

FARM AND DAIRY & RURAL HOME

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COUNTRY

Toronto, Ont., June 13, 1918

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Shall We Feed Grain on Pasture?

Three Dairy Farmers Give Their Views (Page 3).

Balanced Unbalanced Rations

Something New on the Feeding Problem (Page 5).

Ontario Farmers in Convention

A Report of the Toronto Meeting (Page 6).

The Ormstown Spring Show

It Was Canada's Greatest Spring Fair (Page 2).

Cutting Clover Too Short

It Saves Hay But Kills the Stand (Page 4).

The Mechanical Milker in Alberta

An Experience of Two and a Half Years (Page 4).

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Mr. Fred A. Thompson, R. R. No. 2, Bienenheim, Kant County, Ont., writes on 30th December, 1917:

"In the Fall of 1916 I sowed broadcast 1,600 lbs. of your Basic Slag at the rate of 400 lbs. per acre in one side of a 104-acre wheat field before drilling into wheat. The field was all the same kind of land, and had twelve loads of barnyard manure applied per acre on clover sod before the wheat was put in. The wheat field was cut in half, and each half threshed separately. On the one side I had 123 bushels, which tested 54 lbs. On the other side I had 123 bushels, which tested 71 1/2 bushels, which tested 60 lbs., thus making a gain of 50 'bushels, or 135c. 00, as I sold for \$2.50 per bushel, for the use of \$15 worth of Slag applied to four acres."

Isn't it worth your while to use Sydney Basic Slag? Write us for our new pamphlet, giving full information as to our Goods.

The CROSS FERTILIZER CO., Limited
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Orms town Show Scores Another Success

Best Year Since Inception—Entries Total 1,160

JUDGING by the general success of the Spring Live Stock Show at Orms town on June 4th-7th, it may be safely predicted that this fair has come to stay. This is the 4th year of its existence and without doubt it has been a better all round show than that of any of the previous years.

One of the most creditable features of this fair is that it is a strictly live stock show. There are no side attractions and none are to be expected. Thus it explodes the popular fallacy that a strictly agricultural show cannot be a success.

The total number of exhibits exceeded that of last year by 155, there being 395 entries in 1917, as compared with 1160 in 1918. The only class not showing an increase was the poultry.

The greatest attraction of the fair was the evening programme and when the prize stock paraded the floor of the arena it certainly was a sight well worth seeing. This show is now being recognized as the leading agricultural show and on Thursday a party of Government men, including Mr. Crear, Dominion Minister of Agriculture, and Mr. Arkell, Dominion Live Stock Commissioner, visited the arena.

Swine.

The exhibit of swine was somewhat larger than last year's. Geo. Hooker, Orms town, exhibited Tamworths, Durocs and Berkshire; E. Sylvester of Clairfox, Que., exhibited Chester Whites, Tamworths and Yorks. He also won the silver cup for the best boar, any breed.

Sheep.

The exhibit of sheep also was larger than last year. The class exhibitors being E. Sylvester, Hampshires and Oxforda; R. Sylvester, Cotswolds, Leicester and Shrop; W. Gaspre, Tuxton, Ont., Cotswolds, and A. Ayres, Downsfield, Ont., Southdowns, Cheviots, Dorsets and Hampshire.

Horses.

Next to the dairy cattle the heavy horses were the strongest exhibit on the ground. The following are a few of the exhibitors: R. Nees & Son, Howick, Que.; U. Nussey, Howick; S. McGerrigle, Orms town; W. G. McGerrigle, Orms town; A. Nussey, Bryansville; Steel Bros., Howick; Geo. McClintock, Orms town; R. G. Browlee, and Cummings Bros., Lancaster, Ont.; J. J. Thompson, Bainsville, and others.

A valuable contribution to the success of the show was the fine exhibit of grade dairy cows. In some classes these were equal, if not superior to the purebred of the same breeds. The managing committee are to be congratulated upon the satisfactory manner in which the judging and also both the afternoon and evening programmes were carried out.

The Ayrshire Awards.

The Ayrshire breeders deserve great credit upon the appearance of their exhibit. Still greater credit is due when it is considered that every exhibitor came from within a comparatively few miles of Orms town. The following are a few of the larger exhibitors: R. R. Nees, Howick; J. M. Logan, Gilbert McMillan, Huntingdon; J. G. Logan, Howick; R. Nees and Son, Jas. Elliott, Orms town; D. T. Nees, Howick; Hector Gordon, Howick; C. H. Nees, Orms town; A. Arthur, Huntingdon; P. D. McArthur, J. P. Cavers, Orms town; W. G. McArthur and others.

Alex. Hume of Mendis, acted as judge. The Sr. championship for male went to Glenhurst Torra Major, owned by R. R. Nees. This is a splendid bull with grand depth of

body. He won over Lennessock Golden Love, owned by Gilbert McMillan, another bull of great size but of not quite the depth of body possessed by the winner.

The Jr. champion male was Stoner Croft Fickers Pride, a fine yearling owned by A. Arthur. The Sr. champion female was Maple Leaf Jean, an ideal dairy type, owned by Gilbert McMillan, while the Jr. championship went to Burmides Randy Jr., owned by R. R. Nees.

The following are the winners:—
Aged Bull—1, R. R. Nees, Howick, Glenhurst Torra Major; 2, McMillan, Huntingdon, Lennessock Golden Love; 3, W. Logan, Howick Station, Sunnyside Pastures; 4, Hector Gordon, Howick, Que.; 5, J. P. Cavers, Orms town.

Bull, 2 years.—1, D. T. Nees, Howick, Parkley's Footprint; 2, M. Kerr, Howick, New; 3, Jas. Elliot, Orms town. Bull Senior Yearling.—1, Logan, a Sunnyside Leader; 2, D. T. Nees; 3, Chas. Cook, Orms town. Yearling.—1, A. Arthur, Huntingdon, Fickers Pride; 2, Gordon; 3, McArthur; 4, G. Logan, Sunnyside Pastures; 5, D. T. Nees; 6, J. McArthur; 7, Elliott; 8, J. West, Howick.

Bull, 2 years.—1, D. T. Nees, Howick, Glenhurst Torra Major. Heifer Calf Junior.—1 and 4, R. R. Nees, 2 and 3, J. M. Logan, Orms town. Senior Champion Female.—McMillan on 1, R. R. Nees, on 2, J. M. Logan, Orms town. Junior Champion Female.—R. R. Nees, on Burmides Randy Jr.; Graded heifer—R. R. Nees; 2, J. M. Logan, Orms town; 3, D. T. Nees; 4, Logan, Junior Herd—1, R. R. Nees; 2, Logan, Orms town; 3, D. T. Nees; 4, Cavers, Logan. Get of Bire—1, R. R. Nees and 5, D. T. Nees; progeny of one cow—1 and 2, R. R. Nees; 3, D. T. Nees; 4, Cavers, Logan. Masterpiece; 3 and 4, Logan; 5, Cavers, Junior Champion Bull.

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Amber Sugar cane	1.50
Dwarf Essex Rape	1.50

GEO. KEITH & SONS
124 KING ST. E. TORONTO

Trade Incr

VOL. XXX

A T a dairy years ago, the handling of dairy 'ow benefits from during the month could be continued er's views call few good dairy should have equally experience. A few there were in summer crop were deducted from per-day, the dairymen as to feeding.

And what about our agric farms are almost exclusive experim for the present himself as to the problem, to price and scarcity advanced, but with the increase in Farm and Dairy good dairy farms are published he farm others of districts of their dairy farm man

A GREAT many of whether of to supplement of grain ration, or former years. M makes the practice most commonly use but only as an ag dairymen, w My own exper that we cannot great industry w own, and al pasture is grown any direct ben tions. It takes When the herd exercise they are in weight, and it will not heat the hot weather making real man stays on the job I an fully decid matter even on result in heavy fit require an extra to bring them ba were when turne the cheapest fee addition of a little obtained. It takes body of the cow some over that dairymen makes men endeavor to live on, who the to discover how yield accordingly.

Carrying Over to Lean Years

Why Not Another Silo for This Purpose?

L. K. SHAW, Welland Co., Ont.

EARLY last winter I received a commission to go out and buy a few head of milch cows of the Ayrshire persuasion, preferably with papers attached. In looking for these cows I traveled over quite a section of Western Ontario. I found good number of breeders who had been selling heavily and probably a majority of those visited were willing to reduce their herds. The season gives everywhere was the same—noilage. The counties that I visited were in the wet belt last spring. Through the winter season it rained almost continuously. Fields that were seeded after much tribulation were later drowned out. As a result, silos were half full, a quarter full, and in some cases had not been filled at all.

I came across one man, however, who had no cows for sale, no young stock for sale, and was quite satisfied with conditions generally, and with himself. His pride in his silo was justified by his foresight. With his 1917 corn crop he had had no better luck than his neighbors. His 14 x 35 foot silo was just half full. In addition to this, however, he had a 10 x 30 foot silo left over from the year 1916 that had not even been opened.

Always plan to grow more corn than I think I will need," he told me. "The 1916 I had a good crop. I filled both of these silos and then fed corn stalks cut up, moistened and well mixed with pulped roots and straw, until Christmas. The big silo then carried us through the regular winter gave us three months of summer feeding as well. The smaller silo was not touched, and will make it possible for us to feed almost the usual amount of ensilage this winter."

Wise man! He had prepared for the lean year ahead. It is a common experience that good years are followed by poor years, and it is always a problem with a live stock farmer just how much stock to carry. A capacity herd of cows for two years leaves a surplus stock to be disposed of in a lean year, and sometimes disposed of at a low price. He was asking myself, Would it not be a good plan to grow more corn than is needed on a regular policy, and have a good supply of ensilage ahead? It means more silo capacity than would otherwise be necessary, but considering the value of the food stored in the silo, the silo affords the cheapest storage that we have on the farm. There is no doubt but that the ensilage will keep, as one neighbor last winter fed silage that was four years old from the bottom of his silo, and he tells me that it was good feed.

The Milker in Alberta

Good Service for 2½ Years

W. A. BARR, Olds, Alberta.

I INSTALLED a milking machine about two and a half years ago, and I have been entirely satisfied with the results. I was right up against the help problem. I either had to sell some cows or get a machine, but I had plenty of range for the cows, I decided to keep them and get a machine with the intention of throwing it out of the stable end of a year unless I was perfectly satisfied. I decided to invest in one of the greatest labor-saving devices yet invented for the farmer, and very simple. When you see the machine in operation you wonder why such a machine was not invented long ago.

As regards its ability to do the work, I would say it does it almost perfectly. We have to strip by hand to a certain extent each year by putting in a few new cows or heifers with good-sized teats, and who let that do not milk so fast. By cutting out the cups are used, and the machine is left on long enough, it will milk them dry.

With one and one-half h. p. engine, you can run three units, a water separator and a pump, all at once. I have the water pumped for the stock all the year round, while the milking is being done, so the

gasoline bill is not high. Regarding upkeep of machine, I did not have any expense the first year. Last spring I got a new set of mouthpieces which finished out this year, costing 25 cts. each.

The cows seemed to like the machine from the start, and we did not have any trouble with them. I believe the man who will milk a cow as good as our machine is hard to get. I deal with three units, milk 20 cows in an hour, while before I got the machine, I used to gather up all the help I could around the place. At present I have a returned soldier with one arm disabled, who could not possibly milk a cow, but he can milk the 25 cows with the machine. In having time I come in about five o'clock and milk the bunch myself, leaving the men in the field until quitting time.

As long as I stay in the dairy business, my machine could not be bought unless another one could be procured.

Freezing in the Silo

Ideas for Use Next Winter

FARMERS who had more trouble than usual last winter with frozen silage will be interested in the method advocated by W. J. Dougan, of Wisconsin to prevent the freezing. Here is an extract



Mr. Wm. Bailey, Dundas Co., Ont., Makes Good Use of the Milking Machine in Solving a Difficult Labor Problem. A View of His Stable with the Machine in Operation.

from his address before his State Dairymen's Association:

"In taking silage out of your silo, keep the surface like an inverted saucer. Insist always on your man edging out six or eight or ten inches around the edge and let it go down gradually toward the edge. The silage does not freeze through the wall so much as it freezes from above. Two years ago, I went into my silo when my man went away for a short vacation around the edge three feet high and coming up in the centre. I went into the silo with a pick and I dug found not a bit of frozen silage except right close up against the wall.

All the rest of that cold weather there never was a ring around the silo of frozen silage because I always insist upon keeping the silage in the form of an inverted saucer. The next year, just after the first snap of cold weather, I fill a lot of gunny sacks about two-thirds full of fine chaff and take into the silo, enough up the doors and keep the whole top of the silo. I shut down the doors and keep the doors all up as we go back, keeping it just as close to the edge as possible. We lay a ring of those sacks around close to the edge, and when the man puts them down he tramps every

When you come to take out the edge as possible, throw the sacks back with your fork from half of the silo onto the other half of the sacks. Just draw off a straight line through the other, pick the sacks off one side and lay on the other, pick the sacks off that you want and cover it over again. At that angle cover the other side in the same way. In that way you will have no trouble to keep it from freezing."

Cutting Clover too Short

It Saves Hay But Kills the Stand

DESIGNS it say to set the cutter bar of the mow so low that it fairly shaves the ground. Writing in Hoard's Dairyman recently, Thomas N. Cisel says "No." Here is his argument:

"With many farmers it is the rule to cut grass very short, putting the bar just as near the ground as possible. While a small amount of hay saved by low cutting and the field looks neater, all is overbalanced by the injury done to the sod. (On a first winter, usually stand clover plants, after the tending above the soil. The crown, to a great extent, is the heart of the clover plant from which the stems sprout if the plant is vigorous. To injure the crown means to stunt or kill the plant. Should the weather turn dry and hot soon after the clover is cut, the chances are the stand is ruined if the crown does much to repair the damage but the plants will never be as strong again after once being injured.

"Along with this short cutting is the rule of permitting the clover to be well ripened before cutting for hay. Once fed clover is apt to rot in the mow. It will never make a good stand the next year if the hay crop is well matured when cut, the seed crop will usually be thin. Late cutting and short cutting will usually ruin the best of stands.

"Examine a clover stand that has been cut short in dry, hot weather, and you will find almost everywhere the crown has been cut away by the knife and the hot sun has burnt the very heart of the plant. Go again to the field when the stems are about six to eight inches long and examine the plants. You will find them plump and vigorous and ready to start the new growth. This short cut method has more to do with clover failures than any other one cause.

While timothy is not so easy to injure as clover in this way, yet much injury can result from a short cut of timothy.

"The mowers of today are so made that you can shave the surface of the ground, and it is not uncommon to find where the soil has been cut away. The result is much shorter cutting. The old style mower and heavy slides at each end of the bar and the cutting bar could not be lowered to the soil level. It will also be remembered that the farmers had much good clover and timothy twenty-five years ago.

"Some farmers today raise good clover and timothy and it has been my observation that it seldom the field that shaves his sod for the last inch of straw."

The idea that red clover will persist for more than one year will be a new one to most Canadian farmers. Hoard's Dairyman, however, editorially endorses Mr. Cisel as follows:

"We have long been convinced that farmers, as a rule, were more to blame than anything else for the failure of the clover crop. This was due to the fact that the stems and the head is brown before cutting near death to the clover the next year. If you want to save your clover, cut it always before the stem forms and the seed forms. The clover plant has fulfilled its mission and proceeds to die the same as other plants.

"We once saw a red clover field that had been kept in good production for nine years by cutting three times each season, keeping it from being matted, and by giving it a light topdressing of manure in the fall. With all their familiarity with clover, farmers have got to learn a lot about the biological laws that govern its growth. Mr. Cisel has evidently been a close observer and is governed by facts and not traditions or notions as the most of us are."

The man who is expecting to feed a number of hogs during the season of 1913-1914 should grow barley. While oats is probably more generally fed in Canada than any other grain for hogs, it is a poor feed for fattening pigs. The best pig is in feeding growing pigs or milking sows. Barley is the best fattening grain in Canada. It may be used with oats and shorts for 3 parts pigs, and as a finishing ration for hogs over 100 lbs. It is the best grain we can grow.—G. B. Rothwell, G.E.F., Ottawa.

THE PREVALENCE of the ration elements for reproduction of the supply, available energy, modern feed, taught by a few, and used by many, animal husbandmen. One would assume that, under all conditions, vigorous offspring matter that the materials involved true if protein necessities in becoming clear, other important a successful r is discussed here, stricted sources production in

Ten years ago as a series of the effect of low reproduction. In their make-adequacy of the energy are the formulating a that is, so much adequate energy but in one case entirely of feed the corn plant, the wheat plant, the oat plant, a mixture of the ample, the corn composed of five, and seven pound giving a nutritive and 75 percent consumed.

In all cases it include conce from the respec der to supply but in the case of oat meal instead grain was used concentrate; are

The animals approximately 30 grew fairly well receiving wheat developed as the

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Short Stand

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When a Balanced Ration is Not Balanced

New Facts in Feeding for Growth and Reproduction That Upset Some Old Theories

By E. B. HART, H. STEENBOCK and G. C. HUMPHREY.

THE prevailing theory of a balanced ration supposes that all the requirements for the successful growth and reproduction of an animal have been met with the supply of digestible protein and net available energy are adequate. This is the modern feeding standard developed and taught by all authorities on animal feeding and used with great success by countless animal husbandmen.

One would assume that, by its use under all conditions, splendid growth and strong, vigorous offspring could be produced, no matter what the natural sources of the materials involved might be. This would be true if protein and energy were the only necessities in an animal's ration; but it is becoming clearer every day that there are other important factors in the make-up of a successful ration. In this article there is discussed how rations balanced from restricted sources may affect growth and reproduction in cattle.

Ten years ago this experiment station began a series of observations with cattle upon the effect of balanced rations on growth and reproduction. The rations were, however, restricted in their make-up to a number of plants to test the adequacy of the prevailing theory that protein and energy are the only necessary factors in formulating a ration. Each ration was balanced—that is, so made up as to contain the foodstuffs in sufficient amounts and suitable proportions to supply adequate energy and adequate digestible protein—but in one case it was made up entirely of feeds obtained from the corn plant, in another from the wheat plant, in a third from the oat plant, and in a fourth from a mixture of the three. As an example, the corn plant ration was composed of five pounds of corn, two pounds of gluten feed, and seven pounds of corn stover, giving a nutritive ratio of 1:8.2 and 15 therms for each 14 pounds consumed.

In all cases it was necessary to include concentrates obtained from the respective grains in order to supply sufficient protein, but in the case of the oat ration, oat meal instead of the whole oat grain was used, as oat protein concentrates are not available.

The animals used in the first experiment weighed approximately 300 pounds. On all the rations they grew fairly well, although it could be seen that those receiving wheat were not as vigorous or as well developed as the other lots.

A group of Holsteins was started as young heifers on a corn and wheat ration, respectively. Those receiving the corn ration gained as in the first experiment, grew well, matured, showed early oestrus (coming in heat), and were physically strong in every respect. There was every evidence of normal nutrition. Those receiving the wheat ration grew at a fair rate, but when they reached 1,000 pounds they ceased to gain, they began to lose weight and showed lack of vigor. There was evidence of physical weakness—even blindness finally resulted. These animals would come into their stalls and collapse under the slightest excitement. This collapse was followed by labored breathing and more or less trembling. These spasms would last but a few minutes, when the animal would again rise and appear perfectly normal. It is doubtful whether even a change to the corn ration would have brought them back to normal. When the animals of the first experiment were involved in reproduction, strong calves always resulted with the corn ration. These calves would be



The Effect of a Wheat Ration on the Calf. This calf was produced by a cow fed continuously on a balanced ration derived wholly from the wheat plant. These calves were always born prematurely, and were either dead at birth or lived but a short time.

carried to maturity and no trouble was experienced at parturition. On the wheat ration the cows were never able to reproduce normally. Calves were born 25 to 30 days ahead of time, under-sized and weak, and would never live over four or five days. The mother would often fail to properly "clean," and with the attendant dangers of infection. In several cases we lost mothers from this cause alone. It should be stated here that dry rations had nothing to do with the phenomena observed. The corn ration was as dry as the wheat ration, but it gave practically normal results. For this reason dryness of rations should not be thought of as a factor in disturbed reproduction.

This herd was absolutely free from contagious abortion. It had been under the observation of a veterinarian during the entire period of freedom and was found by him to be free from the contagious form of abortion disease. On the ration balanced from the oat plant fairly good offspring were produced, but in no case did they appear quite as vigorous as the offspring of the corn-fed group.

Later experiments with rations made entirely from the oat plant demonstrated more clearly than did those earlier experiments that a perfect ration cannot be made from it alone. In those later experiments the calves were born prematurely and seldom lived. The difference between the earlier and later results very probably lies in a difference in the mineral content of the two straws used. That was the first experiments contained twice as much mineral matter as that used in these later experiments.

Influence of Feeding a Mixed Ration.

A mixed ration, according to our previous ideas, should have been the one giving the best results, and under our present limitations in information, feeding a mixture is undoubtedly, the safest route to follow; but in this case the offspring from the mixed ration were not as good as the offspring from the corn ration. The milling down effect of some of the poor constituents of the ration, such as the wheat grain and straws, was plainly noticeable. This illustrates very clearly the fact that a ration may be restricted in variety but still be physiologically perfect, while on the other hand a mixture may carry something decidedly deleterious to its physiological soundness. Judgment as to the physiological value of a ration cannot be made until it has been given a definite feeding trial.

When an animal was changed from the corn ration to the wheat ration it always became exceedingly stiff, and if it was continued too long on the wheat ration prostration would result. This condition often led to a loss of the in-

Wheat Plant Deficiency.

In our attempts to locate the trouble in the wheat ration we have fed rations made up of corn grain and wheat straw, here the offspring were also weak and often dead. When to that same ration, however, a suitable salt mixture was added so that the mineral content of the ration was made like that of the corn ration, perfect offspring resulted. This indicates, then, that one of the deficiencies in the wheat ration was a proper salt mixture. This is a fact of very great fundamental importance. When, however, the corn grain in the ration was displaced by the wheat grain and the ration consisted then of wheat grain, wheat straw, and a proper mineral content, disaster in reproduction again resulted. This shows the presence of a second disturbing factor in the wheat ration which here is shown to be located in the wheat grain. This factor is probably some inherent toxic (poisonous) material, as yet of unknown character.

Calves born to mothers on this ration held their heads in a strained position, either sideways or backwards. They were unable to get up or to suckle the mother and always died a few hours after birth.

These experiments indicate that in a ration made from the wheat plant alone there are two defects: namely, a poor mineral content and a toxicity located in the wheat grain. When the wheat grain was

coupled with corn stover we have sometimes met with success and some times with failure in the character of the offspring. With strong mothers it appears that the addition of corn stover may act as an efficient antidote to the toxic factor, and, in addition, furnish sufficient mineral matter to enable the animal to reproduce normally.

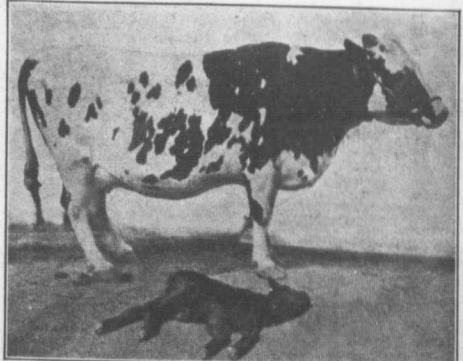
The possibility of the toxicity being destroyed by heat was also taken up, and baked wheat was used with corn stover. This had no effect whatever in improving the wheat kernel. In other cases fat wheat grain plus corn stover ration had butterfat added to it for the purpose of supplying plentifully the newly discovered growth-promoting factor—fat (Continued on page 10.)



This shows the offspring from a mother fed a balanced ration of the corn, grain and wheat straw. The low mineral content of the ration would always lead to disaster.



This calf was produced by a cow fed continuously on a balanced ration derived wholly from the corn plant. Upon this ration sturdy, vigorous offspring were always produced.



Effect of a Ration Balanced from the Oat Plant. This ration consisted of 7 parts oat meal, 7 parts oat straw. Two pounds of butterfat to 100 pounds of grain were added, but did not improve the ration for reproduction. The calf in the picture was also weak as an animal and much like a wheat ration calf. The ration used here was too low in mineral content. On such rations as this invariably the cow does not "clean" naturally and it is necessary to call a veterinarian to remove the afterbirth.

Electric Conveniences in the Farm Home

The Home Generating Plant is Appreciated Where Used

"I LIKE the country to live in, but I don't like the conveniences. If I had my old home right out here on the farm, it would be just ideal."

The speaker was a young woman of city upbringing who had married a young farmer of my acquaintance. She had had one year on the farm and I was interested in getting an explanation of her opinion on her new life. Her reply was as I expected, for I had heard it many times before. She missed the convenience of running water and more particularly as she objected to coal oil lamps with their soot, labor and poor light. "If I could only turn a switch and have good light at will in any part of the house, I would never utter another complaint," she sighed.

Had she only known it and I took good care to impress this point upon her, this country with its conveniences right on the farm, and at very little more expense than her city friends pay for the same comforts, including electric light. Hydro-electric has already made electric light and power available to thousands of farmers in Ontario. Just recently I visited Mr. W. C. Good on his farm near Stratford, Ontario. His pneumatic water system was a convenience of some years' standing, but since my previous visit he had connected up with Hydro-electric. Every room in the house was illuminated by electricity. Out in the kitchen I found an electric range, a convenience enjoyed by few even in the cities. An electric toaster and a electric iron completed the equipment. The Good home has all of the conveniences of the up-to-date city establishment and then some.

The Home Generating Plant.

But how about the even greater number of farm homes that are not on the electric power line. Even here electricity may be easily enjoyed. Small home lighting plants have been brought to a high degree of perfection. A year ago at the West-End Fair, London, Ontario, Mr. W. W. Ballantys, of Stratford, told me of their home lighting plant and the satisfaction it was giving. In the Ballantys home a small generating plant and storage battery lights the house and barns, runs the washing machine, supplies power for the mechanical milker and cream separator and, if I am not mistaken, pumps water as well. "It is just about the best improvement we ever put in the house," said Mr. Ballantys, enthusiastically.

Just a week or two ago I was visiting Doc R. Barrie & Son, on their two hundred acre farm near Galt. This is a real partnership establishment, and just across the drive from the old home a small house has been built for the junior member of the firm, Mr. W. C. Barrie. Both homes are equipped with all conveniences, and both are lighted from a common lighting plant, located in the garage. The whole plant takes up only a corner of the building. The small engine is run with coal oil and the storage battery consists of 16 large sized cells.

"Coal oil seems a poor affair now," remarked Mr. Barrie, Senior, "except as we use it in this engine to produce light of another kind. We run the engine once a week and the batteries fully charged will keep both houses running for a week. If we have company and all lights are on it would, of course, take more power." W. C. Barrie estimated that six quarts of coal oil a week will charge the batteries from nothing to full capacity; or, the fuel bill for both homes is only 30 cents weekly. In addition to supplying light a small motor is used to churn and pump water.

I have seen many other similar systems to that used by the Barries,

and in no case would the owners be without them. The first cost of a home electric plant may seem high, but the improvement is practically a permanent one, as neither engine, dynamo, or batteries will wear out in one life time if properly cared for. The operating cost will be less than the price of coal oil under the old system of lighting. The lack of conveniences that have driven country girls to town, and kept city young women from accepting homes in the country, is a factor no longer operating if modern inventions are taken advantage of; and the latest and best addition to the already long list of country conveniences is the individual lighting system.

It is not good practice to turn spring calves out to pasture during June, July and August. Their skins are injured by the flies and heat. They will require more food also and will not thrive so well.

Farmers and Their Flour Supply

FARMERS may be reassured that there is no intention on the part of the authorities to inconvenience them unduly in their busy season with unnecessary restrictions and regulations as regards the hoarding of foodstuffs.

An Order of the Canada Food Board recently made it illegal for people to have more than 15 days' supply of flour, made wholly or in part from wheat, on hand at any one time. For people living at a greater distance than two miles and not less than five miles from dealers licensed by the Canada Food Board, sufficient for their ordinary requirements up to 30 days only was allowed, and for persons living 10 miles or more, 120 days' supply.

Further it was required that any surplus holdings should forthwith be returned to the miller or dealer from whom they were purchased, at the purchase price or at the market price, whichever was the lower.

This Order was designed primarily to remedy a state of things in the

towns and cities, as it was commonly reported that some people had laid in undue quantities of flour in view of the world's scarcity, selfishly thinking that they would be sure of a normal supply for the next year or so, whether the people in Europe starved or not.

In the case of farmers, however, it pointed out that it was their custom in many cases to take wheat to the mill and get several months' supply ground on one occasion, so as to save frequent trips and waste of time. To require that such a farmer return all surplus flour to the mill and then come back every couple of weeks, or like short intervals, for supplies of their own flour, would seriously interfere with farm work, occasioning unnecessary travelling and the waste of days precious, especially at seeding and harvest time, to the cause of production, a cause more important, even, than that of conservation.

Bona fide farmers are now permitted to hold flour in excess of the amounts provided for other people. An Order by Campbell, passed on May (Continued on page 7)

Northern Electric Light and Power Plant

Better, Brighter, Safer Lighting for the Rural Home

We have given the farmer of Canada the telephone. We have now the Northern Electric Lighting System which is destined to be the greatest medium for making the farm cheerful, comfortable and home like.

The Northern Electric Lighting System will, we believe, be as much of a blessing to the farm as the telephone has been; it will furnish Better, Brighter and Safer Lighting, for the Rural Home; IT WILL MAKE IT A HOME.

The Northern Electric Lighting System is THE PLANT of Farm Lighting efficiency and is the result of years of painstaking study and experiments. The equipment comprises the generator, switch-board and storage battery complete. You use your own engine, if you have one; if not, we will supply a plant with either a gasoline or kerosene-burning engine.

Think what a benefit this equipment will be to you and your family. Think of the odors, flies, dirt and safe method of lighting your home, your barn, and your other buildings. Think of those long, comfortable winter evenings. Think of every comfort and cheerfulness of the city home in your own country home. The Telephone, the Electric Light, the Electric Range, the Electric Iron, etc., etc.

Write for literature that shows there is a need for a safer and better way of lighting the house and the dangerous coal oil lamps and lanterns to investigate the Northern Electric Lighting System. Your home means you for full descriptive literature free. If you do not intend to purchase but you will surely be interested in the possibilities of electricity on the farm. WRITE TODAY.

Now is the time to plan for better and more economical lighting.

Northern Electric Company LIMITED
MAKERS OF THE NATION'S TELEPHONES

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MONTREAL, QUE.

He is a good farmer—he reads Farm and Dairy regularly.

SHEEP AND SWINE

Milk in the Hog Ration

In order to raise and finish all the extra pigs that will be farrowed in Canada this year as a result of the campaign for increased production, it will be necessary to exercise the utmost economy in the use of concentrated foods. Pig raisers who have access to dairy products have a great advantage over others. Experiments carried on at the Dominion Experimental Farms and Stations show that for growing hogs, 60 lbs. and over, 400 lbs. of skim milk produced results equal to 90 lbs. of mixed meal. Buttermilk fed fresh is equal to skim milk. Whey is not so valuable. One hundred pounds of whey was proved equal to 19.3 lbs. of meal, that is, providing it is fed in not too large quantities and before it has soured.

A study of experiments with skim milk shows that for young pigs one pound of milk fed with two and a half or three pounds of meal gives best results. For larger hogs less milk may be used. For hogs over 100 lbs. in weight not more than five pounds of skim milk should be provided in order to get the greatest value from the milk.

At the Nova Scotia Agricultural College it was shown that the best gains were made by feeding a lot of pigs a ration composed of 148 lbs. of grain, 900 lbs. of skim milk, and 110 lbs. of mangels. At the Ontario Agricultural College the best results were obtained when the proportion of milk to meal was 2.5 to 1. In one trial in which this proportion was used, 366 lbs. of skim milk were equal to 100 lbs. of meal. This agrees fairly closely with the results obtained at the Ottawa and Branch Farms.

In a series of articles that appear in the May number of The Agricultural Gazette, both the Ottawa and Gazette authorities agree that it does not do to change the diet from sweet to sour milk. For young pigs the sweet milk is much to be preferred. For larger pigs it seems to make little difference whether or not it is fed sweet or moderately sour, provided whatever condition favored is uniformly kept up, that is to say, if the milk cannot be obtained always sweet, then it should be fed sour as a rule.

The Cost of Mutton Production

The scarcity of wool and meat has given a new impetus to the sheep-breeding industry in Canada, and once more it becomes again firmly established as a common farm industry, and as the benefits coming from it are fully recognized, the writer feels confident that it will not again go into decline.

This class of stock, while enjoying to the full the benefit of the increased high prices of the products produced, is probably the one which has been affected the least by increased cost of production, common to the products from other classes of stock. This is due to the fact that the feed consumed consists largely of home-grown roughage and grains, thus eliminating, to a large extent, the purchase of high-priced concentrates. It is also due, in part, to the fact that very little labor is required to handle a flock, so that the increased price of labor has not the same effect.

To arrive at the cost of mutton production many factors must be taken into consideration. It may be safely considered that the value accruing from the manure produced and weeds destroyed fully offsets the labor expended. From the records of the breeding and feeding work at the Central Experimental Farm the remaining factors in the cost of produc-

tion of year-old mutton may be tabulated as follows:

Cost of feed in maintaining ewe from weaning of one lamb to weaning of next \$5.00
Interest on value of ewe (\$30 at 6%) 1.80
Service charges and maintenance of ram35
Cost of feeding lamb from weaning until finishing at one year old 6.72
Wool from ewe (7 lbs. at 60c per lb.) 4.20
Cost of 120 lbs. mutton (spring, 1918) 17.75
Cost of 100 lbs. mutton 8.66
Profit per 100 lbs. \$9.69

This is a profit of \$11.33 per lamb but one lamb is raised per ewe. The above figures are based on an increase of one lamb per ewe. Where two lambs were raised practically the same results in weight may be expected at the end of the year. In such a case the first three times in the cost would be split between the two, thus reducing the cost to \$12.66 per hundred weight and increasing the profit to \$12.66 per hundred weight.

The foregoing estimates are exclusive of overhead charges or depreciation, but these items may well be overlooked, as they are almost negligible in sheep raising, owing to the fact that so little is required in buildings or equipment. Moreover, the estimates are conservative, and though they show a return of at least 38.8% on the investment of \$20 per ewe, the same may be looked for under Eastern conditions, while under Western conditions even greater dividends may be realized.

HORTICULTURE

Orchard and Garden Notes

HEAD lettuce requires cool, moist conditions for growth. Consequently it can be grown best in early summer and late fall. Tomato plants tend to stake and kept trimmed will produce nicer shaped and larger tomatoes, though not quite so many of them.

Keep the cultivated soil polished with much use from now till fall. Beans may be used as a succession crop for grass, spinach, or onion sets. Don't leave melons out of the garden. Melons work, but the end justifies the labor.

Cucumbers require warm, rich soil and plenty of moisture. Keep them growing rapidly from seed to harvest. Thorough cultivation in the garden is of much greater value than artificial watering.

A heaping teaspoonful of Paris green or powdered arsenate of lead to one quart of flour or air-slaked lime, sprinkled on cabbage when it is moist, will get the cabbage worm. The cut-worm season is at hand. Get the worms by scattering poisoned mash near the plants late in the afternoon. They feed at night and are sometimes picked up from the ground and plants by using a lantern or flashlight to find them.

Do not leave flowers out of the garden this year. Plant annuals and set out perennials. The value of flowers is going to be better recognized as the winter comes. Food for the body comes first, but we dare not stint in any way the soul.

A little sheep manure applied occasionally to the lawn gives it a bright green and generally thrifty appearance.

Do not let the vegetables remain too thick in the row. Too many roots to the foot in the row is just as bad

as weeds. Get the maximum yield from your ground by thinning and good care.

When spraying or dusting a tree or plant with an insecticide do a thorough job. See that no spot is left unscanned in which an insect may hide. Many of the insects propagate very rapidly, and even one will do lots of damage.

Spraying Notes

THE most important aspect of the year is just about due; that is, the petals are about to open. This spraying is efficacious in combating apple scab, codling moth, green fruit worm, apple aphid and leaf-eating insects. Its principal value in the small orchard, however, will be in combating the codling moth. For the codling moth alone, a mixture of two to three lbs. of lead arsenate of 20 lbs. of water, or a quart or a pound of Paris Green in a similar quantity of water, will kill the worm, but has no effect on the fungus diseases. The preferable plan, therefore, is to use both. The best fungus enemies at the same time, as used the poison mixture with either Bordeaux or dilute lime sulphur. This spraying should be very thorough, covering both sides of the leaves, fruit clusters and new shoots. It loses its effect so far as the codling moth is concerned if delayed until the calyx has closed.

An Intensive Gardening Method

MR. PHILIP CARL, a vegetable grower of North Toronto, Ontario, has introduced in his vegetable growing what is apparently a new method in the country, though it is said to be used in some parts of the United States. Last year he tried it for the first time, staking his season's work on its success, and was not disappointed. In fact, successful did it prove, that he is carrying it out more extensively this year.

In planting carrots, beets, onions and radishes. Mr. Carl's method is to plant in double rows instead of single rows. The plants are planted in rows four inches apart with a space of 24 inches between double rows, to allow of the use of a horse cultivator. The double rows are weeded and thinned single rows. It is Mr. Carl's experience that he got better vegetables from this method than from any other he has tried. The two rows seem to shade each other, and are less affected by the sun than the single rows would be. In addition, more vegetables can be grown on a given area.

Cutworms and Their Control

EVERY gardener has experienced the damage for which cut worms are responsible. As a rule cut worms injure crops before the end of June but in the limited period of their activity cutworms may destroy half the crops of the good sized garden and have been known to work havoc on big fields of corn.

In fields or gardens where such plants as cabbages, cauliflower, tomatoes, etc. are set out, protection against cutworm attack can be had by placing a board or wrapping a piece of paper about the neck of each plant at the time of setting out. Strips of tin which can be made from old tomato cans are to be preferred and pieces about six inches long and two and one-half inches wide are sufficiently large for this purpose. When paper is used cut into strips about three inches square, tie in cylindrical form and leave about two inches of the paper above the ground. The poisoned bran mash is the standard method of fighting cutworms, especially when they are operating on an extensive scale. The formula is as follows: Bran, 2 lbs.; molasses, one quart; Paris green or white arsenic, one-half pound; water, two to

and on-ban-
Formula for sm-
court of bran,
Farm ground,
with moisten the
be applied thin
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spots too, that
tired after sund-
in the very best
cutworms come
in garden scum
rows of vegetable
about 20 lbs. of
sufficient to treat

APICU

Control

ONE of the most beekeeping troubles of swarms for a strong colony is the tendency to swarm, but the colony cuts out and is watching for a new queen to take a great deal of time and energy to make notice into the methods of control that have been

Experimental Facts on the Control of Swarms

(1) General shading the apiary entrance with combs and flowers, and opening the entrance; and, yep; and you measure, while found insufficient to prevent the bees from leaving the hive. (2) Manipulation of the entrance than one swarm are clipped, but when bloom, and when seed is still in picked up from moved to a new containing the old placed on the of the returning swarmed later, the swarm, leaving so much weakness to swarm again. If this, however, be many turned moved to the days later. This control necessitates when the swarms manipulation can often be carried folks should the (3) Manipulation of the entrance with some of the bees, except the cutting cells every seven this failed during from clover at O the bees raised out larvae and swarms queen cells were however, been for well swarming. This method of control, although it enters from the middle of August, a spent in examining the swarms. If the swarming are being along the following the most probable the swarming will be swarmed. (4) Finding the brood chamber with without lifting the wire which the a rack that can ways is being tried. (5) Endeavoring that will not swarm

and one-half gallons. A simple formula for small gardens is one quart of bran, one teaspoonful of Paris green and one tablespoonful of molasses with sufficient water to moisten the bran. The mixture should be applied thinly as soon as cut-worm injury is noticed. It is important that the mixture be scattered after sundown, so that it will be in the very best condition when the cutworms come out to feed at night. In gardens scatter a little along the rows of vegetables. Under field conditions 20 lbs. of poisoned bran is sufficient to treat about three acres.

APICULTURE

Control of Swarming

ONE of the greatest problems in beekeeping to-day is the control of swarming. It is natural for a strong colony of bees to swarm in early summer when the weather is coming in, but the breaking up of the colony cuts down the honey yield; also watching for and hiveing swarms takes a great deal of the beekeeper's time and even when the swarm may escape notice and fly away. The methods of controlling swarming that have been tested at the Central Experimental Farm, Ottawa, fall under the heads:

(1) General measures. Partly shading the apiary; providing a large entrance with deep space between comb and floor; giving plenty of room in the brood chamber and super; and young queens. These measures, while valuable, have been found insufficient in themselves to prevent the bees from raising queens in preparation for swarming.

(2) Manipulations to prevent more than one swarm. The queen's wings are clipped, preferably during fruit bloom, and when a prime swarm issues and is still in the air, the queen is picked up from the ground and placed in a cage and the hive is removed to a new stand. A new hive containing the caged queen is then placed on the old stand to receive the returning swarm, the queen being liberated later. The field bees join the swarm, leaving the parent hive so much weakened that it is not likely to swarm again. To make certain of this, however, the parent hive may be merely turned around and not removed to the distant stand until five days later. This method of swarm control necessitates immediate attention when the swarm issues, but, as the manipulations are simple, they can often be carried out by the home folks should the beekeeper be away.

(3) Manipulations to prevent swarming altogether. At the time of writing none of the manipulations that have been tried has succeeded except the cutting out of all queen cells every seven or eight days, and this failed during a heavy honey flow from clover at Ottawa in 1916 when the bees raised queens from worker larvae and swarms issued before the queen cells were capped over. It has, however, been found possible to prevent swarming in out-apiaries, 40 miles north of Ottawa, by this means, although it entailed weekly visits from the middle of May until the middle of August, and much time was spent in examining each colony.

Experiments in the control of swarming are being continued, especially along the following lines, which seem the most promising:

(1) Testing systems of raising brood to the super. Many of these will delay swarming under some conditions.

(2) Finding means by which the brood chamber may be easily examined without lifting off the supers. A hive in which the brood combs are in a rack that can be drawn out sideways is being tried.

(3) Endeavoring to breed a strain that will not swarm, of which the pro-

liminary step is to find out if the non-swarming character shown by some queens is inherited. A queen showing this character was found to retain it the following year.

Farmers and Their Flour Supply

(Continued from page 7.)

17th, makes this express provision: "A bona fide farmer shall be permitted to hold, subject to the order of the Canada Food Board, the amount of flour, made wholly or in part from wheat, he may have in his possession in excess of the amount prescribed by Order No. 31, if, on or before the 15th day of June, 1918, he reports to the miller or dealer from whom it was purchased or by whom it was manufactured, the excess amount held by him."

When these reports are received it is the duty of the miller or dealer to pass them on to the Canada Food Board, and thus it will be known by the authorities what the supply of

flour in the country is and where it is. Further, this Order provides that in cases where a farmer or any other person has in his possession one partly used barrel or package he shall not be required to return his surplus requirements, nor shall he be required to return amounts of less than 23 pounds. Thus it is seen that the intention of the Order is entirely reasonable and will not work hardship or inconvenience unnecessarily.

Shall We Feed Grain, etc.

(Continued from page 3.)

and August, and if so, the amount of concentrates fed, if any, need not be large.

This is a question upon which no one can speak authoritatively for his neighbor. Every farmer must decide it for himself and he must do so at a random guess, but rather he should sit down with a pencil and paper and figure out just what is going to pay him best. If he finds that the results he receives from one ar-

rangement are better than from another it would be foolish not to allow that method.

There is another feature which enters largely into the question and one which receives altogether too little consideration. It is the difference between the cows of various herds and between different cows in the same herd. There are cows in some herds that would not pay for a handful of meal in summer or in winter while there are others which will give ample returns for the extra expense of feeding concentrates at all times. In this also, the farmer should study the situation. He should weigh each cow's milk every day and then he can tell to a nicety in his own head just where it pays to put the extra feed and where it does not—C. G. McKillop, Glengarry Co., Ont.

Lovers will be serenaded a girl by standing under her window and playing a guitar, but nowadays they merely sit in front of the house and call her by tooting an automobile horn. And she comes just the same.

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THE Motor Car is a greater convenience to the average farmer than the telephone, the rural mail or even the grain binder.

The binder which is considered as a very useful implement is rarely used more than a few days during the entire year. The rest of the time it stands idle, taking up space, while the automobile is available for use throughout all seasons, and both day and night.

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The motor car is called upon whenever anything is wanted in a hurry. It is the most useful implement or convenience for the farm. It helps you conserve your energies and time for productive work and enables you and your family to accomplish more with less energy. You surely feel the need of a Ford. Why not order one today?

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F. O. B. Ford, Ont.	

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Down the road or far across the fields is often an "entrance," a mere hole in the fence, a constant source of danger to stock getting through. The best way to keep your stock where you want them is to provide reliable, strong and durable. All Peerless Farm Gates are of heavy open hearth steel wire on strong tubular steel frames electrically welded in one solid piece, and braced into a steel hinge. No sag, no rust, no wearing out. Ask your dealer to show you Peerless Gates, also Peerless Perfection Fences and Postery fencing with the famous Peerless lock at intersections.

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When a Balanced Ration is Not Balanced

(Continued from page 5.)

soluble vitamins—which is now known to be necessary for growth and is supplied abundantly in butterfat. Vitamins are substances that have an importance in rations until recently not understood. It was thought possible that the wheat grain plus wheat straw ration was somewhat deficient in this material. Butterfat additions, however, did not uniformly improve the ration, while we had a number of successful reproductions with its use, we also had a number of failures. This would again emphasize the probability of the presence of a toxic substance in the wheat grain. When, however, wheat straw was mixed with a legume hay, such as alfalfa, so that the latter formed but 20 per cent. of the ration, we had perfect success in all cases in the production of normal offspring. The improvement resulting from the use of alfalfa must lie in introducing into the ration a better mixture, perhaps a better protein mixture, and an abundance of growth-promoting substances (vitamins), all of which may contribute toward making it possible for the animal body to combat successfully the toxic factors introduced.

We had thought it possible in our earlier work that the bad results secured with the wheat ration were due to the acidity of this ration, as the urine of the wheat-fed animals showed consistently a slight acidity due to the low intake of calcium, magnesium, sodium and potassium. If this were true, then the addition of acids to the successful corn ration would give results similar to those obtained with the wheat ration. This, however, we found not to be the case, for when mineral acids, such as sulphuric or phosphoric acids, were added to the corn ration in such proportion that the acidity of the ration was made more similar to that of the wheat-fed animals, the offspring were strong and normal in every respect. There is a prevailing theory that too high a content of magnesium in an animal's ration may lead to disastrous results, but in our work the addition of a large amount of magnesium salts to a corn ration did not in any way disturb the production of normal offspring.

The results just detailed indicate clearly that the wheat grain contains a toxic material and later work shows that this is largely present in the embryo of the seed. When wheat embryo is used with corn stover so as to bring into the ration four or five times the amount of embryo that would be introduced when feeding whole wheat, an early abortion results. Cows on this ration drop their calves at six or seven months. These facts show that increasing the amount of toxic material produced this disturbance at a somewhat more rapid rate.

Microscopical studies were made on the spinal cords of calves fed largely upon wheat rations. It was shown that there was a watery condition of those nerve cells especially concerned in body movements and that they were compressed and partially degenerated. This condition is analogous to that of beriberi, a disease which occurs among the people of Japan and China as a result of eating too abundantly of polished rice. The cause of beriberi is ascribed to the absence or deficiency of certain vitamins in the diet. In the case of wheat it would appear that the essential disturbing factor is a toxic substance which interferes with the utilization of materials necessary for the normal development of the nervous system of the animal, or acts on the nerve directly. It is possible, of course, that it may induce degeneration of the nerve tissue of young or mature animals. This would account for the blindness observed in the heifers and also for the failure of muscular co-or-

dination apparent in the newborn calves of wheat-fed mothers. It is not to be concluded from these studies that whole wheat or those more common wheat products such as middlings and wheat bran cannot be used with success in the ration; but they should be used judiciously. As pointed out, when employed too exclusively and not in conjunction with normal calves, the various difficulties are likely to arise. As pointed out, we have fed wheat and wheat straw with the production of normal calves, when it has been sown with about 30 per cent. of the ration of alfalfa or clover hay. The calves produced on such rations were normal for the first gestation period. Only when we continued these animals on the same ration for the second gestation period were the calves born weak, underfed, and in some cases blind. It was the long continued use of the material without change in the ration that was finally fatal to normal production. The cumulative effect of the toxic material finally shown on its effect.

A few years ago there was a late season drought in Nebraska. A large wheat crop was matured, but the corn crop failed. The dairymen of that state fed, during the following fall and winter, abundance of wheat. In many cases there were reported troubles in reproduction. The calves were dropped ahead of time and were either dead or weak and undersized. It is altogether probable that the chief cause of these disasters was a too extensive use of wheat and wheat products.

Corn stover is not as good a substitute of the harmful effects of wheat as are the legume hays. In many instances we have had success in reproduction on a ration of corn constituted 50 per cent. of the ration and the remaining 50 per cent. consisted of wheat meal and wheat gluten. In the instances where we had failures, we have always used a wheat embryo directly with perfect success in a single gestation when it constituted 14 per cent. of the ration and when, in addition, corn meal and corn stover were used in the proportion of approximately 30 and 50 per cent., respectively, of the ration. The ration consisted of four pounds of corn meal, two pounds of wheat embryo, one pound of cornstarch and seven pounds of corn stover.

These experiments indicate how a combination may be made to include the material harmful in itself and yet so mask its toxicity with corrective agents as to produce good results.

This is undoubtedly the common experience on the farm. Barn rations are changed occasionally, and summer pasturing comes in as another change. These broken periods with different rations, even if they do occasionally contain some mildly toxic material, are really too short to bring out the effects of toxicity on growth and reproduction. But how much the continued use of the same food carrying a mild toxicity may weaken the animal, making the offspring less vigorous and strong and the mother less resistant to disease, is a question that may well be raised as a result of these experiments. Is a herd receiving wheat products continuously and abundantly more likely to contract contagious abortion, tuberculosis, or is a herd receiving continuously a ration physiologically complete, such as our corn ration, developing a resistance to the ravages of these diseases? These questions we cannot answer at the present time, but in an outbreak of anthrax in the university herd the only losses we saw in our experimental herd were among the calves. When farmers use wheat straw or oat straw too freely as a roughage they will likewise arise troubles in reproduction. These losses, such as the good roughage, as corn stover or

mailed hay is raised constant of quite. Pention of tendan. We are in much tr among co such who as these an ace of factors in trition an We too co of the far little imp in the reality, corn strati. The various, vitamins, latory fun health and as wheat straw, and hays, which roughage, sufficient, or imp ments. Of these available m are at the to be defec fertile soil and found the safe rough

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H. Percy

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mixed hay — preferably legume hay — is mixed with the straw, the mineral content of the ration will be inadequate. Premature birth and the retention of the after-birth, with its attendant dangers, will surely occur. We are informed that there is already much trouble with reproduction among cows in the Dalotas whenever much wheat straw is fed. Such facts as these must emphasize the importance of an understanding of all the factors involved in the normal nutrition and reproduction of animals. We too often think of roughage of the farm as so much filler and of little importance in the vigor of life. In reality, good roughage, such as corn stover, clover or alfalfa hay, is the carrier of an adequate supply of vitamins, and these in their regulatory functions are indispensable to health and vigor. A roughage such as wheat straw, oat straw, barley straw, and possibly some of our grass hays, when used as the sole source of roughage, may supply either an insufficient quantity of mineral matter or an improper balance of mineral matter. The mineral content of each of these straws is influenced by the available supply in the soil, and straws grown on poor soils are more likely to be deficient than those grown on fertile soils. In any case we have not found the straws when used alone as a roughage for breeding cows.

(To be continued.)

FARM CHATS

Tales From the Dictionary

H. Percy Blatchford, Hants Co., N.S.

THE orator, picturing the eruptions of this world, waved his hand and in the full, throaty tones affected by rators, exclaimed: "In sorrow, where can I find comfort; in poverty, where can I find plenty or even competence; homeless, alone, where can I find friendship, help, companionship, happiness?" which a little girl broke in: "Please Sir, in our big Dictionary."

So, outside of the papers of history, when the Normans conquered Britain, and took the fat portions, driving the Saxons to the fields to till the ground that their masters might eat the fruits, the Dictionary tells us the story. The things of the farm, as pig, cow, calf, sheep, are all Saxon words; but they appeared on the table as pork, beef, veal, mutton; all of which words are Norman—French in origin.

We look back, away beyond Julius Caesar, for the Latin word for "farmhouse" is "atrium." Apparently nothing strange about that; but there is "Atricola," though masculine today, is in the first or feminine declension. It tells us that the first cultivators of the soil were probably were women. It tells us the same tale of ancient Latins that travellers tell us of savage lands to-day: the man fought, or hunted or loafed; while the women sowed.

Other words open the door of the Saxon cottage and show us the skillful mother at the loom, weaving; the weaver; the wife;—the "wife." Her girls are at the less difficult task of spinning;—spinsters; and so the young maids, not the "old maids" were "spinsters." The young girls assisted too in the barn chores; they did the milking; for the word "daughter" means the "milker." This very sentence, when analyzed, tells a further tale. The "churl" was first a slave; because churl and thurl are the same word; and thurl comes from "thurlan," the Saxon word for "to bore." The reason was that: "to mark of the slave among the Saxons, as among their Hebrew ancestors, was the hole "bored" in the ear. (Ex. 21:6.) He was often, too, a bed-na-

tured fellow; and no wonder, considering the drudgery of his work in the old castle kitchens. But in time, boys got too valiant, or above their job; and so their sister was put in the scullery. Thus she was called the "churl," the "gurl," the "giri." The father in a fashion has held his job. He was then, as now, the "fader," that is, the "feeder."

It is after all an interesting old book, the Dictionary; and there may have been something to be recommended in the ambitious darkey's method: who in his strivings after education had learned by heart the first 20 pages of Webster's unabridged.

A man left his umbrella in the stand in a hotel, with a card bearing the following inscription attached to it: "This umbrella belongs to a man who can deal a blow of two hundred and fifty pounds weight. I shall be back in ten minutes."

On returning to seek his property he found in its place a card thus inscribed: "This card was left here by a man who can run twelve miles an hour. I shall not be back."

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PETERBORO AND TORONTO

"Read not to contradict and to confute nor to believe and take for granted, but to weigh and consider."—Bacon.

The Military Service Act

THOSE farmers who feel disappointed that the U. F. O. is unable to bring sufficient pressure to bear upon the Government to induce it to suddenly revoke the Order-in-Council in reference to the Military Service Act, that has caused all the trouble, are expecting the impossible. With only some thirty-five farmers in the House of Commons out of a House of over 230 members, how can farmers expect that they can compel the Government to change its policy hastily on a matter which it considered as carefully as it did the recent Order-in-Council? Were there 125,000 organized farmers in Ontario instead of less than 20,000, and had these farmers at the last Dominion election elected enough farmers to the House of Commons to adequately represent the rural constituencies, the probability is that the Order-in-Council would never have been passed, and that had it been passed the Government could have been forced to revoke it.

A splendid effort has been made by the U. F. O., and it still being made, to give expression to the strong resentment of the Government's action by its aroused among farmers throughout Canada. The Government, undoubtedly, is hoping that if it sits tight the agitation will in time die out. All that can be done is for the farmers to continue to organize and to continue to bring such pressure to bear on their members in the House of Commons and through them on the Government that in time, if not immediately, the Government will see how disastrous its action is proving to the cause of increased food production, and thereby to the Empire, and be led in consequence to amend its stand accordingly. Just as the Motherland found, it necessary to withdraw men from the fighting forces and return them to the farms in England, it is not impossible that some of the young men that have recently been drafted, and who may be sent abroad may yet be brought back to the Canadian farms from which they have been taken, because it will be found that there is where they can render the most effective service to the Empire.

If the present situation in regard to the Military

Service Act but serves to prove to the farmers of Eastern Canada their impotence to lead the Government at Ottawa to pay heed to their views, and thereby results in the farmers' movement being sufficiently strengthened to give it the power it now lacks, good will come out of even the present unfortunate conditions. As farmers we should see that it does.

Build the Silo

THE briefest and best argument for a silo on every dairy farm is supplied by the following table, which is being used in connection with Indiana's campaign for 10,000 more silos this year on the farms of the "Hoosier" state.

Comparative Values of Grain and Silage.	
When grain costs	Silage is worth
\$1.25 per hundred	\$ 5.00 per ton
1.50 "	6.00 "
1.75 "	7.00 "
2.00 "	8.00 "
2.25 "	9.00 "
2.50 "	10.00 "
2.75 "	11.00 "
3.00 "	12.00 "

The average price of the grain being fed to dairy cows at the present time is at least \$2.50 a cwt. This would give corn-ensilage a value of \$10 a ton, or a value per acre with only a fair crop of 120. This estimate may seem high when the price of hay is considered and probably it is high. Silage, however, supplies the succulence that cannot be incorporated into a hay ration and gives an extra value all its own. Even with labor as scarce as it is this year, there can be no question but that corn is one of the most profitable crops to grow, and a silo to house it in the best investment that can be made on the average dairy farm. Even in sections where corn cannot be grown successfully, dairymen are finding ways of utilizing the silo to supply them with cheap succulence.

The Dairyman's Future

THE dairy industry is now experiencing its time of testing. Conditions are not so favorable to the dairy farmer comparatively as they were a few years ago. Feeds have advanced out of all proportion to the price of dairy products. Labor, unless one has it within his own family, is difficult to get. As a result, the farmer who has depended largely on his hired men and hired help is now up against it, and a few dairymen here and there have sold the most of their cows. This discouragement is traceable to several factors over which the farmer has no control and to a still greater number of factors for which he alone is responsible.

Among the first is the war time demand for coarse grains. Human consumptive needs are coming in competition with the cows for a supply of coarse grains and milling regulations have reduced the quantities of by-products available. This demand for human needs is accountable in large measure for unprecedented price increases. The second uncontrollable factor is the hostility of the consuming public to an advance in the price of milk and its products commensurate with the increased cost of production. Both of these are serious factors in the situation. We notice, however, that the men who have good cows, who grow all of their own roughage and if of good quality and who are placing a minimum of dependence on the feed merchant, are not selling their cows and are probably more prosperous than ever before. Good cows, lots of silage or roots and an abundance of good clover or alfalfa hay, is still a winning combination.

Even with these three, however, the farmer-on good strong land may feel that he would have more profit at the end of the year if he specialized in grain growing than he has by feeding the most of his products to dairy cows. This opinion has been voiced by such a good dairyman as E. H. Stonehouse, who spoke for many when he said that last year he would have been further ahead to have sold grain and surplus stock and given milk production the go-by. While this may in a measure be true under present conditions we cannot afford to neglect

the future. The fertility of the soil and future markets for dairy cows and dairy products must both be considered. Dairy cows in Europe have been slaughtered by the millions to meet the pressing necessities of the moment. Already three foreign governments have commissions in America inquiring into the possibilities of purchasing great numbers of dairy cows here to replenish the herds of Europe when the war is over. Of still greater import in the lesson taught by all past wars,—that grain quotations always drop sharply on the conclusion of peace but that animal and dairy products follow more slowly because of the time required to restore normal production. If present conditions do not seem encouraging, the future at least is filled with hope; and the rewards of the future are to him who keeps his dairy herd at or near its full strength.

Keeping the Herd Clean

ONE of the finest herds of pure bred dairy cattle in Canada has been twice reduced almost to the vanishing point by tuberculosis. In this herd the tuberculin test has been used regularly. For many years all the reactors had been eliminated as soon as detected. For years only an occasional animal would be discovered reacting to the test and the disease never got a dangerous foothold. The two epidemics that almost cleaned out the herd on two successive occasions came suddenly and were traced in both cases to purchased animals. The animals were purchased, but failed to react. They were then considered clean and admitted to the herd.

The early experiences that followed were due to a lack of knowledge of the limit of the tuberculin test. It is now known that an animal may be exposed to tuberculosis, but the disease may not have sufficiently developed to cause it to react. An animal far gone with tuberculosis will occasionally fail to react to the test. The test, too, is capable of manipulation; for instance, if an animal has had an injection of tuberculin solution a few days before the real test is made, it will show no reaction. Such manipulation as this was suspected in the case under review.

It would seem that the only safe procedure is to quarantine animals newly purchased for a couple of months at least, and then re-test. If any react to the re-test, the reactors should be eliminated and the remaining animals quarantined for a further period, or until such time as there have been at least two negative results. This may seem an expensive procedure. But it is not one-half so expensive as the loss of a valuable herd through infection by purchased animals.

A Man of His Word.

(Hoard's Dairyman.)

ONE of the real luxuries of life is to deal with a thoroughly honest man. Not long since we received a letter from a hired man who spoke in praise of his employer in very significant terms, but requested that we do not publish his letter. Our paragraph of his letter we venture to copy. He says:

"It is a comfort to work for Mr. — for he is so reliable, a man of his word. Whether he makes or loses by his promise it is all the same; he stands by it without a murmur for as he said to me once: 'I consider my word the most sacred thing of my life.' I have worked for farmers of far different character. They were looking for some loop-hole to get out of doing as they agreed, particularly if they were going to lose by it. A hired man very quickly gets on to the make-up of the man he works for."

When we were a young man in Madison county, New York, we remember that a very high standard of business honor prevailed among all of the leading farmers of that section. It is so to-day with all right thinking men in every calling. But this standard is just as necessary with the hired man as with the farmer. We must all face our duty squarely without hope of excuse if we fail to do so. Money gained at expense of our manly honor has always been paid for dearly. Every man must set up his own standard of business dealing. He will find that it will pay richly if the standard is a high one.

Farmers Determined in Their Opposition

(Continued from page 6.)

apparently by a majority of the residents of the towns and cities throughout Canada, who, for the most part, are people utterly unaware of how disastrously the provisions of the order-in-council are working out in the country districts. In addition the Government claimed to have received letters from many farmers commending it for its action. Under these conditions it is very difficult for the farmers to receive the consideration from the Government that they otherwise might. For the same reason also it will be almost impossible for the department that has been sent to Ottawa to receive favorable action at any early date by the Government, especially in view of the fact that the Premier and several members of the Cabinet, including Hon. Mr. Rowell, are in England. Other members of the Cabinet also are away from the Capital and the House of Commons is not sitting so it will be impossible for the committee to lay their views before the members of the House. Nevertheless, it is hoped that by interviewing the acting Premier, Sir George E. Foster, and possibly other members of the Cabinet, beneficial results may follow.

A Representative Meeting.

The meeting was a most representative one. Possibly it was the largest meeting of farmers that has ever been held in Toronto. Interest in the proceedings was considerably increased by the presence of several farmers and speakers from the Province of Quebec, including J. W. Levesque, M.L.A. representing the Gardeners' Association of Quebec, and Jean Masson, of the Comptoir Cooperative of Montreal. There were present also President H. W. Wood, of the United Farmers of Alberta, Roderick McKenzie, secretary of the Canadian Council of Agriculture, and T. Ross, of Prince Edward Island. The latter expressed the strong opposition of the farmers of his province.

The opening meeting was held in the Convention Hall of the Labor Temple on Church Street, where the annual convention of the U.F.O. was held last December. It was soon apparent, however, that this hall would be too small and it was decided to engage Massey Hall, although it was understood that the expense would be about \$150. The afternoon meeting opened in Massey Hall, where the attendance was so large that it filled the lower floor and almost filled the second gallery. It would seem safe to estimate that the attendance was from 2,000 to 2,500. It included farmers from all parts of the province. An unfortunate incident connected with the convention was the death of two of the delegates, William Lacey and Richard Goggins, said to be from Hastings County, who were asphyxiated Friday night in their room at the Kirby House on Queen Street.

Purpose of the Meeting.

After opening the Friday morning session President Halbert called on Mr. C. W. Gurney, of Paris, the chairman of the committee that was left in Ottawa to continue negotiations with the Government, to explain what had been accomplished by the committee. Mr. Gurney stated that five members of the Government, when the committee first went to Ottawa, had heard their views. Sir Robert Borden and General McWburn gave them a cold reception. Hon. Mr. Rowell and Hon. Mr. Crerar were more sympathetic. The committee was given assurance that the question would be re-opened. Sir George Foster, Hon. Mr. Crerar and Hon. Mr. Rowell were favorable to such action. General McWburn, however, said he would not consider exemptions under any circumstances and that he would have nothing to do with any changes proposed in the Act. It was the

strong stand taken by him apparently that finally led the Government not to change its stand. While a good deal had been said about conscription, city labor and sending it to the farms Mr. Gurney said there appeared to be reason to believe that there was an agreement between the labor men, the manufacturers and the Government to interfere with city labor as little as possible and to make the main drive for men against the farmers of Ontario and Ontario. Mr. Gurney was of the opinion that the fight should be continued earnestly and that the Government should not be given any respite until it had revoked its order.

President Halbert appointed a resolutions committee composed of George Brodie, of Newmarket; A. A. Powers of Orillia; B. Cowan, of Farm and Dairy; Rev. W. F. Carpenter, of Hornby's Mills, and Peter Porter, of Burford. This committee presented its report at the afternoon session.

Secretary Morris called attention to the memorial prepared by the farmers for submission to the Government had been printed in Hansard, in the records of the Senate, in many papers and a fight being reprinted by the U. O. in a neat form so that copies might be preserved by farmers to show how they had not hesitated to call the Government itself into question. It overstepped its powers as it had done in many ways since the outbreak of the war.

Friday Afternoon Session.

On the opening of the Friday afternoon session in Massey Hall a considerable number of ladies who were present were invited to accept seats on the platform which they did amid applause. Great interest was manifested when it was announced that President Wood of the United Farmers of Alberta, was present and would make a statement in reference to the famous telegram sent by four members of the executive of that association to the Government. Mr. Wood said that he felt himself to be in a peculiar and embarrassing position. He had not attended the meeting of his executive when the telegram was drafted. He stated emphatically that his executive when it sent the telegram, had no idea it would reach the Government just when it did, or they would not have sent it at that time.

Mr. Wood explained that he had been in the United States and arrived in Winnipeg the night the executive committee was meeting in Calgary. Having been out of Canada for some time he was not fully posted on what had taken place but telegraphed the committee asking them what they were planning to do. He told them that he considered the situation was critical, that he believed the action of the Government would have a serious effect on production and that while it might not be wise to take an extreme stand against the Government, he believed that the Government should be made to take full responsibility for its action. Later the committee telegraphed him what it was proposed to telegraph the Government. Telegrams were not clearly worded, and while he felt he could endorse the idea he thought they were trying to express, he had not felt altogether sure about the wording. Later, when the telegram was published, it was not worded the way he had expected. Mr. Wood said that Alberta is feeling the effects of the Government's action even more serious than in Ontario, that strong opposition to the order-in-council has been expressed throughout Alberta, that there was a feeling that a mistake had been made in the sending of the telegram, the effects of which Alberta farmers were most anxious to remove, especially as they felt that the mistake had been their's. "Our interests and yours," said Mr.

(Continued on page 19.)

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In the Spy Net

By Cmel Parker in Farm and Fireside.

(Continued from last week.)

"WHEN what is it? Does anyone engaged in an innocent pursuit act in this way? Think of the suspicious things he has done—telling you, after much hesitation, that his name is Carl Stackpoole, while in his bag were numerous belongings marked R. K. M. . . . No, don't say that he might have borrowed these things, for he could easily have told you that; but instead he deliberately told you that he had no hair brushes, while there were two in this bag marked with those initials. Why does he avoid all mention of his profession or his family or his home?—even the simplest questions Aunt Sarah asks him he evades. Then, to sneak out of the house at night when he thinks everyone is safely in bed! Heaven knows how many nights he has gone that you don't know about! And to-night you yourself saw him go—obviously in a boat. That proves another thing, serious as that is, but anything else—whatever he is doing he is not acting alone. At least one other person shares his secret, but that person is not you."

Hour after hour she sat, wide-eyed, unable to form any plan, unable to think beyond her present moments of agony.

When Lisa called her the next morning she said with truthfulness that her head ached and that she wanted no breakfast. Having been awakened, however, she found it impossible to go back to sleep, and as she pictured her as a ghost, she went upstairs alone in the dining-room she half wished that she had decided to go down.

So deeply had the roots of her affection for him gone down into her heart, hitherto untouched by any man, that it was impossible to tear them up all at once.

"This is an unforgivable thing!" said common sense. For already Eugenia's mind was on a trail.

Shortly after nine the girl rose and went directly to her aunt's room.

"Dear me, Eugenia!" said that lady. "You look as pale as a sheet. Speaking of ghosts, I've just been reading such a terrible and yet thrilling account of the Stepham. You know the Sunday edition of the *Savannah* papers came yesterday, but I didn't have time to do more than glance over them, because you and Mr. Stackpoole came up last night—not, of course, that I wasn't glad to see you. I do think he is such a courteous young man; for all the world like poor Charlie Daingerfield. But as I was saying, I looked over the papers this morning while I was waiting for Lisa to come up, and I read an interesting letter which an Atlanta boy—Simmons, I think his name was—wrote to his family. He had enlisted in the navy, and was one of the crew of the Stepham."

Eugenia waited with breathless interest.

"What did he say?" she asked.

"He said that the Stepham had been

tried out, and on her first trip had proved to be an excellent boat—the best type of destroyer we have, as a matter of fact. That was the reason, you see, that no one could learn anything of her a short time ago. Do you remember, I saw something in the papers about her, and I was afraid that she had been sunk, and I had all those mufflers knitted for her poor sailors!"

"Was that all he said—just that she was a good boat?"

"Oh, dear me, no! The important thing was that in some mysterious



The Auto on the Farm Makes Such Picnic Possible.

What is more enjoyed by the farm family than a picnic by automobile to a quiet spot by the water's edge where a picnic may be indulged in such as the one here pictured. While a hike of this nature may not be of very frequent occurrence in the busy life on the farm, for this reason it is all the more enjoyed when it does take place.

way the second time they attempted to take her out they found that she had been damaged. No one knows how. They repaired her again, and tried her out; but again she had been damaged. Of course they suspected that some member of the crew was in the enemy's service; but they can't locate anyone who is even suspicious. Although this letter doesn't say so, I judge that they have been trying her out very near here. You know there used to be a naval station south of here."

Another idea had occurred to Eugenia.

"Does Mr. Stackpoole ever read the papers when he comes here?" she asked.

"Oh, yes; always. He asks me what news there is, and then he looks over the papers himself. Oh, I do think this Stepham affair is simply terrible! Several lives have already been lost through the machinations of those fiends who are trying to wreck her."

When Eugenia went back to her room she carried with her that section of the paper which told of the Stepham's plight. She put on a dress of soft rose color, hoping that its glow would lessen the pallor of her cheeks, and tying on a wide-brimmed hat, she went downstairs.

It was partly with relief and partly with regret that she realized that her guest was not in sight; for, although

the thought of seeing him was painful, the thought of not seeing him was unendurable. She went out into the garden. As she turned the corner she saw him sitting on a bench beneath an orange tree.

"Oh, but I am glad to see you!" he exclaimed. "How is your headache?"

Never had his voice seemed so magnetically sympathetic. For the moment she could not believe that last night had ever existed.

"I am much better," she said, "let's pick some roses for Aunt Sarah."

He looked as if he would have preferred more personal conversation, but he acquiesced.

"Shall we pick red or pink?" he asked.

"Both. If we get only pink she's sure to say they are very pretty, but she has always preferred red. And if we get only red, it's sure to be pink like this. Unless, of course, you took them to her. As Lisa says, you must have her 'hyped.'"

Then she remembered that within half an hour she had discovered a possible reason for his devotion, in no way connected with a desire to please Miss Burr, and she was silent.

After her basket had been filled she sat down on the bench, glad to bask in the sun, and he sat cross-legged on the grass, smoking a pipe with an air of deep contentment. A horrible idea came to her—could he be merely pretending to love her with some possible gain in view?

she's going to name it for you, Miss, and the thought struck her. Ole Sam's most tickled to hear you. Ole Sam's "I don't wonder. I'm delighted too. And I shall go to see her this very afternoon."

"Isn't it too far for you to walk?" the man asked as they set down at the table.

"No, indeed. It's scarcely three miles, there's back to the house, one of those cottages at the end of the island, you know. The fresh air will do me good." She expected him to offer to accompany her, but he said nothing about it.

It was hard for her to reconcile his contradictions. Before she had met him, life had seemed a simple thing to Eugenia Stepham; now it seemed cruelly complex. There was no one in all the world to whom she could go for guidance, and she felt woefully alone and incompetent. She had always supposed that when love came it smoothed out all difficulties and swept away all obstacles, but her loss had brought the most harassing, the most saddening problems of her life.

Unaware of how much nearer she felt to him when she next saw him, Eugenia started after luncheon, carrying a large basket of tributes to her namesake.

Having admired the baby until her adjectives were exhausted, Eugenia started home by a roundabout trail which led along the beach for some distance.

Suddenly her keen vision detected a small boat bobbing up and down some distance from the shore. It astonished her to see so small a craft in these waters, and she speculated idly upon its destination.

To her consternation she saw that it was heading directly for the spot from which she had seen Stackpoole disappear the night before.

Hastily she slipped behind the giant trees, confident that she had not been seen and should not be. She was sure that there was something sinister in the boat's approach, for the proper landing was some distance away, and this boat had avoided seeking instead the more hazardous and concealed landing for which it was now making.

She moved swiftly along, sheltered by the heavy growth of trees and foliage, until she had reached a secluded spot from which she could only watch the approaching boat; but also the path down which she had seen her guest come the night before.

She saw a man jump out of the boat; pull it on shore, and then pass up and down the beach as if fearful of being observed. Apparently satisfied that no one was in sight, he walked straight up the beach, as if consulting his steps. Halfway between the water and the outstanding trees of the forest he stopped, knelt down, and began digging into the sand with his fingers.

He pulled up something which seemed to the girl to be a small herb, drew something white from his pocket, placed this in the box, again knelt down, and re-covered it with sand. He looked all around once more, then went hastily back to his boat, pushed off, jumped in, and in another second was rowing hard away from the shore.

The entire incident had not taken more than a minute by actual time; but to Eugenia it was as vivid as if she had seen it enacted over and over again. She had not, and she would never forget that scene in all her life.

The boat seemed to move with agonizing slowness, for she was so filled with fear that Stackpoole appeared to her to be moving very slowly, that whatever had been placed in the box in the sand had been put there by him, and it occurred to her that perhaps the reason for his not accompanying her on her visit to the end of the island had been due to his desire to receive this message as soon as it arrived.

(Continued next week.)

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The Upward Look

Through the Holy Spirit

THE abiding which ye have received of Him, abideth in you; and even as it hath taught you, ye shall abide in Him."—1 John, ch. 7, v. 17.

How beautiful the thought of a life always abiding in Christ! The longer we think of it, the more attractive it becomes. And yet how often it is that the precious words, "Abide in Me," are heard by the young disciple with a sigh! It is as if he understands so little what they really mean, and can realize so little how this full enjoyment can be attained. He longs for some one who could make it perfectly clear, and continually again remind him that the abiding is in very deed within his reach. If such an one would but listen to the word we have from John, what hope and joy it would bring! It gives us the divine assurance that we have the abiding of the Holy Spirit to teach us how to abide in Christ.

What holds true of all spiritual truth is specially true of the abiding in Christ: We must live and experience truth in order to know it. Life-fellowship with Jesus is the only school for the science of heavenly things. "What I do, though knowest not now, but I thought shall know hereafter," is a law of the kingdom, especially true of the daily cleansing of which it first was spoken, and the daily keeping. Receive what thou dost not comprehend, submit to what thou canst not understand, accept and expect what to reason appears a mystery, believe what looks impossible, walk in a way which thou knowest not,—such are the first lessons in the school of God. "If ye abide in my word, ye shall understand the truth:" In these and other words of God we are taught that there is a habit of mind and life which precedes the understanding of the truth. True discipleship consists in first following, and then knowing the Lord. The believing surrender to Christ, and the submission to His word to expect what appears most improbable, is the only way to the full blessedness of knowing Him.

These principles hold specially good in the teaching of the Holy Spirit. That teaching consists in His speaking the spiritual life within us to that which God has prepared for us, without our always knowing how. On the strength of His promise, and trusting in His faithfulness, the believer yields himself to the leading of the Holy Spirit, without claiming to have it first made clear to the intellect what His will is to do, but consenting to let Him do His work in the soul, and afterwards to know what He has wrought there. Faith trusts the working of the Spirit unseen in the deep recesses of the inner life. And so the word of Christ and the gift of the Spirit are to the believer sufficient guarantee that He will be taught of the Spirit to abide in Christ. By faith he rejoices in what he does not see or feel; he knows, and is content that the blessed Spirit within is doing His work silently but surely, guiding him into the life of full abiding and unbroken communion. The Holy Spirit is the spirit of life in Christ Jesus; it is His work, not only to breathe, but ever to foster and strengthen, and so the believer yields himself in simple trust to the unseen, but most certain law of the Spirit of life working within him, his faith will pass into knowledge. It will be revealed by the Spirit's light revealing in the Word what has already been wrought by the Spirit's power in the life.

Apply this now to the promise of the Spirit's teaching us to abide in Christ. The Holy Spirit is indeed the

mighty power of God. In the expression, "the fellowship of the Spirit," we are taught what His highest work is. He is the bond of fellowship between the Father and the Son; by Him they are one. He is the bond of fellowship between all believers; by Him they are one. Above all, He is the bond of fellowship between Christ and believers; He is the life-sap through which Vine and branch grow into real and living oneness; by Him we are one. And we can be assured of that if we do but believe in His presence and working. If we do but watch not to grieve Him, because we know that He is in us, if we wait and pray to be filled with Him, He will teach us how to abide. First guiding our will to a whole-hearted cleaving to Christ, then quickening our faith into ever larger confidence and expectation, then breaking into our hearts a peace and joy that pass understanding. He teaches us to abide, we scarce know how. Then coming through the heart, and life into the understanding. He makes us know the truth,—not as mere thought-truth, but as the truth which is in Christ Jesus, the revelation into the mind of the light of what He has already made a reality in the life. "The life was the light of men."

In view of such teaching, it is clear how if we would have the Spirit to guide us into the abiding life, our first need is—quiet restful faith. Amid all the questions and difficulties that may come up in connection with our striving to abide in Christ,—amid all the longings we may sometimes feel to have a Christian of experience to aid us,—amid the frequent painful consciousness of failure, of ignorance, of helplessness,—do let us hold fast the blessed confidence: We have the union of the Holy One to teach us to abide in Him.

It is impossible to live the life of full abiding without being full of the Holy Spirit; hence the fulness of the Spirit is indeed thy daily portion. Be sure and take time in prayer to dwell at the footstool of the throne

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of God and the Lamb, whence flows the river of the water of life. It is there, and only there, that thou canst be filled with the Spirit. Cultivate carefully the habit of daily, yea, continually honoring Him by the quiet, respectful confidence that He is doing His work within. Let faith in His dwelling make thee jealous of what ever could grieve Him,—the spirit of the world or the actings of self and the flesh. Let that faith seek its nourishment in the Word and all that says of the Spirit, His power, His comfort, and His work. It is faith in Jesus that brings the anointing; the anointing leads to Jesus, and to the abiding in Him alone.

The Holy Spirit was given for this one purpose,—that the glorious redemption and life in Christ might with Divine power be conveyed and communicated to us. We have the Holy Spirit to make the living Christ, in all His saving power, and in the completeness of His victory over sin, ever present with us. It is this that constitutes Him the Comforter: with Him we need never mourn an absent Christ. Let us therefore, as often as we read, or meditate, or pray in connection with this abiding in Christ reckon upon it as a settled thing that we have the Spirit of God Himself within us, teaching, and guiding, and working. Let us rejoice in the confidence that we must succeed in all our desires, because the Holy Spirit is working all the while with secret but Divine power in the soul that does not hinder Him by its unbelief.

Canning the Early Vegetables

Mrs. M. L. Woelard, Toronto.
"THIS is the day of the man who can." So wrote Carlyle. But that was yesterday, and to-day is the day of the woman who can. But her cans are, or should be, glass jars filled with the early vegetables.

On every available signpost are placed placards bearing the words in large red letters: "Save Food or Starve," and these plain words convey a message to everyone that the time has come to act seriously.

Last year the canning campaign launched by the Ontario Department of Agriculture, Women's Institutes Branch, proved a boon to many. The instructions were thorough and organization complete in every detail. The Women's Institutes did a splendid work in helping women all over the Province, and the Department were begged by other organizations to send their demonstrators here, there, and everywhere, and the women of the Province are aroused to the great necessity of saving the perishable food.

This year the situation is much more serious, and not one bit of food should be allowed to waste.

We can start now and take care of the early vegetables. By using all we can on the table, we save wheat and meat for overseas. The slogan has always been: "Eat Vegetables and be Healthy," and I will continue to use that slogan.

Canadians have not used enough vegetables in the past, and that reason accounts for much of the physical unfitness found in the men examined for overseas—a lack of the sulphur, salts and nitrogen, etc., of which quantities are found in green vegetables. At this season of the year, when our system requires toning up, we should use more of nature's remedies, such as watercress, rhubarb, lettuce, young onions, in fact all green stuffs, and nothing will stimulate the appetite more than a tempting salad.

It is well established fact that vegetables are necessary to the human system. We should know more of our fruits and vegetables as there is less health. Many a mother has said to me: "My family do not care for vegetables, so I never use them." The answer is: "Come, everyone must eat them, to save other food."

The canning of vegetables, with the exception of corn, peas, and tomatoes, has not been carried on by the women in our Province to any great extent until within the last two years, when almost every variety has been canned. Some women have made a great success of the canning. Others have had failures, but will try again, for our women of Canada are true patriots and know we must save and serve.

We are very apt to leave the canning of the vegetables until later in the season. This will be a great pity, as so much delicious stuff will be missed. Get busy as soon as the first vegetables are ready, and can as many jars as possible.

One thing is certain: We will never return to the factory-canned vegetables—and there is such a difference in price. A small bottle of tomato catsup, holding one cupful, a scant one at that, will cost from twenty-five cents to thirty-five cents. You can make eight soup cupfuls, or two quart, for the price of the little bottle.

This year we are making a great effort to get the people interested in drying the vegetables and fruits, and much has been printed concerning the dehydration plants in use in the U.S. Every woman can use a rack over her stove and dry any vegetable or fruit. Especially can we have a soup mixture containing such vegetables as onions, parsnips, carrots, potatoes, parsley, having it all-ways ready, just as fresh as the fresh vegetables. As I say: "Eat Vegetables and be Healthy."

Note.—In our issue of next week Mrs. Woelard will give some practical pointers concerning the canning of various kinds of vegetables.

More Homes Wanted

A FEW weeks ago we published information concerning children for whom homes were wanted. Several of Our Polks got in touch with the inspectors of the Children's Aid Societies who were in search of homes for these children, and we anticipate that good homes were secured.

Mr. Geo. Powell, Inspector, Children's Aid Society, Peterboro, Ont., advises us that he has three children, all boys, for whom he is anxious to find good homes, preferably in the county of Peterboro. Their ages are one year, one between two and three years, and one between five and six years. Mr. Powell tells us that some months ago, when we put an announcement in our columns that he wished to secure homes for eight children, the response from Our Polks more than filled his requirements, so we trust that these children may also find good homes.

We have advised also from Mr. Hugh Ferguson, Inspector, Children's Aid and Humane Society, Stratford, Ont., who is looking for a home for a boy, and writes us as follows: "We have a pleasing, healthy, promising boy in readiness for a home with a good Roman Catholic family. He is three years of age."

Anyone desiring to secure further particulars concerning these children may do so by communicating with Mr. Powell and Mr. Ferguson.

Mr. Amos Tovel, Inspector, Children's Aid Society, Guelph, Ont., writes us as follows: "I am very grateful for your assistance. Many applications were received as a result of your kind notice in a recent issue of Farm and Dairy. Homes were opened for four of the little boys we had need of for them. The twins, brother and sister, whom we wished to place with a Roman Catholic family were not called for and are yet awaiting a home. Bobby aged five, Billy aged four and Frank aged two, are three brothers. They are desirable boys. They need good homes. I hope to send you a photo of these in a few days."

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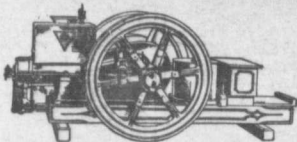
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Butter and Cheese Makers are invited to send contributions to this department, to ask questions on matters relating to cheese making, and to suggest subjects for discussion.

Pasteurization in Wisconsin

ALL creameries and cheese factories in the State of Wisconsin will be required to pasteurize their by-products after June 1st of this year. The conditions which are leading to the enforcement of this legislation are a strong argument for pasteurization everywhere. Last year Wisconsin lost \$1,718,000 from hogs infected by tuberculosis; 24 1/2 per cent. of all the hogs coming into Milwaukee packing plants for slaughter were tubercular, as against a much smaller figure for those coming into St. Paul, the lower figure at the latter place being partly due to the fact that Minnesota has had a law requiring pasteurization of hogs for many years. Packers have urged the legislature of Wisconsin that unless the continuous infection of hogs from that State was stopped, Wisconsin hogs would be discriminated against in price.

The Wisconsin state has its application in every cheese factory district where whey is not pasteurized and in every skim milk creamery where the skim milk goes to the creaming tank. In Canada there are still large sections of the country where unpasteurized whey and skim milk is still free to distribute the germs of disease over the whole district. Makers, we believe, have understood the situation for a long time. The difficulty in making pasteurization universal has been that the benefit is derived almost altogether by the consumer, and they have not always been willing to meet the extra expense involved in pasteurization. Experiences such as that of Wisconsin should emphasize the need of universal pasteurization of dairy by-products.

A Successful B.C. Creamery

ALMOST all of the farmers in the Cowichan district of British Columbia are members of the Cowichan Creamery Association, one of the most successful cooperative ventures in the Sunset Province. The Cowichan creamery was built cooperatively in 1906, and was first intended merely as a butter factory. It is now a centre of cooperative trade for the district, handling feeds, fertilizers, poultry and eggs, and acting generally as a clearing house for farm produce and farm supplies.

The manufacture of butter is, of course, the chief business of the association. Cream is delivered by the farmers themselves two days each week during the winter, and three days in summer. On the morning following the collection of cream, the butter made from it is selling in the stores of Vancouver and elsewhere, and must be disposed of before the next day's churning is put in its place. The cream is carried to the creamery, where it is graded when received at the creamery; the butter is made under expert supervision, but the manager believes that immediate marketing is an important point in receiving the top price, as the reputation of any creamery brand depends on its condition when it reaches the consumer. To insure that Cowichan butter is sold immediately, an office and staff are maintained at Victoria. Eggs, too, are collected and distributed on the same basis.

Four years ago the association erected an elevator plant capable of taking care of 10 cars of feed, and at the same time they installed machinery for grinding the oats and other grain crops. Grain crops are

sold or exchanged for mill feeds, whichever the market suggests as more profitable. The business is conducted by seven directors elected yearly, and a capable and efficient business manager is employed. The Cowichan Creamery Association is a splendid example of a successful local cooperative association.

Trouble With Boiler

I HAVE an eight h.p. boiler in my cheese factory, and I am using a three-quarter Sauerbrey injector to put water into it. It does not work very well as it takes a long time to draw clear, and will only put a little at that. The injector has been used one or two seasons in that water. It does not look dirty, and will run clear through clean water. The three-quarter pipe is enlarged from one inch to 1 1/2 in. J. M. Cullison Co., Ont.

There are so many things that may cause an injector to fail to put water into the boiler that it is very hard to say from the information furnished just why I would be the source of the trouble in this particular case. The trouble may be in the injector, or it may be in the delivery pipe leading to the boiler. If the steam valve immediately above the injector has been leaking and the boiler has not been kept properly cleaned, sufficient scale might be deposited on the inside of the injector to prevent it from giving satisfactory service. Again, the delivery pipe leading to the boiler may be partially clogged with scale, which would require a more steam pressure to make the injector operate. Also, there might be a leak in the suction pipe which would cause trouble. If the injector has become scaled over I would recommend that the injector be taken off and placed over night in a bath made up of two parts of muriatic acid to 10 parts of water. The pipe leading to the boiler might be disconnected at the boiler to see that the same is clear with no deposit of scale. Also examine the check valve between the injector and the boiler. To test whether the suction pipe is tight, plug the overflow of the injector and turn on the steam, which will reveal any defects in that part of the pipe.—L. A. Zafel, Supt. Eastern Dairy School, Kingston, Ont.

The Dairy Branch of Saskatchewan Department of Agriculture will hereafter provide for the inspection of cream-gathering stations. It will also provide for the grading of all creamery butter manufactured in the province and the issuing of certificates regarding its quality, as well as assistance in marketing same when requested.

Air in Horse Stalls

THE average horse stall, with its tight boarded sides and ends is a prison for foul air. At Walkerside Farm, in Essex county, the horse stalls, as well as the horse barn itself, are ventilated. There is a two-inch space between each of the planks which form the side and the front of the stalls.

"When a horse lies down in an ordinary tight stall," remarked Mr. Cramer, the farm foreman, "it lies down in a pen where bad air is imprisoned, and the vitality and vigor of the working team must be lowered by the atmosphere of their stalls. We consider this space between the planks as important, and we believe that the same rule applies to the construction of calf pens as of horse stalls; have them all well ventilated."

Excitement is often the cause of strange telegrams. A merchant who had been one of the passengers on a shipwrecked vessel was rescued almost by a miracle. On arriving at a place from which he could send a telegram, he forwarded the following dispatch to his partner in business:—"I am saved. Try to break it gently to my wife."

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Resolutions Passed at Toronto Convention

(Continued from page 6.)

all shall take time, under the direction of the organized farmers, to visit the farms as possible in different parts of the country in company with representatives of the organized farmers, where the desirous effects of the government's policy will readily be apparent. Only representative farms will be selected, typical of thousands of others.

What Farmers Recommend.

We would recommend that this convention request the Government to secure:

1. That all owners or practical managers of farms be exempted to carry on their work and that in cases where they have already been drafted they be granted extended leave of absence for this purpose.

2. That enough skilled agricultural labor be exempted to supply one skillful man for each one hundred acres or major part thereof in ten of the farming districts and a similar requisite number in districts devoted to special production.

3. That following British precedent which at late date as the Royal proclamation of April 20th of this year, recognizes the need of maintaining sufficient skilled agricultural labor to efficiently cultivate the farms and which has since the beginning of the war conserved the representatives of the farms as to the needs of agriculture, we would ask our Government:

(a) To create an Advisory Board in Agriculture, said board to be constituted of men actually engaged in Agriculture and nominated by whatever central farmers' organization may exist in that Province with whom the whole situation, both from the standpoint of military and productive needs may be taken up and who may assume such responsibility from time to time as the needs of the whole situation may dictate.

(b) That Under the most recent Order in Council given on the 19th of May 24th, by which officers have been specially detailed to deal with applications for leave of absence we recommend, that again following British precedents, appeal tribunals shall be created to deal with extreme cases as developed under the recent Order in Council, and that practical agriculture be represented on the personnel of these tribunals.

4. That the food producing operations of our country be accorded the same consideration by our Government as is given by the Government of the United States to food production in that country.

Consult the Farmers.

Whereas many orders are issuing by the various committees and Boards appointed by the Government, which directly indicate a lack of knowledge upon the subject, which seriously affects the farmers in many instances and

Whereas it is only reasonable that the farmers should be consulted upon matters which directly and vitally affect their interest.

It is therefore resolved that the Federal Government be memorialized to consult with Provincial advisory committees to be selected by the organized farmers in each Province with a view to fitness and efficiency, with whom they may consult in all such cases.

After War Conditions.

Whereas the whole Trade and Financial conditions of Canada have been greatly disarranged by the war, and will require careful re-adjustment to its termination.

It is resolved that an Industrial Re-organization Committee be formed under the Department of Trade and Commerce and consist of agricultural, manufacturing, labor, financial and transportation representatives, and

that a memorial be presented to the Dominion Government looking to the formation of this Committee.

Abolish Titles.

Whereas aristocracy is the great tap-root of the present devastating world-war; and

Whereas aristocracy was the foe of our fathers who, upon this continent sought freedom for its away; and

Whereas it is an aristocracy is rising in our midst by the manufacture and importation of aristocratic titles; and

Whereas a mock aristocracy to-day threatens us with a real aristocracy to-morrow; therefore resolved

That it be both expedient and necessary to abolish all titles in this Dominion of Canada in order that Government of the people, by the people, for the people, may be secured for all coming generations.

Freedom of Speech and Press.

Whereas national and individual freedom have always been constitutional principles of the British Empire; and

Whereas to-day evidences are not lacking of a departure from these noble principles and an official attempt being made to deprive us of these sacred rights through curtailment of the freedom of speech and of the press;

Whereas we believe the democratic people of this Dominion are already chafing under this departure which condition does not tend to promote national unity of progress.

Be it therefore resolved that we call upon our Government to further in this direction, but to trust the people believing that they can fully depend upon every man doing his duty in this day of great national tribulation.

Greater Organization Needed.

Whereas in the light of recent events it is quite clear that the Federal Government do not regard the economy of sufficient importance as a concrete body to cause them to re-examine pre-election promises made with apparent frankness; and

Whereas it is likewise apparent that this unfortunate state of affairs must continue so long as we remain in our present unorganized condition and permit ourselves to be automations for professional politicians and party heelers;

Be it therefore resolved that we hereby pledge ourselves to put forth our united strength to return to our respective neighborhoods to promote organization to the end that the agriculturists of this Dominion may receive the recognition which the greatness of their calling justifies.

Official Organ Wanted Immediately.

The publication committee of the United Farmers of Ontario after mature consideration submit the following:-

That with the exception of the agricultural press the rural view point is public opinion expressed and consequently not being influenced by our organization.

That the individual farmers' opinion on public questions cannot be less they own and control their unpublished organ.

That the growth of the Farmers' Organization having become so widespread it is not only good policy but absolutely necessary that an official organ be established.

Three plans for publication have been submitted and considered by this Committee:-

1. In connection with other farm papers in the Dominion form a chain of papers which would have a uniform plan of action and be influential Dominion wide.

2. A very favorable offer was received to publish an official organ under control of the U.F.O. the publisher to run all risks provided the U.F.O. pay the subscription price of each number.

3. An offer was received from a well established weekly newspaper to sell out our will and equipment provided the paper was controlled and owned by the farmers.

Therefore be it resolved that this mass meeting of the farmers of Ontario approve of the immediate establishment of an official organ by means of a subscription for a stock consisting of shares of \$50 each, 50% payable on allotment and balance to remain on call and that a subsidiary company of the U.F.O. be formed for the purpose of operating this official organ.

Farmers Determined in Their Opposition

(Continued from page 13.)

Wood, "are absolutely identical. As farmers we have great problems to face and solve, not only now, but we will have others after the war is over. We must face these problems through our organizations and their proper solution will require all the strength of all the farmers of the Dominion. I urge that any mistake that we have made shall not be allowed to hinder the development of our organization. You may be sore, but don't be foolish. In Alberta we are not alone. No breach that may have been made by our action should be healed and any assistance that we can give you we are willing to give at any time."

Following Mr. Wood's statement a motion was carried amidst applause asking Mr. Wood to carry back to Alberta the greetings of the farmers of Ontario to the farmers of Alberta. Mr. Roderick McKenzie, Secretary of the Canadian Council of Agriculture, said that when there was a shortage of military equipment the Government consulted with the men who produced such equipment, but when the question of food production arose the farmers were not consulted by the Government. To-day the urban population is the governing part of Canada. As yet the public opinion of the rural population has not been brought to bear on the Government with sufficient strength to enable it to produce results. Hitherto farmers have been too modest. They should form clubs, study public questions and practice the art of public speaking.

Resolutions Adopted.

The resolutions as published in another column were submitted at this session by the Resolutions Committee and adopted unanimously. The object in issuing a statement showing the farmers' attitude was to remove as far as possible, the misunderstanding which exists among city residents thereto.

Daily Papers Scored.

Secretary J. Morrison read an editorial from the Toronto Globe denying the truth of a statement made by himself that the city papers were prejudiced against the farmers, and constantly misrepresented them. The meeting made it apparent that they endorsed the view that had been expressed by Mr. Morrison. Throughout all the afternoon strong resentment was expressed against the daily papers over their stand on questions relating to the farming industry. Mr. Cowan of Farm and Dairy, expressed the belief that dangerous legislation is being created by the growing misunderstanding on the part of the city man of the farmer and of many farmers concerning the viewpoint of the city men. When he expressed the view that editors do not deliberately misrepresent questions in a way calculated to injure farmers as a class there was a loud outburst of dissent. Later Mr. Cowan was allowed to read a number of the articles to which farmers

take exception are written by men utterly unfamiliar with farm conditions and who have, by means of knowing and having the effect in the country of the articles they write. They were honest from their viewpoint in what they wrote. This situation was causing most unfortunate results. Some action should be done to bring about a better understanding between these two great classes of citizens.

An Official Organ.

Mr. J. N. Kernighan, of Goderich, the chairman of the committee appointed to study the annual convention of the U. P. O., to see what could be taken to establish an official organ, presented through President Halbert, the report of the committee. It is published among the resolutions on this page. The meeting was enthusiastically in favor of action being taken. A strong desire was expressed that a daily paper should be started. In reply to a question as to whether a daily paper would cost the reply was given that \$1,000,000 would be needed. In order to determine the feasibility of establishing a paper and the suggestions farmers would be likely to give it might be ascertained Mr. R. W. E. Burnaby, the president of the United Farmers' Company, invited the delegates to sign cards stating how much they would subscribe for the purpose of starting an official organ of some kind. Pledges were received for this purpose at the afternoon meeting exceeding \$10,000. The matter was taken up again by Mr. Burnaby at the evening meeting when additional pledges were secured which brought the total to \$25,700. The delegates appeared to be about unanimous that money would be subscribed liberally for this purpose by the members of their clubs and to them properly. Some of the subscribers promised were as high as \$500. While these pledges cannot all be considered binding, it is probable that at least \$20,000 could be raised for this purpose from among the people who signed the cards and handed them in at the meeting.

Other Speeches.

The Friday evening meeting was devoted largely to speeches that were somewhat general in character. Those who spoke included Peter McArthur, who warned those present about the publications involved in the launching of the official organ, and an experience he had had which resulted in a large sum being started being put out of business by opposing interests. Other speakers included C. H. Adams, of Toronto, East Durham, W. L. Smith, of the Toronto Globe; Mrs. Gilbert MacIntyre of South Perth; T. Ross, of Prince Edward; Joe Aken, Joan Masson, W. H. Adams, of Downsview, and Elmer Jack, of Oshawa.

Final Sessions.

In addition to the business already mentioned a resolution was passed at the Saturday evening following a speech by Mr. Galbraith, of Todmorden, expressing opposition to any more bank mergers being permitted by the Dominion Government unless the Finance Minister is present on the floor of the House of Commons that the merger is necessary in order to prevent one or other of the banks concerned from becoming insolvent.

A resolution was adopted providing that a thorough investigation be made as to the capacity of the packing plants now operating in Canada before any new packing plants shall be allowed to be established. The Ottawa committee was reappointed and authorized to take whatever steps it might deem necessary to see that the views of the farmers are properly presented at Ottawa.

Throughout the convention the feeling was frequently expressed that the organized farmers of Ontario must be pushed vigorously in all parts of the province. Further reference to the meetings and to the speeches will be made in next week's issue of Farm and Dairy.

LAKEVIEW freshening in light season butter from 55 to about 100 lbs. This same cow yields more milk, testifies to the fact that the world's best butter is now Lakeview Dairy.

LAKEVIEW CATTLE

4T is the first ever been sale in Canada. Dawson, of the University of Toronto, is consigning to an June 26. Certainly not the argument sale. He signed that breeders' unity of getting into the Lakeview Herd. The offering is Lakeview Dutch cows whose record is King Canary, 8; King Sugar Foot, 8; Pet Chazy, 8; Green, 8; Canadian, 8; year-old cow, choice over well for her records in the hammer. The Lakeview Herd is present. Cows mature cow, 8; milk, 1607. The Lakeview Herd (as a three-year-old) as a two-year-old. Older animals Lakeview Month, 3-year-old girl, 774 lbs. Two daughters for sale also go Lakeview Dairy.

—1, Arthur on Stoney Croft Flicker's Pride. Aged Cow (in milk)—1 and 2, McMillan, on Maple Day Jean (Imp.) and Ruth of the Willow; 3, R. R. News on Hobland Barbara; 4, Gordon, on Stonehouse Milkmaid; 5, Cavers, Cows 3 years in milk—1, R. R. News on Burnside Barbara; 2, D. T. Ness; 3, A. G. Cavers. Heifers (2 years in milk)—1, McMillan, Queen Bess; 2, D. T. Ness; 3, Gordon. Aged Cow (dry)—1, 2, Gordon; 3, Cavers; 4, Logan. Cows 2 years old (dry)—1, R. R. News, on Burnside Barbara; 2nd: 2, Gordon; 3 and 4, Cavers. Senior yearling female—1, D. T. Ness; 2, Gordon. Junior yearling female—1, R. R. News; 2, McMillan. Junior yearling female—1, R. R. News; 2, Gordon. Heifer calf (senior)—1, R. R. News; 2, Cavers; 3 and 4, Logan; 5, McMillan.

An interesting special was given by Mr. W. F. Stephenson, secretary of the Ayrshire Breeders' Association, for the best Ayrshire cow judged on the following points: perfect conformation 150 points, 1 point for each 500 lbs. of milk, and one point for each 20 lbs. of fat above what it requires to qualify in R. of P. 1. Gilbert McMillan on Maple Leaf Jean; 2, R. R. News, on Hobland Barbara; 3, G. McMillan, on Ruth of the Willows.

Holsteins.

Though not quite so numerous as the Ayrshires, Holsteins in this district is one of the Ayrshire strongholds of America, the Holsteins made a good show. Owing to the fact that the Raymondale herd were not on hand this year the exhibit possibly lacked the time of last year. However, the Judge, Mr. F. R. Mallory of Frankford, remarked that during the four years he had acted as Judge he had noted a steady improvement on the part of the local men in preparing their stuff for the show. It certainly is a fact that the stock exhibited, while not all of the most classy type showed evidence of fitting and care. The strongest exhibitor was W. C. Stevens of Phillipsville, Ont. He was the only Ontario breeder present and possibly carried the largest share of awards.

In the championship classes Mr. Angus McNaughton won out for Senior male on Gano Faforit Braw Boy. His closest competitor was A. Younie

who with Prince Ormsby Pouch 3rd gave the champion a close run for his money.

The Jr. championship male went to W. C. Stevens with Riverdale May Echo 1st, a well balanced son of May Echo Verbella. The champion female any age was Saugster's Rhoda Queen May, a dry 3-yr. old and a daughter of old Rhodas Queen. There was also one herd of Jerseys present, owned by Wm. Martin, Warden, Que., and one herd of French-Canadians owned by E. Sylvester, Clairville, Que.

HOLSTEIN AWARDS.

BULL 3 years old and over—1, Angus McNaughton, Dewittville, Que., Gano Faforit Beau Boy, senior and grand champion; 2, A. Younie & Son, Prince Ormsby Pouch 3rd; 3, F. N. Williams; 4, J. J. Alexander; 5, Neil Sangster.

BULL 2 years and under 3—1, Walter Scott, Talbotville, Que., on Pontiac Mutual Friend; 2, J. D. McEwen, Ormstown, Que., Leonard Pontiac; 3, Felix Picard, St. Louis de Beauce, Que.

BULL 1 year old Senior—1, W. C. Stevens, Phillipsville, Ont., Riverdale May Echo 1st; 2, Neil Sangster, 3, Angus McNaughton, Jordan Elgin DeKoli; 4, J. M. Tinning, St. Louis; 5, A. A. McNeil, Ormstown, Que.

BULL 1 year old Junior—1, Jas. Winter, Prince Otto of Pine Dale; 2, R. Anderson, Anderson Corner, Que.; 3, A. Younie & Son, Talbotville, Que.; 4, H. W. Elliot, Ormstown, Que.; 5, Thom Rutherford, Ormstown, Que.

BULL Calf 6 months and under 12 months—1, John McEla, Howick, Que.; 2, J. J. Heifer Calf of Calendar year—1 and 2, W. C. Stevens; 3, Jas. Winter.

COW 4 years old or over in milk—1, W. C. Stevens, Pauline Beese Foun; 2, J. D. McEwen; 3, J. J. Alexander; 4, Angus McNaughton; 5, Jas. Winter.

COWS 3 years old and under 4 in milk—1, Neil Sangster, Lady Rhoda; 2, Jas. Winter, Stella Kewell; 3, Neil Sangster; 4, Neil Sangster; 5, W. C. Stevens.

COW 2 years old and under 3 in milk—1, Neil Sangster, Bertha Pontiac Johanna; 2, J. D. McEwen; 3, A. McNaughton; 4, W. C. Stevens; 5, John A. Gillis.

COW 3 years or over, dry—1, W. C. Stevens, Pauline Pet Pouch; 2, A. Younie & Son, Talbotville; 3 and 4, J. J. Alexander; 5, W. C. Stevens.

HEIFER 2 years old and under 3, dry—1, Neil Sangster, Rhoda, Queen May, also champion female; 2, Neil Sangster; 3, Thom, Forberford; 4, W. C. Stevens; 5, Jas. Winter.

HEIFER 1 year old, senior—1, W. C. Stevens; 2, 3 and 4, J. J. Alexander.

HEIFER 1 year, Junior—1, Neil Sangster; 2, Neil Sangster; 3, W. C. Stevens; 4, John McEla; 5, J. J. Alexander.

HEIFER Calf 6 months and under 12

LARGER IMPLEMENTS PURCHASED.

IT is very noticeable that farmers are using larger implements and more horses per man. It is not an infrequent occurrence to see four-horse teams working with double discs, accomplishing as much as was previously accomplished by two teams going over the land twice with the disc. Most of the new machinery which is being purchased is of a larger type than has been previously found on the average farm. One farmer operating quite a large farm told me that he was having his hay-racks all built low, and was arranging to load both hay and grain with the hay loader this year. He is arranging to stack his hay in the field by means of a hay fork with a device which he has designed himself. In this way he hopes to get through haying and harvesting with such labor as may be available; even though it is not of the most experienced kind—E. K. Hampton, Welland Co., Ont.

MONTHS—1 and 2, W. C. Stevens; 3 and 4, Neil Sangster; 5, J. J. Alexander.

HEIFER Calf of Calendar year—1 and 2, W. C. Stevens; 3, W. W. Elliot; 4, A. McNaughton; 5, J. M. Tinning.

GRADED HERD—1, W. Stevens; 2, Neil Sangster; 3, J. D. McEwen; 4, Jas. Winter; 5, J. J. Alexander.

YOUNG HERD—1, W. C. Stevens; 2, Neil Sangster; 3, Jas. Winter; 4, J. J. Alexander.

GET 5 W. C. Stevens.

GET OF SIRE—1, Neil Sangster, on Gano Faforit Pouch; 2, W. C. Stevens; 3, Neil Sangster; 4, W. C. Stevens; 5, J. J. Alexander.

PRODUCE OF LOW—1, A. Younie & Son, 2, Neil Sangster; 3, W. C. Stevens; 4, Jas. Winter; 5, W. C. Stevens.

HEIFER CALVES BRED AND OWNED BY EXHIBITOR—1, W. C. Stevens; 2, J. J. Alexander; 3, Jas. Winter.

JUNIOR BULL, W. C. Stevens, on Riverdale May Echo Lyons. Senior Canadian Bull—A. McNaughton on Gano Faforit Beau Boy. Champion Female—Neil Sangster, on Rhodas Queen May.

GEO. E. HAIRD.

BEST DISPLAY OF HOLSTEIN CATTLE bred and owned by Exhibitor—1, Neil Sangster; 2, W. C. Stevens.

BANK OF COMMERCE.

BEST REG. HOLSTEIN BULL—1, Angus McNaughton.

J. H. WALSH.

BEST HOLSTEIN FEMALE under 2 years—1, W. C. Stevens, Faforit Netherland Pouch.

SOUTHERN COUNTIES AYRSHIRE BREEDERS WILL MEET.

THE public is cordially invited to a joint auspices of the Ontario Department of Agriculture, and the Southern Counties Ayrshire Breeders' Club, on Mr. C. C. Hawkins, Brownsville, Ont. R. M. King, B.S.A., will represent the Department of Agriculture and Alex. Hume, Campbellford, Ontario, Ayrshire breeder and exhibitor, will address the meeting and take charge of the judging classes of Ayrshires. Members are requested to bring a generous supply of lunch along with them. Light refreshments can be obtained on the grounds.

A meeting of the members of the club is called for 11:30 a.m. to consider matters in connection with the contingent sale to be held next December. Brownsville is situated on the Michigan Central railroad, and Mr. Hawkins' farm is five miles west of Tillsonburg.

LAKEVIEW HOLSTEINS AT AUCTION ON THE Jockey Club Grounds HAMILTON, ONT., JUNE 26th.

The Famous Cow LAKEVIEW RATTLER

Canadian Champion 30 day Mature Cow 8 months after calving 61.20, Milk 1409.7.

Milk	- - -	724.
Butter	- - -	37.54

will be included in my consignment

Besides the above cow, LAKEVIEW RATTLER, we are including in the sale her two daughters, one grand-daughter and her two daughters. We are also offering a son of LAKEVIEW LESTRANGE 741.9 LBS. MILK, 38.06 LBS. BUTTER. Sired by DUTCHLAND COL. SIRE MONA—Sire of LAKEVIEW DUTCH. ARTIS 43.06, and LAKEVIEW D. C. ROSE 31.71 lbs. WORLD'S champion 2-yr-old with first calf. Lakeview Daisy 34.26 lbs., daughter of CHERRYVALE WINNER, the noted show cow, and two of her daughters, LAKEVIEW DUTCH. ARTIS 2ND, full-blooded sister to Lakeview Dutch. Artis, Canada's only 43 lb. Cow, and her two-year-old daughter in calf to Dutchland Col. Sir Mona.

This is the first time in the history of Canada that daughters of a 43 lb. Cow have been offered to the public at auction. Come and buy them at your own price.

BRONTE, ONT.

Major E. F. Oster, Prop. T. A. Dawson, Mgr.

ANOTHER BIG RECORD FOR LAKEVIEW.

LAKEVIEW DUTCHLAND ARTIS, freshening at the age of six years and eight months, has made 43.64 lbs. butter from 554.5 lbs. milk, with an average lot of 5.55 per cent. fat. This same cow three years ago as a 3-year-old made 14.92 lbs. butter from 567.3 lbs. milk, testing 4.88 per cent. fat.

Lakeview Dutchland Artis is a sister to Lakeview Dutchland Chalmers Rose, the world's champion 2-year-old with 1st sale. Her dam, Lakeview Artis, is a sister to Lakeview Louisa, 74.19 lbs. milk and 15.08 lbs. butter. Her sire is Dutchland Colanthe Sir Mona, whose three sisters are world record year cows. She was bred and is owned by Major H. F. Oiler, Lakeview Stock Farms, Bronte, Ontario.

LAKEVIEW CONSIGNMENT TO HAMILTON.

It is the first time such blood has ever been offered at a consignment sale in Canada," remarked Mr. T. Dawson, of Lakeview Farm, when speaking of the two daughters of his 43-lb. cow, Lakeview Dutchland Artis, he is consigning to the sale at Hamilton, on June 25. Forty three-lb. blood is certainly not the usual thing in a consignment sale, but Mr. Dawson is determined that breeders shall have an opportunity of getting some of the best blood in the Hamilton world and to that end the Lakeview herd will give of its best. The offerings include two daughters of Lakeview Dutchland Artis, the 43-lb. cow whose record is given elsewhere, sired by King Canary Eagle, who was sired by King Sags Pontiac Howell, and his dam, Pea Canary Countess, 27.73 lbs. butter, present Canadian champion squire. 3-year-old 8 months after calving. Another choice cow well known in Hamilton circles for her records is Lakeview Rattler, who with her two daughters will go under the hammer. Their records are:

Lakeview Rattler—milk 724, Butter 12.41, present Canadian champion 29-day mature cow, 8 months after calving, 61.20, milk, 14.97. Two of her daughters—Lakeview Rattler 5th, 13.16 lbs. butter (as a three-year-old), 437.7 lbs. milk; Lakeview Rattler 5th, 13.23 lbs. butter (as a two-year-old) 382.7 lbs. milk.

Other animals from—Lakeview Mona Rattler Girl, the 13.11-lb. 3-year-old granddaughter of Lakeview Rattler, 27.24 lbs. butter, 74.4 lbs. milk. Two daughters of Lakeview Mona Rattler also go in the consignment—Lakeview Daisy—butter 24.25, milk 636,

milk in nine months 17.17 lbs. fat, and her 3-year-old daughter, Lakeview Daisy 5th, 24.80 lbs. butter, 426.8 lbs. milk, and Lakeview Louisa 2nd, 13.23 lbs. butter, 496.1 lbs. milk. Also her son, sired by Dutchland Colanthe Sir Mona, making Artis, Canada's only 43-lb. cow; also brother to Lakeview Dutchland Rose, World's highest producing 2-year-old with first calf 37.71.

Lakeview Canary Countess 5th at 15. 3-year-old daughter of Pea Canary Countess 2nd, 27.73, and half-sister to Lakeview Louisa, 23.93 lbs. butter and 74.19 lbs. milk.

A 240-DAY RECORD.

EDITOR, Farm and Dairy.—I am advised through preliminary report by wire that the Holstein-Friesian cow O. K. L. Albina, 267962, has broken the record for fat production in the senior two-year class of the divisions covering freshening by producing in seven consecutive days, 466 lbs. milk containing 17.78 lbs. fat. She freshened at the age of 3 years, 11 months, 3 days, and began her test eight months after freshening. Her prior record began 40 days from freshening, is 427.7 lbs. milk containing 16.52 lbs. fat. Her sire is Ormsby Korndyke Lord, 109489; her dam is Valley Farm Albina Chronosina, 77084. She was bred by Mr. Ezra Holbert, Lake, N. Y., and she is now owned by Mr. Julius Schmid, Montgomery, N. Y. In the senior two-year class of the eight months division, she displaces Miss Valley Head DeKoi Walker, 250936, whose record began 240 days from freshening is 404.3 lbs. milk containing 17.66 lbs. fat. Computed on the 80 per cent. basis, the equivalent butter claimed for O. K. L. Albina amounts to 22.32 lbs.—Malcolm H. Gardner, Supt. A. R.

THE HAMILTON SALE.

WHAT promises to be one of the most outstanding events of the season to be held at Hamilton on June 25. The high reputation of the consignors as breeders of pure-bred Holsteins and the excellent quality of the stock they are putting in Europe well for a successful sale. Every animal consigned must be a sound, healthy specimen of the breed, have official backing and guaranteed to be absolutely right in every way. Breeders would do well to look up the announcements of the sale in this issue and of some of the consignors, and arrange, if possible, to attend the sale.

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Daughters of Thirty lb. Cows
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June 25 1918

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60 HEAD HOLSTEINS HEAD 60
-AT-
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on the grounds of the
Jockey Club, June 25
When there will be 60 head of choicely bred Holsteins, including daughters of a 43 lb. cow, sold by public auction, the first time in the history of Canada such blood has ever been offered at a public auction sale. Every individual in the sale is of the highest type and breeding, making this one of the greatest opportunities ever offered for Holstein breeders in Canada to add to their herd some of the choicest blood in the Holstein world.
Don't forget the date and the place if you want the best in pure bred Holsteins. For catalogues write either
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DATE OF REGISTRATION			CANADA REGISTRATION BOARD		SERIES NUMBER
MONTH	DAY	YEAR	1918		
			CARD FOR MALES		TO BE FILLED IN BY DEPUTY REGISTRAR
1. Name in full (surname last)?					
Address (permanent)?					
STREET AND NUMBER		RURAL DELIVERY OR POST OFFICE		TOWN OR CITY	PROVINCE
2. Age?	Date of Birth?	Country of Birth?	3. Race?	Speak English (E) or French (F)?	
4. British subject?	By birth?	By Naturalization?	5. If not a British subject, to what country do you owe allegiance?	Specially Registered Category No. F-7	
If naturalized, Which year?	What place?		7. How many children under 16 years?	8. If registered under Military Service Act, what is your serial number?	
6. Single (S), Married (M), Widower (W), or divorced (D)?	8. Physical disabilities, if any?		10. (a) Present occupation (if any)?		
10. (b) What is your regular occupation?			Length of experience in		
(c) What other work can you do well?			(a)		
11. (a) an employee, state employer's name			(b)		
Address			(c)		
Nature of business			12. Do your circumstances permit you to serve in the present national crisis, by changing your present occupation to some other for which you are qualified, if the conditions offered be satisfactory? (a) Where you can return home daily?		
13. (a) Were you brought up on a farm?			Until what age?		(b) Have you worked on a farm? How long?
(c) Are you retired farmer?			(d) Can you handle horses?		Drive tractors? Use farm machinery?
(e) Are you willing to do farm work?			Where?		During what periods?
I affirm that I have verified the above answers and that they are true					
Signature of Registrant					

Procedure of Registration

On June 22nd every person residing in Canada, male or female, British or alien, of sixteen years or over, must attend one of the registration booths located in his or her district, and there observe the procedure explained below.

Where to Register

Every person required to register has the privilege of registering at any of the public places provided for that purpose. The location of all such places will be specified in proclamations posted conspicuously.

In Cities and Towns, many of these places will be open for registration purposes prior to Registration day. Where such arrangements are made, the local papers will supply full information.

Large industrial and business concerns are being asked to provide facilities for registering their employees. Where they do so business will not be interfered with, and employees will suffer no loss of time.

While all are compelled to register on Registration Day, it is not contemplated by the Government to force the sick, feeble and aged to turn out. If such persons will notify the Registrar prior to June 22nd of their inability to attend at a place of registration, an effort will be made to register them at home, provided the request is reasonable and justified.

Remember the Day—June 22nd—Remember the Hours—7 a.m. to 10 p.m. Register early and get your Certificate for your own protection.

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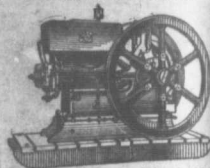
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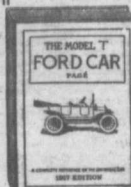


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