected, and I question if in any other country the officials in charge show a keener interest in the farmers' operations than does the Department of Agriculture in Ireland.

The improvement at first will be

(Continued on Page 52.)



The King's Champion Shorthorn Steer, Smithfield, 1906. Aged 2 years, 11 months, 2 weeks. Weight 17 cwt., 3 qr., 29 lbs.; average daily gain, 1.86 lbs.

Our English Letter

Smithfield Cattle Show—Remarkable Success of the King—Potato Disease—Red Fife Wheat in England.

London, Dec. 22, 1906.

We are now within the shadow of Christmas and all its attendant festivities. The fat stock shows are almost a thing of the past, but generally they have maintained the high standard of merit for which the live stock of the old country is famous. The Smithfield Club, which took place last week, is the final court of appeal. The show was the 108th, and amongst the exhibits were the champion animals from Norwich, Birmingham and Edinburgh shows, and these naturally came in for a great deal of attention.

The feature of the show was the great success of His Majesty the King, who carried off an enormous number of prizes. His Majesty's tale of victories include seven first prizes and the breed cups for Devons, Shorthorns and Highland; three second prizes and three thirds. In addition to these, he won the £50 cup for the best steer and the 100 g. challenge cup for the best animal in the show with the Shorthorn steer portrayed on this page. In the sheep section His Majesty won, in addition to class prizes, the breed cup for Southdowns and the challenge cup for the best pen in the show. Altogether His Majesty won money and trophies to the value of £100 for cattle, £100 for sheep, in addition to two challenge cups. Thus, with the £490 secured at Birmingham, the King has achieved a great triumph, in less than a fortnight by winning at the two principal fat stock shows money and trophies to the value of more than five thousand dollars.

CATTLE CHAMPIONSHIPS

The first of these was the £25 silver cup for the best beast not exceeding two years old, and the winner of this was Mr. John Ross, of Meikle Tarral, Fearn, with his red and white winner in the Shorthorn steer class. The next to be adjudicated were the claims for the £50 silver cup to the exhibitor of the best steer or ox in the classes (except carcass). Here the competition seemed to grow keener in intensity; most certainly the interest of the onlookers

did, pointing as it does to the possible winner of the full championship honors. The King's Shorthorn steer in the not exceeding three years old class was selected for the cup; and reserve for this distinction was the Aberdeen-Angus steer which headed the like class in its breed, exhibited by Mr. Peter Dunn, Hull. These cups, together with a like valued one for the best heifer, were won right out, with the privilege of taking the worth in money.

The champion plate of 100 guineas for the best animal in the show, with a gold medal for the breeder, fell to the King's Shorthorn already mentioned; and His Majesty being also the breeder, the gold medal will be added to the successes of the Windsor Royal Farms. The King's challenge cup for the best beast in the show bred by the exhibitor also went to the same entry as the previous big prize; so the King's wonderful success at Bingley Hall has been followed by equal distinction at the great national exhibition of Smithfield.

The reserve in both these championship events was given to Lord Rosebery's not exceeding three years old Aberdeen-Angus heifer, which so easily headed its class.

SHEEP AND PIGS

A record was established in the sheep classes, a pen of three fat wethers of the Lincoln breed exhibited by S. E. Dean & Sons, Bourne, turning the scale at 10 cwt. 22 lbs.

The champion plate for the best pen of long-wooled sheep was taken by Messrs. Dean with Lincolns, and the champion plate for the best pen of short-wooled sheep went to His Majesty the King with Southdowns, which pen also won the challenge cup for the best pen of three sheep or lambs in the show bred by the exhibitor.

In the pig section the champion plate for the best pen of two pigs was taken by Mr. A. Brown, and the champion plate for the best single pig by Mr. J. A. Fricker. Mr. Brown also won the challenge cup for the best pen of two pigs in the show bred by exhibitor.

CARCASS CLASSES

In this section the championship for cattle was secured by Mr. G. Young, of Carboll, Fearn, with a steer of 2 years, 10 months, which had been placed first when alive by the judges on Monday. The live weight was 13 cwt., 1 qr., 8 lb., and the carcass weight 124 st., 4 lb. The reserve championship and the first prize for steers not exceeding 2 years old went to J. G. Young, of the same address, with his black cross-bred of 1 year and 9 months, the live weight being 10 cwt., 3 qr., 22 lb., and the carcass weight 103 st., 11 lb. Championship honors in the six classes for sheep fell to a nine-months-old Suffolk, bred and exhibited by D. Abbott Green, of Colchester, weighing 11 st., 1 lb., and having possessed a live weight of 1 cwt., 23 lb.

COMPLAINTS OF POTATO DISEASE

Throughout the past dry summer potato growers were hugging themselves that, though the drought might lessen the crop, there would at least be no loss from disease; but we have learned to realize that this trouble might be brought about by sudden climatic changes as much as by protracted wet, because we dug a good many diseased tubers before the dry weather broke up in September. Unfortunately, however, matters have got much worse and the rain, which hampered the lifting of the crop, has



Lord Rosebery's Aberdeen-Angus Heifer. Aged 2 years, 10 months, 5 days. Weight, 13 cwt., 3 qr., 17 lbs.

had considerable influence in the spreading of the disease.

We also hear complaints of the disease having increased rapidly since the crop of tubers were lifted and piled, and some growers are rather afraid to look into their bulk. This state of affairs is disappointing, because markets are promising. There are prospects of prices going up, and, for the district potatoes, but fair to be a profitable crop. It is argued in some quarters that heavy manuring is responsible for disease, but, be this as it may, it is obviously to the interest of the grower to produce as many tons to the acre as possible, even at the risk of getting some disease, and he is hardly likely to change his tactics on the strength of opposition. As for varieties, we have not got that much desired disease proof potato yet; but the experience of this season is causing some people to lose faith in Dates. If it is given up, which of the other varieties should be planted in bulk instead? For the moment we leave the question unanswered.

RED FIFE WHEAT IN ENGLAND

In the course of the experiments in the interest of wheat by the Home-grown Wheat Committee of the National Association of Millers, it was found that Fife wheat gave variable yields of grain and straw under different sets of natural conditions, but it gave such uniformly excellent results as to quality that the committee deemed it advisable to ascertain, if possible, under what conditions it was likely to succeed as a farmers' wheat.

The heads of Fife wheat are small, but give a yield of grain per acre altogether larger than their appearance in the field would lead any one to expect. This experience has been so common that it was thought desirable to ascertain its cause. With that object in view, where Fife and Squarehead Master were grown close together, the number of stems per foot were counted in the stubble of both sorts. As an average of thirty counts in each variety was found that the Squarehead Master had 24.9 stems per foot and the Fife 44.8, of fifty per cent more. It was then thought desirable to ascertain how this particularly thick plant was caused, and it was found that one bushel of Squarehead Master contained 567,831 grains and one bushel of Fife 604,982 grains or 25 per cent more.

For the purpose of this counting samples were drawn from the bulks of the two sorts which had been grown side by side in the same field. Fife wheat is known to tiller well, and it would appear from the foregoing figures, being only 20 to 25 per cent of the 50 per cent thicker plant could be accounted for by the smaller berried seed, that this reputation for good tilling is well deserved. Any person looking at the sorts growing in the field would not suppose that this much greater thickness of plant existed, and the illusion is probably caused by the fact that the Fife straw has very little slag, which also may account for the fact that the straw weighs well and yields so well per acre.

Some growers have reported that Fife wheat was knocked down badly by the severe frosts which visited many localities in June, and that its straw is brittle—liable to be broken in threshing. The Home-grown Wheat Committee has realized this tendency to weakness of straw for some time, and has for years been engaged in remedying the defect by selection and hybridising. The brittleness is much intensified if the wheat

be allowed to get fully or dead ripe. Some at least of the largest growers have been able by earlier cuttings to obtain straw which has been sold at maximum prices. The wheat is one to two weeks earlier than the typical English wheats, so that on account of its forwardness, it was more likely to be damaged by the very severe storm which took place in the home counties at least the night following June 25th. The absence of flag should assist under ordinary circumstances to stand up relatively well. It is worth mentioning in this connection that in the middle of a field of Fife at Adlestone 18 plots, representing a corresponding number of varieties were being grown on behalf of the committee. The storm referred to, which, without exception, all the earliest wheats, and knocked them perfectly flat on the ground. The Fife forming the main crop of the field, was not so early as some of the plots, and suffered to moderate extent only. Squarehead Master, in the next field, which was not nearly so forward, escaped practically unharmed.

The committee has not received a complaint, either last winter or at any previous time in its existence, of Fife suffering unduly from winter climatic conditions. The evidence is overwhelmingly in favor of autumn sowing in preference to a spring sowing, although its value as a spring wheat, if such be required, is high.

The quality of the grain is almost invariably superb. Reports received from millers and bakers not actively associated with the committee speak in the highest terms of the flour and the bread produced from it. Although the Fife wheat introduced by the committee has been grown for five consecutive years in England, there is not the slightest evidence of diminution in strength in the greater majority of cases.

A. W. S.

Agriculture in Ireland

(Continued from Page 50.)

slow, but every inch gained will be kept and serve as an example for others to follow. The progress will be more rapid from this on and Canada must remember that in Ireland we shall find one of our keenest competitors for the markets of Great Britain. In most parts of the country some of the farmers are showing commendable enterprise and intelligence, and others soon follow an example seen every day and thoroughly understood in its results. The farmers with some capital have a good chance, and I visited some cultivating 60 or 70 acres who were able to educate their children and save a competence for advancing years. Large families are not uncommon, and will compare favorably with any other country for brightness and intelligence. The accompanying illustration is a good specimen of this class, and all that I have written about agriculture in Ireland, I have not included that part known as

THE CONGESTED DISTRICTS,

which includes the rocky, hilly portions, where the land is very stony and the inhabitants less numerous. A good specimen farm is shown in one of the accompanying illustrations. Nor have I included the peat bog portion. Some of these lands are rudely cultivated, but it must not be included in Ireland's good farming districts. Yet it is a noble asset and covers a considerable area. It is to the Irish farmer what the coal in England is to the farmer in that country. It makes good fuel, is inexpen-

sive and will last for many years. Each family has its own plot, from which the square is taken out in the shape of two bricks in length. These are left to dry in small heaps, then piled in one or two rows, and when thoroughly dried, drawn to the home and piled as cord wood. It is a common sight to see a whole family engaged in procuring a supply of this fuel and preparing it for the haul-home. Taken as a whole, Ireland is

AN INTERESTING COUNTRY,

well worth visiting. It is rich in natural wealth, contains beautiful scenery, especially on the west and north coasts, with a fair service of railways. Its one great drawback is the lack of trees, but the Department of Agriculture is striving to rectify this defect also. Already much has been done in preparing the way, and I shall expect much planting to be done in the near future. These forests will help to beautify the landscape as well as provide an added commercial asset. Game will find in them, also, a reservation in which they may find security and a safe breeding ground.

I will continue my story by saying that my hope is that Ireland may be allowed to forget her past history, which no power can at this date undo, and live in the present, doing her best for her own children and cultivating a higher patriotism, which will not be content with mere resentment, but while demanding her rights, will seek to place her country in the forefront as a producing nation.

✽

A Valuable Report

The second annual report of the Canadian Seed Growers' Association has been received. It is a valuable report of 90 pages, and is of special interest to farmers. It contains the constitution and by-laws of the association, the methods of keeping records of registered seed, the names and addresses of seed growers who are producers of registered seed, and instructions as to the methods of growing and selecting seed grain and other seeds of various kinds. It also contains a reprint of the seed control act and a circular on testing seeds for purity and vitality. A full report of the proceedings of the last annual convention, held at Ottawa last June, also appears in it.

✽

Best Yet

My father takes THE FARMING WORLD and thinks it the best paper for giving information about stock, poultry and markets he has ever had.

J. S. SCHLOTZHAUER,

Perth County, Ontario.

An American traveller in England heard the following in a third-class railway carriage near London:

Mother (opening a parcel of sandwiches): "Johnnie, what kind of sandwich will you ave?"

Johnnie: "Well 'ave 'am, mother."

Mother: "Don't say 'am, dear. Say, 'am!"

Man in the corner (chuckling to himself): "Both of 'em thinks they're saying 'am."

✽

A well-known judge fell downstairs, punctuating his journey with a loud exclamation point at every step. A bystander hurriedly raised him and, solicitously inquired: "Is your honor hurt?"

"No!" snapped the judge, "but my head is."



How to Train the Roadster*

As in the case of the worker on the farm, the first lessons for the prospective road horse are that of first getting the animal familiar with the harness, to move around quietly in harness single or double, and to respond to the bit and the voice to some degree at least. In fact, there is no better place to teach the horse than at some light team work around the farm.

The education of the most promising horse must begin exactly the same as that of the animal which has no future beyond the most menial labor, and they must learn the ground work first and the finer touches not until long afterward. If the horse by nature possesses fine conformation, combined with natural elegance, action and style, then the labor of education must be so much the less, and the possibilities so much the greater. If on the other hand, as is usually the case in the beginning with even a very large proportion of the future showringers and sensations of the speedway, he possesses good natural conformation to begin with, and a temper and nerve which at least brings him within the limit of possibilities both of which his breeding ought to assure, and along with these qualities a considerable number of shortcomings, then it will be the next

the road is pretty well illustrated by the remark of the Irishman who said that if the fences were all in good repair he could get along somehow—the one is a case of driving and the other one of “chasing” which just about classifies the comparison. In

LIGHT SINGLE DRIVING

almost every form and make of bit that has ever been devised has been tried and experimented with on all kinds of horses and by all kinds of men. After all, if we ignore the exceptional cases, of the horse with unruly temper, badly trained, the hard-puller and the horse with the sensitive mouth, always or nearly always the result of bad handling at some time, the good old snaffle, or, what is equally popular in the single roadster, the smooth, round bar, of at least medium size, comfortably adjusted to the horse's mouth and the headstall also of as fine a fit as possible, has as yet never been improved upon.

In the case of the light roadster, breezy, light and rangy of forehead, with well set head and neck, the bar bit should usually be preferred, as it will bear a trifle more weight of hand than the snaffle, and this style of horse usually presents a case where lightness and delicacy of touch are doubly important. In the case of the horse of a little coarser

fibres, of heavier type, stronger of neck and the trotter of generous temper, the snaffle would be best. Either are good in either case if well handled, and little good can come, while on the other hand much harm may be done, by seeking the assistance of various devices. Later on, when the horse is well broken and trained, and gives promise of results from further education, a few well tried systems may be permissible, but at this stage of the business the plain bar or the snaffle are the right and only things to be considered.

When the horse is first driven singly to carriage on the road, then, let the bit be a snaffle or straight bar. Attach to this

A GOOD STRONG PAIR OF LINES,

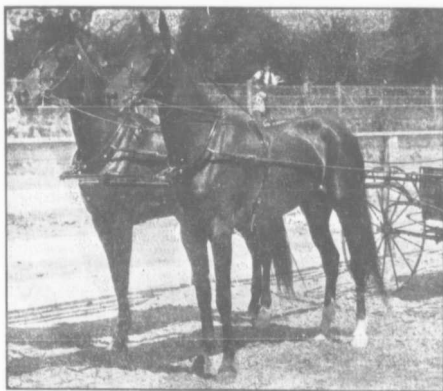
their strength to be tested in case of emergency only. It is well to wear a martingale of almost full length, and with a small strap running from each ring over the neck confining it close, the object being, if possible to prevent the lines from getting around the shaft when the colt tosses his head, as he is sure to do. Wear a side rein check, not too tight, allowing the horse's head to be carried a trifle low if he likes, but short enough to prevent him boring his head in an awkward manner. Keep a light touch on the rein, and at all times make the horse keep right up to it—do not permit of any carelessness of manner. It is not necessary to make him walk his fastest or to trot his best clip. Three and a half miles an hour at the walk and seven and a half miles an hour at the trot are rates which he should be made to keep up as long as he is going steadily. Always watch that he turns out handsomely when meeting another carriage. Keep him in the middle of the road until at a proper distance and then turn smartly to the right, and back again as cleverly as may be. If it is desired to allow the horse to walk up hill, do not accustom him to stop right at the foot of the incline, but as often as not drive him a little way up at the trot, as he will then not learn to drop suddenly into a walk at the base of every little declivity he meets, a rather objectionable habit.

To drive a single roadster well requires a good temper, a good hand and a watchful eye, with a conscious-

DUTY OF THE TRAINER

to watch for such of these as he may observe and endeavor to correct in him. And while it is true that the first step in the education of all horses is exactly the same as that of the worker on the farm, and the second step in the training of all horses whose future sphere will be the road, the park, the boulevard, the speedway, and the racetrack, is to familiarize them with all that is required of the ordinary roadster horse. A little careful handling of any horse which is destined to be driven on the highway will well repay the pains taken. Even if he is unsound, or of very faulty conformation, and of such a character that poorly trained he would not be a hopeful bid for a dollar, yet if well trained and apparently full of natural handiness, some one will be sure to think there is all in his hide that his training cost you anyhow, and this is doubly true in the case of a mare. The difference between a well trained road horse and one that is merely “familiarized” with

*This is the fourth of a series of articles on training the horse by J. W. Sangster (Farming World Man on the Wing).



A well broken pair of roadsters

ness of what you are doing. Never forget appearances yourself, and that is at the same time just what you do not wish the horse to do. An ungainly attitude is never a really comfortable one. If you are feeling lazy, and if on the other hand you forget yourself and in handling the horse's head around you get your elbows in the air, your back humped up, and the horse's head pulled around to one side, then is the time to just stop and think "What is the horse and myself look like just then?" "Did that moment of forgetfulness enhance the appreciation of the whole outfit generally in anyone's estimation?" On the contrary, if any of your good horse-men, or many indifferent ones for that matter, happened to be looking on, their first probable remark was, "Look at the idiot," and you can gamble that your guess was a pretty shrewd one.

STYLE IS A MOST DESIRABLE FEATURE.

In the driving horse, but all the style in the world will not make the outfit, with a driver who is continually getting into awkward positions and his accoutrements disarranged, compare for a minute with the well-ordered, trim, tidy, well-groomed and well-mannered outfit in which flashy style is entirely lacking. The former is merely an exemplification of the old-time proverb, "Clad an ape in tissue and you only add scorn to the beast."

In driving with a light rein the seat of the vehicle is suited for the handling and training of the horse, and, in fact, for all pleasure driving, should be rather high, at least high enough so the driver can see well ahead of him and sit with his feet planted in such a manner as to give strength and firmness to his seat. The driver should sit with his feet well braced and with legs and hips firm and solid, the upper part of the body as free and as possible. It is desirable that the seat should be as secure as possible, in case of any emergency, and this not in any degree at the expense of absolute control of the lines, which should not in any sense be used as a means of support for the driver. The driver's eyes should be always on his horse, and at the same time nothing should escape his notice.

THE TRUE ART OF DRIVING.

It is to appear composed, cool, comfortable and at the same time elegant, first last and all the time. The moment that you forget yourself, and raise hands, whip or voice high, you have lost all of these, so has the horse, and both of you look as if a little bit of balance was lacking.

All this, and all the other possibilities in good horsemanship, is attained only through first developing in the horse a "fine mouth," or through intensifying in him his own natural tendency to instant obedience of the very light touch of the rein, and maintaining it by never using a heavy hand except when absolutely necessary, and not a moment longer than necessary.

Clover for Horses

Of late years clover has been a more popular hay crop and is grown to a much larger extent than formerly. Many farmers are, however, opposed to feeding clover to horses, as they claim it will cause colic. On this point the "Michigan Farmer" gives some sound advice as follows:

"This clover hay question is quite an old one and many farmers would not feed clover to their horses for love nor money. As a saying, 'Where there is so much smoke, there is sure

to be some fire,' no doubt applies to some extent to this case. We believe that clover hay under some conditions is apt to produce colics. The reasons for that as we see it, are two fold. First: Clover hay being more difficult to cure than timothy is often, during bad seasons, put up in a rather damp condition and the result is that it becomes mouldy or very dusty. Hay that is very dusty is injurious to horses, especially so, when fed in such a condition as to show a previous sprinkling. Second: Good clover hay is relished by horses more than timothy, and for that reason they will consume much more of the former if they are procure. Now, it is often the case on farms that the hired man feeds his own team or all of the horses, many of these men will throw all the hay before a horse that he is willing to eat. The result is that a hearty feeder will consume more clover hay than is good for him. The walls of the stomach are distended to such an extent that the organs of respiration are affected and heaves are sure to follow if such feeding be continued for any great length of time. Had timothy hay been fed, the horse would not have been nearly so apt to eat too much.

We are not, however, arguing that timothy should be fed to work horses in preference to clover on this account, on the contrary, we would prefer to feed clover hay if we had it, be-

cause it contains much more nourishment, a much higher per cent. of protein or muscle forming substances than does timothy. Besides, a crop of clover produces more forage per acre than timothy and, at the same time, adds timothy to the stock forage effect upon the horse, and for that reason, is not quite as well adapted for roadsters as is timothy.

Another point in favor of clover for horses is that in case of a total clover crop and no production on the farm and part is to be sold, timothy hay always brings the better price on the market and therefore if either hay is to be disposed of, timothy should be the one. Not only will timothy bring the best price on the market but it also removes less plant food from the farm than an equal weight of clover does. To sum up, then, we conclude that clover is a better feed for horses should be more generally used as roughness for work horses on the farm than is the case at present, but moderation and care must be exercised in feeding it. As to pasture and mowing, we will put any bad effects, and are acquainted with many farmers who have fed it for twenty-five years in succession and never had a case of heaves on the farm.

Winter Management of Breeding Cattle

The feeding and general management of breeding cows and young heifers vary so very much, according to their kind, constitutional robustness or delicacy, the main object of the owner, his views, opinions, and prejudices, climate, situation, buildings, and the kind of food raised from the farm most abundant during the winter season, that many pages might be filled with theories and facts relating thereto.

Some breeders entertain the notion that the less shelter and more exposure to the elements average heifers of all hardy, native varieties receive, the better. The wild creatures of mountains, forests, and the prairie have undoubtedly abundance of hair, but of a more wiry, harsher kind than owners of Shorthorns or any other pedigreed variety of the bovine race would like to see on their animals. And this abundant hair is mostly associated with hides as thick as the skin of the buffalo. Moreover, other of their features would be equally objectionable, such as sinew and muscular development, stringy and strong, the coarsest of flesh and big bones. Nature could not all at once, or in two or three successive winters, make domestic animals like her native wild ones by exposure to the elements they have to brave, and we may be well assured that it is far better not to risk the extreme probability of giving highly-bred animals colds, fevers, and vital injury by subjecting them to such harsh, cruel experiments.

If this ought universally to be abandoned as unnatural, so ought the opposite course to be rejected, of pampering young cattle and keeping them confined all day, as well as in the right season in covered yards and houses. There is a rational middle way that steers clear of the soils of both extremes, that of giving the animals adequate shelter at night, and allowing them full range in the day time.

Another question of paramount importance is: How ought young pedi-

gree cattle be fed? The opinion is very general that rather low dieting is rather more favorable to the generative function than feeding them habitually with rations calculated to lead to a secretion of fat.

Any stranger visiting the breeders of Hereford cattle, in the home of the breed, in winter, would be amazed at finding so many heifers and cows of fame being fed chiefly on straw fodder. Their owners occupy a great deal of arable land, pasture and meadow land, and are perfectly aware that their high-proving cattle will sustain condition on straw diet. They are, as may be supposed, allowed a few roots in addition, unless these are scarce, when about 3 pounds of cake per head per day is given as a substitute. The heifers, in a great many cases, are allowed to run out on the grass lands in the day time, any surplus being fed in the evening of old rough grass for them to pick up. As for the breeding cows, their owners will tell you they must be kept on low diet when dry, or they will get too fat when they calve.

The feeding of the breeding heifers is very similar to that of the Herefords. In both cases, if it is possible, their owners prefer them to roam the fields by day. They browse straw fodder at night, but it depends on circumstances whether they have many roots or much cake or not. In all breeds, the kind of feeding the breeding animals get usually depends, however, far more on the owner than on the breed. The ordinary practical farmer would be unlikely to give his young breeding heifers much artificial food, whereas maybe in a large breeding establishment, with a competent manager at the head, a great deal more artificial food is given.

The winter dietary varies very much according as straw and roots are scarce or abundant. When the farm is almost entirely grass, hay becomes the staple food for cows and heifers over a considerable part of the winter and spring. But this is a commodity

which, however useful and good to rely on, differs greatly in quality, as well as in suitability to health, in accordance with the nature of the land, that grows it and the success in taking it secure from damage in the making. A great deal of hay has less nature in it than good straw, and is far less harmful to cattle feeding on it. The ordinary resources, when the hay has suffered damage, is to chaff and steam it, and when unnutritious, to give a little oil cake in conjunction. A far better system would be always to convert a portion of the grass into silage—indeed, a large portion of it when the meadows yield low class herbage, and in all cases about three weeks or a month before lambing time begins only a small amount of roots should be fed each day, say a pound or two per sheep.

An exceedingly important thing in the feeding of young bulls is naturally and necessarily high, and little need be urged about this beyond the point well known to all skilful breeders, that the kind of auxiliary feeding stuffs habitually supplied to them should be those which favor muscular development, of which oil cakes and bean meal are the best. These animals, no less than all others, require, however, variety of diet, and the ration that will suit one bull may not be best for another. The eye of the owner consequently makes the bull, as often as it fattens the ox.

W. R. GILBERT.

The Breeding and Feeding of Sheep*

In the purchase of breeding stock, too much attention cannot be given to the quality of the animals selected to form the flock in the case of either the males or the females. It is very certainly better to have a few well-shaped, well-wooled animals in the flock than to have a large number of commonplace, ill shaped, coarse and badly woolled ones. The male in sheep breeding operations, as in all other breeding operations, is of course of paramount importance and the expenditure of \$5 or even an extra \$20 in the purchase of a good male should not stand in the way of getting the animal the most suitable for the purpose in view. This is advisable though only grade ewes are to be used, since the influence of the ram extends over the whole lamb crop, and the carcass cost distributed over half a hundred lambs for three or four years amounts to a bagatelle of an increase in each case, but really makes a very important change in their appearance and value.

SUCCESS IN SHEEP FARMING

depends upon the proper attention (neither more nor less than the proper amount) being given the dogs at the right time. Starting with the ewes in the fall, it is undoubtedly of the highest importance to have them in thrifty condition and improving rather than falling at the time of coupling. Ewes bred under such conditions are much more likely to give numerous and vigorous lambs than where bred when in poor condition or on short rations. The ram, it is unnecessary to say, should be put in good shape as the breeding season approaches. He should be separated from the ewes for a week or two before the beginning of the 100 or 100 day period which must intervene between service and the dropping of the first lambs, and during this interval of two or three weeks he should receive a plentiful ration of grain as well as a small amount of meal. After service time, the ewes may be fed largely on roughness.

*Extracts from an address by J. H. Grisdale, Agriculturist, C. E. Farm, Ottawa, at the Maritime Winter Fair, Dec., 1906.

Turnips might advantageously constitute a good portion of the food, say five or six pounds a day per head, and along with the turnips, some highly nitrogenous dry feed such as pea straw, vetch hay, clover, alfalfa or pea and oat hay.

A small amount of straw might be fed when it would be necessary to add some meal. When the ewes are three months gone in young, even though good roughness may be being fed, it is usually advisable to add a bit of grain, say half a pound a day of a mixture of equal parts bran and oats. At the same time, the turnip or root ration should be gradually diminished about three weeks or a month before lambing time begins only a small amount of roots should be fed each day, say a pound or two per sheep.

An exceedingly important thing in the

WINTER MANAGEMENT OF SHEEP

is that the ewes should be compelled to take considerable exercise. Ewes that fail to get as much exercise as they should are apt to produce unhealthy lambs, weak at birth and unthrifty in after life. Probably, however, the best results are those observable at lambing time when not infrequently the lambs can scarcely stand up or are affected with gottre or are over-fat.

Unnecessary to say that great care should be taken of the mother and

receiving a bit of meal, a bit of grass, their mother's milk, the whole flavored and increased in value by a bit of kindness on the part of the shepherd, make wonderful progress in condition and, therefore, big money for the owner. As the dry season draws on, the utmost care will be found necessary to insure continuous thrift in the flock, on the part of the lambs more particularly, and, unnecessary to say, they should be the shepherd's chief care as long as they are lambs. When weaning time comes on, the meal may be increased or new pasture should at least be provided or cut feed thrown on the old and somewhat bare fields. Suitable feeds for this period are rape, vetches, clover, alfalfa, peas and oats. A discussion of the cultivation of these would be of value, but cannot be taken up at the present time.

A practice most common, but not the less reprehensible, is that of leaving the lambs on the ewes until they wean themselves. The effect is generally to put the ewe in poor flesh, to make her conditioning for the next service exceedingly expensive and to materially injure prospects for the succeeding lamb crop. Better far to separate the lambs from the mothers in July or August, as certainly better lambs will result, better mothers surely will be found in the flock and, as a rule, much more profitable operations be recorded.

Sheep Act Should be Amended

EDITOR THE FARMING WORLD:

At the meeting of Farmers' Institute delegates, held in Toronto, on Sept. 5th and 6th last, there was a resolution introduced by myself and Mr. F. Birdsall of Birdsall, Ont., and carried unanimously recommending legislation towards eliminating the tax of chapter 271, R.S.O., 1897, and making a tax on dogs for the protection of sheep compulsory. I have also asked the secretary of the Association of Fairs and Exhibitions to have this subject placed on the program for discussion at their next annual meeting.

I was pleased to read in THE FARMING WORLD the discussion at the Winter Fair on this subject by some of the leading sheep raisers of Ontario and I trust we will hear more from them.

I think the Act should be made compulsory and I believe that one great benefit in doing so would be the doing away with a lot of worthless dogs, and there would be few sheep killed. I think that every township council should appoint a competent person to adjudicate on losses and that the taxes should be a general fund to pay for sheep killed by dogs in the municipality. Trusting to hear the opinions of others on this subject, I remain,

Yours truly,

CHAS. O'REILLY,
Secretary of E. Peterborough F. I.

Winter Care of Sheep

A good many buyers send letters of disappointment in starting with sheep, and in nearly every case they inform us that it is a lack of care for the sheep that caused the disappointment. Some lose lambs, and some both ewes and lambs. I think likely the care was good, but not of the right kind. Good feed is plenty but no more than the ewes can eat is one thing needful, but to my mind the most essential and absolutely needed thing is plenty of exercise. But whatever else you do not set the dog on ewes heavy with lamb nor drive them yourself without you



The head of the Grand Champion Steer at Guelph, 1906.

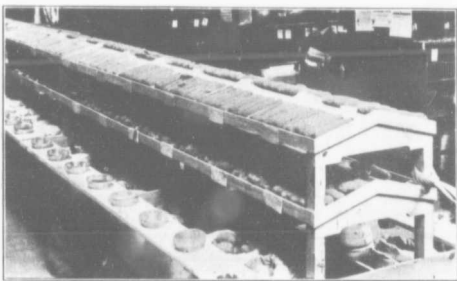
her young for a couple or three weeks after lambing. They should be carefully protected from the inclemency of the weather and fed a fairly plentiful ration of nutritious and easily digested food. Probably the best ration that could be advised would be, say one week after lambing, from one-half to one pound of the mixture of bran and whole oats, about three pounds of clover hay and a couple of pounds or more of turnips.

Lambing time reveals the shepherd. If poor, then most certainly will the lamb crop fall short. Not only will the lack of care in the past months show itself in the inferiority of the crop, as to both quality and quantity, but also in the proportion saved. The bad shepherd makes bad ewes, that is, they respond not to attention paid them and in addition the shepherd is not apt to give as much attention as he should. Consequently

HEAVY LOSSES OCCUR

a poor condition follows with the result of inferior lambs when marketing time draws on.

At no great age the lambs may be persuaded to eat. A creep constructed in one corner of the pen or in some secluded part of the pasture will excite their curiosity and a trough containing a little bit of oats and grain will soon draw their attention, and be robbed of its contents. Lambs



Seed Exhibit, Provincial Winter Fair, Guelph, 1906.

Can Ontario Grow Her Own Seed Corn?*

If she cannot, my talk this morning will be of interest to few; if she can, it should be of interest to all. From conversation, observation and experimentation I believe she can. I have reference now chiefly to Ontario's corn belt—a district, so far as commercial seed corn production is concerned, practically embraced in the counties of Essex, Kent and Elgin.

This year, for our corn work in Ste. Anne de Bellevue, we obtained seed corn from thirteen growers in these counties and, notwithstanding the fact that we had a cold, backward spring, the corn averaged 90 per cent. germination in the field. The man who has made careful field germination tests will be the one who will most appreciate these results.

The sweet corn on the table before me was grown at the Macdonald College this past season and yielded at the rate of 106 bushels of shelled corn per acre of thoroughly dried seed corn. The only fertilizer used was a light application of barnyard manure in the spring. Seed of the flint corn to my right was obtained in the Eastern Townships, Quebec, and planted at Ste. Anne's, although it was not planted until the 6th of June it was

PERFECTLY MATURED

three weeks before the frosts were sufficiently severe to injure the foliage. This plot was one-quarter of an acre in size, received no artificial fertilizer or manure, and yielded at the rate of 63.9 bushels of shelled corn per acre. Undoubtedly, we have yet much to learn regarding varieties, cultivation and handling of this important crop, but by co-operating with nature, my fears for ultimate success are not grave.

Consciously and unconsciously corn has been selected in a crude way for centuries. The fact that in harvesting the crop it was necessary to handle each ear separately made the selection of the largest and most symmetrical ears a comparatively easy matter. It is true that by this method performance and real efficiency were often sacrificed to good appearance, as is too often the case at the present time. An ear possessing outward character and strength and approaching perfection so far as conformation goes need not necessarily

be a productive or a desirable ear to plant. If in addition to a good external appearance the individual kernels are of the desired conformation we can more nearly determine the true efficiency of the ear so far as seeding value is concerned, but it is only by a comparative field test of different ears that we are able to determine the prepotency or projected efficiency of any ear.

Realizing the wide range of varieties and types of corn grown in Ontario I shall not specialize too closely, but hope to direct your attention to some fundamental points to be considered in selecting a good seed ear.

CONFORMITY TO BREED TYPE

All ears intended for seed purposes should conform to the desired standard in shape of ear and kernel, in color of grain and cob, in purity, size, uniformity, filling of butts and tips, indentation of crown (in the case of dents), depth of kernel, space between rows, straightness of rows and proportion of corn to cob. Conformity to a desirable type should be insisted on, as it has been repeatedly demonstrated that pure-bred varieties give not only higher yields, but corn of better quality than that produced by nondescript breeding.

While this is true, broadly speaking, it must ever be borne in mind that it is unwise to pay such close attention to detailed evidence of good breeding that real efficiency is ne-

glected or overlooked. Again, no variety of corn, no matter how productive it may be, can ever hope to win public favor and become widely known if it attempts to justify its existence on the ground of productiveness alone. However prone we may be to overlook the aesthetic side of grain production and lay emphasis on the financial results, somehow we all insist that an ear of corn have those evidences of breeding which give such added interest and satisfaction in growing and handling the crop.

SHAPE OF EAR

The shapes of ears will vary from the cylindrical to long, pointed forms according to variety and the conditions under which they have been grown. Ears full and strong in the central portion are most desirable as they indicate a high per cent. of corn to cob, and corn of superior feeding qualities. An ear properly proportioned in the centre is indicative of strong constitution and high yield, as a correlation exists between ears and the kernels of which they are composed.

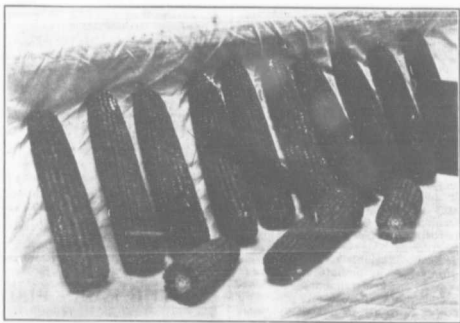
SHAPE OF KERNEL

A good kernel, especially in the dent corns, should be broadly wedge-shaped, strong and plump at the tip and should carry its sides well up to the crown, giving a strong, full shoulder. The germ or chit should not only have a large surface but should be carried well down to the back of the grain. The germ is high in oil; the hard, horny part of the kernel is rich in protein.

In selecting an ear of corn for seed always remove two or three kernels and study them in connection with the ear. If the kernels are undesirable reject the entire ear, even if to outward appearances the ear is good. Many a poor ear is used for seed or show purposes which would never have been considered had the owner removed a few of the kernels and made a careful study of them before making his final selection.

BUTT

The butt should be symmetrical, full and strong and made up of straight rows composed of kernels conforming as closely as possible to those in the centre of the ear. A full rounded butt is indicative of strength and adds the element of character to an ear, but it is not desirable to have it round out too fully and become too constricted, as there is a danger of its weakening the shank to such



Prize Corn, Seed Exhibit, Provincial Winter Fair, 1906.

*Paper read by L. S. Klinec, Macdonald College, Ste. Anne de Bellevue, Que., in the lecture series at the Provincial Winter Fair, Guelph, 1906.

an extent that the ears break off prematurely. Open or swelled butts are always objectionable.

TIP

The tip should be in proportion with the body of the ear and round out symmetrically and naturally. The rows should be straight and kernels retain as nearly as possible the size, shape and indication of those in the centre of the ear. Too much attention should not be paid to the complete covering of the tip, as the kernels here are not so valuable for seed or for feed as those in the centre of the ear. In addition to this, when undue attention is directed to securing ears well filled out at the tip, there is danger of doing so at the expense of shortening the ear in the most valuable part.

PURITY OF COLOR IN GRAIN AND COB

Strict adherence to a uniform color is essential in maintaining purity or freedom from mixture in any variety. The degree or depth of color in kernels or cob is of minor importance when compared with the question of mixture. Corn intended for seed should not be planted within a quarter of a mile of another variety of corn. Even if all the kernels not true to color are removed from the ear, there is a strong probability that many kernels on the same ear, although apparently pure, are in reality of a different origin. It is not good practice to plant for seed any ear having many mixed kernels, even if all the kernels not true to color have been removed, as the influence of the previous cross pollination may at any time manifest itself in subsequent generations. White corn should have white cobs; yellow corn should have red cobs.

UNIFORMITY OF KERNELS

Under this heading is considered not only the uniformity of the kernels on the ear, but also the conformity of the ear and its kernels with the rest of the sample. As the kernels on the butt and tip of an ear cannot conform closely to those in the centre they are shelled off when a uniform sample is desired for seed. Blocky or irregular kernels in the central portion of an ear are considered much more objectionable than if they were found at the ends, as it is much more difficult to remove them.

VITALITY

As used in this address the word vitality is not restricted to a kernel's ability or lack of ability to germinate but is used in the wider sense to indicate its strength and probable reproducing power when it does grow. A kernel full and plump in the tip and having a bright, vigorous germ is more desirable. Kernels weak and pointed at the tip do not have a sufficient store of reserves food to give the tiny plant a strong start in life. All such kernels should be discarded.

In order to determine the relative value of the different types of immature kernels so frequently found in selecting seed corn, germination tests were conducted by the writer in the field and in the green-house. Five classes were experimented with and the conclusions drawn from the results form the basis for the statements regarding each class. It was found that chaff adhering to a kernel, as it often does in immature ears, was not sufficiently detrimental to warrant discarding such kernels providing this was the only evidence of immaturity, as the growth of these kernels, both in the field and in the green-house, was satisfactory.

BLACK TIPS

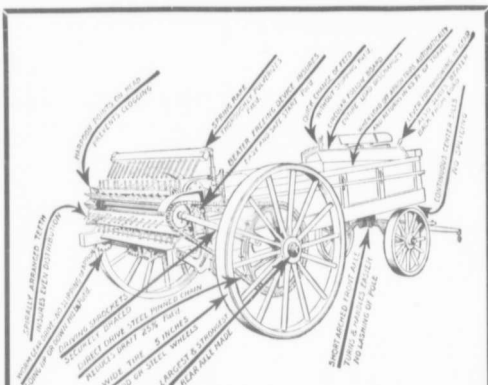
Kernels with the tip-cap removed, exposing the black covering of the embryo, grew well when planted in the green-house and under field conditions gave a good stand. The tip-cap is intended as a protection for the young plant, and when removed the water readily enters. If planted in a cold, wet time, such kernels frequently rot, but when planted under favorable soil and climatic conditions give but little indication of impaired vitality. These statements apply only to those kernels in which the tip-cap remained in the cob on shelling. The

black skin-like covering immediately under the tip-cap is natural to every kernel. Objection can be taken to its appearance only when it is exposed through removal of the tip-cap in the process of shelling.

WRINKLER, BUSTED OR SHUSUKEN GERMS

Kernels showing these evidences of immaturity are arranged in the order in which objection should be taken to them. Corn stored in a very warm place will shrivel and become uneven on the surface. Unevenness on the surface of germs due to this cause

(Continued on Page 70.)



Direct Chain Drive of "Success" Makes Draft 25% Less

No complicated, troublesome, easily-broken clutches, levers, gears, etc., are used to drive Beater of "Success" Manure Spreader.

Old style methods have been side-tracked entirely—not good enough for "Success."

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The driving mechanism is held securely in place by a HEAVY BRACED SHAFT, which is entirely absent from common manure spreaders.

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A lever close by the seat throws the beater into gear. Impossible for it to get out of gear until the load is completely distributed, or you release the lever. Securely locked back when in gear, and just as securely locked forward when out of gear.

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This is of immense importance. Rear axle has to convey power to pulverize and distribute the load, besides bearing a great share of its weight.

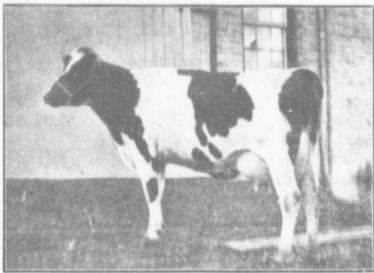
Steer clear of a weak axle. It will play havoc with your machine. Parts will become disarranged and broken. It will be a constant source of anxiety and expense.

If you want the simplest, strongest and easiest-working manure spreader on the market you will buy the "Success."

Write for our Free Illustrated Catalogue. It tells all about the "Success" in detail.

THE PARIS PLOW COMPANY, LIMITED

Paris, Ont., and Winnipeg, Man.



The Champion Cow, Boutsje, owned by O.A.C., and whose wonderful record is given below.

Remarkable Figures in Milk Production

Every dairyman looks forward with interest at the end of the year to the record of the dairy herd at the Ontario Agricultural College. The record for 1906 is in advance of that of the previous year, and shows that the cows at the college have not yet reached a point at which it may be said that the maximum in milk production has been attained. The average for 1905 was 6,062 lbs. of milk and 261 lbs. of butter per cow, and the average cost per cow for the year was \$28.70. Had the herd during 1906 not been used in testing the milking machine, a larger record would have been received. Prof. Dean has kindly furnished *THE FARMING WORLD* with a detailed statement of the herd's record for 1906, which reads as follows:

"Replying to yours of Dec. 31st, regarding our dairy herd, I would say that our best cow during 1906 gave 11,490 pounds of milk and 465 pounds of butter. The average for the herd per cow was 6,513 pounds of milk and 277 pounds of butter. The value of the butter was \$82.37 per cow, and the milk \$104.74. The average percentage of fat was 3.65 and the average cost of feed per cow \$30.63. Last year's average profit on butter over cost of feed was \$21.74, and on milk, over cost of feed, \$73.58."

The first nine cows in the herd were Holsteins and Holstein grades. We estimate that on three of our other cows we lost not less than 10,000 pounds of milk during the past year as a result of using the milking machine, and our average is lower than it would otherwise have been.

Regarding the champion cow, Boutsje, I would say that her record for 30 days in November last was 2,352 pounds of milk and 103 pounds of butter. For seven days it was 643 pounds and for one day 96 pounds. During the year this cow gave 11,025 pounds of milk and 463 pounds of butter. The cost of her feed was approximately \$44. This cow will do very much better during the coming year, as it is altogether likely we lost a couple of thousand pounds as a result of using the milking machine." As will be seen, the herd, notwithstanding the drawbacks incident to testing the milking machine, gave an average of 451 lbs. of milk per cow more than in 1905. If the 10,000 lbs. of milk which Prof. Dean estimates were lost, because of machine milking, were added to the grand total, it would mean an average increase of about 500 lbs. per cow for 1906 over that of 1905.

The record made by the Holstein cow Boutsje, champion of the Winter Fair dairy test in 1905, and purchased by the Ontario Agricultural College, is a remarkable one. If we take Prof. Dean's valuation of the milk as above, this cow would give a cash return for November last of \$40.35, or within \$1 of what it cost to keep her during the year. At the same valuation, she would give a cash return of \$102.28 for the seven days' milk and \$1.33 for the milk of one day. If figured on Prof. Dean's valuation of the butter per cow for the herd during 1906, this cow would give a cash return of \$19.57 for butter alone during November last. On the same valuation for butter and milk the best cow in the herd would give a cash return for 1906 of \$88.35 and \$153.98 respectively, or \$36.08 more from butter and \$79.24 more from milk than the average of the herd.

These figures should give the dairyman something to think about. They show what is possible in milk production by careful selection and feeding of a dairy herd. Let every farmer take a lesson from it; find out what his cows are doing, and act accordingly.

Eastern Dairymen in Annual Session

The thirtieth annual convention of the Eastern Ontario Dairymen's Association, held at Ottawa, Jan. 9-11, was fairly well attended. While there were a great many makers present, the number of farmers or milk producers present was very small. A program of interest and value to dairymen had been prepared, and it was a pity that more producers were not in attendance at the sessions of the convention.

The chief feature of the opening session was the annual address of the President, Mr. D. Derbyshire, M.P. Speaking with reference to the work of the past year, he said: "We have to acknowledge that we did not produce quite as much milk as in 1905 owing to the shortage of pasture, and we feel confident that with all the educational advantages that are in reach of our dairymen, such as this association, the dairy schools, agricultural colleges and cow-testing associations, a greater quantity should have been produced. We believe that the cow testing associations, which are being encouraged and established under the supervision of the Dairy Commissioner, should re-

Cow Testing Associations

A good start was made in 1906 with the organization of cow testing associations, but we hope to see great extension of the movement during the coming year, because there is no other line of effort which offers the same possibilities for increasing the profits of milk production. Judging by results obtained elsewhere and also by the experiences of progressive farmers in this country, it would seem to be possible to increase the average production of Canadian herds by at least 2,000 pounds of milk per cow per year, by applying the same rational methods.

The plans for the improvement of a dairy herd need not be elaborate or expensive, and should take cognizance of the fact that there are good cows and poor cows, judged by their milk production, in all breeds, and that it does not follow because a cow may have a lengthy pedigree that her performance at the milk pail is up to the mark; that there are "scrub" purebreds as well as common "scrubs." It will require some moral courage to discard the expensive pure-bred "scrub" after she has been shown up in her true colors, but that is what should be done. There is only one true standard and the test must be production. This is not an argument against the pure-bred animals as such, but rather an attempt to place performance ahead of pedigree. Ancestry is a most important consideration, but unless the record carries with it some account of production, it lacks the only really important feature and the man looking for superior animals gets no information from it that is of real value to him. He may have personal knowledge of the animal in question, but that is another matter.

Owners or managers of cheese factories and creameries naturally take an interest in this question, and there is no reason why testing of individual cows should not be done by the factory management. Most factories have the necessary appliances (except the sample bottles), and the manager is, or should be, more competent to do the work properly than the average farmer is. Full particulars regarding the formation of testing associations may be had by applying to the Dairy Commissioner, Ottawa.

ceive more attention from the dairymen, and that testing would have aided more in keeping up the quantity and standard of quality than the accurate knowledge of just what our individual animals are doing, which is easily obtained at the formation of these cow testing associations.

A HUNDRED MILLIONS

"We find that we have made about \$100,000 worth more cheese this year than last, yet we find that we are behind in the exports of butter about 180,000 packages, but with the high prices obtained, we find that the estimated value of cheese, butter and bacon exported will amount to about \$46,500,000 from the make of 1906, and when you add to this \$54,500,000 the value of these articles of food (including milk) consumed at home, we have a grand total of \$101,000,000, which is \$6,000,000 more than for the year 1905. As our dairymen become better educated in the work, we expect to see the demand for and home consumption increase each succeeding year."

Before closing his address Mr. Derbyshire announced his retirement

from the presidency, a position he had held for a great many years.

Dealing with the question of dairy records, Mr. C. F. Whitley, of the Dairy Commissioner's staff, stated that sixteen cow testing associations had already been established. They were not only valuable, but indispensable to progressive dairymen, because (1) they assist in distinguishing the good from the poor cows; (2) they guide the feeder in preparing rations economically; (3) they give warning of approach of sickness; (4) they give inspiration to those aiming at improvement. The weight of the milk of each cow was taken by the farmer himself and the test for richness was made free by the Government. The cost to the dairyman was only between two and three dollars.

Discussing this subject, Mr. J. H. Grisdale, of the Central Experimental Farm, said that after seven or eight years working along this line he had found startling results. It was possible to increase the average yield per cow by 2,000 pounds per year. He gave the result of a British Columbia dairyman who had by the methods advocated by Mr. Whitley increased the individual output from 3,000 to 6,000 pounds per cow. Another in Nova Scotia and another in Ontario had sent in even better results. It was not only the selection of the best animals for breeding, but the improvement it offered to care in feeding. Prof. Dean, of the Ontario Agricultural College, emphasized the importance of judging a cow by her production and not by her outside appearance. At the college the poorest cow gave 2,000 pounds of milk per year and the best 11,000 pounds. Farmers were waking up to the fact that there were vast possibilities in the breeding of dairy cattle. A sire last year had sold in the United States for \$10,000 because for three generations back it had the record for production. He would like to see a station established where a man would be able to study privately the fundamental principles of breeding dairy cattle.

The opening sessions were designed for farmers, but there were very few present to hear the addresses. At the afternoon session of the first day Mr. Grisdale and Dr. J. G. Rutherford, Veterinary Director-General, were the chief speakers. The former took up the question of farm economics. Care for his cattle all the year round should be the aim of the progressive farmer. There is great need for a change in methods. The introduction of a definite plan of farm economics. He pointed to a suitable division of a farm, showing the main cropping area divided into four fields with a suitable rotation list of pasture, corn and roots, grain and hay, arranged so that there would be a crop of each kind for each year. A portion of six acres should be set apart for growing such crops as clover, corn and mixed crop, such as peas and oats and vetches for summer feeding. In each field there would be one of these, and this would give steady feed for the cattle when the pastures failed. The proposed arrangement not only provides feed for the Mr. Grisdale cited a case of a farm which five years ago supported only 15 head of cattle, and last year supported 29 and enabled the owner to sell hay besides.

STABLE HYGIENE

was Dr. Rutherford's topic. He argued that dairymen kept their stables too warm. It was not unusual to find an unventilated stable with 70 degrees of heat, while it was 30 degrees

Figures That Tell

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A new Canadian record accomplished in 4½ years:

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Deposits, over	15,000,000
Capital, Reserve Fund and Undivided Profits, over	5,250,000

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This running turns to a scurf and forms a firm bandage on the part. So long as it stays over the strain or swelling, the effect of the dressing holds good. In 14 to 16 days, the scurf falls off and the horse is well.

And you can work the horse all the time Fellows' Leeming's Essence is curing it.

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Fellows' Leeming's Essence

for Lameness in Horses. 14

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My pictures with plain, easy-to-understand explanations in our new catalogue make the construction and operation of the U. S., as plain as though the machine was before you. Let us send you a free copy. Just write: "Send Construction Catalogue No. 110". Write today. Don't buy a Cream Separator before you see this book.

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below zero outside. The heat was supplied only by the animals, and if any were diseased the healthy ones suffered. Tuberculosis in cattle was responsible for a good deal of the increasing tuberculosis in pigs. This was undoubtedly caused by drinking the milk of tuberculous cattle. Pure air in plentiful quantities would do a great deal towards remedying these evils.

Prof. Dean, Mr. Henry Glendinning and others took part in the discussion which turned largely upon the question of the proper temperature for dairy stables. Prof. Dean did not fall in with Dr. Rutherford's statement that a temperature of about 40 degrees was sufficient for cows in winter and contended that much better results would be obtained at a temperature of from 50 to 60 degrees. At the lower temperature, too much food would be expended on keeping the animal warm.

His Excellency Earl Grey had been expected to formally open the convention on Wednesday evening, but owing to indisposition was unable to be present. The Hon. Mr. Fisher was the chief speaker. He welcomed the dairymen to Ottawa and paid them a high compliment for the excellent work they had done in building up so great an industry. They should now strive for a general improvement in the rank and file of the dairy herds of the country. Referring to the question of testing cows, he stated that ten years ago, when giving his personal attention to his own herd in Quebec, his cows made 300 lbs. of butter per year. Now, owing to the testing part of the business having been neglected, his cows only gave a yield of less than 200 lbs. of butter each in 1906. There were now 16 cow testing associations, and only three of these were in Ontario.

President Creelman, of the Ontario Agricultural College, Hon. Mr. Monteith, Minister of Agriculture for Ontario, and Dr. Mills also gave addresses. Mr. Monteith outlined to some extent what his department is doing for dairying and strongly emphasized the need of reaching the farmers who do not take proper care of the milk supplied for cheese and butter making.

MAKERS' DAY
Thursday morning's session was opened by an address by Mr. G. A. Putnam, Director of Dairying, in which he outlined the work being done by the Department of Agriculture to help the dairy industry of the province. He referred to the work of the Women's Institute and what was being done by that organization to build up the home life of the country. Incidentally he referred to a statement made at the recent Women's Institute gathering at Guelph that children raised on cows' milk only stand one chance in fifteen of pulling through, as compared with the child that is brought up by suckling its mother. The crying need, therefore, was absolute cleanliness in caring for milk on the farm. Most farmers know what is wanted, but do not put into practice what they know. There are 300 cheese factories which are still out of the syndicate work. These factories must be got at.

Mr. G. G. Publow, Chief Instructor for Eastern Ontario, followed with a report of the work of the past season. The work was similar to that of other years. The present system of applying for instruction is not satisfactory. Some provision should be made whereby he would know earlier in the season what factories

would want instruction. Twenty-eight instructors in all were employed last year, and looked after 727 factories, seventy-seven of which had received instruction for the first time last season. They made 3,274 day visits and 2,762 call visits. They visited 3,332 farms and addressed 58 meetings. 78,086 tests for adulteration were made. 173 samples of milk were found to be watered and 307 skimmed or the fat removed. \$1,800 was collected in fines. Only 50 cheese factories in Eastern Ontario pay for milk by the Babcock test. During the season 106 factories were repaired and 34 new ones built, necessitating an expenditure of \$119,198, or \$19,000 more than in 1905. In all, there are only 457 makers who keep everything clean about the factories.

Speaking of the season's work in general he stated that the instructors must be better paid, as it was hard to keep good men. There was not the improvement in the milk expected. There were few who did not understand how to care for the milk. There was a lot of over-ripe and bad-flavored milk, due largely to the very hot

In answer to a question, Mr. Publow said that in

HANDLING CURD IN THE VAT

it should not be removed in a soft condition. If racks are used curd can be removed in a soft condition in handling fast milk. Such curds should have less acid when dipped. Cut fine and cook higher and faster, to 80, 90, 100 degrees. During 1906 they had more ripe milk than for six years past, but less acidity cheese was made, because makers knew how to handle it better. Buyers are not laying so much stress on closeness as formerly.

Mr. D. M. MacPherson advised giving prizes for the best quality of milk, as well as for the best quality of cheese. He suggested that prizes be given to the patrons in the syndicates sending the best quality of milk to the factories.

Mr. Publow stated that the makers are putting forward a greater effort to reach the patrons. There are many makers, however, who are not fitted for this work. The best milk is received where makers show tact and judgment in dealing with patrons. If the raw material is wrong, the best factory buildings and the best maker will not insure a good product. Many makers have not the time to visit the patrons. He instanced the case of a factory whose cheese had been rejected and the patrons did not know anything about it. The maker had made an agreement with the buyer to pay any loss incurred.

Dr. W. T. Connell, Queen's University, presented an interesting paper on

DAIRY BACTERIOLOGY.

Bacteria that grow in milk very soon affect it. Milk, when kept, undergoes fermentation changes. The common one is the souring of the milk and may be brought about by many forms of bacteria. There are the clean, souring types or lactic acid bacteria and those producing more or less gas. The first type was more common in cheese making, when the latter kind predominate there are more or less bad flavors. The lactic acid types are the basis of all starters. The other kind are very common about stables and in many factories. Very little care was taken on the average farm of the drinking water. There was as much typhoid fever in Canada last year as in England and Wales, with several times over the population. He had investigated some rust discoloration in cheese and found it due to same condition as reported upon several years ago. By thorough cleanliness the gas-forming bacteria could be largely eliminated in cheese and butter making.

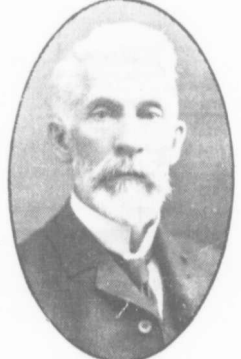
In answer to a question, Mr. Publow recommended steel in preference to iron why tanks. They cost more but are worth the extra cost.

He believed that nothing would help the quality more than the

GRADING AND SELLING CHEESE

on its merits. There should be a perfect standard before everyone who judges or reports on cheese. One reason why fewer cheeses were rejected was because there was a rising market and dealers could find an outlet for them.

Mr. Ruddick in reply to a question, stated that Canadian cheeses were better than New Zealand cheese, but our cheese is not as well handled and does not reach the British consumer in as good condition as New Zealand cheese. Climate conditions there are better than here. New Zealand cheese does not compete with



JOHN R. DAIRGAVEL, M.P.P.
The new President of the Dairy men's Association of Eastern Ontario.

weather. While this was true, the general quality of the finished product was better than before, there being fewer claims for bad cheese. The constantly rising market during the season may, however, have had something to do with this. One of the chief faults of the season's trade was the shipping of cheese too green. He regretted very much the removal of the official referee at Montreal, as he had been of the greatest assistance to him in previous years. An effort should be made to attend more of the annual meetings of factories. Factorymen were constantly asking for speakers for these meetings.

Mr. J. A. Ruddick, Dairy Commissioner, in leading the discussion commented very highly on the work of Mr. Publow. The syndicate system of instruction is the proper one. It would however, be a decided advantage to have each syndicate organized with a set of officers. This would interest more people in the work and bring about more co-operation among factories. This plan has been followed with success in Quebec. In regard to the official referee, he would be glad to have an expression of opinion from the convention as to the appointment of such an official.

Canadian cheese, as they come in at a season when we do not send any. That is, their fresh made cheese does not come on the market at the same time as our fresh cheese.

Mr. Wieland, of Montreal, stated that the chief reason why the New Zealand cheese sold for three shillings more than Canadian in 1905 was because they sold during the time of the year when the market is the highest.

In answer to a question, Mr. Publow stated, the three things required to improve quality are: Deliver milk in a better and cooler condition, improve the factories and curing rooms, and have less jealousy in the business.

Prof. Dean, of the Ontario Agricultural College, opened the afternoon's session in a well thought out address on

MOISTURE IN CHEESE

Butter and milk. The water in cheese is the natural water of the milk, while water in butter is the water incorporated in the making. Considerable moisture can be incorporated in cheese to advantage. Not only so, but moisture is the essential thing in dairy products. He outlined the method used at the college for determining the amount of moisture in butter, the apparatus of which cost \$200. Even to-day we know very little about the principles of cheese making. For instance, no maker can tell the exact percentage in his curds at any stage.

The maker should know this, and this cheap apparatus would enable the maker to do this. There should be some relation between the weight of the curd and cheese and the percentage of moisture. A given volume of curd when water was taken out behaved mechanically between the particles of curd. If c.c. of curds will weigh about 1-10 of a grain less when stirred. He outlined a simple plan, though not perfect, which would enable makers to check moisture in curds fairly well. There was no relation between moisture in butter and the overrun. He quoted the result of tests to prove this. Wherever methods were adopted to increase overrun, the quality was injured. Curd containing 70 to 80 per cent. moisture at hooping had 35 per cent. when in green cheese. It may be possible for a cheese maker to increase moisture in cheese without injuring quality, but the maker should go slowly. It is possible to leave from 50 to 52 per cent. of moisture at dipping and turn out a first-class article. Cheese made this way was scored 90 points by Montreal buyers, while cheese with the ordinary amount of moisture of from 45 degrees to 47 degrees per cent. only scored 97 points. The former was a little weak in color, while the latter was weak in texture. He asked for volunteers among the makers who would undertake to make an experiment on this moisture question.

In answer to a question, he thought that from 1½ to 2½ lbs. of salt per cwt. of curd was sufficient. Many makers use too much salt. Cheese with more moisture in should not be cured at a high temperature. Found best results by curing cheese at a temperature of 40 degrees. Cheese made and cured at 40 degrees scored more than cheese cured at 60 degrees. After a period of from 4 to 6 weeks, rate of ripening is about the same at both 40 and 60 degrees.

In reply to a question, he outlined the steel boiler shell for a whey tank. He would never put a whey tank of any kind in the ground. Tank at col-

lege is 4 feet wide, 6 feet high, cost \$40. A 15,000 lb. tank, quarter inch steel, will cost about \$110 L.o.b. An ejector or pump should be used to elevate whey.

Mr. Ruddick, before beginning his regular address, stated that in

COOL CURING

they had advised makers not to include too much moisture in the cheese when brought to the cooling station. It is important that all cheese should be put into the cool curing room as soon as possible, though green cheese are apt to become mouldy if not allowed to dry off somewhat. He then gave some information regarding the development of our export trade in cheese. The first shipment was made in 1900. At first the buyer visited the factories and found out what was on hand and cabled to the old country for prices. Then came cheese markets, which helped the situation very much. Of late years the Canadian trade were buying outright here and there, and offering to the English dealer. In regard to selling cheese on their merits, he instanced the case of some factories that sold for ¼ cent more than the price in the district. Some cheese sold for 1 cent per lb. more in England than the cheese from neighboring factories. In regard to grading, he thought it could not be satisfactorily conducted under our conditions. During the past few years we have made considerable progress among the consumers in Great Britain. Dealing with the

SHIPPING OF GREEN CHEESE

he read letters from several old country firms condemning the practice, and stating that it has seriously injured the quality of the past season's make.

They also complained of loss in weight due to the same cause. In New Zealand 3 per cent. is deducted from the gross weight for shrinkage in shipping. It is a serious menace to the Canadian cheese trade. While the exporter is to blame somewhat for buying green cheese, he was of the opinion that the seller was to blame in not holding his cheese until they are ready to ship. He gave an account of some small cheese, made in June and cured in the cool-curing room all summer, and the quality was good. He was of the opinion that we do not get that fine "cheesy" flavor in cheese cured at a very low temperature, as at about 60 degrees. They are apt to be insipid if cured at too low a temperature.

SALESMEN'S SIDE

A salesman stated that buyers send men around and offer so much if cheese are shipped at a certain date and the factory should not be to blame for accepting the offer.

Replying, Mr. Ruddick stated that if the trade is injured by shipping green cheese, it will react against the producer.

Mr. H. A. Hodgson, representing the Montreal Produce Merchants' Association, made a short address, explaining that a few years ago some buyers were under the impression that green cheese would cure in storage, started to buy close to the hoops. They had found out that such cheese would not cure and consequently injured the trade. In regard to a referee, the buyers were willing to co-operate with the factory men in this particular. Referring to the trade of the past season, he stated that their firm had many letters from (Continued on Page 71.)

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Old Times, Old Friends, Old Love
There are no days like the good old days,

The days when we were youthful!
When humankind were pure of mind,
And speech and deed were truthful;
Before a love for dorded gold
Became each man's ruling passion,
And before each dame and maid became
Slave to the tyrant Fashion.

There are no girls like the good old girls—

Against the world I'd stake 'em;
As buxom and smart and clean of heart
As the Lord knew how to make 'em.

They were rich in spirit and common sense,
And piety all supportin';

They could be and crew, and had taught school, too,
And they made such likely courtin'.

There are no boys like the good old boys—

When we were boys together;
When the grass was sweet to the brown bare feet

That dangled the laughing heather;
When the pewee sung to the summer dawn

Of the bee in the willow clover,
Or down by the mill the whip-poor-will
Echoed his night song over.

There is no love like the good old love—

The love that mother gave us.
We are old, old men, yet we pine again

For that precious grace—God save us.
So we dream and dream of the good old times,
And our hearts grow tender, fonder,

As those dear old dreams bring soothing gleams
Of heaven away off yonder.

—Eugene Field.

Too Many Cooks

The "county cook" stood in the lane at the back of the school buildings, and shaded her eyes from the sun, which was setting in a bank of purple clouds. In her trim black gown, with the starched apron and dainty white sleeves, she looked as fresh as though the South Kensington College of Cookery had but that instant turned her out, armed with the diploma that had secured her appointment under the County Council. At the present moment, she also possessed a very impatient frown, the cause of which lay in a note she held in her hand.

Viva Kerr read the ill-spelled letter once more and sighed. It was her custom to hold a weekly demonstration and lecture at the remote townlet of Hillstone, and on these occasions Mrs. Thompson, the wife of a local gamekeeper, acted as her assistant. At the moment when she had completed all her preparations for the class, a shock-headed boy had appeared with the disturbing letter:

"Dear Madam," it ran. "I'm sorry to say as I'm ill with the sore throat, so I cannot oblige you to-night, and being so late I can't find you no one else but my cousin, him being up at the squire's and in the house, so will be handy and useful, and I've sent him word this minute, so he will be sure to oblige you. Yours obediently,
Sarah Thompson."

The village clock struck eight, and still Viva waited for her assistant. Apparently, the obliging youth omitted punctuality from his stock of virtues. As the last stroke died away, and the girl turned to go inside the schoolhouse, a man rode furiously down the lane on a bicycle. The machine was old and battered, and like the clothes of the rider, had seen better days. Viva saw a dark, youthful face, and noted that the flies on his old cap and the white neckcloth, twisted round his throat in place of collar, gave the man more the appearance of a groom than that of an indoor servant.

"Are you from the Hall? Stop this instant!" she called out in a very peremptory manner.

The man stared, but jumped off his bicycle.

"Yes, I'm Hall," he said, gazing at the girl.

Viva hardly heard the answer. "I've been waiting ages," she said, in an aggrieved manner. "I was told to expect you at the cookery class to-night."

"Cookery class?" The man's countenance cleared. "Yes, I did promise something—" he began, but he spoke to Viva's back.

"Follow me quickly, and don't waste time," she directed.

There was a smile on the man's face, as he obeyed these instructions, but when he had passed the door of the schoolhouse, the grin faded to a genuine look of fear.

The room was large and bare. On a raised platform stood a gas stove, and on the table there was a collection of cooking utensils and provisions. All this was harmless enough, but what brought the bashful red to Hall's face and fixed it there was the fact that the room was simply packed with the petticoat brigade—most of them young, and a fair proportion quite pretty.

Notebooks in hand, they sat around on the forms. Some looked bored, and were obviously there under protest, while others were so eager in their search after new recipes that they did not need a ring to label them "Engaged." All of them stared at the masculine intruder.

The charming cook stepped on to the platform.

"I'm exceedingly sorry to be late in starting," she said, "but my assistant kept me waiting. However, we will lose no more time."

She hurriedly gave out the initial recipe, and then turned to the thoroughly alarmed Hall.

"You'd better have this on," she observed, and then she started to tie a very servicable looking apron about him. Hall placed desperate hands to restrain her.

"Not for worlds!" he exclaimed;

and really, Miss—er, he began,

"I really must explain. You're making a mistake. Do listen! I don't know what you expect me to do, and—"

Hall felt himself dwindling visibly.

"Look here, Miss—er, he began, "I really must explain. You're making a mistake. Do listen! I don't know what you expect me to do, and—"

He stopped in despair, for Viva, who noticed that the class was waiting, cut in hurriedly. "Can't you see you're keeping us waiting?" she cried. "I've been hindered and bothered enough as it is, without you. You don't know what to do? Simply as I tell you. I don't expect more. You might surely try and help, instead of putting obstacles in my way."

Hall looked at her. Anger had deepened her flush to a deep carmine color, and her gray eyes had darkened to purple pansies. A sudden admiration glowed in his face.

"If you put it like that, of course, I'll do all I can," he said, and Viva nodded. She noticed now that the clean shaven face had deceived her. Her assistant was an older man that she had originally taken him to be.

"Evidently stupid and can't get on," was her deduction. Then, absorbed in her work, she forgot all about her assistant. For his part, he watched her with amusement.

"That's a young madam," he decided, as her high-pitched voice laid down the law on the science of cookery. The slight element of authority which her position gave her was evidently pleasing to the girl, but her vigorous grace and the energy with which she worked made Hall gaze at her with pleasure, while he mechanically tried to cope with her abrupt demands for "bowl" or "spoon." Suddenly, as she was about to place a dish on the stove, she met his gaze, and the admiration made her redder with annoyance.

"Just watch this pastry, and turn down the gas in five minutes time, exactly," she commanded as she turned away.

Her recipes were the simplest, and were evidently selected to meet the needs of a rural population. Baked haddock and cottage pie did not prove inspiring, so once again Hall watched the wavy black hair, and marveled at the play of the mobile features in dreamy content.

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"Are those tarts ready?"

Viva's high-pitched voice suddenly broke his reverie. Hall gave a guilty start of horror.

"I'm afraid—I've forgotten," he stammered.

Never before in his life had he been so thoroughly afraid of a woman, and his knees nearly shook as, with the air of an empress, Viva swept passed him to the oven. She swung open the door and slammed down on the table a tray of blackened pastry, while Hall heartily wished the ground would swallow him up, and mingle his ashes with the sympathetic dust of King Alired.

"You see the result of my pastry, ladies!"

The county cooks' voice vibrated with anger.

"This is exceedingly annoying, as they were specially ordered for a supper party to-night, and we help to meet our expenses in this way. I suppose I'm to blame, but, at the same time, I must say that if one cannot expect anything but ignorance from inexperienced people, one has a right to expect ordinary care and common sense."

The look she gave poor Hall seemed suddenly to brace him up, for he raised his drooping head.

"I'm exceedingly sorry for the accident," he said, "and as I gather some inconvenience may result, will you kindly allow me to make good the deficiency?"

The class stared at the speaker, and Miss Kerr's eyes opened in surprise. This was not the kind of speech she had expected from an assistant, but her astonishment was quickly swallowed up in a greater wonder.

The assistant had possessed himself of her place. With lightning rapidity he seized a bowl and spoon and began a series of rapid movements. Eggs seemed to crack as though by magic; flour whirled round in a white cyclone, and sprays of water splashed through the air. The deft fingers seemed everywhere—patting, kneading, cutting, molding with unerring skill, while the class gasped in astonishment. They had the feeling of watching a performance which should have progressed to slow music and applause. When the last tartlet was popped into the oven, the transformed assistant turned to his audience with a smile.

"As I am about fifteen years out of practice I hope you will wait about ten minutes to see if I have vindicated myself."

He need not have troubled. The class had no intention of abandoning what it had seen those tartlets emerge

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Dept. W., ORILLIA, Ont.

from the oven. And when after a short time they appeared from that fiery trial to be subjected to the hotter ordeal of the scrutiny of fifty pairs of eyes, a storm of enthusiastic exclamations arose. Such a triumph of cookery had never been witnessed in Hillstone before.

And the county cook knew it, too! She saw the room grow empty, as the class melted away and she was at last left alone with her assistant. She looked at him with inquiring eyes; all her self assertion had vanished, and it even seemed to Hall as though the starch had gone out of her apron.

"Who are you?" she asked.

"There, now, you would not let me explain, I'm Adrian Hall, from the Colossal Hotel."

Viva gasped. She knew the name. Only the previous week a magazine had published an interview with the celebrated Adrian Hall—an artist in his special line, and the head chef in England, or, as some asserted, in Europe, who, after a varied career, had proved himself very genuine in the culinary art. She had read of his army of chefs and subordinates, and his princely income, and on top of the recollection came another. She had given him a demonstration of cookery.

"You see, I only get a holiday about once in five years, and was here fishing. Met the squire, and he invited me to try his preserves. He happened to mention that he had to put in one attendance at the cookery class, and I offered to look in for him," went on Hall.

Viva's sigh was indicative of the resignation of despair.

"Well, I suppose I've quite done for myself in Hillstone," she said. "To begin with, I've made a laughing stock of myself. Then, of course, you'll tell the squire all you've seen. Yes, I know that sauce was burned, though I did say it was the coloring. And there's worse than that."

"Still worse?" Hall was heartless enough to laugh in the face of such a tragedy.

"Yes—Worse," was the reply. "I—I told you to take hints from me. Here the tears fell, but Hall affected not to see them.

"Anyway," he said, "you've taken me on as assistant, and a jolly poor job I've made of it. Now I'm going to finish up in the orthodox way by washing up. Won't you help me? It's rather fun."

So Viva took up a towel and helped him, just as a year later she helped him to ice the names "Adrian" and "Viva" on a wedding cake.—Answers.

Night Express

There's a light at last in the sable mist, and it hangs like a rising star.

On the border line 'twixt earth and sky, where the rails run straight and far;

And deeply sounds from hill to hill, in mighty monotone,

A distant voice, a hoarse, wild note, with savage warning blown.

'Tis the night express, and well 'tis named, for behold, from out it comes and darts down the rails

it looms to the startled sight—Larger, nearer, nearer yet—till at last there's a clang and roar,

A wave of heat and a gleam of red from a closing furnace door;

Then the crash and shriek of the rushing trains—and our hearts beat fast and high

When sudden and swift through the shadowy mist the night express goes by!

—St. Nicholas.

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THE BOYS AND GIRLS

Pa's Awful Ignorance

Most every day when I'm at school
The teacher tells us things
About the birds and animals
And presidents and kings,
And then, at night, when I ast pa
If what she says is so,
He reads his paper right along
And says: "Oh, I dunno!"

One day she told us that the world
Is round, just like a ball,
And that there's nothing down below
It's standin' on at all,
I ast pa if she told the truth,
He read his paper, though,
And put his feet up on a chair,
And said: "Oh, I dunno!"

And once the teacher said the sky
Ain't heaven's floor, and tried
To make us think no angels walk
Along the other side,
And so that night I ast my pa,
And all he said was: "Oh,
Don't bother me about such things,
I'm busy—I dunno!"

One time a bigger boy, he said
The doctor didn't bring
My little baby sister in
A box—no such thing!
That night I ast my pa if what
That big boy said was so,
And pa he answered: "Oh, keep
still—
Confound it, I dunno!"

I used to kind of think somehow
That my pa knew a lot—
But that was wrong, or if he did
I guess that he's forgot.
Since I've got started into school
Most every day or so
I hear about a hundred things
Pa doesn't seem to know.

—Judge.

How Bessie Filled a Day

By M. J. S.

"It will be such a long day!" sighed Bessie. "It does seem as though I just could not live it through!"
"Why don't you fill it up with something—then it won't be empty. Just think of the nine hours that I am gone as nine great dishes that must be filled."
"What with?" asked Bessie, wondering.
"Almost the nicest thing to put in them is service—something useful. If you could find something that would make some one else happy, that would fill faster than anything. It is an idle hour that is empty."

"Tell me how," said Bessie, who was watching her mother tie on her veil and prepare for a day in the city. Bessie was to stay with her Aunt Helen and grandmother, but as the country was a little strange to her, she dreaded it very much.

"Well," said mother, "come out to the piazza, and while I am waiting for the carriage to take me to the station I will give you an idea of the things you can put in your nine hours, and they will fill up faster if you work moderately—without rushing round."

"Wait till I have a pencil," said Bessie, skipping away to her room. When she returned her mother began: "First, I think it would be very nice to gather Aunt Helen a large bouquet of wild flowers—she loves

them so well—and that will take you on a pleasant journey down the road. When you have enough you can put them in that large bowl and set them in the corner of the piazza. Next, I would take a pile of those old picture books up in your room, and paste the torn leaves very carefully, and carry them down to that little lane boy who lives by the church, for he has nothing to read and the days are very long to him. After that I would sit down on the piazza with Aunt Helen a while, and very likely she will want you to arrange all the spoils in her basket and look after the stray threads, just as you fix mother's sometimes."

"Then there is gingerbread," broke in Bessie, eagerly.
"Oh, yes, there will be that and the glass of milk. But I see the carriage coming. I'll just say that Mrs. Loren's baby is almost never taken out in its carriage, because the mother has no time; and there are the letters to bring from the mail, and grandma does love to be read to and—good-by—there are those lovely poppy seeds, and no one to gather them—good-by!; and the carriage turned out of the yard."

It was just nine hours before she saw her mother again, but how they flew, and the day was full of surprises, just because she was looking for pleasant things to put in her hour-dishes. Uncle Henry said that his men in the lower meadow had nothing to drink, and there was lemonade made for them as an extra treat, and Bessie it. She had kept her list tacked to the blind beside the piazza, and whenever she was inclined to look at the clock she ran to see what she could do next.

She met her mother with a beaming face. "They are just heaped!" she cried. "I don't believe I could crowd in one more thing in my hour-dishes."

"Then they must be ready for the frosting," said her mother, giving her a dainty and mysterious package done up in white tissue. "There is just a little gift for frosting, and a plum for the top."

"Good! goody!" cried Bessie. "But really the hour-dishes were nice, anyway. And so they were, for Bessie had learned the best recipe for making happy days."

Tomahawk Throwing

When the writer was a small lad in Kentucky, it was the ambition of the boys, not to go and kill Indians, but to be able to throw a tomahawk with the skill and accuracy of our pioneer forebears, and the ability soon acquired by the boys in throwing hatchets at targets was really remarkable. They would come up to within thirty feet of an old board fence with a whoop and a yell, then "click! click! click!" would go the hatchets, each and every one sticking fast in the board, either in a true vertical or horizontal line, as it pleased them. Ever since those glorious days of my boyhood in Kentucky it has seemed to me that throwing the tomahawk should be one of the regular feats at all American athletic meets.—Dan Beard, in Woman's Home Companion.

If

If all the skies were sunshine,
Our faces would be fair
To feel once more upon them
The cooling splash of rain.

If all the world were music,
Our hearts would often long
For one sweet strain of silence
To break the endless song.

If life were always merry

Our souls would seek relief
And rest from weary laughter
In the quiet arms of grief.

—Henry Van Dyke in The Pilgrim.

Curious Advertisements

"Annual sale now on—Don't go else-
where to be cheated—come in here."
"A lady wanted to sell her piano, as she is going away in a strong iron frame."

"Furnished apartments suitable for gentlemen with folding doors."

"Two sisters want washing."

"Wanted—A room for two gentlemen about thirty feet long and twenty feet broad."

"Lost—A collie dog by a man on Saturday answering to Jim, with a brass collar around his neck and a muzzle."

"Wanted—By a respectable girl, her passage to New York; willing to take care of children and a good sailor."

"Respectable widow wants washing on Tuesdays."

"For Sale—A pianoforte, the property of a musician with carved legs."

"A boy who can open oysters with reference

"Bulldog for sale; will eat anything; very fond of children."

A Short Sermon

When Archbishop French was Dean of Westminster, he delegated Canon Cureton to preach on certain saints' days to boys of the Westminster School. The boys attended the service and then had the rest of the day as a holiday. While Mr. Cureton, on the morning of the day he was to officiate, was looking over his sermon at the breakfast table, his son asked in a tone vibrating with anxiety, "Father, is yours a long sermon to-day?" "No, Jimmy, not very." "But how long? Please tell me." "Well, about twenty minutes, I should say. But why are you so anxious to know?" "Because, father, the boys say they will thrash me awfully if you are more than half an hour."

Jefferson's Ten Rules

Never put off until to-morrow what you can do to-day.

Never trouble another for what you can do yourself.

Never spend your money before you have made it.

Never buy what you don't want because it is cheap.

Pride costs more than hunger, thirst and cold.

We seldom repent of having eaten too little.

Nothing is troublesome that we do willingly.

How much pain the evils that have never happened have cost us.

Take things always by the smooth handle.

When angry, count ten before you speak; when very angry, count a hundred.

Paul: "What yer git fo' Crissmus, 'Ginny?"

Virginia: "Mammy's ole gun shoes. What yer git?"

Paul: "I hain't got shuah yit, but I fink pop's done fo'get t' lick me fo' suckin' dem aigs lars' night!"

IN THE KITCHEN

A Ballad of Vegetables

A potato went out on a mash
And sought an onion bed;
"That's pie for me!" observed the
squash,
And all the beets turned red.
"Go 'way!" the onion, weeping, cried;
"Your love I cannot be;
The pumpkin be your awful bride—
You cantaloupe with me."

But onward stole the tuber came,
And lay down at her feet;
"You cauliflower by any name
And it will smell at wheat;
And I, too, am an early rose,
And you I've come to see;
So don't turnip your lovely nose,
But spinach with me."

"I do not carrot at all to wed,
So go, sir, if you please!"
The modest onion wearily said;
"And lettuce, pray, have peas!
Go, think that you have never seen
Myself, or smelled my sigh;
Too long a maiden I have been
For favors in your eye!"

"Ah, spare a cuss!" the tuber
prayed;
"My cherished bride you'll be;
You are the only weeping maid;
That's currant now with me!"
And as the wily tuber spoke
He caught her by surprise,
And, giving her an artful choke,
Devoured her with his eyes.
—Joseph Meelan, in Philadelphia
Record.

Uses for Old Newspapers

Newspapers are excellent to put things away in, as insects do not like the ink.

They are excellent in polishing glass, copper, nickel and silverware. They are good to use for the top of the stove, the bottom of the frying-pan, the sink.

If you always cut up your vegetables over a spread newspaper you save clutter and can remove the waste. Preserve jars and jelly tumblers put away in newspapers with an elastic around the top are kept dry. The elastic admits of easily slipping down to see the condition of the fruit or the label.

The sugar bags are useful, too. Pies can be slipped in them. Cakes and cookies can be put away in them. Folded wrapping paper and strings will be always in readiness if kept in these bags. They are stiff and will make excellent covers for dishes, containing food that must be left in the pantry to cool. Cut them to the desired height.

Turnip Soufflé

A turnip soufflé is a very nice dinner dish to serve with lamb. Boil sliced turnip until tender and mash thoroughly. Better still, put them through a fine colander. Return them to the fire with the addition of a roux made with a tablespoonful each of butter and flour. Season and add a cupful of hot milk. Stir the mixture until it boils. Take from the fire and beat hard, stirring into it gradually two beaten eggs. Pour into a greased porcelain dish and bake in a quick oven. Serve at once, or like all soufflés, it will fall.

Cabbage Cooked Without Water

Chop one head of cabbage fine. Put half a cup of lard into an iron pot, and slice one large onion into it, stir until the onion is slightly brown, then add the cabbage, and keep stirring until cooked. Add one cup of cream, half a cup of vinegar, pepper and salt to taste.

Fruit Cake

Four eggs, three cups of sugar (brown), one and a half cups of butter, one and a half cups of molasses, two teaspoonfuls of cinnamon, one teaspoonful of cloves, two teaspoonfuls of mace, one nutmeg (grated), one pound seedless raisins (chopped), one pound currants, one pound citron (chopped fine), half a pound of figs (chopped), seven cups of flour, one teaspoonful of soda. Dissolve in a cup of sweet milk.

Note—This will make two good-sized loaves. Bake three hours. Add one wine glass of brandy.

Paste That Will Keep

Wheat flour, eight ounces; alum, powdered, one-fourth ounce; glycerine, one and one-half ounces; oil of wintergreen, one drachm; water, one and one-half pints.

Mix the water, flour and alum to a smooth paste and boil till it thickens (be careful and not let it burn or cook too much), take it from the fire, add the oil and glycerine and mix thoroughly. This will keep for years; sticks fast every time; will not sour or discolor the paper. When first made it is too thick to use. But take out a little of the thick paste and thin it with water. After the paste has stood in the jar for a couple of months some very clear water will gather on top of the paste. Do not throw this away. Let it stay on the paste.

Cleaning A Clothes Closet

It is a good idea to spray clothes closets with a weak solution of carbolic acid every spring and fall. At the first hint that there is a moth in a piece of upholstered furniture take it to the air—into the back yard, if there is one—brush it thoroughly and then saturate it with naphthalene, say the Washington "Times." But never do this in the house. The fluid is so volatile that even a burning match may set the fumes on fire and cause an explosion. It should remain out of doors until the odor of the naphthalene has left it.

Sponge your black dress with good cold tea, and all those spots and stains will disappear, leaving the stuff looking as good as new.

Paint may be removed from clothing by the application of equal parts of ammonia and turpentine well shaken together. Apply carefully to the actual paint spot and let it penetrate for five or ten minutes; repeat two or three times and the paint will come off in flakes. In wash fabrics this treatment is very successful, even if the paint has been dried on for a long period.

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IN THE SEWING ROOM

May Manton's Hints

FANCY POINTED YOEK WAIST 5552

The yoke waist in all its variations is being much worn and certainly is exceedingly dressy and altogether charming in effect. This one is trimmed to suggest the bretelle idea and includes quite novel sleeves as well as a wide grille. In this instance crepe de Chine is combined with lace and is trimmed with velvet banding, and the plisse frills that can be purchased ready for use. But almost every material used for indoor gowns or for party waists is suitable with trimming varied to suit individual tastes. All-over lace makes an exceedingly handsome yoke, but there are lingerie materials that are liked while tucked chiffon is always pretty. Again, the trimming portion could be of contrasting material.

The waist is made with a fitted lining and itself consists of front, backs and the chemise. The various parts are arranged over the lining and the girde is attached to the lower edge of the waist, the closing being made together at the back. The sleeves are finished with up-turned cuffs, which in this instance are of lace, and are cut to form points that are as attractive as they are new.

The quantity of material required for the medium size is 3 3/4 yards 21, 3 yards 27, or 2 3/4 yards 44 inches wide, with 3/4 yards of all-over lace, 1 1/2 yards of lace edging for collar and cuffs, 3/4 yards of banding and 8 yards of plisse silk for frills.

The pattern 5552 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.



6552 Pointed Yoke Waist
32 to 40 bust.

5554 Box Coat,
32 to 42 bust.

BOX COAT 5554

To be made with shawl or regulation collar and lapels.

The box coat is an eminently fashionable one just now and is exceedingly becoming as well as smart. This one suits both the costume and the separate wrap and consequently almost all seasonable materials. In the illustration, however, it is made of kersey, with collar and cuffs of velvet and cloth combined and is trimmed with handsome buttons, the edges being finished with simple tailor stitching with binding silk. If the shawl collar is not liked the regulation one with lapels can be substituted and these can be all of velvet or the collar of velvet with lapels of cloth as preferred. Again, the cuffs can be

made of one material if better liked. Contrasts of color, too, can be used as such combination as leather color on green or blue, dark green or black and the like are much in vogue.

The coat is made with fronts and back. The fronts are supplied with generous patch pockets and the neck can be finished either with the shawl collar, as illustrated, or the fronts faced and turned back to form lapels, while the regulation collar is joined to the neck edge. The sleeves are in coat style, the cuffs at their lower edges being rolled over the seams.

The quantity of material required for the medium size is 4 1/2 yards 27, 2 3/4 yards 44, or 2 3/4 yards 52 inches wide, with 1/2 yard of velvet.

The pattern 5554 is cut in sizes for a 32, 34, 36, 38, 40 and 42 inch bust measure.



5512 Seven Gored Walking Skirt,
22 to 32 waist.

5513 Boy's Russian Suit,
4 and 6 years.

SEVEN GORED WALKING SKIRT 5512

This skirt is cut in seven gores and is laid in box plaits at the front, back and sides that are stitched flat for a portion of their length and pressed into position below. The closing is made beneath the plaits at the back and the trimming is arranged over the lower edge of the skirt.

The quantity of material required for the medium size (including bands) is 9 yards 27, 8 yards 44, or 2 3/4 yards 52 inches wide when material has figure or nap; 3 1/2 yards 44 or 4 1/2 yards 52 inches wide when it has not.

The pattern 5512 is cut in sizes for a 22, 24, 26, 28, 30 and 32 inch waist measure.

BOY'S RUSSIAN SUIT 5513

This little suit is made with blouse and knickerbockers. The blouse is absolutely simple, closed at the right of the front, while the shield is separate and closed at the back. The knickerbockers are in regulation style, drawn up by means of elastic below the knees.

The quantity of material required for the six-year size is 4 1/2 yards 27, 3 yards 36, or 2 3/4 yards 44 inches wide, with 3/4 yard any width for the shield and 3 1/2 yards of braid for the belt and trimming.

The pattern 5513 is cut in sizes for boys of 4 and 6 years of age.

The price of each of the above patterns postpaid is only 20 cents. Send orders to The Farming World, Morgan Building, Toronto, giving the size wanted.



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Write me today for my paper book giving further details and how to use the treatment which will set you absolutely free of charge. Address: Dr. J. B. D., 237 Commerce Street, Detroit, Mich., U.S.A. or Drawer 117, St. Windsor, Ont.

Fruit Growers Getting Busy

The Board of Directors of the Ontario Fruit Growers' Association met in Toronto on January 8th and elected the following officers: President, Harold Jones, Mattland; Vice-President, Elmer Lick, Oshawa. The other members of the executive committee are: W. H. Bunting, St. Catharines; A. E. Sherrington, Walkerton, and P. W. Hodgetts, Secretary, Parliament Buildings, Toronto.

Co-operative and transportation committees were the first to look after the formation of co-operative shipping societies and the latter to deal with freight rate and express parcel problems.

An important move was that of taking action with the Fruit Growers' Association of Michigan towards securing a reciprocal tariff between the two countries on fruit products. This question was initiated by the Michigan fruit men in December last, when they passed a resolution favoring a conference with Ontario growers with a view to eliminating, if possible, all objectionable duties on the respective rates of the country and adopting a schedule of reciprocal rates that would be satisfactory to both.

Fruit Experiment Stations

The Board of Control of the Experimental Fruit Stations met on January 7th, at the Parliament Buildings, Toronto. There were present: G. C. Creelman, President of the Ontario Agricultural College; L. Wood-verton, Secretary, Grimsby; E. Lick, Oshawa; W. T. Macoun, of the Ontario Experimental Farm; H. L. Hutt, of the O.A.C.; A. M. Smith, St. Catharines, and P. W. Hodgetts, Toronto.

Last year's work was considered and a program of experiments for this year mapped out. One of the principal experiments will be a search for hardy peach stocks for Essex county. The work will consist chiefly in grafting peach stocks on plum roots, and it is hoped that in this way a hardy tree will be secured, suitable for that district. Work will also be conducted with a view to selecting the site for another station in New Ontario.

Fruit Growers' Protest

A meeting of the commercial fruit growers, held at Grimsby, Ont., on January 10th, strongly protested against the action of the directors of the Ontario Fruit Growers' Association in agreeing to the suspension of reciprocity in fruit between Canada and the United States with the Michigan association. A mass meeting of the growers in the Niagara district will probably be held to make a similar protest.

Principles and Practices of Pruning

Although a great deal has been said and written on this subject, much bad practice still prevails. Orchards are seen all through the country which have either never been pruned or, if the work has been performed, it has done more harm than good. Trees with trunks trimmed up to three times the proper height, trees mutilated by the needless lopping off of large

branches, trees one-sided and totally destitute of symmetry, or filled with a mass of brush, may be seen all over the country. A perfect orchard is a rarity. The same remark will apply to nurseries. The trees have been grown and trained with very little attention to a perfect shape, the chief object of the owner being to grow large trees in as little time as possible. The purchasers of such trees after setting them out, either give no attention or they cultivate them well, allow them to form their own heads. They may be too tall, or one-sided, or distorted and irregular, no attention being given to shaping the heads when they are young.

When young trees are dug from the ground, the roots from necessity are more or less bruised or mutilated. All these bruised or torn places should be pared off smoothly with a sharp knife. If left untouched they induce decay, and are unfavorable to the healthy growth of the tree. In the same way a broken or twisted limb above ground would furnish a dead stub or make a bad scar, while pruning it off smoothly will cause it to heal over readily.

Thirty young trees usually have roots extending as far each way from the foot of the stem as the height of the tree. A careful examination will discover the whole surface of the subsoil occupied with the same number of full-grown nursery trees. It is obviously impossible, therefore, in digging up to avoid cutting and leaving most of the roots behind, and the tree when set is unable to sustain or feed for a time its leaves and branches. A part must, therefore, be cut off to restore the balance, corresponding in some degree with the loss of the roots. This may be done by thinning out all the feeble shoots, so as to leave an even, well-shaped head, and then cutting back a part of each remaining one-year shoot. Judgment must be exercised as to the amount to be cut away from the tops. The growth of new roots depends on the assistance afforded by the leaves at the top; if the leaves are too few, the roots will not extend freely, if they are too numerous the roots cannot furnish proper supply for them, and they will be feeble and sickly. Planters will learn a great deal on this point by cutting away more or less on different trees and observing the result.

Different kinds of trees require varying management in this respect. The peach, for example, readily reproduces new shoots, and it may, consequently, be cut back very freely—two-thirds to nine-tenths of each season's shoot may be removed without detriment. The grape, also, may be very heavily pruned, as it throws out new vines with great vigor. The cherry, on the contrary, is very sensitive, and young trees have been nearly killed by a severe summer pruning. The young cherry shoots should never be cut back in the spring more than half their length. The pear and apple are intermediate and the heads should be moderately and not severely pruned.

W. H. STEVENSON.

Ontario County.

Can Ontario Grow Her Own Seed Corn?

(Continued from Page 58.)

should not be regarded as objectionable, but a shrunk or blistered germ is very serious if the covering of the germ is fatal to an embryo of large extent as a result of exposure or freezing. The vitality of such germs is almost invariably greatly impaired, if not wholly destroyed.

STARCHY, SHRUNKEN OR BLISTERED KERNELS

Whenever exposure or freezing has been severe enough to blister the back of a kernel, its chances for germination are poor. This is one of the strongest indications of injury resulting from imperfect ripening. When the back of a tip shows a decided depression, it is strong evidence that the kernel has not had sufficient time to develop properly. A kernel depressed on the back is usually deficient in the amount of glutenous material, and is therefore composed largely of starch.

CONDITION OF GERM AS INDICATED BY ITS CUTTING QUALITIES

A properly developed and carefully dried germ cuts readily and presents an oily appearance. It is light cream in color and can be cut in very thin layers which roll up like fine shavings. If kiln dried, less oil will be apparent, and in cutting the layers will break up readily. A frozen germ on the other hand lacks this healthy, oily appearance. It is tough and elastic, and unless the knife is sharp the germ is sure to shove or roll. When cut in the present state of growing, soggy appearance is shown.

SIZE OF EAR

The length and circumference of the ears chosen must be governed by the locality in which the corn is grown. The tendency has been, and still is, in the direction of growing varieties too large to mature properly. This is a mistake. It will prove more profitable to grow a smaller corn which will mature every year than to grow a large corn which seldom if ever ripens properly.

In dent corns the proportion of length to circumference should be as four is to three, i.e., an ear ten inches long should measure seven inches in circumference about three and one-half inches from the butt. Short, thick-set ears are inclined to have long, deep-set kernels, which makes it impossible for ears to dry out readily in the fall. The variety has been carefully selected for years to combine early maturity with depth of kernel. It is, of course, advisable to grow as large and deep-grained a variety as the soil and season would upon to mature in any given locality.

In flint varieties the length of the ears differs so widely that it is a more difficult matter to establish a fair proportion. As a general rule the production of long pointed ears should be discouraged, as they are almost invariably poorly covered at the tip.

SPACE BETWEEN ROWS

Wide space is undesirable in any but deep-grained varieties. It is generally caused by rounding of the crowns. As the general rule, however, why the kernel should not carry its sides squarely up to the shoulder and thus fill practically all the space with corn, wide spaces are severely cut.

DON'T BUY GASOLINE ENGINES UNTIL YOU INVESTIGATE "THE MASTER WORKMAN" — "THE MASTER WORKMAN" is a variety of gasoline engine, known as a "Kilowatt" engine, superior to any other in its class, for its power, its weight and bulk are half that of single cylinder engine, with greater durability. Costs less to buy — less to run — more economical. Write for literature. Also, for a list of dealers. Write to THE TEMPLE PUMP CO., Mrs. Moagher and 10th St., Chicago. THIS IS OUR FIFTY-THIRD YEAR.

Please mention The Farming World when writing Advertisers.

In addition to the serious loss occasioned by this conformation, the chief ground for objection to them is that they are an indication of degeneracy or reversion to a more primitive type. **PROBATION OR CORN TO CORN**

It is practically impossible to lay down a standard on this point which will apply to any considerable section. Dent varieties will range from 78 to 86 per cent, shelled corn; flint varieties will range from 74 to 81 per cent. A good average for the former would be 82 per cent; for the latter 79 per cent. As it does not necessarily follow that a large ear will shell out more corn than a much smaller one, in selecting seed corn close attention should be paid to the points just mentioned, which go to make up a solid ear. To ascertain the proportion of corn to cob, weigh the entire ear, shell the ear and find the weight of the grain, divide the weight of grain by the weight of grain and cob and the result will be the percentage of corn.

A large proportion of corn grown averages considerably less than the average given; a number of varieties, as the result of years of careful breeding, exceed the average percentage. While it is desirable to grow corn giving a low percentage of cob, there is a point beyond which it is not safe to go. There seems to be a proper proportion or relation existing between the corn and the cob bearing it, and beyond this point the breeder cannot go without seriously endangering the vigor and constitution of his corn.

Eastern Dairymen in Session (Continued from Page 62.)

makers, asking them to send the full amount for the shipment, and if there was any cut they would pay it. This practice did not remedy matters, and buyers must get down to paying just what the cheese are worth.

Mr. J. R. Dargavel, M.P.P., read a telegram from a Montreal buyer strongly advocating.

LICENSING MARKERS.

He stated that the Ontario Government had a system of licensing in view which would be put in force this year.

Mr. Wieland, of Montreal, also spoke strongly deprecating the shipping of green cheese. Many complaints the past season in regard to shrinkage. Buyers figure on losing half a pound per box per month. If it goes above this, buyers lose too much. While the quality was good, there was a little too much of what is known as "mutual flavor," or a clean flavor, but without character.

Dr. J. W. Robertson was introduced to the convention and made a brief address.

DO DAIRYMEN MAKE MISTAKES

Prof. Dean addressed the evening meeting upon the mistakes of modern dairymen. What is needed among dairymen is more backbone. Too many dairymen are wasting their soil fertility. They are making mistakes in regard to the plants they are growing. Grow timothy for dairy cows. Alfalfa is one of the very best plants that the dairy farmer can grow. The average dairy farmer is content with a 3,000 pound cow, when he should have cows that give yearly 8,000 to 10,000 pounds of milk. They do not feed their cows enough. The cow should be well fed during the winter, so that she will be in a position to give a good flow of milk in the summer. The effect of poor feeding on the progeny is the cause of so many

poor dairy cattle being raised. Too many makers smoke. Many dairymen cling to the old idea that aerating milk is necessary. The necessary thing is to cool it. The cooling medium should not be put into the milk, but the milk should be put into the cooling medium. Many modern dairymen sell their product too cheaply. He compared the value of milk and beef as foods, and their relative values on the market. Modern dairymen make a mistake when they advertise to the world that we produce an impure milk. Tendency of the public is to expect too much of the college professor or dairy teacher. One chemist and bacteriologist are needed to devote their whole time to dairy investigation.

Mr. A. F. MacLaren, M.P., in a brief address complimented the eastern dairymen upon the progress made in dairying during the past few years. He deprecated the publishing of reports abroad in regard to uncleanly methods in making. The great fault in our cheese is that it is too dry and crumbly.

DAIRY EDUCATION

Dr. Robertson, of Macdonald College, Ste. Anne de Bellevue, Que., gave a splendid address. The destiny of Canada, he stated, will depend upon the thought power of her people. He reviewed the progress made in dairying since the cheese industry was first introduced into Canada. Twenty years ago the exports were worth \$200,000,000; in 1896 about \$20,000,000; 1906, \$50,000,000. Those in the dairy business should not expect to get something for nothing. There must be a conservation of energy in the dairy business, and the dominating power of intelligence over the whole thing. By applying this intelligence to the selection of seed, a marked improvement in the yield of crops could be effected. Very little effort in seed selection would add 25 per cent to the yield of grain crops in Ontario. Another 25 per cent increase could be secured by better crop rotation. The hay crop of 20 acres alone takes more fertility out of the soil than \$6,000,000 worth of butter. He believed that it is possible to divide up our dairy farms so that more people may get a living out of the surface of the soil. Referring to the cow testing associations, he stated that they only eliminate the bad cows, but do not build up the good.

Too intelligent methods can secure good cows. Everything is not in the breeding of the cow; there is much in the rearing. Referring to the question of education, he said that a little knowledge, with common sense, is a good thing. The schools of the country should be improved by doing things. Let the children do things for themselves. The full benefit of the agricultural college should reach down to the schools. After fourteen, all education should have a vocational quality.

RECOMMENDATIONS

The final session on Friday morning was devoted largely to finishing up the business of the convention. The meeting placed on record its appreciation of the work accomplished by the Dominion Government for dairying by the cool-curing stations, the operation of which will be discontinued. A resolution carried, though with some opposition, recommending that all factories be required to receive the services of the instructor, and that the annual fee for each factory be \$12. A resolution passed favoring a national dairy show, to be held in co-operation with the Western Ontario Dairymen's Association.

THE APPEAL IS TO YOU!

THE HOSPITAL FOR SICK CHILDREN

For it Cares for Every Sick Child in Ontario whose Parents Cannot Afford to Pay for Treatment.

The Hospital for Sick Children, College Street, Toronto, appeals to fathers and mothers of Ontario for funds to maintain

the thousand sick children that its nurses within its walls every year. The Hospital is not a local institution—but Provincial. The sick child from any place in Ontario who can't afford to pay has the same privileges as the child living in Toronto and is treated free.

The Hospital had last year in its beds and cots 858 patients—351 of these were from 231 places outside of Toronto. The cost is

1.37 cts. per patient per day, and there were 125 sick little ones a day in the Hospital.

Since its foundation the Hospital has treated 12,120 children. About 8,500 of these were unable to pay and were treated free.

Your money can put golden hinges on the door of the Hospital's mercy. Every body's dollar may be the Friend in Need to Somebody's child.

Your dollar may be a door of hope to somebody's child. The Hospital pays out dividends of health and happiness to suffering childhood on every dollar that is paid by friends of little children.

If you know of any child in your neighborhood who is sick or crippled or has club feet send the parent's name to the Hospital.

See what can be done for club-foot children. There were 36 like cases last year and hundreds in 31 years.



Please send contributions to J. Ross Robertson, Chairman, or to Douglas Davidson, Sec. Treas., of the Hospital for Sick Children, College Street, Toronto.



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Please send contributions to J. Ross Robertson, Chairman, or to Douglas Davidson, Sec. Treas., of the Hospital for Sick Children, College Street, Toronto.

The directors, who were elected at special meetings, held in their respective districts, are as follows:

John H. Singleton, Smith's Falls; Neil Fraser, Vankleek Hill; Edward Kidd, North Gower; J. D. McPhail, Russell; John McGregor, Alexandria; Angus Grant, Moose Creek; C. F. Whittaker, North Williamsburg; Levi Patton, Brockville; G. W. Carson, Charlesville; John R. Dargavel, Elgin; T. A. Thompson, Alton; William Guthrie, Perth Road; Robert Metzler, Odessa; James Whitton, Wellman's Corners; T. B. Carlow, Markworth; G. A. Gillespie, Peterborough; Henry Glendonnie, Manilla; D. H. Young, Melville.

After the close of the convention the directors met and elected Mr. J. R. Dargavel, M.P.P., president, and R. G. Murphy, Brockville, Ont., Secretary.

Prince Edward Island

We have had very little frost from Dec. 20th up to June 1st. On Dec. 21st a big thaw set in, which greatly reduced the size of the big snow-banks on the country roads. Rain fell for several days. There was very little driving in the city on Christmas Day, as the snow was nearly all gone off the streets. On account of the prevalent wet weather and bad roads the market has been thinly attended, and business very dull during the latter part of December. Merchants and others have felt the loss keenly. The New Year was ushered in by a heavy rainfall, which continued nearly all day. The roads are very bad in the country.

Mr. Nicholl, of Murray Harbor, brought to market the largest turkey seen for some time. It weighed 21 pounds and was bought by Saunders & Newsome.

A bunch of mayflowers was picked on the farm of J. F. McLeod, Chignecto, Dec. 31st.

The Government has decided to sell the stock farm. Some of the cattle on it were tubercular and have been disposed of. Recently the farm has not been paying.

Dr. Saunders, director of the Central Experimental Farm, Ottawa, has written to Premier Peters, stating that the Department of Agriculture has selected a site for the Dominion Experimental Farm in this province from one of the lots proposed by the Provincial Government.

CHRISTMAS MARKET

Beef, qr. per lb., 3 to 4½c; small, 10 to 12c; butter, fresh, per lb., 25c; tub 21 to 22; eggs, per doz., 25 to 26c; flour, per cwt., \$2.30 to \$2.40; fowl, per lb., 8 to 9c; geese, per lb., 10 to 11c; hay, per cwt., 35 to 60c; hides, per lb., 10c; lamb, per lb., 11 to 16c; oats, per bu., 35c; pork, carcass, 8 to 8½c; small 10 to 12c; potatoes, per bu., 35 to 40c; sausages, per lb., 14c; apples, per doz., 8 to 12c; oatmeal, per cwt., \$2.25 to \$2.50; turkeys, per lb., 13 to 15c; turpins, per bu., 10 to 12c; mutton, per carcass, 6 to 7c; small, 8 to 10c; ducks, per lb., 10c.

National Live Stock Convention

The call for the tenth annual convention of the American National Live Stock Association, to be held at Denver, Colo., on Jan. 22nd and 23rd, has been issued. Among the important topics to be discussed are those of railroad service and meat inspection.

Be sure and read the list of piano bargains which is given on the outside back page of this issue.

QUESTIONS AND ANSWERS

Caring for an Orchard

I have a one and a quarter acre orchard; trees are down four years. Last spring I sowed clover. The orchard is in good state of cultivation. Will it be injurious to trees to pasture hogs in orchard next summer, providing they (hogs) do not get in contact with trees? I also have some fifty old plum trees, down five years next May. They are free from black knot and pruning vigorously, but they have not borne any fruit yet, although kept in good state of cultivation. Please advise.—Ignoramus, Mabon, N.S.

Answered by H. L. Hutt, Prof. of Horticulture, Ontario Agricultural College, Guelph.

It is not advisable, except in very rare cases, to seed down an orchard in the spring and leave it uncultivated for the season. The best method for treating either a young or an old orchard is to give thorough cultivation from early spring until about midsummer. It may then be seeded down with red clover, lucerne, hairy vetch, rye, rape, or some other crop which will act as a cover crop to protect the roots during the winter and add fertility to the soil when it is turned under in the spring. Either red clover or hairy vetch we find give excellent results for this purpose.

There is no objection whatever to pasturing hogs in orchards, provided they are properly fed, so that they are not tempted to bark the trees, as they will sometimes do if they are not sufficiently fed. Hogs in a bearing orchard are very useful in picking up fallen fruit and destroying the codling worm in fallen apples.

A plum orchard requires much the same treatment with regard to cultivation and cover crops as an apple orchard. Good, thrifty plum trees five years of age should be coming nicely into bearing. There are a few varieties, such as the Washington and General Hand, which are slow in coming into bearing, and often get six or eight years old before they have any fruit, but other varieties, such as Lombard, Imperial Gage, and Reine Claude, usually begin bearing at three or four years after planting. It is just possible that the fruit buds may have been injured by winter-killing or, if the trees have bloomed, that the fruit may have been destroyed by the work of the Plum Curculionid, but a close examination would soon show if either of these was the cause of unfruitfulness.

Mares in Foal

1. Is it all right to feed brood mares out sheaves that are rusty and have some smut as well? 2. Is it all right to have a mare foal in the same stable with other mares that are with foal. Last spring I lost two colts that came before their time. I had a mare

A HEALTHY STANDARD

FOR COWS ONLY

KOW-KURE

A healthy standard is necessary to get profit from cows. The amount of milk given depends on the cow's constitutional condition. If she is "off feed" it shows loss of appetite and poor digestion—she needs a tonic to restore her digestive organs to a healthy state.

KOW-KURE

for cows only, is a CONSTITUTION BUILDER—not a "food," but a medicine which starts at the very foundation and makes just what you want—a healthy cow. Thousands of dairymen, after testing its value, say they would not be without it. For all cow diseases KOW-KURE is invaluable. Try it. Our book, "The Cost of a Lost Cow," sent FREE.

Dairy Association Co., Mfrs., Lyndonville, Vt., U.S.A.

In the Poultry Yard

Treatment of the Breeding-pen

By this time most people have mated up the breeding pens for the coming season. Those who have not should do so at once, as it takes some time for the birds to settle down. Not more than eight hens should be allowed each cock, and if the weather comes on very cold, even this number should be reduced. Keep the breeders as young and undisturbed as possible, and above all, when once the pen is mated up, do not interfere with it in any way by removing birds or introducing others. The following is a good diet, but it should not be adhered to too rigidly, as a change is always a good thing, and sometimes a necessity. At 7:30 a. m. give a rather sparing feed, consisting of equal parts of barley meal, bean meal, and middlings. Mix well, and let the fowls partake of it in a warm state. At 9:30 scatter about four handfuls of wheat in the litter (taking for granted that this is provided), and look in every nook and then to see that the birds are working for it. Three times a week some kind of cooked meat-bullock's lights from the butcher is the cheapest form should be given. Between 3:00 and 3:30 the birds may have their last meal of grain; wheat and oats are certainly the best, but maize should be strictly avoided, no matter how cold the weather. Barley and buck-wheat are good changes, and the former is warming. Unless the fowls have a grass run, fresh green food (cabbage, lettuce, cabbage, beet, etc.) must be daily supplied, as must also get and oyster shell. Leave all spices alone except pepper (cayenne), which may occasionally—very occasionally—be mixed in the soft food. It is, by the way, a very good thing to add a little salt to the litter. If the above treatment is adhered to, strong, healthy chickens should be produced, and we should be spared some of the "silly" comments which are directed against poultry breeding by people who are pleased to call themselves practical breeders of the past, it is to be hoped.—W. Fred H. G. Ewart, in Feathered Life.

Males for Breeding

To the past season's hatch of cockerels the breeder now turns for birds from which to breed and to sell as breeders for next season, and this is a matter of importance. Whether for your own yards or for sale as breeders, pick out the largest, best developed birds, those having bright red combs and wattles, clear eye, erect and defiant carriage, and whose plumage and general characteristics conform most closely to the requirements of the breed.

When about to purchase a male to head a flock, it is best to secure, if possible, a line-bred bird, that is a descendant from a strain bred for generations with one specific object in view. For instance, one person will breed for egg production; another for market weight; others still, will strive for a combination of these features. And if it is a safe proposition to head your breeding stock with a bird from the yards of these enthusiasts.

Placing the Incubator

An incubator should never be placed near a wall or in any one thing, there is generally a draught there, and the wall absorbs a certain amount of heat from the machine, consequently the

drawer temperature near the wall is not what it should be. If possible, the machine should stand on a bench. One often sees them fixed on a couple of boxes, but this means too much air and cooling on the bottom of the machine, and a wooden bench is a far better place for an incubator. Before starting even an old, well-tried machine, the thermometers used should be tested, as one never knows but what they have been injured in some way during their enforced illness. It may be only a slight crack here or there, but it makes all the difference to the result of the hatch. Thousands and thousands of eggs are spoiled by over cooling.—Will Howley, in Southport Visitor.

Green Food for Poultry

The farm breeder should lay in an abundant supply of fodder for his poultry just as he does for his horses, cattle and swine. Instead of hay and grain, however, garden refuse, such as small and imperfect cabbage heads, potatoes and turnips, make excellent changes in the ordinary feed for the chickens.

All these things should be carefully stored, so that when the snow or cold rains fall, the hens may have something green to keep their appetites in condition. A change of diet every couple of days is advocated by some of the most successful breeders. Cook the green food one day, and feed it raw the next time, and so on. Readily discernible results are sure to follow.

Hens Going Light

When a hen is noticed to be becoming pale about the face and shrunken about the comb, she should be handled at once to see if there is corresponding wasting away, for this generally denotes tubercular disease of the liver, a complaint that must not only inevitably prove fatal, but is also highly contagious, so that, although valuable specimens have been patched up, it is far better to destroy them and thoroughly disinfect the houses and run, also burning the body and any droppings. Occasionally a hen may be found to be going light without the symptoms of liver complaint.

POULTRY EXCHANGE

One Cent a Word Cash with Order.

BUFF ORPINGTONS—8 breeding pens (this season, headed by imported and prize stock). Eggs 140c. Also 4000 of the best of the better eggs \$3.00 per 100. Write at once for free catalogue describing same. **W. J. BELL**, P.O. Box 47, Orangeburg, N. Y.

BARLEY PEKINS, Osawa, Ont. Buff Orpingtons, B. P. Ducks, Pekin Ducks, Eggs for sale.

MAMMOTH BROWN TURKEYS for sale. Some extra fine young Toms weigh from 20 to 26 lbs., of 8 weeks. Also 4000 of the best of the better eggs \$1.00 per 100. Write at once for free catalogue. **CHAS. G. LEE**, Woodstock, Ont.

FOUL SALES—Buff Orpington Cockerels. **W. M. McDONALD**, Bradford, Ont.

POULTRY MAGAZINE—Large, well illustrated, practical. Tells how to make money raising poultry. Invitations to begethers. Sent one year, and a copy of a new 3c. book on poultry, for 30c. Sample free. **POULTRY ADVOCATE**, Dept. C, Victoria, Ont.

FOR CHICKEN BARRED ROCK, Houdan, Black Minorca and Brown Leghorn Cockerels write **SMITH & HOWN**, Columbus, Ont. Some fine winners included.

FOUL SALES—Some extra well bred Barred Rocks. Prices right. Write **A. S. WERDIN**, Annapolis, Pa., for full particulars.

SHOEMAKER'S POULTRY



and a lesson for 1907 continue on the page with the next issue of the Farming World. It tells all about chickens, their care, diseases and treatment. All about incubators and how to use them. It is a complete encyclopedia of all that a poultry raiser needs to know. Write for a free copy. **SHOEMAKER'S**, Box 1011, Philadelphia, Pa.



INCUBATORS—The best of the best. Write for a free catalogue. **SHOEMAKER'S**, Box 1011, Philadelphia, Pa.



Hatch Chickens by Stear with the EXCELSOR INCUBATOR OR WOODEN HEN. Simple, perfect, self-regulating. Hatch every variety egg. Largest model 1907—also for sale. Write for a free catalogue. **W. J. BELL**, Angus, Ont.

and this may be due to pulmonary disease, though there would be a cough to indicate complaint of the lungs. Ordinary cases of birds going light after a hard season of laying may be cured with cod-liver oil.—Bazaar

Bell's Bronze Turkeys

Have now more first prizes at the Provincial Winter Fair, Guelph, the past six years than all other exhibitors combined, and every one of these winners, with one exception, was bred in his yards.

A few exhibition yearlings and two-year-old hens for sale, as well as some choice young stock.

W. J. BELL, Angus, Ont.

SMITH'S OVARY TONIC

MAKES HENS LAY

It makes hens lay in Spring, Summer, Autumn and Winter. Every month is a good month for hens that are kept in prime condition with Smith's Ovary Tonic.

It costs only 8c. a year per fowl to give each hen the required amount every week. When eggs are selling for 50c. a dozen, this 8c. a year is paying a big profit.

At dealers everywhere. 25c. and 50c. a bottle.

NATIONAL DRUG & CHEMICAL CO., LIMITED, MONTREAL.

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The Editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Farming World Man on the Wing

Mr. S. J. Prouse, of Ingersoll, Ont., has on hand at the present time about 20 head of imported Clydesdale fillies two and three years of age, a number of them supposed to be in foal to leading horses in Scotland. They are all of them well bred, many being sired by such horses as Sir Hugo, Baron Robell and others of equal fame as getters and producers.

Messrs. J. W. Innes and Mr. Schaffer, of the firm of Innes, Schaffer & McLaughlin, of Ingersoll, Ont., leave on the S.S. Salsica for Scotland, where they intend to purchase a consignment of stallions and fillies. It is their intention to offer the entire lot at public auction at their own stable at a date to be announced later.

Mr. Jno. Brydon, Milverton, Ont., reports the sale of a number of young bulls bred in his herd of imported cows from his grandly-bred bull, Sittytown Victor. Among them are a fine eleven months roan bull calf, Sittytown Pride, to F. Martindale & Son, of Caledonia, Ont. W. R. Elliott & Son, of Guelph, Ont., purchased a fine red calf, Rose Victor, dam Mina, sired by Oom Paul, and also another roan whose dam is Margie 7th, by Paragon. Jas. Cowan & Sons, of Guelph, Ont., also got an extra good one in Prince Victor, dam Lottie, by Prince of Sanguhar. J. Watters, of Gorrie, Ont., was the purchaser of a good one whose dam is Aggie 2nd imp, also a daughter of Paragon. Messrs. P. Crear & Son, of Molesworth, Ont., were the purchasers of an extra choice, thick and sappy youngster in Springhill Victor, an eight months son of Sittytown Victor and Loretta Girl imp, who was in turn sired by Sturdy Prince, a good breeding son of Prince of Archers and bred very similarly to Prince Sunbeam.

As announced elsewhere, Mr. J. M. Gardhouse offers at auction sale at the Eagle Hotel, Weston, Ont., on Feb. 7th, 1907, ten imported and Canadian-bred Shire and Clydesdale fillies, thirty-five head of imported and Canadian-bred Shorthorn cattle and 12 head of choice Leicester ewes and ewe lambs. This is an aggregation of goods of a choice kind, as Mr. Gardhouse has ever held a reputation as a winner in the leading showings of Canada and that in the hottest of company. A Shire stallion which he sold to the Lord Aberdeen estate at Vernon, B.C., has been estimated on as the best of his kind which has yet crossed the Rockies. The bull Chief Ruler, from which the young stock are bred, was selected by W. C. Edwards & Co., of Rockland, Ont., last spring to assist in that great herd of Shorthorns. The present bull, Ardethan Royal, was one of the plums at Mr. W. D. Platt's sale. The cows in this herd represent such choice blood as the Misses, Orange Blossoms, Nonpareils, Village Girls, Miss Ramsdens, Urya and other popular strains. Mr. Gardhouse has for many years been most favorably

known to stockmen throughout the continent, and should meet with the enthusiastic support of all stockmen in his present enterprise.

Gossip

The annual meeting of the Canadian Ayrshire Breeders' Association will be held in the Monument National Building, 206 St. Lawrence Boulevard, Montreal, on February 14, at 10 a.m. The directors will meet at the Queen's Hotel on February 13th at 8 p.m. It will pay all Ayrshire breeders to make an effort to attend this meeting.

The Hon. John Dryden and Prof. G. E. Day are announced to give addresses on the "Bacon Hog" at the annual meeting of the American Breeders' Association, to be held at Columbus, Ohio, January 15-18, 1907. Evidently the swine breeders of the United States are not hesitating to add to the thick, fat hog.

Mr. J. M. Gardhouse, Weston, Ont., writes that he will sell a valuable consignment of breeding stock at Weston on February 7th. The imported mares in foal are now looking after. Included in the lot is Black Jewel, now four years old, in foal to Nately King, the first three-year-old at Toronto last fall. This mare won first and Shire horse championship at the Toronto spring show of 1906. The two-year stallion colts are above the average and one of them won first at Toronto Industrial, 1906.

The imported Princess Royal bull I consider one of the very best show bulls in Canada to-day, if fitted. Nonpareil Eclipse is another bull whose sire sold for large money, and he is the right sort. The females, of which several are imported or bred

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure For Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Pulls, and all lamenesses from Spavin, Blisters and other boggy tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is Irvaluable. Every bottle of Caustic Balsam sent is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists or sent by express, charges paid, with full directions for its use. For names of descriptive strangles, tetanus, etc., address

The Lawrence-Williams Co., Toronto, Ont.



ABSORBINE

will reduce inflamed, swollen Joints, Bruises, Soft Bunions, Cure Boils, Fists, or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the product \$2.00 per bottle, express prepaid. Look for C.F. Free.

ABSORBINE, JR., for marking, \$1.00 per bottle. Cures Varicose Veins, Vertigo, Hydrocele, Strains, Bruises, Stomach Pain and Inflammation.

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Canadian Agents: LYMAN SONS & Co., Montreal.

Ontario Veterinary College, Ltd. Most successful Vet. Institution in America. Prof. A. Smith, F.R.C.V.S., Principal. Temperance St., Toronto, Ont.

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Sows bred or ready to breed. Young pigs from three to six months old. Pigs not skin. Satisfaction guaranteed.

GLENHODSON COMPANY, Myrtle Station, Ont. Long distance phone at farm. LOREN FOSTER, Mgr.

Oak Lodge Yorkshires

A large herd of choice Pigs of all ages on hand, quality guaranteed. No other herd has such a record in the show ring, covering several years. Oak Lodge type of hogs are profitable breeders and ideal bacon hogs. Correspondence solicited.

J. E. BRETTHOUR, BURFORD, ONT.



Carnefac

is just what THOSE STEERS require; they are a little off and need a QUICK TONIC.

Try Carnefac for that Thin Horse.

Results SURE and QUICK.

from imported stock, are a kind which will be profitable and have a lot of good calves by their sides, sired by the imported Marr-bred bull, Chief Ruler.

In Leicesters there are some foundation stock, as they are of the best strains obtainable, and have produced several of our prize winners of recent years. The ewes are safe in lamb to last Toronto first prize winner.

A deputation from the new Ontario Horse Breeders' Association, consisting of Wm. Smith, President, and Messrs. J. M. Gardhouse, John Bright, Geo. Pepper, and John Hoag, waited upon the Minister of Agriculture last week and asked for the usual grant of \$2,000 in aid of the horse breeding industry of the province. The Hon. Mr. Monteith promised that the usual grant would be placed in the estimates.

Mr. H. Smith, Exeter, Ont., writes:

The young bulls I am advertising in this issue of THE FARMING WORLD are a choice lot of strong, growthy, sappy fellows of good quality. Among them is Vain Duke, first prize bull calf last fall at London, defeating a Toronto first prize winner. As he is a son of Gold Drop and his dam Vain Maid is a famous breeder, four or five of her calves being first prize winners at London shows, he should breed on. Another good one is Sunrise, by (imp.) Rosy Morning = 50081 = (a Dutch bred bull that has done excellent service in our herd), and from the same dam as Messrs. Watts' excellent herd bull, Springhurst. "Lord Buckingham" was picked out as a very promising calf by Mr.



Dalgetty's Clydesdales

I have at the present time to offer a few splendid individuals that combine weight, size, conformation, quality and style with soundness and unexcelled breeding. My prices are right for the goods, and terms reasonable. Come and see my latest importations at their stables, London, Ont.

JAS. DALGETTY, Fraser Hotel, LONDON, ONT.



Clydesdales and Cheval Normans

New importations, all ages, some ton weights. The Best of Quality and at Low Prices. Must sell. Write for breeding and prices. A few French Canadians.

ROBERT NESS & SON,

Long Distance phone. "WOODSIDE," HOWICK, QUEBEC

Clydesdales, Hackneys

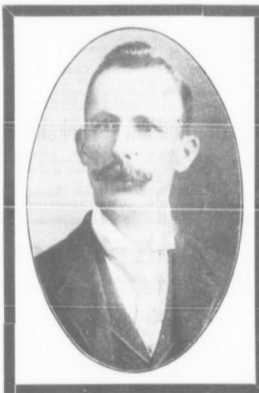


I have just landed a splendid shipment of Clydesdale Stallions and Fillies, and several very fine, flashy and good going Hackney Stallions. The Clydesdales include horses sired by Baron's Pride, Hiawatha and Marcellus and other noted sires.

Parties desiring something choice can find it at right prices at my barns at Millbrook, Ont., or at Regina, N.W.T.

T. H. HASSARD, V.S., Proprietor,
MILLBROOK, ONT.

J. C. FYFE, V.S., Manager,
REGINA, N.W.T.



IMPORTANT AUCTION SALE

Clyde and Shire Horses, Scotch Shorthorns and Leicester Sheep

the property of J. M. GARDHOUSE, Weston, Ont.

EAGLE HOTEL STABLES, WESTON

Thursday, February 7, 1907, at 1 P.M. Sharp

10 Imported and Canadian-bred Clydes and Shires, most of which are mares in foal to first-class sires.

35 Imported and Canadian-bred Scotch Shorthorns, the produce of the best blood obtainable, representing such families as Nonpareils, Missies, Orange Blossoms, Miss Ramsdens, Village Girls, Urys and other popular families, including Imported Ardethen Royal, a Princess Royal bull, and others of equal merit.

12 Leicester ewes of choice breeding, one pair of which are imported, in lamb to a 1st prize Toronto winner; also a few ewe lambs.

For further particulars, see Catalogues, which will be sent on application.

CAPT. T. E. ROBSON }
J. K. McEWEN } Auctioneers.
H. RUSSELL }

Duthie, the famous Scottish breeder, during a pleasant visit here last summer. He is out of an excellent old cow that was the dam of the highest priced female (making \$200) in the last sale of F. W. Harding, the well known Wisconsin breeder.

A white one of excellent quality, thick and low, is "Starlight," by Messrs. Watts' great bull Springfield and out of imported Bessie Wenlock, by Villager.

Our oldest heifers by Gold Drop are just now dropping calves, and they promise to be equally as successful as dairy cows as they have been in the showing—regular double-deckers. Imported Rosy Morning, sire of much of our young stock, will I expect, be equally as successful in siring dairy qualities, his dam being the heaviest milker in Mr. Duthie's herd."

Mr. Robt. Shaw, Brantford, Ont., writes:—

My stock of Galloways are now settled in their winter quarters, after a very successful show season. The imported bull Viceroy of Castlemilk—1394—(7062) is proving himself a very superior sire, and College Chieftain 1425— is a grand type of a Galloway. His is by Colric 4th of Tarbroch—1300—(6466), gr. sire. Camp-follower (5042), dam College Bess 15118, by Canadian Borderer 2945 (4801). One Viceroy heifer (Toronto Maid—1381—) has recently given birth to a nice, blocky heifer calf, sired by the young bull, College Chieftain, and judging from this he also is going to give a good account of himself as a sire. A few more of the Viceroy heifers are in calf to him. Belle B—1376—, and Belle B 2nd—1383— are nursing bull calves of Viceroy type, low blocky fellows. The young stock are doing splendidly, especially those just turned a year old.

I have a few young bulls and heifers to spare at reasonable prices."

Mr. Brodie's Filly Sale

The sale of imported Clydesdale fillies, held by Mr. Geo. Brodie, of Bethesda, Ont., at his farm on Tuesday, Jan. 8th, was an event at which the purchasers got a little the best of it, the average price attained being \$304.87 for the 39 head offered. The fillies were a good class of stock and in fine condition. The highest price reached was \$450, which was paid for Gipsy Maid, a fine, drafty and flashy mare sired by Baron's Pride, dam by Royal Garry. The following is a list of sales:

Princess Prim, to Graham Bros., Clarendon, \$405; Lady Pettigrew, J. Harcourt, \$400; Gipsy Girl, Graham Bros., \$350; Walton Belle, C. Coursey, Lucan, \$300; Chastity, W. Burkin, Bromley, \$400; Blossom, C. Coursey, \$400; Castle Lady, J. Borland, Clarendon, \$305; Maid Marion, D. Brody, Stouffville, \$410; Gipsy Maid, Graham Bros., \$450; Poetess, J. Coursey, \$395; Home Fancy, C. Coursey, \$300; Hartwood Bess, James Leask, Greenbank, \$305; Bellina, R. M. Holtby, Manchester, \$270; Queen Bess, Graham Bros., \$100; Lady Mark, J. Leask, \$360; Jeannie Pride, J. Borland, \$340; Clarabel, J. Blanchard, Newmarket, \$240; Jean Risk, R. M. Holtby, \$110; Caper in Kate, A. McGregor, Uxbridge, \$275; Lady Moir, R. M. Holtby, \$385; Dorcas, E. Myer, Cashel, \$405; Lady Coxhill, R. Miller, Stouffville, \$305; Black Duchess, C. Coursey, \$200; Cousin Royal, Graham Bros., \$300; Lady Bine, C. Coursey, \$270; Ripple, C. Coursey, \$260; Leda, C. Coursey, \$230; Pink Pearl, S. J. Prowee, Ingersoll, \$315; Lady Lettenalt, R. M. Holtby,



CAIRNBROGIE

The home of **The Matchless MacQueen**, and more of America's Champions than all others combined.

Breeders of **CLYDESDALES** and **HACKNEYS**.

GRAHAM BROS. - Clarendon, Ont.

P.O. and Sta., C.P.R. 25 Miles East of Toronto.
LONG DISTANCE TELEPHONE.



DUNROBIN STOCK FARM

Clydesdales Shorthorns Yorkshires

Won more than any other individual breeder in the breeding classes of Clydesdales at recent National Exhibition. Young stock and imported fillies at reasonable prices. Shorthorn bulls and Yorkshire swine.

G.T.R. D. GUNN & SON, Beaverton, Ont.



SMITH & RICHARDSON

IMPORTERS OF

HIGH CLASS CLYDESDALE HORSES

We have just landed a choice and carefully selected lot of grand, big horses, of the splendid quality which Scotland's best blood alone can impart.

Come and see them at their stables at

COLUMBUS, ONTARIO

Oshawa Station, G.T.R. Myrtle Station, C.P.R.



W. C. KIDD, LISTOWEL, ONT.

Importer of Clydesdales, Shires, Percherons, Belgians, Hackneys, Standard-breds and Thoroughbreds

of highest possible quality and richest breeding. Have sold as many stallions the last year as any man in the business, with complete satisfaction in every case. I have always a large number of high-class horses on hand. My motto: "None but the best and a straight deal." Will be pleased to hear from any one wanting a rare good one. Terms to suit. Long distance phone.

LISTOWEL P.O. AND STATION



Graham & Renfrew's

CLYDESDALES and HACKNEYS

Our Clydes now on hand are all prizewinners, their breeding is gilt-edged. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge Street cars pass the door every hour. Phone North 4483.

Graham & Renfrew, Bedford Park, Ont.



JOHN BOAG & SON Importers and Breeders of High-class Clydesdales

We have to offer about a dozen head of fine imported Clydesdale stallions and fillies. They are the right kind, combining size and draftiness with desirable style and quality. They are carefully selected personally, and are from leading sires in Scotland and with good breeding on dams' side. Write and tell us what you want.

RAVENSHOE P.O.
Brown Hill Sta., Midland Div., G. T. R.

Advertise in The Farming World

The Annual Meeting of the Ontario Veterinary Association

The Greeks had their Oracles, the Romans their Augurs, we all have our Omens—and the small attendance at the opening of the meeting certainly looked rather inauspicious. However, oracles, augurs and omens cannot always be relied on, as in a very short time members from far and near began to arrive rapidly. There was soon a good attendance, and a most interesting and instructive meeting was the result, of which the following is a very condensed report:

The annual meeting of this association was held in the Ontario Veterinary College, Toronto, on Friday, Dec. 21st, 1906. Members were present from all parts of the province and some from the United States. The President, Dr. L. A. Willson, V.S., of Aurora, opened the meeting with a short address that was received with applause.

The secretary's, treasurer's, registrar's and auditors' reports were received and adopted, showing that there was now in the treasurer's hands the sum of \$121.

The following new members were proposed and accepted: Dr. S. E. Watson, V.S., Niagara Falls, Ont.; Dr. A. L. Torrie, V.S., Thamesford, Ont.; Dr. D. Henderson, V.S., Glenora, Ont.; Dr. R. F. Freely, V.S., Woodville, Ont.; Dr. G. McCusker, V.S., Alliston, Ont.; Dr. D. C. Tennent, V.S., London, Ont.; Dr. A. M. Lloyd, V.S., Bolton, Ont.; Dr. J. McFadgion, V.S., Arthur, Ont.; Dr. E. A. A. Grange, V.S., New York City, U.S.

At the close of the nominations, an animated discussion ensued as to who were not eligible for membership of this association, and it was ultimately resolved that a committee composed of the president, vice-president and Dr. J. D. O'Neill be appointed to investigate and report.

Dr. Rutherford, Veterinary Director-General for the Dominion, reported that he has now in his hands as treasurer of the Veterinary Organization Committee the sum of \$506.61. Dr. C. Elliott gave a verbal report of the proceedings of the Veterinary Organization Committee; also Drs. Rutherford and Wm. Andrew Smith spoke relating to the action of the committee and its results, and a motion was subsequently brought forward by Dr. C. Elliott, seconded by Dr. J. D. O'Neill, and passed, "That the thanks of the members be tendered to Dr. Rutherford for the stand he has taken in endeavoring to elevate the profession in the Dominion."

After luncheon a difficult operation on a horse was very skillfully performed by Dr. W. J. R. Fowler, Demonstrator of Anatomy of the Ontario Veterinary College, assisted by Mr. C. G. Saunders, veterinary student, who administered chloroform, and who has had considerable experience

MAPLE CLIFF DAIRY AND STOCK FARM

Breeders of CLYDEDALE HORSES, BERKSHIRE AND TAMWORTH PIGS.

FOR SALE, TEN TAMWORTH SOWS—Bred to farrow in May.

R. REID & CO., Hintonburg, Ont.

MAPLE LODGE STOCK FARM

Scotch Shorthorns, Choice Milking Strains, Prize-winning Leicester, Young Stock for sale.—Imported and home bred.

A. W. SMITH Maple Lodge P.O., Ont.

Maitland Bank STOCK FARM

Chicely bred Shorthorns. A fine crop of young stock bred on choicest lines to choose from. Can supply a number of fine young bulls at square prices.

D. MILNE & SON, Ethel P.O. and Sta. G.T.R.

Alliande Stock Farm

Scotch Shorthorns, (Imp.) Fosters, Lavender and Lavender families—Leicester sheep—4 young bulls. Young cows and heifers for sale.

SAMUEL ALLIN, Bowmanville, Ont.



HOLLYMOUNT STOCK FARM

MITCHELL, Ont.

A choice lot of Young Bull for sale—promising heifers, headlers, of the most desirable breeding.

W. J. THOMPSON, Mitchell, Ont.



SHORTHORN BULLS

That are right, bred right, priced right.

Customers treated right.

Also choice Scotch-bred cows and heifers for sale.

Write for catalogue and come and see the herd. We can please you.

Farm adjoins Exeter on the G.T.R. 30 miles north of London.

H. SMITH, Exeter, Ont.

FARNHAM FARM OXFORDS

We are offering for sale 100 strong, vigorous, good-quality ram lambs, a number being from best imported sires. We also have for sale 20 yearling and two-year ewes and a won of ewe lambs.

At Canadian National Exhibition, London, Ottawa, and New York State Fair, we won this year practically everything, both with our imported and home-bred stock.

Guelph, G.T.R.

Arkell, C.P.R.

Telegraph, Guelph.

HENRY ARKELL & SON,
ARKELL, Ont.



THE YOUNG BULLS FOR SALE AT

MAPLE SHADE

are the most uniform lot that we ever offered. They have the best of breeding, which is shown in the catalogue, where you can see the Crickland's bulls used in the herd. The value of this good breeding is best shown by a look at the animals.

Come and see them. Ask for a catalogue.

JOHN DRYDEN & SONS, Brooklin, Ont.

Sale Herd of Shorthorns

Champions of 1905

Owned by R. A. and J. A. WATT, Salem, Ont. Elora Sta., 15 miles north of Guelph. G.T.R. and C.P.R.

Like produces like. Buy from the herd that produces the CHAMPIONS. High-class young bulls, the kind that suit all buyers, at attractive prices. Sired by the International winner, Mildred's Royal, and the Duthie-bred Scottish Beau.

Trains met by appointment. Telephone at residence.

BREEDERS' DIRECTORY

CARDS under this head inserted at the rate of \$2.00 per line, per year. No card accepted under two lines, nor for less than six months.

HORSES

S SMITH & RICHARDSON, Columbus, Ont.
See large ad.

J M. GARDHOUSE, Weston, Ont.
See large ad.

THOS. MERCER, Markdale, Ont.
See large ad.

R. R. NESS, Howick, Que.
See large ad.

G RAMBAM BROS., Claremont, Ont.
See large ad.

HODGKINSON & TISDALE, Beaverton, Ont.—
Clydesdale, Shalton and fillies for sale.

JOS. EADY, Vaux P.O. and Station, G.T.R.—
Clydesdale stallions and fillies, imported and Canadian bred. Right prices for the goods.

SHEEP

J LLOYD JONES, Burford, Ont. A fine selection of choice home-bred and imported Shropshire Sheep.

A. A. JULL, Burford, Ont., Oxford Downs, About 25 head of choice young Lambs, also a few breeding ewes. All by imported Lanes.

C. R. ROSS, Jarvis, Ont., Cotswold sheep. Prize winners at America's leading shows. Imported and home bred. Also some good Tydesdale Horses.

TELFER BROS., Paris, Ont., Hampshire and Southdown sheep.

JOHN GARDHOUSE & SONS, Highfield, Ont.
See large ad.

J. M. GARDHOUSE, Weston, Ont.
See large ad.

JOHN DRYDEN & SON, Brooklyn, Ont.
See large ad.

GEO. B. ARMSTRONG, Howhill Stock Farm, Teaswater, Ont.—Leicester breeding ewes. Prize winners.

PETER ARKELL & SONS, Teaswater, P.O. and sta., G.T.R., Midway, G.T.R., Oxford Down Sheep, shawing and breeding stock, imported and home bred.

THOS. ARKELL, Teaswater, Ont., sta. C.P.R.; Midway, G.T.R. Choice breeding stock, Oxford Down Sheep.

GEO. SWELL, Veerville, Ont.—Shorthorn, Newlyn Prince and Lady May ding, young bulls for sale. All imported stock.

GEO. N. HARRIS, London, Ont., Southdown sheep and Berkshire pigs.

SWINE

J. E. BRITHOUR, Burford, Ont.
See large ad.

JAS. WILSON & SONS, Fergus, Ont., breeders of Yorkshire Swine, Young Boars and Sows of choice breeding for sale.

J. COWAN, Donerail P.O., Alwood sta., G.T.R. Choice breeding stock in Leicester Sheep and Berkshire swine.

CATTLE

ASHLAND STOCK FARM, Pure Scotch topped Shorthorns, Choice bred from imported stock of grand Scotch breeding. Young stock of both sexes for sale. J. MAHSHALL, Jackson P.O., Ont., Tera station, G.T.R.

ROBERT SHAW, Brantford, Ont., breeder of Galway Cattle. Young stock of both sexes for sale.

J. D. MCARTHUR, Paisley, Ont., Some good young Shorthorns.

W. J. THOMPSON, Mitchell, Ont.
See large ad.

JAMUEL ALLIE, Allendale Farm, Bowmanville, Ont. See large ad.

JOHN DRYDEN & SON, Brooklyn, Ont.
See large ad.

HENRY REED, Missosha, Ont. — Herefords—Young stock for sale. Write us.

W. G. PETIT & SONS, Freeman, Ont.
See large ad.

JOHN GARDHOUSE & SONS, Highfield, Ont.
See large ad.

H. SMITH, Exeter, Ont.
See large ad.

JOHN BRYDON, Milverton, Ont., G. T. R.—Short horn cattle. If young bull calves from well bred, imported dams, and sired by imp. Sultana Victor. 2000—

GEO. B. ARMSTRONG, Howhill Stock Farm, Teaswater, Ont.—Imported and Home-bred Shorthorns for sale.

MACDONALD COLLEGE, Ste. Anne de Bellevue, Que.—Ayrshires. The famous Heford herd of Ste. Anne de Bellevue, now owned by Sir William C. Macdonald. Several yearling bulls for sale; also a number of bull calves. Quality and appearance extra good; bred from the best milking strains, noted for robust constitution and large tests. Write for particulars.

AMOS SMITH, Trowbridge P.O., Ont. Short-A horn cattle—pure Scotch breeding from popular and prize-winning strains.

W. F. STEPHEN—Box 163, Huntington, Que.—Ayrshires—Ayrshires—for sale—some young stock, both sexes.

J. A. GOVIELLOCK, Forest, Ont., Herefords, Young stock from carefully selected imported and home-bred cows, prizewinners at leading shows.

H. K. FAIRBAIRN, Thedford, Ont., Shorthorns—Five head of very fine lot of the breed. For sale, six heifers and two red bull calves.

GOLVIE'S Ayrshires—Lachine, Que.—Calves for sale, both sexes, also a few spotted cows. Robt. Hunter, Manager. Phone M 228.

R. A. and J. A. WATT, Saleon, Ont., Shorthorn cattle, imported and home bred. A few choice herd leaders.

D. DECOURCEY, Berthelton P.O., Mitchell Sta., G. T. R. Improved Ohio Chester White Swine. Shorthorn Cattle. Leicester Sheep.

JOHN WATT & SON, Saleon P.O., Ont., Elora Sta., G.T.R. Pure bred Shorthorn Cattle. A few choice females.

W. CLARKSON, Malton P. O. and Sta., G. T. R. Pure bred Scotch Shorthorn Cattle and Lincoln Sheep. Some choice youngstock for sale.

GLEN GOW SCOTCH SHORTHORNS, from such choice strains as imp. Wedding Gift. Young stock sired by Killbuck Beauty bull, imp. Ben Lomond and imp. Jay of Mersey. Some fine young bulls from six months to nine months of age, also some very fine females. Price right. Wm. Smith, Columbus, Ont.

W. W. BALLANTYNE, Stratford, Ont., Ayrshires of the best milking strains. Some choice young bulls for sale.

D. SINCLAIR, Keady P.O., Ont., Shorthorns of best beef and milking strains. Young stock from choicest strains. Close to imported stock. Tera station, G.T.R.

MISCELLANEOUS

JAMES DODDAS, Caledonia, Ont., Short-horn Cattle, Leicester Sheep. Stock for sale.

J. T. GIBSON, Denford, Ont., sta. G.T.R. Imported, and home-bred Scotch Short-horns. Choice breeding stock in Lincoln Sheep.

RICHARD GIBSON, Delaware, Ont.—Short-horn cattle and Clyde horses, Yorkshires. We guarantee satisfaction to all mail orders.

F. & G. PARKIN, Oxford Centre, Ont., Berkshire Swine, Barred Rock Poultry. Prices right. Satisfaction guaranteed.

in producing anaesthesia with chloroform. This operation was viewed with much interest. The animal is now doing well.

Dr. E. A. A. Grange, V.S. of New York, who graduated from the Ontario Veterinary College about thirty years ago, read a very interesting paper on motion stimulants, which are sometimes given to race horses, with the object of improving their racing powers (called by racing men, "doping"). He reported the action of the drugs commonly used and the symptoms and conditions they produce. He also gave various modes for detecting their administration.

Dr. Rutherford gave an interesting and instructive address, mentioning "Sarsa" and "Dourine" or m. m. du coil. The similarity of these diseases in the symptoms in the eastern and western hemispheres, but the marked bacteriological differences that are found in Manitoba and the adjacent provinces from those in tropical climates and in the eastern hemisphere. He also mentioned that Dr. A. E. Watson, of the Lethbridge, Alta., quarantine station, had reported himself in a letter dated Dec. 23, 1906, the finding of trypanosoma in the blood of the cotton tail rabbits of that district. This is the first record of the finding of trypanosoma in mammalian blood in Canada.

Dr. Duncombe, V.S. read a good paper on castration. He gave an excellent description of his method of operating in the standing position and advocated the application of carbolio acid or cresolin in oils to the scrotum afterwards.

All these papers elicited useful discussions, in which many participated, and the thanks of the members were unanimously and in due time gentlemen who had added so much to the interest and instruction of the meeting.

The subject of the so-called "Veterinary Correspondence School" was then brought forward, and institutions of that character were very strongly repudiated by many members of the profession.

A motion was passed that the sum of \$25.00 be appropriated for a medal to be presented for service to the graduating class of the Ontario Veterinary College at the approaching spring examinations.

And a motion was passed that the thanks of the meeting be tendered to Dr. L. A. Wilson, V.S., the retiring president, for his earnest efforts while in office for the best interests of the association and the profession at large.

It was moved by Dr. Rutherford, seconded by Dr. J. D. O'Neil, and carried, that the officers be empowered to hold a meeting of the association during the coming summer. Dr. Rutherford spoke favorably of the meeting being held in the city of Ottawa.

The following gentlemen volunteered to read papers at the next meeting: Dr. Bowlby, V.S., of Tweed, and Dr. Gastin, V.S., of Brantford.

The following are the officers for the ensuing year:

President, J. W. Orr, V.S., Stratford, Ont.; 1st Vice-President, O. H. Duncombe, V.S., Waterford; 2nd Vice-President, F. G. Hutton, V.S., Welland; Secretary-Treasurer and Registrar, C. Heath Sawagump, V.S., Toronto; Assistant Secretary, R. Barnes, V.S., London.

Directors—Dr. C. Brind, V.S.; C. Elliott, V.S.; T. Babe, V.S.; P. T. (Continued on page 81.)

Market Review and Forecast

The Trend of Markets—Supply and Demand—The Outlook

Toronto, Jan. 14th, 1907.

Business this year has opened up very well. In wholesale circles orders for spring delivery are better than expected. If further evidence were needed as a proof of the progress this country is making the splendid showing of the banks in their annual statement would show it. The money market keeps strong and is likely to continue so for some time. Call loans are firm at 6 per cent.

WHEAT

The new year opened with a decidedly bear movement in the speculative markets, due to the unloading of western wheats and the larger arrivals of Argentine wheat. The English market is depressed and at the moment things do not look very favorable for higher prices. The local market is quiet, with quotations on the call board, Toronto, ranging from 65c to 70c at outside points. Goose is quoted at 65c.

COARSE GRAINS

The oat market continues firm, Montreal quotations being 41½ to 42½c. Here quotations are 36c for No. 2 white outside and 37½ to 38c bid, Toronto. The barley market is quiet. Maltng barley is quoted at Montreal at 55c to 60c in store. No. 2 is quoted here at 50c, outside points. The corn market is also quiet. No. 3 American yellow is quoted here at 40½ to 50c for car lots on track. Toronto. Bran is quoted at \$21 Toronto or \$18.50 to \$20 outside.

HAY AND STRAW

The trade seems to be gradually coming to the belief that hay prices will not go lower, and are likely to go higher before the winter is over. In Eastern Ontario and more particularly in the Ottawa Valley, and in parts of Quebec, there is a real scarcity, and many farmers finding it necessary to buy hay for their stock. On Ottawa market last week loose hay was quoted at \$19 per ton. Some Americans are also in the market for Canadian hay. At Montreal baled hay is quoted all the way from \$11.50 to \$15 per ton. Here supplies are more plentiful and prices for the moment are not so firm. No. 1 timothy is quoted at \$11.50 to \$12 and No. 2 at \$8 for car lots on track Toronto. On the local farmers' market loose hay sells at from \$10 to \$15 per ton.

Baled straw is easier here at \$6.50 per ton.

POTATOES AND BEANS

The potato market is quiet and steady. Ontarios are quoted here at 70 to 75c and Eastern at 80 to 85c per bag to the trade.

The bean market seems to be firmer, though dealers are not anxious to buy and are expecting an easier market. At Montreal quotations are \$1.25 to \$1.35, in a jobbing way.

EGGS AND POULTRY

The egg market continues strong and prices continue high. The principal business is in storage stock. Very few new-laid are coming forward. At Montreal they are quoted at 40 to 50c to the trade. Here there is a good demand for all grades. Selects are quoted at 25 to 27c and new-laid in a jobbing way at 30c per dozen. On Toronto farmers' market new-laid bring 40 to 50c per dozen.

Very little poultry is coming forward and the market is on the quiet

side. Quotations here in a wholesale way are as follows: Chickens, dressed, 9 to 11c; fowl, 7 to 8c; ducks, 9 to 11c; geese, 9 to 11c; turkeys, 11 to 15c.

DAIRY PRODUCTS

There is an improved demand for cheese and holders are not inclined to sell at present value. Sales of September and October makes were reported at Montreal last week at 12½c and holders are said to be asking 14½c. Colored goods are selling higher than white just now, owing to their scarcity.

The market rules steady for fancy fall creamery, though less desirable grades are easier, the former being quoted at Montreal at from 24c to 26c. Some Canadian butter returned from England sold in Montreal last week at 24 to 25c per lb. Prices are firm here at 26 to 28c for choice creamery prints and 24 to 25c for solids. Dairy prints are quoted at 22 to 23c and butts and tubs at 18 to 20c for choice quality. On Toronto farmers' market butter brings 28 to 30c per lb.

LIVE STOCK

Live stock receipts rule large, with the quality of the fat cattle offering not as good as the trade all round requires. Trade rules brisk for the best, with the commoner stuff easier. Exporters sell all the way from \$4.00 to \$5.20 per cwt., the latter figure only for very choice quality. Export bulls sell at from \$3.50 to \$4.25 per cwt. Prime butchers' stock is quoted at \$4.50; medium, \$4.00 to \$4.20; common, \$3.65 to \$3.90; cows, \$3.50 to \$3.40; and canners, \$1.25 to \$1.75 per cwt. There is little doing in the feeding classes, but a few feeders, 1,000 to 1,100 lbs. of good quality would sell all right; a few odd steers of this kind sold last week at \$7.75 to \$14. Short-horns, 1,200 lbs. each, sell at \$4 to \$4.25 per cwt. Common inferior stockers are not wanted.

Good to choice milkers sell readily at \$40 to \$55 each, and extra choice ones at \$62. Good veal calves are scarce and in strong demand. Too many skim-milk fed vealers are being offered. Prices range from \$4.50 to \$6.50, with choice ones selling at \$7 per cwt.

The run of sheep and lambs has not been so heavy and consequently the market is stronger. Export ewes sell at \$4.50 to \$5 per cwt, culls and rams at \$3 to \$5 for choice quality lambs at \$6.25 to \$7.00, and the more common ones at \$5 to \$6 per cwt.

The hog market is higher at \$6.00 per cwt for selects and \$6.65 for lights and fats, all fed and watered.

HORSES

The horse market has ruled active, with numerous sales. Prices rule about the same as at last writing.

The Annual Meeting of the Ontario Veterinary Association

(Continued from page 80.)

Bowley, V.S.; W. Steele, V.S.; Jas. Stewart, V.S.; J. W. Porter, V.S.; J. A. Tancock, V.S.

Andreas—Dr. C. Elliott, V.S., and Dr. J. H. Reed, V.S.

Delegate to the Industrial Exhibition, Toronto—Dr. Andrew Smith, F.R.C., V.S. Delegates to the Western Fair, London—Dr. J. D. O'Neill and Dr. W. J. Wilson.

C. HEATH SWEETAPPLE,
Secretary.

Farmers' Institute Meetings

The following Institute meetings will be held during the latter part of January:

REGULAR MEETINGS

Div. 1.—Speakers, H. Jones and W. C. Shearer. 14th, (x) Dunlop; 15th, (x) Haverly; 16th, (x) Warton; 17th, (x) Hepworth; 18th, (x) Tara; 19th, (x) Port Elgin; 21st, Lakelake; 22nd, Lavery's School House; 23rd, (x) Acton; 24th, (x) Georgetown; 25th, Hornby; 26th, McCurdy's.

Div. 2.—Speakers, W. Elliott and J. Gardhouse. 12th, (x) Coldstream; 14th, (x) Beechwood; 15th, (x) Ailsa Craig; 16th, (x) Parkhill; 17th, (x) Exeter; 18th, Brucefield; 19th and 20th, Inwood; 22nd and 23rd, Bridgen; 24th, Walker's School House; 25th, Middlemiss.

Div. 3.—Speakers, J. F. Lavery, V.S., and J. E. Orr; 11th and 12th, Aylmer; 14th, Shedden; 15th, West Lorne; 16th, (x) Bridge End; 17th, (x) Croston; 18th, Valetts; 19th, Romeny; 21st and 22nd, Leamington; 23rd, Oldcastle; 24th, Belle River.

Div. 4.—Speakers, Dr. J. Standish, Jno. C. Shaw (14th and 15th), Geo. Carlaw (16-20), 14th, Ancaster; 15th, Stone Creek; 16th, (x) Galt; 17th, (x) St. David's School House; 18th, Niagara Falls South; 19th, Wiltonghy; 21st, Pelham Centre; 22nd, Attlebridge; 23rd, Cayuga; 24th, Hagersville; 25th, Victoria; 26th, Langton.

Div. 5.—Speakers, E. C. Drury, I. Warron (10th and 10th), J. M. McCullum (24th and 25th), Miss B. Carter (17-23), 12th, (x) Campbell, Kenilworth; 17th, Amun and Leith; 18th, Strathavon Hall; 19th, Owen Sound; 21st, Kemble School House; 22nd, Brown's School House; 23rd, Kilsyth; Desboro; 23rd, Chatsworth; 24th, Bon Dund; 24th, Churchill.

SUPPLEMENTARY MEETINGS

Div. 2.—Speakers, Dr. H. G. Reed, G. Barbour (23-31), Miss B. Miller (14-22), 14th, Holland Centre; 15th, Markdale; 16th, Preciville; 17th, Hopeville; 18th, Dundalk; 19th, Badgeros; 21st, Maxwell; 22nd, Feversham; 23rd, Midhurst; 24th, Minesing; 25th, Pelphoston; 26th, New Flow; 28th, Allanwood; 29th, Wyevale; 30th, Wyebridge; 31st, Le Faveur's Corners.

Div. 12.—Speakers, Jno. Campbell, J. C. Clark (11-24), G. C. Coston (23-31), Miss I. Rife (15-23), 12th, Alton; 14th, Cheltenham; 15th, Brampton; 16th, Churchville; 17th, Brantford; 18th, Tillamere; 19th, Monb Road; 21st, Bolton; 22nd, Kleinburg; 23rd, Maple; 24th, Ella; 25th, Irlington; 26th, Lasky; 28th, Thornhill; 29th, Westford; 30th, Box Grove; 31st, Victoria Square.

Div. 13.—Speakers, T. G. Ravnor, W. P. Stephen (11-19), A. E. Sherrington (19-29), 11th, Oakwood; 12th, Little Britain; 14th, Valencia; 15th, Onmece; 16th, Densford; 17th, Cambray (x); 18th, Burnt River; 19th, Bethany; 19th, Manver's Station; 21st, Millbrook; 22nd, Cavanville; 23rd, Garden Hill; 24th, Canton; 23rd, New-

UNIVERSITY COLLEGE OF WALES

ABERYSTWYTH

(A constituent College of the University of Wales)

Professorship of Agriculture

The Council invite applications for the post of Professor of Agriculture in the above College, at a salary of £350 a year.

Applications, together with 20 printed copies of testimonials, must reach the Council, from whom full particulars may be obtained, not later than Saturday, January 19th, 1907.

J. H. DAVIES, M.A.,
Registrar.

THE FARMERS' EXCHANGE

One Cent a Word
CASH ON ORDER

Advertisements under this head one cent a word. Cash must accompany all orders. No display type or cuts allowed. Each initial and number counts as one word.

FARMS FOR SALE

SUPLINDIP 220 ACRE FARM For Sale near village of St. George, Brant Co.; 22 acres bush and maple; well watered; fine brick house, stone foundation, broom; 2 bank barns, other outbuildings, good state of repair; orchards. For price and full particulars address S. G. READ & SON, Brantford, Ont.

HELP WANTED

WANTED—A reliable man and wife, no family. Man to be thoroughly up in general farming and at same time have experience in dairy farming. Address H. G. CHARLES-WORTH, 40 Adelaide St. E., Toronto.

WHEN you learn Telegraphy you want the best instruction it is possible to obtain. This is exactly what you get at the Dominion School of Telegraphy and Radiotelegraphy, Toronto. B. WALKER SOMERIS, Principal. Send for free booklet.

WANTED—Reliable agents to sell Fruit Trees, etc., during fall and winter months. Terms the best in the business. Established over thirty years. **PELHAM N. HESLEY CO.**, Toronto.

BIG WAGES selling northern grown Trees, outfit supplied. Pay weekly. **WINNERS NURSERY**, Port Hope, Ontario.

MISCELLANEOUS

FOR SALE

Halstein-Friesian Bull, registered. For sale by CHAS. W. HEWIN, Kirkendale, Ont.

FOR SALE—Three hundred stock, grain, fruit, dairy, garden and canning factory (new process) in the Niagara district. No better land, climate, or more prosperous section in Canada. Write for particulars to **FARMERS' REAL ESTATE CO.**, Dunville, Ont.

SITUATION WANTED by married Scotch man as Farm Manager, with practical knowledge of all kinds of farming, good references. Apply Box 18, Freeman, Ont.

FARMS WANTED

WANTED—A 100-acre farm in good cultivation, with good buildings and modern improvements, in central Ontario, near railway station. E. G. McCALLUM, St. Elmo, Ont.



ROOK BALT for horses and cattle. In tons and carlots. **Toronto Bait Works, Toronto**

tonville; 25th, Newcastle; 26th, Orono; 25th, Solina; 29th, Nestleton.

Div. 14—Speakers, J. W. Clark, D. C. Anderson (15-30), J. W. Wildfield (Jan. 31st and Feb. 1st), M. G. Grey (Jan. 23rd and Feb. 1st), 15th, (x) Consecot; 15th, Wellington; 16th, Demorestville; 17th, Cressy; 17th, Wampoo; 18th, Milford; 19th, Cherry Valley; 19th, West Lake; 21st, (x) Wooler; 22nd, (x) Brighton; 22nd, Colborne; 24th, (x) Castleton; 25th, Roseneath; 25th, Baltimore; 28th, Bissels; 29th, Columbus; 29th, Whithy; 31st, Kinsale; Feb. 1st, Greenbank.

Div. 15—Speakers, W. L. Kydd, T. Mason, 12nd, Madoc; 14th, Eldorado; 17th, Marmora; 16th, Ivanhoe; 17th, Moira; 18th, Stirling; 19th, Turner's School House; 21st, Harder's School House; 22nd, (x) Gilroy's School House; 23rd, (x) Foxboro; 24th, Plainsfield; 25th, (x) Melrose; 26th, Marysville; 28th, (x) Clacie's School

House; 29th, Catawaqui; 30th, Glenburnie; 31st, Sunbury.

Div. 16—Speakers, C. W. Nash, A. C. Hallman, 15th, (x) South Mountain; 16th, (x) Winchester; 17th, (x) Winchester Springs; 18th, (x) Chesterville; 19th, Moulintie; 21st, Northfield; 22nd, Apple Hill; 23rd, Maxville; 24th, McCrimmon; 25th, St. Eugene; 26th, Plantagenet; 25th, Leonard; 29th, Russell; 30th, Casselman.

Div. 17—Speakers, H. Glendinning, R. S. Stevenson, 12th, North Gower; 14th, Manotick; 15th, City View; 16th, South March; 17th, Stittsville; 18th, Munster; 19th, Glasgow; 21st, Adamastor; 22nd, Scotch Bush; 23rd, Alice Tp.; 24th, Greenwood; 25th, Cobden; 26th, Drummond; 28th, Balderson; 29th, Harper; 30th, Maberley; 31st, Women's Institute meetings will be held at these points.

Butter Scoring Contest

The standing for the season in the butter scoring contest for "cream-gathered" cream, which was called on under the direction of the Eastern and Western Dairymen's Associations and the Department of Agriculture during the past season, is presented herewith. Thirty-five of those who entered the competition furnished three samples, which were each scored three times. We give below the relative standing of first seven.

L. A. Southworth, Cannington, 94.88 per cent, prize \$30; D. E. McKenzie, Beaverton, 94.49 per cent, prize \$25; W. A. McKay, Underwood, 94.40 per cent, prize \$20; Ivo McQuaker, Owen Sound, 94.3 per cent, prize \$15; F. E. Brown, Dutton, 94.25 per cent, \$10; J. Herb. Thompson, Lucan, 93.74 per cent, \$5; Jas. Walker, Hanley, 93.37 per cent.; J. R. McPherson, Corbett, 93.36 per cent.; W. G. Medd, Winchester, 93.35 per cent.; Wm. Newman, Lorneville, 93.23 per cent.; Thos. Scott, Warrton, 93.12 per cent.; Bluebird Butter Co., Bluebird, 92.84 per cent.; C. Aldrich, Selkirk, 92.72 per cent.; Saugeen Valley Creamery Association, per Chas. Heise, Neustadt, 92.7 per cent.; Mac Robertson, St. Marys, 92.56 per cent. Committee—H. H. Dean, O.A.C., Guelph; G. H. Barr, London; J. W. Mitchell, Kingston; G. A. Finnam, Toronto.

Publisher's Desk

(Continued from page 42.)

Free Subscription to the Large Illustrated Paper for Dairymen—The Separator News. A big paper, handsomely illustrated in colors, entirely devoted to the success, prosperity and protection of separator users and intending separator purchasers. Every issue brimful of special illustrations and information—what might be called inside facts—that will help you to decide whether a cream separator will pay you, how large a separator you should have and how to care for a cream separator so as to get the most out of it. Articles guarding you against the "patent can" fraud and against the mistakes of buying a too cheap or a too complicated separator. Articles telling what State Experiment Stations say of cream separators. Articles comparing different kinds of cream separators. In fact a whole paper devoted to cream separator news. Would you like to receive every future issue—without a cent of expense to you? Then write the publishers, The Sharples Separator Co., of West Chester, Pa., asking them to put your name on their mailing list. But don't forget to mention that you saw this offer in THE FARMING WORLD, Toronto, Ont.

Canadian Industrial Expansion

The importance and value of Canadian trade is appreciated more and more, as evidenced by the location of American and English industries in different provinces of the Dominion. In consequence, Canada's industrial expansion is progressing rapidly.

The latest invasion is that of the Gilson Mfg. Co., of Port Washington, Wis., which concern is now building a plant at Guelph, Ontario. Here "Sixty" line of gasoline engines will be manufactured.

The Gilson 1-h.p. \$60 air-cooled engines are attracting universal attention because they incorporate a number of distinctive features that make them particularly desirable for ordinary every-day use among farmers and others who are not mechanics. The Gilson engines—all sizes—are made so simple that they can be operated by anybody successfully without previous experience. Furthermore, the prices quoted are so low that they place them within the reach of all users of power.

No doubt the Gilson Mfg. Co., Ltd., Guelph, Ontario, which is the name of the new Canadian concern, will reap a full measure of success proportionate to what the parent concern has attained in the States.

Boys' Good Training in English Army Schools

The Army Schools at Aldershot (England) have begun to put into practice the preaching of Lord Roberts, who is always advocating the need of the rising generation to be taught the use of the rifle, says the article entitled, "The Boy Behind the Gun."

The schoolmasters now instruct the boys in the principles of rifle-shooting by the aid of tripods, sun-bags, etc. The youngsters enjoy their new lesson very much.

In America there is no warmer supporter of the beliefs of Lord Roberts than the J. Stevens Arms & Tool Co., of Chicope Falls, Mass. The propaganda of this company has done much to train the faculties of girls as well as boys through increasing their interest in rifle shooting. The use of a gun teaches boys and girls to be alert, careful and decisive, while the outdoor life it encourages does much to improve their health.

Every parent, as well as every lover of a firearm, should have a free copy of the new 160-page gun catalog issued by the Stevens Company. It has much interesting information about sights, targets, ammunition, firearms, etc. It is sent for four cents in stamps to cover postage, if you mention THE FARMING WORLD, Toronto.

A Laggard

Oh, little Afterthought, I wish
You had not come to me,
For with myself I otherwise
Quite satisfied should be.
You're excellent, but I deplore
That you should not have come before.

Why is it that you are not prompt,
But saunter in instead
When all the things I've done are
done.

And all I've said is said?
Oh nuisances you are the worst!
Don't come, unless you come at first!
—Ennice Ward, in Mass.

JANUARY PIANO SALE

Square Pianos, Upright Pianos and Grand Pianos. Priced away down

Careful buyers will find in this list a unique opportunity—an exceptional chance to secure a fine piano at a great saving in price. Our Christmas trade was greater than ever, and many really good pianos were traded in part payment for the GOURLAY. Some are included in the list, the others are instruments that, having been used a short time, cannot be sold as new, even though they both look and sound that way—we have put them on the list at cut prices for INCREASED BUSINESS. We do not intend to have any quiet month in our business.

CLASS A

Three fine square pianos in splendid order, fully guaranteed for five years. A little more old-fashioned than an upright, otherwise they would be higher priced. They are the best possible musical value, and will be very durable, being thoroughly reconstructed with new material.

TERMS OF PAYMENT—\$10.00 Cash and \$4.00 per month, or in proportionate quarterly or half-yearly amounts. A discount of 10% for cash.

- WILLIAMS**—7½ octave square piano by the R. S. Williams Co., Toronto, in handsome rosewood case, with double plinth mouldings and four round corners, finished back and front alike; has full iron frame, overstrung scale. In thorough repair. Original cost, \$375. Sale price, \$109
- WEBER**—7 octave square piano by Weber & Co., Kingston, in handsome rosewood case, with plinth and serpentine mouldings, carved legs and lyre, etc., full iron frame, overstrung scale. Original cost, \$375. Sale price, \$113
- HEINTZMAN & CO.**—7½ octave square grand piano by Heintzman & Co., Toronto, in handsome rosewood case, with carved legs and lyre, double plinth and serpentine mouldings, full iron frame, overstrung scale. A splendid piano. Original cost, \$450. Sale price, \$127

CLASS B

Eight upright pianos by standard makers, and every one in perfect order. A better chance to buy a good well-known upright piano for little money was never offered.

TERMS OF PAYMENT—\$10.00 Cash and \$6.00 per month, or in proportionate quarterly or half-yearly amounts. A 10% discount for Cash.

- GREAT UNION UPRIGHT**—7½ octave upright piano by The Great Union Piano Co., New York, in ebonized case with solid panels, trichord overstrung scale, double repeating action, etc. Height, 4 ft., 4 in. Original cost, \$325. Sale price, \$178
- DOMINION**—Small size walnut upright piano by The Dominion Co., Bowmanville, in use only about a year; has three pedals, full iron frame, trichord overstrung scale, etc. Manufacturer's price, \$250. Sale price, \$189
- KARN**—7½ octave upright piano by The D. W. Karn Co., Woodstock, in dark rosewood case, with solid panels, full iron frame, trichord overstrung scale, double repeating action, ivory and ebony keys, etc. Original cost, \$350. Sale price, \$205
- HEINTZMAN & CO.**—7½ octave upright piano by Heintzman & Co., Toronto, in hard walnut case with solid panels, trichord overstrung scale, ivory and ebony keys, double repeating action, etc. Manufacturer's price, \$375. Sale price, \$215
- KARN**—7½ octave piano by D. W. Karn & Co., Woodstock, medium sized, in walnut case with full length music desk, Boston fall board, solid panels, ivory and ebony keys, etc. Manufacturer's price, \$375. Sale price, \$228
- GERHARD HEINTZMAN & CO.**—7½ octave upright piano by the Gerhard Heintzman Co., Toronto, in Circassian walnut case, with full length music desk, engraved panels, trichord overstrung scale, ivory and ebony keys. Manufacturer's price, \$375. Sale price, \$238
- MENDELSSOHN**—7½ octave upright piano by the Mendelssohn Co., Toronto, in walnut case, medium size, full length music desk, polished panels with border of carvings, three pedals with practice muffer, ivory and ebony keys, etc. Used less than one year. Manufacturer's price, \$340. Sale price, \$245
- DOMINION**—7½ octave upright piano by The Dominion Co., Bowmanville, in handsome figured walnut case, with full length panel and music desk, Boston fall board, 3 pedals and practice muffer. This Cabinet Grand piano has been used less than six months, but is just like new. Manufacturer's price, \$350. Sale price, \$265

CLASS C

Five extraordinary bargains—two grands and three upright grands—pianos in a class by themselves in every detail of musical and mechanical excellence. The opportunity to purchase one of these pianos at a reduction is rare indeed.

TERMS OF PAYMENT—Reasonable monthly, quarterly or half-yearly payments can be arranged. A 10% discount for cash.

- GOURLAY**—Cabinet grand upright piano of our own make, in beautiful Circassian walnut case, with full length music desk, plain polished panels and Boston fall board, height 4 ft. 7 in. If we were to make a piano at \$1,000 in this size, it could be no finer than this instrument. The additional cost would be for case decoration. This piano is the \$425.00 style, but as it has been used for fifteen months, we offer it for. \$308
- GOURLAY**—A superb new grand scale Gourelay piano, in rich walnut case of ornate Colonial design. This is the same style of piano as the one furnished the Countess of Minto three years ago. It is the latest style of piano we make, and in musical quality is unsurpassed. It has been used eighteen months. Special sale price \$335
- KNABE**—A peerless Knabe in rich mahogany case of new design, full length plain polished panel with moulding border, Boston fall board, three pedals, etc. An almost new piano which has just had three months use and is a little shop-worn. Regular price \$600. Special sale price \$430
- HARDMAN BABY GRAND**—Very attractive baby grand piano by this old reliable firm, in rich burr walnut case, particularly graceful in design and deep and full in tone. Fit to grace any drawing-room. Regular price, \$750. Sale price \$455
- STEINWAY GRAND**—A Steinway parlor grand in rosewood case, but though used, is in first-class order, being as good as new both in tone, action and appearance. Regular price, \$1,000. Sale price \$585

Gourlay, Winter & Leeming
188 Yonge Street, Toronto

Please mention The Farming World when writing Advertisers.