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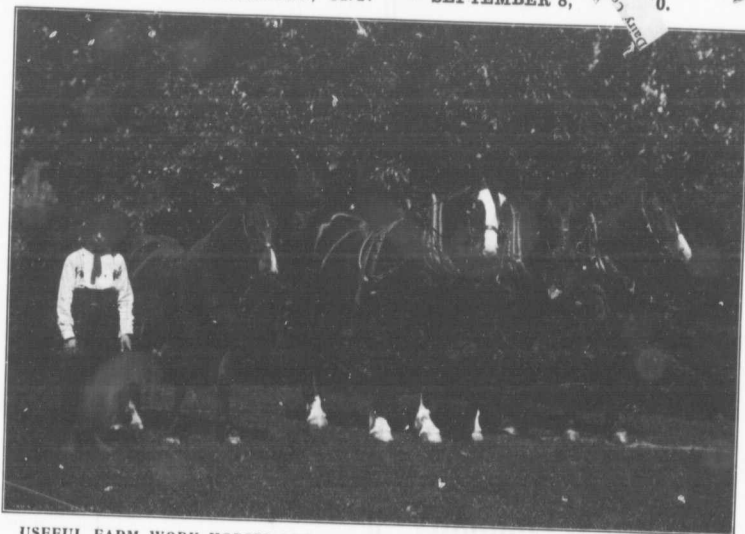
FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

SEPTEMBER 8,

1900.



USEFUL FARM WORK HORSES BUT NOT THE MOST PROFITABLE SORT TO BREED

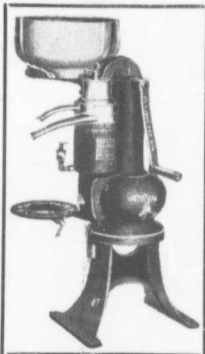
General purpose horses such as the ones illustrated are quite generally popular and quite satisfactory for farm work. This sort can always be purchased at reasonable prices and in view of the fact, it is most profitable to buy that kind rather than to raise them. Good heavy drafters can be raised on almost the same feed and no matter at what age they are to be marketed, they will command prices much in advance of general purpose horses. The illustration shows some of the work horses on the farm of Mr. J. Locke, Northumberland Co., Ont., whose farm was one of the successful competitors in the Dairy Farms Competition.

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CANADIAN COUNTRY LIFE

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Canadian National Exhibition

Visitors to the great Canadian National Exhibition at Toronto this year, as usual, found much to entertain and instruct them. The educational features, so far as agriculture was concerned, were, perhaps, ahead of anything ever before attempted at Toronto. In addition to the usual features, such as the various exhibits of live stock, fruit, vegetables, dairy products, and so forth, there were exhibits of great educational value, which were arranged under the direction of the Ontario Department of Agriculture.

These included displays from the Ontario Agricultural College, showing the results of drainage work and experiments with field crops and corn, and tobacco from Essex County. The Director of Dairy Instruction had on exhibition samples of milk, which showed the effect of cow hairs, straw, hay, flies, dust and so forth, that had been placed therein. In each case the resultant product was repulsive and disgusting to that extent where anyone who gave thought to the matter on seeing the display, would never again allow milk to become contaminated with these things, if at all possible to avoid it. The Fruit Branch had a fine display of fruit, showing the great perfection to which a wide variety of fruits can be grown in Ontario. The grain and sheep exhibits in connection with the field crops competition, were very tastefully arranged, and attracted much attention.

British Columbia had a very fine display of her fruit. Alberta had on display grains and other products from that province. The West Indies were represented by a very interesting and attractive exhibit of her fruit, vegetable and nut products, as produced on the several isles of the West Indies.

INFORMATION ON COW TESTING

The Dominion Department of Agriculture were represented in the Dairy Building by officials of the Dairy and Cold Storage Branch—these in charge of cow testing. Many enquiries about cow testing work were answered, and many farmers were made acquainted with this great work through the display made by the Department.

The dairy cattle exhibits, with the exception of the Guerneys and grades, are reported elsewhere. The Guerneys were all shown by the Trettheway Model Farm, Weston, Ont. These cattle are a fine lot, and were much admired by those who passed through the stables.

The beef cattle exhibits, especially the Shorthorns, were well up to the standard. There was keen competition in the Shorthorn classes, where representatives from two great western herds—those of Sir Wm. Van Horne, and H. L. Emert, East Selkirk, Man.—met the old and well-established herds of the Red, White and Roan from Ontario herds.

BORERS

In heavy horses, the main exhibit, as usual, was with the Clydesdales. These were not as strong as they have been in previous years, so far as the aged stuff was concerned; the younger classes were well filled with a very choice lot of stuff. The principal winners were made by Graham Bros., Claremont, Ont. Their aged stallion, Mikado, was of a right fleshy sort, a good mover, and of fine quality, though of upstanding type. There was only a small showing of Shires, while Percherons were represented by three main exhibitors; two or three others exhibited individuals. The light horses and harness classes, each and all, were well represented.

The weather on several days of the fair was anything but favorable. Rain fell in torrents at times, yet notwithstanding it, the people came in crowds and the attendance was well up to the average, if not in advance of previous years.

Ayrshires at Toronto

It has been many years since the exhibit of Ayrshires at the Canadian National Exhibition has been so few in numbers as was the case this year. Fanciers of this famous Scottish dairy breed, however, had nothing to be ashamed of in the display made of their favorites. The well known and old time exhibitors, Alex. Hume & Co., Menie, Ont., and William Stewart & Son, Menie, Ont. were on hand as usual. Hector Gordon, Howick, Quebec, for the first time in three years had his Stonehouse herd in the fray. The Trettheway Model Farm, Weston, Ont., also showed a number, while Holborn Bros., Mount Forest, Ont., and James B. Ross, Streetsville, Ont., each had an individual entry. The large herds of R. R. Ness, Howick, Que., Robert Hunter & Sons, Maxville, Ont., and Peter McArthur's herd, were greatly missed.

Most notable among the Ayrshire exhibits were the junior and senior championship bulls. Both of these animals, owned by Hector Gordon, are worthy of a great deal of note. Both were very fine animals, the Senior and Grand Champion was Hillhouse Bonnie Scotland. He is an animal most difficult to fault. He is of strong dairy and Ayrshire type, as good as can be in the heart girth, of straight lines both top and bottom, deep barreled and well-balanced. The junior champion, Auchbrain His Eminence, is a bull over which any Ayrshire breeder would become enthusiastic.

The aged cow class, an illustration of which is reproduced elsewhere in this issue, numbered eight entries. Gordon's Bargenoch Blue Bell, which carried off the premier award, is a big strong cow, of rugged constitution, with a good barrel, a splendid udder, and the very best of teats. Her udder was not as level as some Ayrshire men would like, but was capacious, and the teats were large and well placed. She was, perhaps, not showing at her best, as she was not in the best of bloom, due, no doubt, to having been newly imported. The second prize cow, Monkland Snowdrop 4th, also owned by Gordon, is of the very best of quality, and possesses a good handling skin, a fine udder and is good throughout. Not having been fresh it was somewhat against her. If showing at her best, she would, undoubtedly, have been the first cow of the lot. The awards as placed by Judge A. Kains, Byron, follow:

Bull, three years old and over—1, Wm. Stewart & Son, Queen's Messenger of Springhill; 2, The Trettheway Model Farm, Drogan Mains Guarantee; 3, Alex. Hume & Co., Lessness; 4, Royal Prince.

Bull, two years old—1, Hector Gordon, Hillhouse Bonnie Scotland; 2, Alex. Hume & Co., Spicey Sam Jr.; 3, Wm. Stewart & Son, Queen's Messenger of Springhill; 4, Holborn Bros., Mount Forest, Duke of Tanglewyld.

Bull calf, under one year old—1, 2 and 3, Gordon, Stonehouse Bell and Boy, Stonehouse; Earl an Stonehouse Prince; 4, Hume, Royal Scot.

Bull calf, calved after January 1st, 1910—1, Wm. Stewart, Sandy; 2, Gordon, Stonehouse Cheerful Boy; 3, Stewart, Prince.

Senior and grand championships, (male)—Gordon, Hillhouse Bonnie Scotland. Junior champion—Gordon, Auchbrain His Eminence.

Feminine senior and championship—Gordon, Bargenoch Blue Bell, Junior champion—Gordon.

Cow, four years old and over—1 and 2, Gordon, Bargenoch Blue Bell and Monkland Snowdrop; 3, Stewart, Bonnie Laurie 65th; 4, Hume, Princess Ena.

(Continued on page 6)

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Only \$1.00
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Vol. XXIX.

FOR WEEK ENDING SEPTEMBER 8, 1910.

No. 35

EDUCATION—ITS APPLICATION IN AGRICULTURE*

W. C. Good, Brant Co., Ont.

Education in Relation to Production and Distribution—The Farmer as a Citizen—His Political Responsibility—A Broader System of Rural Education Needed.

In general any man's value may be estimated in respect to his various relationships; and in particular the farmer may be viewed from several fairly distinct standpoints. He may be: (1) Intelligent or stupid in relation to his vocation, (2) industrious or lazy in his general habits, (3) unselfish, wise and public spirited in his relations to his family and to society or the reverse. I do not imply by this enumeration that there is no connection between the various aspects of any man's individuality. On the contrary there is the closest connection. For convenience, however, we may suitably consider the relation between Education and the farmer in his several relationships as above stated.

QUESTIONS ON PRODUCTION

We are only beginning to find out how depend-

ent is success in agriculture upon an accurate knowledge of the various elements of the farmer's special business—soil, plants and animals. What kinds of soils are there and to what purposes is each one best suited? How is the texture of the soil to be improved? How is surplus water to be gotten rid of and how is soil moisture to be conserved? How shall the various weeds that militate against crop growth be most economically eradicated? What plants shall we choose for forage, grain, fruit and so forth, and what varieties shall we select? What cultural methods are most satisfactory and what are the best systems of harvesting? How can we improve our plants by judicious selection? What live stock shall we keep? How many and of what kinds? How shall they be most effectively and economically fed and cared for? How shall we improve them by selection and keep them free from sickness? All these and hundreds of other like questions in respect to agricultural production demand knowledge.

Then in respect to the problem of distribution there arises a host of new questions in whose solution not only information but a certain state of normal development is required? How shall the costs of transportation be minimized? How shall the unnecessary middle man be eliminated? Is not the need for cooperative selling imperative; and if so what sacrifices on the part of the individual are necessary? How are prices determined, and what is a just price?

These and other like questions involve an examination of the structure of society from the industrial point of view. The farmer who would assist in their solution must be no ignoramus. Not only must he understand the problems of production and distribution. He must also possess skill as a mechanic and builder and must be

lic spirit, a sense of individual responsibility for collective action.

The farmer as a citizen has relations and duties to various institutions—to the family, to the school, to one or more religious or philanthropic organizations, to the various political institutions—municipal, provincial and federal. He must understand these relationships and these duties, and no duties, and no knowledge or virtue in other respects will wholly atone for indifference to the obligations of citizenship. Under the military form of society these obligations have been identified with military service, and any refusal to accept them has been justly visited with vigorous punishment.

HIS POLITICAL RESPONSIBILITIES

In the modern democratic state they are identified with a persistent campaign against social enemies—parasites, evil doers and so forth; and public opinion must develop to such a state that it condemns indifference to the obligations of democratic citizenship just as severely as it has been the custom to condemn indifference to the claims of military service. If this be not so, skill, knowledge, thrift and perseverance will largely minister to social parasites who will fetter upon the body politic, and thus the gains of civilization will be more apparent than real.

Now, considering the farmer in these various relationships one legitimately asks: What kind of education will qualify him in these several aspects? What kind of education shall we provide for our boys and girls whom we wish to see remain on our farms and become intelligent, contented and sprightly agriculturists? Let me try to answer as briefly as possible, beginning with the primary schools as it is only in the measure that the oncoming generation improves upon its predecessor that we have social progress.

NATURE STUDY AND TECHNICAL TRAINING

Our primary rural schools should develop still further the beginning already made in nature study, so that from the very first our children are brought into closer and more sympathetic relationship with Mother Earth. We should have more advanced rural education accessible to all high schools with rural environments and devoted in part towards laying the foundation for a technical training in agriculture.

The beginning already made in Ontario in the establishing of District Representatives is in the right direction. Higher education of a technical nature, such as is now provided by our agricultural colleges should be given to greater numbers, both of young men and young women, and probably will be when the demand becomes greater. And in all these institutions there should be kept constantly in mind the prime importance of the commonplace virtues, and the supreme value of the home and its activities in the development of these virtues.

And lastly, in school and college, in home and field, in the press and in the pulpit, there should be a continuous effort to prepare for, and obtain, a real democracy by disseminating information and by practical training in cooperative activities. An education which recognises the various sides and needs of human nature is justified by its results, whereas a one-sided education is condemned by its obvious failures. "Wisdom is justified by her children."



A String of Jerseys at the Sherbrooke Fair, 1910

Jerseys were particularly strong at the Great Eastern Exhibition at Sherbrooke, Que., this year. In addition to the Quebec herds, there were exhibits present from Ontario and the neighboring State of Vermont. Photo by an Editor of Farm and Dairy.

able to apply his hand to all the varied tasks that present themselves to him.

MORAL QUALITIES ALSO NECESSARY

But skill and knowledge in connection with the agriculturist's special problems are not sufficient, even to make a good farmer, much less to make a good man and citizen. Success is also dependent upon the development of certain moral qualities—patience, endurance, self control, courage in the face of difficulties, and so forth. We can find not a few who have had all the benefits of a specialized education along agricultural lines and yet who have been dismal failures as farmers because they lacked either self control, patience, perseverance, courage or other quality of soul.

And we have seen the industrious plodder who possessed cool judgment gradually forge to the front in spite of great educational defects along technical lines.

But the good farmer needs not only skill and knowledge of his special business, needs not only thrift, patience, courage, self-control and persistence, but, especially in our modern complex society, needs a knowledge of his status and obligations as a citizen. He needs to have developed within him those civic virtues which we call pub-

*Mr. Good was one of the successful competitors for 1909 in the Dairy Farms Competition conducted by Farm and Dairy during the past two years. This is one of the articles required of him by the rules of the competition. Articles by successful competitors are featured in Farm and Dairy each week.

To Organize a Cooperative Fruit Society

Prof. J. W. Crow, O.A.C., Guelph, Ont.

There is no longer any doubt as to the advisability of cooperative action on the part of fruit growers. All of our associations have not been equally successful; but the difficulties, however, are not in connection with the idea, but rather in connection with the methods of organization or the methods of operation of the association. Most of our associations have heretofore been organized on the joint-stock plan. We believe this to be a mistake. The most suitable arrangement for the purpose is a simple, mutual, working agreement without share capital, preferring to borrow capital on the security of the members rather than secure capital by selling shares to members or to outsiders.

Those of our associations which organized on the purely joint-stock plan have had difficulty in keeping close to the truly cooperative idea. Stock has passed into the hands of a few men, probably business men or persons not interested in fruit growing. These men have, of course, desired to secure as large a dividend on their investment as possible and the grower (who furnishes the business) has suffered in consequence. Several associations have been broken up simply through this cause. Two of our associations which organized originally on the joint-stock plan are now changing their basis of membership somewhat. They are requiring that each member subscribe stock to the association and they allow no one outside of the association to hold stock. In this way, the interest of every member is secured and none but members are interested. The simplest and best plan of all, if capital is required, is to borrow from a loan or mortgage corporation on the security of all or part of the members of the association.

GOOD MEN NECESSARY

To organize an association, the steadiest and most reputable men in the community should be interested. With a few men of this type as a foundation a good association may be built up. One of the principal stumbling blocks of the Ontario Associations has been with regard to the remuneration of the manager. It should be established before operations are begun that he is to receive good pay for his work. Those of our associations which are the most successful are the ones which pay their managers the best.

The manager should, of course, be a first-class business man,—one who understands business dealings, and he should also have the confidence of the best men in the community. Some of our associations have tried to get along by paying a manager \$300 or \$400 a year. This amount is not sufficient to create any active interest on his part and the association consequently does not flourish. Other associations have paid their manager a certain amount per barrel for every barrel handled by the association. In one case the original remuneration to the manager was 25 cents a barrel. This has been reduced to 20 cents. The quantity of goods handled has increased to such an extent that the manager now draws a handsome salary, and no one who is at all well informed will say that he gets too much.

QUALITY, NOT QUANTITY

The experience of Ontario associations points out forcibly that it is not at all necessary to have a large membership at the beginning. A number of associations have had difficulty simply because of the fact that a large number of members was thought to be necessary before the association could do business. It is a much safer policy to restrict the membership at the beginning to the better class of growers.

I am quite convinced that every cooperative association should establish strict rules regarding spraying, cultivating, fertilizing, and pruning orchards, and should in addition adopt strict regulations covering grading and packing of fruit. This means of course, that the membership will

at first be limited to those who agree to all these requirements. If a large number of members is admitted, great difficulty is experienced in persuading them to properly care for their orchards and to properly handle their fruit.

Half a dozen men working together to grade and pack the best possible grade of fruit will secure prices that will make the other men open their eyes. This form, the strongest argument for joining the association, and when growers realize that to secure profitable prices they will be required to perform thoroughly all operations connected with growing and handling their fruit, they are much more likely to take the necessary



Packing Apples Cooperatively in Kent Co., Ont.

This illustration shows the interior of the packing house of the Chatham Fruit Growers' Association. Apples are brought in as they come from the trees and packed at the central warehouse by expert packers. In this way a better and more uniform pack is obtained. Mr. W. D. Ross, Secretary of the Association, reports that the Association started 13 years ago with a membership of 12, and shipped but two carloads of fruit. The membership is now about 100.

trouble than if the association is already stocked up with a large quantity of No. 2 fruit which can only be sold at a low price.

The most successful associations in Ontario and in the Western fruit-growing States and British Columbia are those which adopt the strictest rules from the beginning. Nothing attracts a grower more than the high prices received by his neighbor. A great many of our growers have so far failed to realize that high prices can be secured for good grades of fruit. Once this point is made plain to them, they do not hesitate to enter an association and to go to the extra trouble and expense of producing a high-grade article.

Sweet Clover the Farmers Foe

T. G. Baynor, B.S.A., Seed Branch, Ottawa

A very aggressive weed is this sweet clover; a biennial it is true, but a very persistent grower. If cut off at laying time in a meadow or elsewhere on it comes again, and has plenty of time to produce an abundance of seed if left unmolested. It has got into a large number of clover seed producing districts and many places which know it not now, will soon know it to their everlasting sorrow. It may become a weed seed impurity in red clover and it can hardly be detected from good clover seed that is not well colored. The seed law only limits its presence in clover seed of No. 1 quality, where not more than one per cent is allowed of weed seeds of any kind.

It is to the credit of many farmers that they can be seen spudding it out of their clover seed fields this season, which is the safest and best way of getting it out. It would be better to pull it out of the first crop at a time after a good rain as if cut off with a mower it branches out and is difficult to either pull or spud.

The white variety of sweet clover is the most prevalent now; but the yellow is fast gaining on the white and is worse than the white as it is more persistent in its growth. Farm and Dairy readers who do not know the plant should get to know it at once and not let it rest a minute even if the honey bee puts in his little protest.

Views of a N.S. Dairyman

C. P. Blanchard, Colchester Co., N.S.

At the present price of dairy products every dairy cow in the province of Nova Scotia should give a gross annual return of \$100. By careful computation there are at present in this province about 150,000 cows making an average gross yield of less than \$40 a year. The loss sustained by the farmers of Nova Scotia from the improper selection and care of the dairy cows amounts therefore to the enormous sum of over \$7,000,000 annually. This may look like an exaggerated statement to many dairymen. It is nevertheless

true. I have proved it to my own satisfaction. An average gross revenue of \$100 a cow from a herd is quite possible. In my small herd of 25 cows I have several cows which,—taking the price of butter at 25 cents a lb. and skim milk at 15 cents a cwt.—will return a revenue of over \$125 in the year. In putting the average at \$100 a cow for the whole herd I am quite within the mark.

If a cow does not give an annual return of \$100 there is something wrong with the cow or its management, possibly both. When the management is at fault better farmers are needed. Better farmers means better care of cows and better care means better cows. It is possible to double the output of the dairy by improved methods in feed and care.

SELECTING A HERD

In selecting your herd it should be remembered that there are good and bad individuals in all breeds. Two things are essential in the dairy cow—constitution and conformation. In making up the herd if the would-be dairyman has not sufficient experience to make a proper selection he should get some one who has the necessary experience to do it for him.

The selection of a breed must depend to a certain extent on local conditions. In Nova Scotia the Ayrshire is preferred by many because cows of this breed have those characteristics which enable them to climb over the hills and gather their food in the summer season to the best advantage. To do this they must have a naturally robust and rugged constitution. Under other conditions any other standard dairy breed might fill the bill equally well. Selections of breed must therefore be a matter of taste governed by local conditions.

NOVA SCOTIA A DAIRY COUNTRY

In these Maritime Provinces nature has deprived us of those fertile plains on which can be grown for generations the wherewithal to feed the more densely populated countries of the world. She has, however, opened her hand wide in giving us those conditions of hill and valley, river and brook, which give delight to the dairymen's heart

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and ensure the success of this important industry. Holland and Belgium, 50 years ago, with no better soil were situated about as we are to-day. Last year they exported about \$100,000,000 worth of dairy products while we, with a larger area, produced only about \$4,000,000. We are optimistic however and are eagerly looking forward to the time when Nova Scotia will become a second Holland and stand unrivalled as a dairying country.

Tile Draining a Wet Field

E. F. Eaton, Colchester Co., N.S.

The laying of tile drains is not the work of the skilled engineer only. Any intelligent farmer, by studying up the subject and carefully following directions can lay tile drains as well as any engineer and with much less expense. This has been proven in my own case and in the case of many other farmers as well. Practically all the farms in this neighborhood are well drained and in no case have the services of the engineer been employed.

Many farmers whose farms are badly in need of underdraining hold back because they are not able at the present time to lay a complete system of drains. In such cases a few main drains laid through the lowest land would generally remove the water sufficiently to make, what would otherwise be almost useless land, productive.

Three years ago, we drained a 20 acre field in this way. The field was 832 feet wide and 1,040 feet long, sloping to the west. Running across this field were three main gullies with a fall varying from one to four feet in 100. Along the west side of the field was a four foot ditch which had been put in to prevent the water from running off our field on to our neighbors.

This field was so wet that we had never been able to grow there anything but grass. It kept wet so late in the spring and was so wet in the fall that roots or grain on that field were an impossibility. Three drains, 850 feet long of three inch tile were run up the main gullies in this field and opened into the ditch on the west side.

The lowest part of the land could easily be detected with the eye and a complete survey of

the lath with pencil. The fall of the drain between each station was also marked.

In digging the drains, as little hand work was done as possible. Two deep furrows were thrown out each way with an ordinary plow, a crown plowed and thrown out in the centre. This crown was then used down to a depth of 18 inches or two feet. The whipple trees were attached to the plow by a 10 foot chain. A long whippetree enabled the horses to walk on either side of the ditch. We then used our subsoil plow down to within six inches of the finished depth of the drain. The bottom of the drain was finished by hand.

GRADING THE DITCH BOTTOM

In grading the ditch bottom we used a 10 foot plank, with a spirit level tacked on one side. The end of the spirit level was dropped at one end according to the grade of the drains. For instance, if the grade was 10 inches in 100 feet the drop in 10 feet would be one inch. In two feet (the length of the level) the drop would be one-fifth of an inch. Hence to get the true grade the end of the level pointing up the slope would be dropped one-fifth of an inch below the top of the board. The bottom of the ditch would then be graded with a spade till, when the board was laid on it, the bottom would be centred. We found this to be a handy and accurate method of grading a ditch bottom.

At the outlet a wooden box was used for the last eight or 10 feet. If the tiles had been allowed to run to the outlet of the drain, they would have been cracked and heaved by frost and the drain thereby rendered ineffective. We prefer round tile as it is easier to make a good joint with them. In case a good joint could not be obtained, a sod was placed over it, grass side in. We laid the tiles starting at the outlet. We filled in the earth each day. If tiles are left uncovered and a rain should come, it would be necessary to take the tiles out and grade the bottom of the ditch over again. The filling was done with a snowplow arrangement after five or six inches of the earth had been dropped in by hand.

THE RESULTS OF DRAINAGE

This drainage was done in the fall of the year

\$400. Of course, the crop of roots cost more to produce than hay, but the extra expense certainly did not amount to \$640. The expense of putting in the three main drains was:

Cost of tiles, 2,550 three inch tiles..... \$38.25
Digging, laying and filling \$95.00

Or a total cost of\$133.25

We estimated that the first crop off this 20 acre field paid for the tiles at least twice over.

Of course, this is not a complete system of underdrainage and this field is not as easily worked as the other parts of the farm, which have laterals every 60 or 80 feet. Sometime in the near future, we will run laterals through this field. Where, however, the farmer is unable to put in a complete system of underdrainage through financial limitations a few main drains where they are most needed will be a very profitable investment and will not be lost as they will make up a part of a complete system of drainage to be installed later on.

The Nova Scotia Government this last summer has purchased a ditching machine which is doing splendid work. We expect that this machine will not only decrease the cost of putting in the drains but will to a large extent solve the labor problem, which is our greatest difficulty.

Possible Combinations Amongst Farmers

W. J. L. Hamilton, Nanaimo Co., B.C.

Independence is an excellent thing, but like all other good things it can be carried too far. Yet this is one of the hardest lessons to teach our farmers in British Columbia. Each man goes his own way, raises and markets his own produce, without any heed to his neighbor. The consequence is that this independence, (is it distrust?) of his neighbors prevents cooperation, which, if undertaken by any district, would lead to each individual making greatly increased profits. And I am not merely alluding to joining a cooperative association, though this is of the first importance. Besides doing this the farmers of a district should combine to raise certain classes of produce along the same lines.

The same breeds of cattle and poultry, the same classes of crops, the same varieties of apples and other fruits should be produced by all; then a district would soon establish a reputation for excellence in such produce, and, above all, the purchaser would then always feel that he could obtain all he needed of these staple articles without fear of being told that, owing to limited production, it was all sold out.

In this case local agricultural exhibitions would assume a much greater importance than now, for they would promote a friendly rivalry, stimulating every individual to produce only the very best of what he raised, thereby maintaining the highest possible standard of quality in those lines of staple products which the district was commercially engaged in producing.

There is no reason why this rivalry should be other than friendly, if that very common cause of discord, distrust of the judges at the exhibition, were avoided. This is best done by avoiding the selection of local men to judge the produce, since these are always suspected of partiality and this often with the greatest injustice.

If men of acknowledged capacity, with no special local interests, were chosen as judges, the absurdity of any such charge would be manifest, even to that very frequent product of each district, the man who knows that his exhibit exceeds that of the prize winner.

The first few times the cow is milked, her udder will be tender when the milking begins, so we should be quiet and careful. A young cow is made or spoiled forever by the treatment which she receives in the first few milkings.—R. S. Hoardsworth, Durham Co., Ont.



One of the Latest and Greatest Labor Savers Connected with Farm Work.

The illustration herewith shows a traction ditcher at work on a farm near Perth, Ont. At the time this photo was taken, the ditcher was being timed to see what record it could make. It was digging the ditch three feet deep at the rate of one rod in two minutes.

the field was not necessary. Starting at the outlet, laths were driven in every 100 feet where the ditch was to go. A spirit level was used for detecting the fall from one stake to another. Coordinate paper marked out in squares of one-tenth of an inch was used in plotting the depth and grade of the drains. We endeavored to have the drains running straight as far as possible and on an even grade, but never allowing them to go more than 3/4 or four feet deep, the average depth being three feet. When the system was complete on paper, the depth of the drain at each station was determined and marked on

of 1907. The following year, for the first time in the history of the field we had a crop of roots and potatoes. The crop was as follows:

Five acres of potatoes, 1,000 bushels	
at 35 cents	\$350.00
Ten acres turnips, 8,000 bushels at	
6 cents	\$480.00
Five acres mangels, 3,500 bushels at	
6 cents	\$210.00

Total\$1040
Previously the best crop we had ever obtained was 40 tons of hay worth at the very most,

Ayrshires at Toronto

(Continued from page 2)
 Cow, three years old—1, Hume, Stonecroft Lady Helen; 2, Gordon, Aikenhead Blackbird; 3, Hume, Bell's Land No. 4h.
 Cow, dry, in calf—1, Gordon, Southwick; 2, Hume, Barceover Speedrop; 3, Holborn Bros., Sprightly of Tonge wild; 4, Trettheway Model Farm, Brownie of Glenhurst.
 Heifer, two years old—1, Gordon, Fancy of Lancaster; 2, Hume, Lessnessock Sprightly; 3, Stewart, Dewdrop of Menie.
 Heifer, one year old, out of milk—1, Gordon, Stonehouse White Rose; 2, Hume, June Morning; 3, Gordon,

Lochfergus Daisy; 4, Stewart, Jean Armour, 3rd.
 Heifer calf, under one year old—1, Stewart, White Heather; 2, Gordon, Stonehouse Fancy; 3, Gordon, Monkhouse, Brown Queen; 4, Hume, Lady Helen of Menie.
 Heifer calf, calved after Jan. 1, 1910—1, Gordon, Stonehouse Mary; 2, Stewart, Mayflower; 3, Hume, White; 4, Stewart, Lady Mary Stewart.
 Graded herd—1, Gordon; 2, Hume; 3, Gordon; 4, Stewart.
 Young herd—1, Gordon; 2, Stewart; 3, Hume.
 Four animals, the progeny of one bull—1 and 3, Gordon; 2 and 4, Stewart & Son.

Holsteins at Canadian National

Fanciers of Black and White cattle could well be proud of the splendid showing made by their favorites at the Canadian National Exhibition for 1910. Holsteins were out in exceedingly large numbers. There were no less than eight of what might be termed large exhibits. These included the herds shown by G. W. Clements, St. George; James Pettit, Norwich; R. F. Hicks, Newtonbrook; Lakeview Stock Farm, Bronte; A. E. Hulet, Norwich; Edgar Dennis, Newmarket; F. A. Legge, Jefferson; G. H. & J. Mackenzie, Willowdale; John Clarkson & Sons, Summerville. Other exhibitors were; the Trettheway Model

Farm, Weston; Weir Bros., Malvern and O. D. Bales, Lansing. Large classes confronted the judge, Mr. R. S. Stevenson. Arranger in almost every case. The competition in many instances was exceedingly close, the stock in general being of a very high class, so that the judge had work, and plenty of it, to do in the awards.

Throughout Mr. Stevenson favored the low, short-legged type of Holsteins. He let out the long-legged individuals at every turn. Speaking of the exhibit the judge expressed it as his opinion that it was the best that had ever been at Toronto, both as regards numbers and the quality of the individuals. Among the animals worthy of special note were; Schulling Sir Posch, owned by Legge, which bull was awarded the Grand Championship. He was the champion last year, and is a bull of wonderful constitution, of great size, combined with the very best of quality, thus being an animal the likes of which are eagerly sought after. The junior champion was the two year old Prince Abekirk Merceca, owned by Hicks. He is an exceptionally good bull, possessing the best of constitution, and the other strong points of the typical Holstein to that degree which promises that he will be heard from again later. The aged bull, Lord Cornelius Tensen, shown by the Trettheway Model Farm, and which bull was the Junior Champion last year, might under the scrutiny of the judges, have been placed higher. He was awarded third prize. He is a typical Holstein bull, and if brought out another year will in all probability be placed a good deal higher. As shown beside the other two that were awarded places above him he did not possess quite that substance necessary to win alongside of the strong company in which he was placed, although a very fine bull.

Among the cows Helbon Bonheur Queen, owned by Rettie, shown in the age class, was a very typical Holstein, and a very beautiful one. Beyond the fact that she was possibly a little short in the neck she was difficult to fault. De Kol Pauline Sals Yale, shown as a dry cow, in the four-year-old class, was mentioned by Mr. Anderson, as being one of the best types of Holsteins that has ever been shown at Toronto. The three-year-old Pauline Golantha Posch, owned by Hulet, was an exceptionally fine individual, in fact one of the best. She is a strong cow and will be heard from again.

The young stock made a grand display, and were of a very high order in numbers and quality throughout. In connection with the herd prizes it may be said that there were never better females shown than in the old herd class, the first prize for which was awarded to Rettie.

Placings were made as follows:—
 Bull, three years old and upwards—
 1, F. A. Legge, Schulling Sir Posch;
 2, James Rettie, Count Merceca Posch;
 3, Trettheway Model Farm, Lord Cornelius Tensen;
 4, R. F. Hicks Count Favorit Merceca.
 Bull, two years old—
 1, Hulet, Prince Abekirk Merceca;
 2, Rettie, Francis Calahemy De Kol;
 3, Dennis Sir Woodland Sarcastic.

Bull, one year old—
 1, Rettie, Ina Triton Ind's Abekirk;
 2, Clarkson & Sons, Summerville, King Norine Wopke Pasma;
 3, G. H. & J. McKenzie, Summerville Echo;
 4, Hulet, Count Tensen A.

Bull calf, under one year old—
 1, Rettie, Bonheur Favorit;
 2, Rettie, Count Netherland Merceca;
 3, G. H. & J. McKenzie, Favorit Merceca 10th;
 4, Lakeview Stock Farm, Lakeview De Kol Payne.

Bull calf, calved after January 1, 1910—
 1, Rettie, Schulling Prince;
 2, Legge, Coral Canary Posch;
 3, O. D.

(Continued on page 9)

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See it at The Ottawa Fair

Learn how clean, easily and effectively the rustless aluminum separating plates do their work, how close the separating process really is. We'll show you how it is easiest to get best results with the

Separate Bowl and Spindle

Bowl is Self-Centering and Self-Balancing

Rustless Aluminum Separating Plates

Heavy, Straight-cut Gearing—Runs on Ball Bearings.

Made in Five Sizes—350, 500, 650, 800 and 1,600 lbs. per hour.

Very Strong Rigid Frame.



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Cream Separator

See how it meets YOUR OWN tests—examine every part of the machine yourself thoroughly—then form your own conclusions. We leave it entirely to you to judge of its merits.

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Ask our Agent for one—or if you are not going to the Fair send us your name and address and we will mail you a copy FREE. Then you can learn all about the Premier and our liberal trial offer.

The Premier Cream Separator, Company
 Department J. - TORONTO, ONT.

GET A GOOD SEPARATOR

DON'T buy a separator that will mean more work, more time, more trouble, and less profit. You do not have to take chances. There is one sure way to know a good separator—one sure way to get one. Look for the I H C trade mark—a seal of excellence and a guarantee of quality. Then you can be sure your separator will skim to a trace, is simple, light running, and most durable. Then you will get a pound more butter from every cow, every week.

I H C Cream Harvesters have a most enviable record among thousands of the best farmers and dairymen in America. The many I H C features and money-making advantages should appeal to you.

After close investigation, you will find that they are the only separators with dust-proof and milk-proof gearings. You will find in them the most perfect straining device—insuring pure cream and skim-milk at any time. You will see that the frame of an I H C is entirely protected from wear by bronze bushings at all points; that the I H C has largest shafts, bushings, and bearings; that it has the safest, simplest, surest, and most economical oiling system; that the flexible top-bearing prevents vibration and keeps the bowl steady, no matter how unevenly the power is applied; that the crank is at just the right height for convenient turning and the supply can be low enough for easy lifting.

I H C CREAM HARVESTERS



Made in four sizes and two styles. Bluebell is a gear-drive machine, while Dairymaid is a chain drive. You have a wide choice. One of these should meet your needs exactly.

See the I H C local dealer, or, if you prefer, write to nearest branch house for full information.

CANADIAN BRANCHES: International Harvester Company of America at Brampton, Canada, Etobicoke, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA

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THE I H C LINE

LOOK FOR THE I H C TRADE MARK. IT IS A MARK OF GUARANTEE AND A GUARANTEE OF QUALITY.

The Feeders' Corner

The Feeders' Corner is for the use of our subscribers. Any interested are invited to ask questions or for information of interest. All questions will receive prompt attention.

To Winter Sows on Clover Hay

I learn that a couple of years ago experiments were carried on at the Central Experimental Farm with clover hay as a feed for brood sows. I believe they were allowed to run out of doors all winter, and the brood sows live on clover hay without supplementary feed? If so, how much extra were they given? Would this method here in Wellington County?—Subscriber.

On the occasions in question the brood sows did not live on clover alone. During November, December and January they were fed about as follows: as much clover hay as they would eat up fairly clean, about 3 lbs. a day) roots eight to 10 lbs. and one to one and a half lbs. of bran daily. Turnips were cooked. Mangels, sugar mangels and sugar beets were fed raw. The sugar beets were pulped. When turnips were fed they were given hot with the bran added at the time of feeding.

Sows had no other protection than single board cabins well ledded and properly ventilated. They came through the winter in excellent shape and without exception gave good large litters of thrifty pigs. They were of course fed a more liberal meal ration during February and March, just before farrowing.

Such a plan of wintering would prove entirely satisfactory in Wellington county or any other county in Ontario or in Canada for that matter. A good windbreak, that is a wind tight cabin, must be provided for sleeping quarters and lots of good dry straw provided for bedding.—J. H. G.

Meal Ration with Ensilage

1. Should bran be fed alone as a meal ration with green corn silage this fall? 2. What would be a good meal mixture for winter feeding with green silage, straw, clover and timothy hay?—H. I. L., Shefford Co., Que.

Bran alone would not constitute a very good meal ration for use with green corn. Oil cake meal, oat chaff, oats, one part; and straw four parts would be a much more satisfactory meal ration.

2. As a meal ration suitable to feed with roughage of corn silage, straw, clover and timothy hay I would suggest: bran, 500 lbs.; oil cake meal, 200 lbs.; oats, 100 lbs.

If gluten, or cotton seed meal are available they might replace the oil cake meal to a certain extent. Oats might enter in more extensively replacing bran if more convenient. So far as feeding value is concerned, oats are about equal to bran for milch cows. Not less than three different meals should enter into a meal mixture.—J. H. Grisdale, Mgr. C.E.F., Ottawa.

Food for Mare Without Teeth

I have a pure-bred Clydesdale mare, 16 years old. She has lost her teeth and cannot eat well. As she is a valuable mare, I would like to keep her. How can I prepare feed which would keep her in good condition?—J. E. Colchester Co., N.S.

For such an animal I would suggest crushed oats and bran about equal parts as suitable for grain and meal rations. If bran is not readily available then part of the oats might be boiled whole and about one lb. of oil cake meal added to 10 lbs. of oats. For roughage, fine clover, oat chaff and a small amount of timothy cut into four inch lengths or thereabouts would prove satisfactory.

Dampening the roughage an hour or so before feeding by sprinkling with water in which about two table-spoonsful of salt has been dissolved

per gallon of water will aid digestion and facilitate mastication.—J. H. G.

Grain for Ewes in Winter

I have a flock of 30 ewes to carry through the winter. I will have plenty of good clover hay and an abundance of corn silage. What grain feed should I use in addition, and what ration of this would you advise?—T. M. K., Middlesex Co., Ont.

Ewes on good clover hay and corn silage will not require very much meal in addition thereto. In fact during December and January it would be as well not to give more than four or five lbs. oats a day among the lot. As the season advances however, the addition of a slightly greater amount of meal to the roughage in question would be found to have a beneficial result upon the lambs produced and upon the progress they will make after birth.

As a meal ration suitable for breeding ewes on the roughage in question I would suggest starting with one-third lb. daily and going up to two-thirds or three-quarter lbs. of wheat bran 200 lbs., whole oats, 200 lbs., and nutted oil cake meal, 100 lbs. This constitutes likewise, with the addition of about 200 lbs. cracked corn a most excellent ration for feeding lambs at and after weaning.—J. H. G.

FARM MANAGEMENT

Applying Manure to Corn

1. When is the best time to plow and manure sod ground for corn next season? 2. How can we improve an old pasture that is mowed over and very stony?—H. I. L., Shefford Co., Que.

Manure for corn may be applied during the preceding summer, autumn, winter or in the spring just before plowing. Best results may be anticipated from applying in the spring just before plowing or during the preceding summer. So many factors other than time of applying, however, are likely to affect the results that it is really quite impossible to say what is the best time to apply manure for corn land.

The following general principles are however worth following as closely as possible. Apply in such a man-

ner that the soil will be left as compact as possible. Try to work in when the manure is wet or well tramped down and evenly distributed. Do not apply too heavily a dressing; from 15 to 18 tons an acre will give best results.

2. To improve the pasture mentioned apply barnyard manure, 10 tons an acre in the autumn. Spread evenly and harrow three or four times with a heavy narrow harrow. Leave till spring and then apply 100 lbs. nitrate soda, eight lbs. red clover, two lbs. white dutch clover and two lbs. alsike seed per acre. Harrow after seeding with a light harrow. Roll if possible. If barnyard manure is not available harrow as indicated in the fall and sow fertilizer and grass seed the following spring.

I am renewing my subscription to Farm and Dairy. We are always anxious to look into the pages of Farm and Dairy as soon as it arrives. It has so many practical thoughts.—I. D. Ramer, Lemonville.

Renew your subscription now.

CORRUGATED IRON

Galvanized, Rust Proof, Made from very finest sheets, absolutely free from defects

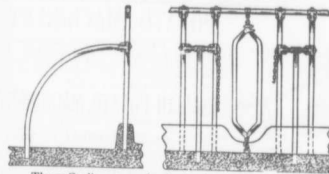
Each sheet is pressed, not rolled, corrugations therefore fit accurately without waste. Any desired size or gauge, straight or curved.

LOW PRICES—PROMPT SHIPMENT

Metallic Roofing Co.
MANUFACTURERS LIMITED
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Louden's Sanitary Stalls and Stanchions

Clean
Strong
Comfortable



These Stalls are made of the best steel pipe with malleable couplings. There are no threaded joints to weaken the pipe, and no wood is used to hold germs, etc. The round pipe is easily kept clean, and is the strongest stall made. Write for particulars to

LOUDEN MACHINERY CO.
GUELPH, ONT.

MANUFACTURERS OF
Hay Tools, Feed and Litter Carriers, Barn Door Hangers and Hardware Specialties.

Be sure to see the Peter Hamilton Agent before you buy a Feed Cutter or Plow

He has something special to offer you
This cut shows our No. 7 Ensilage Cutter with Carriers. A strong conveniently operated machine which is most economical in power.

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THE
PETER HAMILTON
COMPANY, LIMITED
Peterborough
ONTARIO





SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

ANY person who is the sole head of a family, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency, or Sub-Agency, for the District. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts, a homesteader in good standing may pre-empt a quarter section alongside his homestead. Price \$3.00 per acre. Duties—Must reside upon the homestead or pre-emption six months in each of three years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption, may enter a quarter section instead in certain districts. Price \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

Deputy of the Minister of the Interior W. W. OOBLY.

N. B.—Unauthorized publication of this advertisement will not be paid for.

HORTICULTURE

Marketing Tomatoes

F. and H. P. Langdon, Frankford, Pa.

After careful attention has been given to the problems of seed sowing, growing of plants, transplanting, moving to the field, fertilizing and caring for tomatoes during the growing period the marketing is the only serious proposition left to face. It would seem that one who can grow a fancy crop that needs but little instruction on harvesting and marketing it. As different individuals, however, have different methods an exchange of ideas may be profitable.

We pick our tomatoes when about half ripe when of a yellowish red for sorting and shipping in from one to three days. If they are allowed to fully ripen on the vines they might crack more or less, and would be too soft for safe shipping. They are emptied from picking baskets into "shippers' bushel" baskets in the field and are drawn to the packing shed on platform spring wagons. They are then emptied on to the

ground in the shade to cool and color for sorting. Seven-eighths bushel baskets holding 50 pounds net, with slatted, hoo-rim covers, are used for shipping. The baskets are papered placing the tomatoes closely together stem side down with stems removed so they will not puncture the other fruit.

We pack as solidly as possible. We fill the baskets level full, fasten on the cover with the cross slat and they will ship safely.

When packing we reject all rough or affected fruit, and put most of the largest and best fruit at and near the bottom with most of the smaller and medium sizes at the top. This surprises the purchaser and makes a favorable impression on him. When using the last of the fruit it influences the customer to think of getting another basket as good. It is unwise to put in a basket what you would not be willing to buy at your selling price.

MARKETING THE CROP

If a city wholesaler is not within reach a market must be created where such is possible. We have a list of about 200 Adirondack hotels, camps, grocers and pedlars to whom we send a postcard price list every Saturday. These postcards are printed by us with a rubber type galley press, and quotations changed weekly according to our supply and the demand. We do not try to compete with market prices. We cannot and keep good our guarantee of satisfaction with our goods.

These postcards are made as catchy as possible, one day reading like this: "They say 'If it's from Langdon's, it's all right.' We say, 'If I buy mistake it is not right we will make it right.'—Today, Aug. 15, they read, 'Tomatoes, those fancy red ones, in better supply this week, only \$3.00 per bkt., U. C. top, U. C. all. Send on your order for a nice bushel.'"

Another point—if mistakes are made, as they are sometimes, if shipments are damaged by the express company, or for any reason the fruit is damaged, it is well to meet the customers more than half way and then take a good large dose of the Golden Rule.

This, in a few words, is the way by which we have built up and hold a good demand for tomatoes, at from \$4.00 for first early to \$1.00 later in the season when tomatoes are selling in Utica at 50 cents a bushel or less. From two acres of our Northern Adirondack Earlians we sold 400 fifty pound baskets for \$900.00 last year.

Horticultural Notes

No. 1 apples and pears, both early and late varieties, will find a ready sale. Early apples offered in local markets as well as in the Northwest are finding a ready market at good prices.

Clarkson fruit growers shipped two cars of berries this season through to Montreal in iceed cars. The shipment was a complete failure. They went by ordinary freight and through neglect were not iced. A fruit train from the Niagara Peninsula for Montreal passes through Clarkson each evening. Fruit in iceed cars is loaded on to this train and as the cars are ventilated and make the journey during the night, the service gives good satisfaction. The cool night air circulating through the cars does away with the necessity of icing them.

Fruit growers are very much handicapped by the commission men in Toronto charging a cartage commission of one cent a basket for the fruit they handle. A commission of two cents is charged on 24-box lerry crates, three cents on 36-box crates and five cents on a bag of corn. These

charges are considered to be very unjust since a great bulk of the stuff is never delivered, the bucksters and others coming to the commission men for the produce and taking it away; hence this commission goes directly in to the pockets of the commission men.

POULTRY YARD

Appearance vs. Performance

E. Terrill, Northumberland Co., Ont.

We farmers have for years in connection with our stock paid too much attention to the mere matter of looks. I well remember as a boy law my father used to admire the cow "Tidy". Her heifer calf must of course, be kept. She gave a very indifferent amount of milk, but then she was nice to look at, and to show to our friends that came to see us. Since the introduction of individual milk records, this old idea has been pretty much discarded, and we are now more concerned with the cow's udder, but how about heps? Countless farm flocks are kept more for appearance than for production. At least these results obtained would warrant such a conclusion.

At one time, I kept hens for their appearance. Now I want them to lay. I have had White Leghorns for over 30 years and consider them to be a great farm asset as it always aims to get new stock from good laying strains. Our 100 hens during last April, May and June, made over \$10 for us, not counting the higher prices secured for special settings that we sold. I know our hens are profitable. They are laying 50 eggs a day even at this date, August 20th, when so many farm hens are laying only indifferently.

Crate Fattening of Chickens

W. F. Dods, Middlesex Co., Ont.

In former years, I practiced crate fattening of chickens. Lately, however, all the fowls that I have been able to raise have been sold for breeding purposes. The chickens were fattened in crates for about four weeks. They were killed by cutting the vein in the back of the throat. Bleeding will be much better when the birds are hung up for a few minutes with the head down before cutting the vein.

When the chickens are dry picked and placed in dressing boards over night, they have a very plump, attractive appearance. They were shipped to special customers in Toronto. The price received was never less than 15 cents a pound, the dealer paying transportation charges.

Horse Manure in Poultry Yard

Would there be any objection to throwing stray horse manure into the hen yard for the hens to scratch through?—H. I. L. Sheffo Co., Que.

Provided the manure was quite sandy and dry, there would be no objection to using it as you have mentioned. It should not be allowed to accumulate however in too great quantities and when wet with the rain should be removed. However it is doubtful if there would be any benefit derived and the labor of the extra handling would be lost. The value of the horse manure would also be largely extent be destroyed. Lying loosely in the yard under ideal conditions for the decomposition and loss of nitrates.

Duck culture is like every other industry. It requires some careful study. It is necessary to know what you are doing now and what you will do next.—A. G. Taylor, Macdonald College St. Anne de Bellevue, Que.

Holsteins

- (Cont) Bales, Prin Dennis, Qu Faloritz, S. Lakerwin, C. Hicks, Con Bull, Seni ships—Leggo Bull, Juni Tribon, Ina C. Cow, for Rattie, Helia Hulet, Aulia Hicks, Rida L. Rottin, C. Clemons, Ma view Stock Cow, four dry in calli- no Sadie, Val 3. Clemons, on, Rese D. Cow, three Pauline Clou Ross Bonhou Shladawn M forit Mercen Anonah Cal Heifer, two Cornelia of Alice Wayne Idaline Vene Concordia De lah De Kol J. Ind Posh. Heifer, one Rattie, Ponti Hilet, Perfect Dennis, Queen G. Clarkson, Mercena and Heifer, one Jan List, 1910—Sch and Jess E. Habet, sen and Alice Heifer calf, tie, Sadie Merc, G. H. E. J. and Prichard March 2 Esch Mercena Heifer calve L. Rattie, Mer Dennis, Hiesie Kenzie, Edgen Bales, Falorit ones, Maple Hill Stock Farm, I.

POTATO MACHINERY

The O.K. Canadian Two-Horse Elevator Digger will dig your crops and do it well, you are in need of a digger you can do no better than to secure this.

Write for our catalog and price. CANADIAN POTATO MACHINERY COMPANY, LIMITED 127 Stone road, GALT, ONT.

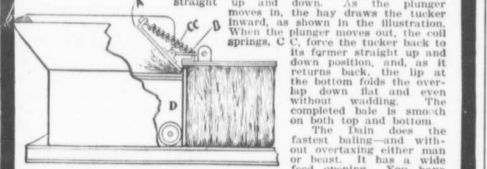
Look for our Exhibit at Toronto Exhibition under the Grand Stand



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The city dealer or exporter will pay you more for your hay if pressed into bales by the Dain Pull Power Press, because Joseph Dain's patented tucker makes bales that no other hay press can duplicate. They are smoother, neater, more firmly compressed. The skeleton drawing will give you an idea of the principle of the Dain tucker, and we advise you to study it carefully.

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Holsteins at Canadian National

(Continued from page 6)
Bales, Prince Favorit Mercena; 4, Dennis, Queen's Netherland Peer's Favorit; 5, Lakeview Stock Farm, Lakeview Court Madura; 6, R. F. Hicks, Court Favorit Tensey.

Bull, Senior and Grand Championships—Legge, Schuling Sir Posh.

Bull, Junior Champion—Rettie, Ima Triton (two years old) upwards—1, Rettie, Helbon Bonheur Queen; 2, Rettie, Aulinda Crown De Kol; 3, Hicks, Rideau Delilah Lena De Kol; 4, Rettie, Olive Schuling Posch; 5, 4, Clemens, Mary Anderson 3rd; 6, Lakeview Stock Farm, Rose Rattler.

Cow, four years old and upwards; dry in calf—1, Rettie, De Kol Pauline Sadie Vale; 2, Rettie, Favorit 7th; 3, Clemens, Beauty De Kol; 4, Clemens, Rese De Kol Teake.

Cow, three years old—1, Helton, Pauline Colantha Posch; 2, Rettie, Rosa Bonheur Queen; 3, Rettie, Shadelawn MacMillan; 4, Hicks, Favorit Mercena Belle; 5, Hulet, Gaza Aroneth Calamity.

Heifer, two years old—1, Rettie, Cornelia of Homestead; 2, Clemens, Alice Wayne 2nd; 3, Hulet, Ladoga Idaline Veeman; 4, Legge, Fannie Concordia De Kol 5th; 5, Hicks, Delilah De Kol Johanna; 6, Legge, Rosalind Posch.

Heifer, one year old, Senior—1, Rettie, Pontiac Atlas Maid 2nd; 2, Hulet, Perfection's Toronto Queen; 3, Dennis, Queen Artis Favorit; 4, 5 and 6, Clarkson, Blue Bell Beauty, Lads Mercena and Lads Beauty.

Heifer, one year old, calved after Jan 1st, 1910—1, 2, Pride Mercena Posch and Jessie Posch Ind; 3 and 4, E. Hulet, Pauline Colantha Tensen and Alice Tensen.

Heifer calf, under one year—1, Rettie, Sadie Mercena; 2, Hulet; 3 and 4, G. H. & J. McKenzie, Lillie Brightest and Princess; 5, Clemens, Evergreen March 3rd; 6, Rettie, Bessie Lush Merena.

Heifer calved after Jan. 1st, 1910—1, Rettie, Mercena, Schuling 4th; 2, Dennis; Bessie De Kol Favorit; 3, McKenzie, Edgemont Laura; 4, O. D. Bales, Favorit Fairy Beauty; 5, Clemens, Maple Hill Audrey; 6, Lakeview Stock Farm, Lakeview Queen.

Four animals, the progeny of one bull, under two years owned and bred by exhibitor—1, Hulet; 2, Rettie; 3, Dennis; 4, Clemens.

Herd of one bull and four females over one year old, owned by exhibitor—1, Rettie; 2, Hulet; 3, Legge; 4, Clemens.

Young heifers consisting of one bull and four females one year old and under two years—1, Rettie; 2, Hulet; 3, Clarkson & Sons; 4, Legge.

The Jerseys at Toronto

Jerseys at the Toronto Exhibition this year were represented principally, in fact almost wholly, by the well known herds owned by David Duncan, Don; Wm. Mackenzie, Kirkfield; and B. H. Bull & Son, Brampton. It would seem that the Jerseys so far as the Canadian National Exhibition is concerned, have been given over entirely to the larger breeders who are men of means. The showing throughout was a creditable one. It is to be regretted, however, that representatives from the smaller herds, of which there are many, and in which are to be found many choice animals, are not exhibited at Toronto.

Evidently the smaller breeders have not the courage to face the competition that can be put up by men of means. Some encouragement, more than is being given at present, ought to be handed out to smaller breeders through placing classes in the prize list for amateurs, or for cattle bred by the exhibitor.

The Kirkfield Jerseys were exhibited in particularly fine condition. Geo. W. Sisson, Jr., Potsdam, N.Y., placed the awards. He expressed himself as well pleased with the showing, although he was certain that there had been much stronger exhibitions of Jerseys at previous Toronto shows. He was greatly taken with Mr. Mackenzie's cow, Gellen Jolly Champion, which cow was awarded the Grand Championship of the show, and according to the judge might have been a winning animal in any ring.

The awards throughout the various classes were as follows:—
Bull, three years old and upwards—1, Mackenzie, Pearl of Kirkfield; 2, Duncan, Fontaine's Boyle; 3, and 4, Bull & Son, Brampton Jolly Oakland and Brampton King Edward.

Bull, two years old—1, Bull & Son, Brampton Ruby Feroz; 2, Mackenzie, Beulah's Raleigh of Kirkfield; 3, Gruer Estate, Mount Forest, Ont.; 4, Forest King; 4, Bull & Son, Brampton Cantalas King.

Bull, one year old—1, 2 and 3, Bull & Son, Brampton Stockwell, Brampton Feroz, Brampton Eminent and Brampton Mt. Forest Star.

Bull calf, under one year—1, Mackenzie, Grey Unass Kirkfield; 2, Duncan, Eminent Royal Fern; 3, Bull & Son, Brampton Blue Sox; 4, Gruer Estate, Mount Forest Star.

Bull calf, calved after Jan. 1st, 1910—1, 3 and 4, Bull & Son, Brampton Fern Lad; Brampton Patty Fox and Brampton Mergor; 2, Duncan Fountain's Oxford.

Cow, four year old and upwards—1, Mackenzie, Golden Jolly Champion; 2, Duncan, Lady Primrose of Don; 3, Bull & Son, Marquette Golden Lassie; 4, Mackenzie, China Mirande of Kirkfield.

Cow, three years old—1 and 2, Mackenzie, Meadow Grass 2nd of Kirkfield and Inverna's Queen of Kirkfield; 3 and 4, Bull & Sons, Brockville, Financial Countess, Brampton Blue Marjoram.

Cow, any age with two of her progeny—1 and 3, Bull & Son; 2, Duncan.

Heifer, two years old—1, Mackenzie, Mancella's Ross; 2, Bull & Son, Brampton Rochette; 3 and 4, Duncan, Matinella of Don.

Heifer, one year old—1, Mackenzie, Kirkfield's Mabel; 2 and 3, Bull &

Sons, Brampton Goldmont Jess and Brampton Foxy Adelaide; 4, Mackenzie, Thoughtful Pet of Kirkfield.

Heifer, one year old, out of milk—1, Mackenzie, Butterfly's Duchess; 2, Duncan, Fiona of Don; 3, Mackenzie, Kirkfield's Inverna; 4, Bull & Son, Brampton Feroz Taster.

Heifer calf, under one year old—1, Bull & Son, Brampton Fontaine Rill; 2, Duncan, Cora of Don; 3, Mackenzie, Kirkfield Chimes; 4, Bull & Son, Brampton Blue Duchess.

Heifer calf, calved after Jan. 1st, 1910—1, Bull & Son, Brampton Tilly Fox; 2 and 3, Hattie Bell and Agatha's Louche; 4, Bull & Son, Brampton Cerrine.

Four animals with the progeny of one bull, all bred and owned by the exhibitor—1 and 2, Bull & Son; 3 and 4, Duncan.

Herd consisting of one bull and three heifers under two years old, the heifers to have been bred by the exhibitor and also owned by him—1 and 4, Bull & Son; 2 and 3, Duncan.

Graded herd, owned by the exhibitor—1, Mackenzie; 2, Duncan; 3 and 4, Bull & Son.

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AND RURAL HOME

Published by The Rural Publishing Company, Limited.



I. FARM AND DAIRY is published every Thursday. It is the official organ of the British Columbia Agriculturists, Eastern and Western Ontario, and Bedford District, Quebec, Dairyman's Associations, and of the Canadian Farmers' Unions, and Jersey Cattle Breeders' Associations.

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FARM AND DAIRY

PETERBORO, ONT.

THE EVIL GROWING

During the past ten years a most undesirable change has been creeping over our agricultural exhibitions. Within the memory of many of the time was when the exhibitions were purely agricultural in nature. Of late years, however, first in the United States and now in Canada, the introduction of special attractions has altered the situation. Exhibition after exhibition has fallen under the control of men more interested in the promotion of horse races and grand stand performances than in the encouragement of agriculture. Many societies now spend more on special attractions than they do for all agricultural purposes combined. Some years ago it was shown that the societies in the state of Connecticut were spending three dollars for attractions to every two dollars they spent on agriculture.

Gradually, but surely, the same change is taking place in Ontario. It is all the more dangerous because insidious in character. Whereas a few years ago there was not a society in Ontario that spent as much for attractions as it did on its agricultural features, now there are a number.

The report for 1910, of the super-

tendent of agricultural societies for Ontario, gives in the tabulated reports from the societies, published in the back, the following interesting information concerning the societies named. Other societies not quite so bad might be mentioned.

Society	Total price money paid	Spent on Special Home
Kinardine	\$340	\$342
East Elgin	687	1093
South Grenville	1034	996
West Huron	712	846
Casselman	203	315

As societies are not required to show in their government reports the amount they expend for horse races the returns do not indicate the true conditions. Ten years ago now, the number of societies like the foregoing will have increased considerably unless something is done in the meantime to bring about an improvement.

A society that expends more money on horse races and special attractions than it does on its agricultural features can no longer be considered to have the promotion of agriculture as its main object. It is no longer entitled really to be called an agricultural society. It is, in fact, apt to work more harm in a community than good, and is no longer entitled to draw a government grant.

This is a matter that should be discussed earnestly by the members of the Ontario Association of Fairs and Exhibitions. It is certain in time to affect their interests vitally. Their officers who prepare the program for their next convention, if they are wise and really desire to promote the best interests of all the societies, will make provision for a discussion of this subject. After all, however, it is a matter that will have to be dealt with finally by the Department of Agriculture. May we ask what the superintendent of agricultural societies and the minister of agriculture propose to do about it? Are they going to show courage by dealing with it on a sound, common sense basis, or will they be content to merely permit matters to drift from bad to worse? Conundrum.

ROADSIDE WEEDS NEGLECTED

The indifference with which roadside weeds, of a more or less noxious nature, are regarded and allowed to go to seed in so many localities, is little short of alarming. It is short sighted policy to allow these weeds to seed. They eventually will add greatly to the labors of hundreds of farmers who later on will have an increased struggle in keeping down weeds upon their farms, which adjoin these neglected roadsides.

Roadsides that are neglected would appear to outnumber this year those that are being looked after. Herd laws might well be relaxed in such cases rather than to have weeds go to seed. Any inconvenience from having the neighbor's stock at large would be more than offset by the advantage of having the weeds destroyed.

Why do not municipal authorities look after this matter? The railways, in the main, are doing their part and are setting a good example in this regard. Here and there occasional farmers with their scythes have waged war

with the roadside weeds adjoining their own property. Such is commendable work, and but for it the evildoer which now obtains would have been much greater.

METHODS OF SELLING CHEESE

It would be difficult to imagine a more unsatisfactory method of selling cheese, both as concerns makers and patrons, than that which is practised throughout Ontario and the greater part of Quebec. The cheese is graded by the buyer after it has left the hands of the maker and, as practised, the grading is more apt to depend upon the state of the market than upon the quality of the cheese. Quebec makers have led the way in bringing about a reformation in this matter. Some of them now sell their cheese cooperatively.

Under the system as obtains in Ontario, the maker gets various grades for what he knows to be the same quality of cheese. He is at a loss to know what is wanted. The system of grading is demoralizing, so far as the maker is concerned. His second class cheese on a rising market sells for first. On a slow market or upon a falling one, cheese of the same quality is graded for a cut in price if then follows that the maker thinks himself cheated.

Under the new system, as is now current in Quebec, members of the cooperative society of cheese makers have their cheese graded by a government official. Uniform grading is the result. Makers are thereby encouraged to make better cheese and they know full well that a rising market will not in the least smooth over any deficiency. Members of the society are well pleased with the success of cooperative selling. The membership in the society is increasing.

The benefits of government grading and cooperative selling of cheese have been well exemplified in the case of the Quebec cheese makers. Others in Quebec and those interested throughout Ontario or other provinces, where cheese is made, should give serious consideration to this new method of selling cheese. It is a vast improvement over the method that more generally prevails, and as such it cannot any too soon be adopted.

WEALTH FROM THE DAIRY COW

There are great possibilities of increasing our national wealth from the dairy cow. Increased wealth must come from increased production, and it is possible to increase the annual production of wealth at least 30 per cent. by improved methods in feeding and breeding dairy cows and without increasing the number of cows kept.

A Nova Scotia dairyman elsewhere in this issue estimates if the average production of the dairy cow in Nova Scotia could be increased from \$40 to \$100 a year, it would mean an added income of \$7,000,000 annually for that province. This would mean an increase in the total annual production of the province from all sources of 30 per cent., and in the agricultural products of almost 50 per cent.

The dairy cow can be made to produce \$100 gross revenue annually. This

has been proven by hundreds of good dairymen in various parts of the Dominion. In no other line of industry is it possible to increase the efficiency of plants by 60 per cent. through better methods of management. No other industry offers such opportunities of increasing our national wealth as does the improvement of agriculture, and particularly of dairying. A few thousand dollars spent on agricultural education and in promoting the work of cow testing associations, would do more for this country than the millions of dollars which are now being spent in building up urban industries, some of which are able to run only because of government aid and are no real addition to the wealth-producing power of the country. Governments, both Federal and Provincial, should not hesitate to spend money on agricultural education where the possible results are so great.

For some years the Ontario law relating to the suppression of games of chance at exhibitions has been flagrantly broken each year at the Central Canada Exhibition, at Ottawa. The city police have stood and calmly watched the games in progress. Officials of the Department of Agriculture at Toronto, who are expected to pay attention to this matter, have neglected to do so, as far at least as the Ottawa Exhibition is concerned. We trust that this mere statement of well known facts, will lead to an improvement this year in the enforcement of the law.

Taxation and the Farmer

Winnipeg Free Press.

An official return laid on the table of the British House of Commons shows that in the Highland crofting counties of Scotland the area devoted to deer forests has been increased to 2,368,400 acres, which, under the system which the Lloyd George legislation is to do away with, have been assessed at a total valuation of only £132,041, or less than 10s.4d. per acre. Much of this is suitable for crofting. The crofters have been cleared away to make room for deer. The great landlords who have this depopulated vast regions of Scotland have had their deer forests assessed at less than a shilling an acre, while those of the evicted tenants who have not emigrated have crowded into the towns.

If four landlords owning lands which God gave to men, depopulated two million acres of industrious crofters in 100 years, how long and how many landlords would be necessary to make it possible for even the Devil to live in Scotland, provided the government continued only to tax the crofters—nice little sum in mental arithmetic, isn't it? Here's another.

If the province of Ontario in nine years, by her policy of fining men in their rates of industry and improvements, at the same time granting special privileges to all the industrial barons, who own big factories, has lost 63,000 farmers, as the Deputy Minister of Agriculture for that province shows that she has, how long will it be for the people will have to take step-ladders along, when they go to the grocers—to reach the price of living?

A Bad

J. E. H.

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A Bad Weed Described

J. E. Howitt, M.S.A., O.A.C.

Guelpa

Field Bindweed (*Convolvulus arvensis*) is a perennial weed introduced from Europe. It is deep rooted with extensive, creeping, cord-like, fleshy root stalks. These throw out numerous slender, twining, smooth stems which form thick mats on the surface of the land and twist around any plants growing within reach, using them as supports and choking them out. The leaves are about one to one and a half inches long, on slender stalks; they are ovate or heart shaped, arrow shaped at the base; the flower stalks are slender, about the same length as the leaves and are provided with small leaves at some distance below the large, open, funnel-shaped, pink flowers, which are over an inch across. The fruit is a round two-celled capsule containing three or four brown seeds.

Bindweed is exceedingly hard to eradicate once it becomes established. The creeping root stalks, if broken up, grow at the joints and produce new plants.

METHODS OF CONTROL.

Small patches of the weed may be destroyed by digging them over carefully and removing the root stalks. Then apply a heavy covering of short cut straw or lawn grass clippings; this should be about a foot or more in

Field Bindweed (*Convolvulus Arvensis*)

depth and well tramped down and a little earth thrown on top. The patch must be watched and, if any of the bindweed is noticed growing up through the covering or out around the edges, it must be pulled.

In large patches bindweed is exceedingly difficult to eradicate and careless cultivation only increases the trouble by carrying the roots from place to place. Salting is recommended by some practical farmers who have succeeded in eradicating this very troublesome pest, but we cannot speak from experience as to the value of this method of treatment.

The weed can be kept in check by the frequent introduction of well-cared-for hoed crops into the rotation; the shorter the rotation the better. The later sown hoed crops, especially rape, are more effectual than those sown earlier in the season. Before the hoed crop is sown the weed may be kept in check by going frequently over the field with a broad shared cultivator so as to cut all the plants an inch or two below the surface without bringing up any of the creeping rootstalks.

About the first of July the land may be sown with pasture rape in low ridges about 26 inches apart, using a

pound and a half of seed an acre, and during the early growth of the crop the seed may be kept in check by means of the cultivator and more or less hand weeding. If the land has been well manured or is naturally rich in vegetable matter and the seed is sown when the soil is moist so that it gets an early start, the rape will make a rank growth and smother some of the weeds. The rape may be pastured in the fall and in some cases may be followed by another hoed crop, such as corn. If the corn is well cultivated and hoed, most, perhaps all, of the plants will be destroyed.

In some cases it may be advisable to summer fallow, and in such cases it is best not to plow more than is absolutely necessary, but to depend mainly on the broad shared cultivator. Buckwheat sown on summer fallow and plowed under when coming into bloom, followed by surface cultivation with a broad shared cultivator, will assist very much in killing the weed. If necessary the summer fallow may be followed by a hoed crop.

A Great Decrease in Hogs

Editor, Farm and Dairy.—In regard to the hog situation, Mr. Huffman weigh-master of Kincardine scales told me there were not one half as many hogs weighed in Kincardine in 1909 as in 1908 and there was a big decrease from 1908 to 1909 and probably between 10,000 and 12,000 hogs less weighed in town in 1909 than in 1908.

There may be a slight increase in numbers next year but not very much. Farmers seem more content to grow five hogs at a profit than 10 at a loss and there are few so anxious to grow hogs merely to uphold the reputation of the Canadian bacon trade. Neither have they confidence in the packers to pay more than they can get out of it as the lessons they received in the past were sufficient to make them cautious.

Anyway what's the use of any row about hogs. Farmers, intelligent ones, will grow what suits their conditions and situations best and dispose of it in a way in which they will receive most for it. I doubt if there are many who will feed many hogs for four cents a pound for a while.—J. E. Harrison, Bruce Co., Ont.

Better than a Gold Mine

Editor, Farm and Dairy.—Our farmers do not appear to be increasing the number of their breeding stock of hogs. There is not any greater number of hogs in the farmers' hands than a year ago. In fact, I believe there are fewer hogs being fed for market this fall than last year.

The principal reason that farmers do not increase the number of their hogs is that they have had a short supply of coarse grain and although hog feeding under present prices of grain and hog products show a good margin of profit, many of our farmers refuse to buy grain and run their chances on the market price of hogs.

At the present price of hogs there is no branch of stock raising that will show as great a margin of profit and it looks to me that we are going to have high prices for pork for some time to come. Some of the pork packers think the price of hogs must come down. I do not see it that way. The stocks of cured meat are very light and the supply of hogs coming in so limited that there can be no accumulation of cured meats. I doubt if there will be sufficient to meet the increasing demand. Hog raising is a better proposition than buying stock in a gold mine.—J. E. Bretherton, Brant Co., Ont.

Your paper is second to none. Some of our neighbors are taking it and they could not do without it.—Geo. Brayman, Carleton Co., Ont.

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Cheese Department

Makers are invited to send contributions to this department, to ask questions on matters relating to cheesemaking and to suggest subjects for discussion. Address editor to The Cheese Maker's Department.

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A. MacDonald, Dairy Instructor, Glenarry Co., Ont.
Factory conditions in Glenarry Co. from a sanitary standpoint are better than they have been. There has been a gradual improvement in this respect for the past six or seven years.

There is room for improvement, however in the fitting of the curing rooms in order that the temperature may be controlled. The time is not so distant when the cheese will have to be held over for a number of weeks or until they are properly cured before being put on the market.

The output of cheese this year has been larger than for the past three years. With an exceptionally large growth of after-grass, prospects for a large autumn milk are assured.

The quality of the cheese made up to date this season has with a few exceptions been exceptionally good.

Act may have same on application to the Dairy Commissioner, Ottawa. The Act comes into force on January 1, 1911.

The chief Inspector of Weights and Measures, Standards Branch, Department of Inland Revenue, has intimated that he will be in a position to receive glassware for verification at any time after October 1 next. This will give ample time to have all test bottles and pipettes now in use verified before January 1, 1911, after which date no unauthorized test bottles or pipettes may be used.

REGULATIONS

The more important regulations as they now stand in this connection follow:

All test bottles, pipettes, or measuring glasses, used in connection with the testing of milk or cream, except skin-milk bottles and the tubes used in connection with the apparatus known as the 'Oil Test Churn,' shall be forwarded, *charges prepaid*, to the Standards Branch, Department of Inland Revenue, Ottawa, for the purpose of verification.

All glassware sent for verification shall be received at the owner's risk. All glassware sent for verification must be perfectly clean on both the inside and outside surfaces.

during this warm weather. Especially is this true on Monday morning.

The patrons farthest away are generally the first at the factory. There is therefore no excuse why they should not all be here in time. Of course when the day comes to the average is lower than that of the factory that gets all the milk in and the vat set by seven o'clock sharp. Some patrons also think the whey looks somewhat richer on Tuesday morning than on other days.

They don't come to the maker with their complaint, however. This is all talked over among themselves. The maker hears it, nevertheless. If they would come with their complaints to the maker he could explain where the trouble lies.

I would like others, either makers or patrons, to give their opinion on this matter through the columns of Farm and Dairy. The patrons in this factory all draw their own milk, with the exception of one small load.

Note.—Farm and Dairy would be pleased to hear from readers on this or any of the numerous problems in connection with these factory work.

—Editor.

Dairy Notes

The Manchester market requires a soft mass cheese, showing plenty of meat color as dead whey as possible. In some parts of England brick-red cheese is demanded. This season great difficulty was found in getting factories to turn on to making this class of goods, although the importer was quite willing to pay an enhanced price for them, and to contract to take the full make of the factory for the season.

Reports received from 32 factories and creameries show an increase of about 23 per cent. in the amount of milk received this year over that received last year up to July 15th, while the increase in the number of patrons is less than two per cent. and in the number of milk cows about five per cent. The increase is due mainly to better feed and better care of cattle. There seems to be some improvement in the quality of the milk although one factory reports returning 3,000 lbs. of milk on Monday, July 11th. The price of milk cows has increased about 12 per cent.

I pay by the Babcock test, for it forces the patrons to send you pure milk. Those patrons whose cows do not give a great quantity of milk, but of better quality, are paid what the milk is worth. In paying according to the value there is more satisfaction amongst the patrons.—P. Bisson, Bruce Co., Ont.

Have you forgotten to renew your subscription to Farm and Dairy?

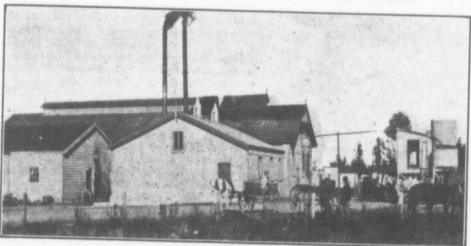
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One of the factories in a land now our formidable Competitor

A rear view of the Cambridge Dairy and Factory, New Zealand, is here shown. The New Zealand cheese has become popular in Great Britain of late years, and has supplied a considerable part of the trade which at one time took only Canadian. The factories in New Zealand are large and well-equipped so that they can turn out a first grade article.

Most of the poor cheese was made in the early summer, when the season was wet, causing a large growth of grass. This made the curd hard to firm and open and weak cheese resulted.

The Milk Test Act

During the past two or three years, numerous complaints have been received respecting the inaccuracy of the glassware in connection with the Babcock milk test. A prominent creamery owner sent in to the Department of Agriculture, Ottawa, a 50 per cent cream test bottle in which the marking showed an error of 10 per cent. The Chief of the Dairy Division and other members of the staff connected with the cow testing work, have found a large number of test bottles with incorrect graduation, the error in some cases being as much as .6 per cent. The Dairymen's Association of Western Ontario have by resolution asked for legislation to provide protection against the injustice which may arise from the use of this inaccurate glassware.

In view of these facts, the Minister asked Parliament at the last session to pass a law for the proper regulation of this important matter. The law is based on the same principle as that which relates to the inspection of weights and measures. The full text of the 'Milk Test Act' and the regulations thereunder were reproduced for general information in Farm and Dairy, April 14th. These wishing a copy of the full text of the

The Chief Inspector of Weights and Measures shall cause each bottle, pipette or measuring glass that is found correct within an error of one-tenth per cent. plus or minus, to be ineffaceably marked with the outline of a crown, having within it the initial letter of the reigning sovereign, and any such glassware not being found correct within the error herein specified, he shall cause to be destroyed without compensation to the owners thereof.

The fee for the verification of milk test glassware shall be five cents for each test bottle, pipette or measuring glass, which amount shall be forwarded to the Standards Branch, Department of Inland Revenue, Ottawa, with each consignment of glassware to be verified.

Any person who violates any of the provisions of The Milk Test Act or the regulations made thereunder, shall be liable, on summary conviction thereof, to a fine not exceeding \$50 for each offence.

The Milk Delivery Problem

Wm. Drew, Frontenac Co., Ont.

The patrons of some factories make a great mistake in not going to the factory early enough in the morning. I start to take milk in at six o'clock and the last can gets here about 8.15. The milk all goes in one vat. Just think of it! One vat of milk standing two hours and 15 minutes. The milk is getting quite ripe at the end of that time and has a tendency to make a poor average



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hours. Those blessed babies are fainting already. Could they have fainted from exhaustion?"

"I assure you they are safe, and for at least two hours," he laughed, as he rose and stepped to the door. Lighting a cigar, he lingered tentatively, hoping for some sign of invitation to remain. The potinon dropped from his buttock.

Then she raised her eyes to his and said sweetly and directly, with gratitude tinged with resentment: "Thank you for helping me out with them. You—you won't be far if they wake up, and get beyond me?"

Those eyes and that curly mouth! Mr. Alan only really "came to," as Miss Selma Lue would have put it, when seated by her side later on the steps. In fact, he lived through an hour or more of partial eclipse of mind; and when the four-o'clock boat-whistle sounded to call him to the wharf to get a package brought down to him from the Lock, he felt as if he had been in a dream, a beautiful dream, that was as common as the bidding of a digestion impaired by lobster a la Newbery or eggs-fried.

For Miss Cynthia, some evil fate or perhaps a sleepy chirp from Clemmie, the roarer, led her to the back regions of the grocery, and while there she idly tasted that spoufiful of potato which had been left, with misgivings. A shred of egg followed, and gone was all her complacency, the fruit of Mr. Alan's self-sacrifice.

How—how would she ever face him again after having steadily enjoyed such an awful thing upon him! Her humiliation was complete. Her one thought was a hope that she would never lay eyes on him again. "Well, well, Miss Cynthia, honey, did you ever see such a day for happenings as this has been to us all?" And Miss Selma Lue stood at the door beaming with delight.

(Continued next week.)

Watch for our special Household Magazine issue, October 6.

The Upward Look

We Should be Strong

For God hath not given us the spirit of fear; but of power, and of love and of a strong mind. Timothy 2, 7.

That is one of the grandest, most inspiring statements in the Bible. Read it again. God has not given us a spirit of fear. Instead, He has given us a spirit of power, a spirit of love and a strong mind. What does it mean? Why simply that if we are fearing that with our difficulties and our sickness, death, loss of power, position or means; that our friends are going to leave us, that we will not be able to obtain those things that we deem absolutely necessary for our well being, no matter what, then we have a wrong spirit within us, a spirit that can represent the Devil in one of his numerous disguises.

How can it be otherwise? We are told plainly that God has not given us the spirit of fear but of power. If we have within us a spirit of power then we feel able to cope with our difficulties and we no longer fear them. If we have not a spirit of power then the reason must be that we have refused to accept what God has given us. Instead we have permitted the Evil One to gain an entrance but God's spirit of power and of love should reign.

It is all so simple! Instead of loving we are fearing, instead of trusting we are doubting, instead of mastering we are failing. Our hearts are barometers that if we will but consult them will show us exactly at all

times, how we stand with God. If we are full of doubts and fears we are wandering from God. If we are full of power and of love, then we are near to God. Here is it we are so apt to misunderstand this simple truth?

God intends that we shall be full of power and of love and that our thoughts shall be thoughts of strength. If this is not our condition it is because we are not looking to Him and asking Him to furnish us with the power and strength and wisdom that we require. God is the source of all power and love and wisdom. He has promised to give us those blessings if we will but ask Him for them. If we lack power, love and a strong mind it is because we are not praying to God for them as we should.—I.H.N.

Aid to the Injured

During hot weather, children having the privilege of being out of doors without shoes and stockings are in danger of poisoning by rusty nails. Miss Poole, chief nurse of the School of Agriculture, St. Anthony Park, Minn., says that, when a child has injured his foot, the first thing to do is to determine if possible what kind of an instrument caused the injury; and, if a tack or rusty nail, or any rusty metal, make a solution of common table salt, one tablespoonful in a pint of boiled water. Take four layers of clean linen or cotton cloth, a little larger than will cover the wound. Wet this compress in the salt solution, place it on the wound, and fasten securely with a bandage. Moistened the compress every three hours, for forty-eight hours; then discontinue the moist dressing and use only a dry dressing of soft linen until the wound is healed.

Staying on the Farm

While calling at a home for a few moments in this neighborhood the writer noticed a nicely made summer house on the lawn. Curiosity led me to peep into it, and he was pleased with what he saw, for one glance showed it was used as a playhouse for the children. The little dishes and many odds and ends spoke louder than words of the love that was being centred around these little ones' lives for the love of home.

Not very much danger of these youngsters ever forgetting their youthful days or wandering very far away from the old endeared spot.

Country people! Fill your children with pleasure and contentment if you would keep them from the allurements of the city's life, and in later years those children will thank you for it.—J. E. O., Middlesex Co., Ont.

Labor-Saving Contest

We are pleased to note the general interest that was taken by the women readers of Farm and Dairy in our Labor Saving Contest, which was announced in the June 2nd issue. The contest has now closed and awards will be made to the prize winners in the special Household issue of Farm and Dairy to be published on October 7. Watch for the results.

Putting in Sleeves

An easy way to put sleeves in without trying on the waist is to fit the armhole over the knee as a shoulder, fastening it snugly in place. Then take the sleeve by the two seams and pin it in so that it hangs in the natural position up as far as the gathers on each side.

Take off, turn shoulder to the inside and after placing the top of the sleeve at the shoulder arrange the gathers evenly.

The Proper Way to Make Tea

By Olive Brown Sarré.
When a Japanese expert makes tea the foreign spectator is impressed not only with the extreme sensitiveness of his hands but also with the evident delicacy of his senses of sight and smell. However, one who wants to may serve tea in America with the same delicate taste and aroma that are secured by the best brewers of Japan. The secret lies in the proper infusion, and that is what I am going to tell you about.

First, as to the tea itself. The variety is a matter of individual taste. Of course I cannot recommend any particular kind, but I would say that in your choice you should not be influenced at all by other person's recommendations, not at all by fashion, and not much by price. By this last I mean that you should not think that a high-priced tea is necessarily any better than one of lower price which you fancy. Select the tea you like best and learn whether it is from an early or a late picking, its name at home, how it is cured, and then experiment upon getting the same tea every time. And do not forget that a poor tea properly made is better in every way than a superior tea badly made. A few experiments with a variety you like will result in a perfect tea, so far as your taste is concerned; and after that do not modify in any detail the way making it, particularly, if nothing is greater exactitude required.

BLACK TEAS REQUIRE BOILING WATER.
Tea leaves subjected to different processes of curing require different methods to get the best beverages. There are two broad rules to follow and several minor ones. First, black teas require boiling water and green teas do not.

Black tea requires fresh water poured on the leaves when it has just come to a decided boil. Hot water that has boiled a long time and lost its life will not make good tea. It should stand for from three to seven minutes (according to the variety and quality) and only in a porcelain pot. Then all the liquid should be poured off. In other words put only as many cupfuls into the pot as you wish to serve at once. Hot water standing on tea leaves draws out the tannin, which is the main thing to be avoided. For second cups pour boiling water on these ones-used leaves.

The principal ingredients of tea are tannic acid and theine. From the former we get all the bitter and deleterious taste, from the latter the aroma and the pleasing and beneficial effects of tea. To draw out the theine and at the same time not disturb the tannin is the object of good tea-making. If you have made a tea with no free tannic acid, milk may improve it as a beverage for some tastes. Always see that the sugar (if you care to use it) is thoroughly dissolved and stirred in before you add the milk—this makes a decided difference chemically.

(Continued next week.)

A Rat Eradicator

I feel sure that many housewives will be very grateful to know that sulphur will rid their houses of rats. Sprinkle it in bureau drawers, closets, around the holes where they come in and in barns; the farm rat will find his corn will not be troubled by rats.

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NOVA SCOTIA
HANTS CO., N. S.
ELLERSHURSE, Aug. 29.—We are having delightful weather. Grain has ripened well and is about ready for reaping. With the exception of the clover, we have seen a banner year for all crops, particularly hay—which is away above the average. Grain crops and potatoes have also done well. Potato bugs were very plentiful and did considerable damage on unsprayed potatoes. Blight has made its appearance. Tussock caterpillars have been doing a lot of damage, especially in the Halifax district.—B. B.

QUEBEC
COMPTON CO., QUE.
COMPTON CENTRE, Aug. 29.—Haying is done. Most farmers report a first class crop. Some harvesting is being done. Grain is fairly good. Root crops are looking well and everything points to a good season. Cattle are very scarce. The apple crop will be poor this fall. The Great Eastern Exhibition opens in a week. They have a very large prize list, and expect to have a record show.—H. G. C.

ONTARIO
GRENVILLE CO., ONT.
PRESCOTT, Aug. 25.—Pastures are very poor. Almost every farmer is feeding hay, clover, corn or meal. Cows have failed almost one half. Grain is good. All in the barn, and a few of the farmers have threshed. They report a fair yield of grain. Potatoes are looking fairly well, considering the dry weather. Corns looking very well, although short in stalk. Timothy hay is selling for \$10 a ton; oats, \$5 a bush; corn, \$2 75 a bush, 822 a ton, middlings, \$24; eggs, 18 to 22c; butter, 27c.—G. W. C.

HASTINGS CO., ONT.
SIDNEY CROSSING, Aug. 22.—Fall wheat seems to yield extra well. A great many are getting ready for canning factories, as great quantities of tomatoes and corn are raised for that purpose. Corn is a good crop generally.—J. K.

NORTHUMBERLAND CO., ONT.
WICKLOW, Aug. 30.—Threshing has commenced. Grain is going to be a fair yield. Winter wheat is good; peas, very poor. Apples, owing to the recent rains, will be much better than was at first anticipated. The season's output of cheese is not so good so far this season as last year. Prospects of good pasture are encouraging, however. The prices of all kinds of live stock are keeping exceptionally good. The few who have tried alfalfa this season seem to be well pleased with the result.—E. B. H.

DURHAM CO., ONT.
BURKTON, Aug. 24.—Corn never looked better. There are no silos in this section, but the corn is cut and fed in connection with straw. Recent rains have put the land in excellent condition for preparing for fall wheat.—H. P.

BLACKSTOCK, Aug. 30.—Harvesting is once more a thing of the past. We had a very wet harvest. Straw is not in as good condition for feed as some years. Fall wheat is turning out well and is a good sample. Spring wheat is not very good. Barley is a good crop, will be dark in color. Oats will be a fair crop. Roots and corn are looking well. Alsike is averaging about three or four bushels to the acre. The prospect for red clover is good. Apple crop is a failure.—R. J. F.

WATERLOO CO., ONT.
AVR, Aug. 22.—Harvest is well over. There are a few oats and peas out yet. Peas are almost a failure—only half a crop at the best. Some even plowed them out. Oats varied considerably. Some were short. Other fields were fairly good. The most general complaint was that they had not stood out well in the spring, and were inclined to be thin. Clover crop, the dry weather having killed it out. There was a good catch in the spring. Pastures still second growth meadows are looking well.—G. C. S.

BRANT CO., ONT.
FALKLAND, Aug. 22.—Harvest is completed. The weather was very rather dry during the most of it and considerable difficulty was experienced in storing the grain in good condition. Oats drawn in too soon are heating badly in the barns. Some threshing has been done. Wheat is running 25 to 30 bushels an acre, and is a fair sample, testing about 57-58 lbs. a bush. Barley is below the average yield, and is

shrunken. Oats are good, yielding 35 to 40 bushels an acre. Few peas are grown here.—L. T.

OXFORD CO., ONT.
BRIGHT, Aug. 23.—Apples are small and rather inferior in quality; about one-third of a crop as compared with previous years. Old trees are practically covered with bark louse. This is not to be wondered at, as there is absolutely no spraying done.—G. D.

MIDDLESEX CO., ONT.
APPIN, Aug. 25.—Oats are of good quality. Early sowing cannot fail to have its effect on the quality of spring grain. Very few peas are grown. The average of fall wheat to be sown promises an increase of probably 25 per cent. over last year. This is the result of the many rains which have made soil preparation fairly easy and promises good germination of seed.—C. M. M.

GLAXWORTH, Aug. 24.—We are harvesting and preparing land for fall wheat, for which recent rains have put the land in

fine condition. Reliable help cannot be had, although over 70 years old I must still work. This will continue as long as we are heavily taxed and our help taken to build public works to be given away.—J. A. G.

BRUCE CO., ONT.
CLUNY, Aug. 29.—The weather is fine and cool. We have had plenty of rain in the past two weeks. A great deal of damage has been done to buildings, especially barns, by lightning. Harvest is half over now. Everything but peas is yielding an average crop, a little better than the last two crops. Hay has been a big crop. The second crop is being kept for seed by a great number of the farmers.—J. McK.

GOSSIP
 An illustration of a champion Holstein bull, Sir Hooker Pouch 2nd, owned by Duff Bros. of Warkworth, Ont., was published in Farm and Dairy issues of August 4th

and 11th. This illustration was made from an amateur photograph and did not do the animal justice. The animal has won first prize during the past three years at all the local and county fairs in Northumberland and East Peterboro. He is richly bred from stock with high official record. Duff Bros. are offering the bull for sale to avoid inbreeding in their own herd. Write them if you want a choice stock bull to head your dairy herd.

Visitors to the Toronto Exhibition this year cannot afford to leave Scarborough Beach Park out of their plans. This \$600,000 amusement resort, modelled after Dreamland and Luna Park, the world-famous institutions at Coney Island, is the finest of its kind outside of New York.

We think Farm and Dairy is a great help to farmers in many ways. I enclose \$1.00 for my subscription for 1910.—J. J. Patterson, Grey Co., Ontario.

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Thus these Oshawa Shingles require no painting. They will not rust. They cannot possibly leak.

So you are sure you will have no bother with your Oshawa-shingled roof, once it's on the building. You can depend on that; and you can doubly depend on it because you have the guarantee. Hand it to your banker or lawyer to keep for you and know that it is good for a new roof right up to the last day of the twenty-fifth year—if the first one gives any trouble whatever.

Cost Far Less Than Wood Shingles

You must pay about the same price per square for ordinary wood shingles. They will cost you more to lay, because it is a quick and simple job to roof with Oshawa Steel Shingles—and it is no easy job to lay wooden shingles right.

And the wood-shingled roof will need repairs every year or two. Probably it will leak from the start. And it will be no real roof at all at the end of ten years, at the most.

You can be certain that an Oshawa-shingled roof will outlast a wood-shingled roof ten to one. Thus it costs but one-tenth as much.

This is the Roof That Really Protects

Oshawa-shingled roofs are not merely weather-proof roofs. They are fire-proof roofs. They are wind-tight roofs. They keep buildings cooler in summer and warmer in winter.

And the building covered with Oshawa Steel Shingles is safe against lightning—far more so than it would be if it fairly bristled with lightning rods.

Put these Oshawa Shingles on a building, following the simple, plain directions that come with them, and you have a roof that is handsomely enough for a city hall and that absolutely protects.

Practically an Oshawa-shingled roof is one seamless sheet of tough galvanized steel. Not a crevice for moisture to get through. No way to set fire to it. No chance for the wind to worry it. Dampness cannot gather on the under-side of it. It needs no painting. And you need not worry about it needing any repairs, for twenty-five years at least.

Isn't that kind of a roof the roof for you? Isn't that kind of a roof worth more than it costs? Isn't it the only roof you ought to consider?—since it is the only roof of which all these things are true.

Get Your Copy of This Free Book

Send your name and address to the nearest Pedlar place. Tell them you want your free copy of "Roofing Right."

When you have read that book through, you will know more about roofing than a good many experts know. It gives you facts, proofs, figures.

Get it and read it. Get it even if you don't expect to do any roofing for some time yet. It will put you right on the whole roofing question.

With the book will come a copy of our Guarantee. Study that, too, and see how fair and square and straightforward it is. See what positive protection it gives the man who buys Oshawa Steel Shingles.

Sample Shingle Free

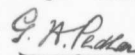
WITH the book will come a sample of the Oshawa Shingle itself. It will interest you to study it. You will see the actual construction. You will see that the Pedlar Improved Lock, on all four edges of the shingle, makes it certain that moisture never can get through any Oshawa-Shingled roof. You will see how the Pedlar process of galvanizing drives the zinc right into the steel so it never can flake off. You will be in no doubt about which roofing after you have studied this shingle. Send for it and the Book and Guarantee—Send now.



OSHAWA STEEL SHINGLES are made of 28 gauge steel, specially toughened and heavily galvanized to make them rust-proof. Thus they weigh about

seventy-eight pounds to the square. With the box about 88 pounds to the square. When considering metal shingles always learn the weight of metal per square offered and be sure that the weight is of the metal only.

Make the weight test yourself. First be sure the scales are accurate. Then unbox a square of Oshawa Shingles and weigh them. Note that the weight averages 78 pounds without the box.

Don't go by the box weight. Some boxes weigh four-


Send to-day for Sample Shingle and "Roofing Right" Booklet No. 9

It Will Pay You to Pedlarize All Your Buildings

"To Pedlarize" means to sheathe your whole home with handsome, lasting and beautiful steel—ceilings, side-walls, outside, roof. It means to protect yourself against cold; against fire; against much disease; against repair-bills. Ask us and we will tell you the whole story. Just use a postcard and say: "How about Pedlarizing my house?" State whether brick or frame. Write to-day.

THE PEDLAR PEOPLE OF OSHAWA

HALIFAX 16 Prince St.	ST. JOHN, N.B. 42-46 Prince William St.	QUEBEC 127 Rue de Front	MONTREAL 321-3 Craig St.	OTTAWA 423 Sussex St.	TORONTO 11-113 Bay St.	LONDON 86 King St.	CHATHAM 200 King St. W.
PORT ARTHUR 45 Campbell St.	WINNIPEG 76 Lombard St.	REGINA 1901 Railway St. South	CALGARY 1112 First St. West	VANCOUVER 821 Powell St.	VICTORIA 434 Kingston St.		

ADDRESS OUR NEAREST WAREHOUSE. WE WANT AGENTS IN SOME LOCALITIES. WRITE FOR DETAILS. MENTION THIS PAPER.