

# FARM AND DAIRY

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RURAL HOME



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COUNTRY LIFE



Toronto, Ont., July 12, 1917



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## The District Convention of the U.F.O.

**Rousing Meeting and Intense Enthusiasm the Rule.**—A Synopsis of Addresses

THE district conventions of the U.F.O. are still in full swing and the interest and enthusiasm is marked. The attendance has been splendid, in several cases taxing to capacity the buildings in which the meetings were held. In some instances it was impossible for all who came to the meetings to gain admittance. Forceful speakers are bringing to the members of the clubs the information they desire, an indication of this being that at more than one meeting, the session lasted until midnight.

On June 28, Mr. J. J. Morrison addressed a meeting at Avon in Middlesex county and organized a fine club with Mr. Smith, reeve of the township as president. The future of this club is most promising, both in numbers and quality. A bumper meeting was held at Tilbury on June 29. At least 500 were inside the hall and quite a number could not get in. The mayor welcomed the speakers and extended them the hospitality of the town. This meeting was a record one in every way. A crowded house stayed until midnight asking questions and discussing the points which had been brought out by the speakers. All present were eager to hear and learn. On the same evening, Mr. R. H. Halbert and Mr. John Kennedy went to Essex, where an equally good meeting was held. On June 30 the Forest club held a picnic at Hillsborough beach. Over 5,000 were present, a splendid attendance. At this picnic Messrs. Halbert, Kennedy, Morrison, Pettypiece, Grob and others addressed the gathering and in the evening a good meeting was held in the Forest town hall. About 100 were present at the meeting at Exeter on July 2, Mr. Morrison and Mr. J. N. Kernighan being the speakers. On the same evening over 200 gathered in the town hall at Seaforth, where a fine club was organized; that is they elected the directors and they will choose officers themselves at a later date.

The most representative and enthusiastic meeting up to this date was held at Listowel. Mr. W. S. Shearer, president of the Elma club, ably acted as chairman and he deserves a very great deal of credit for the splendid part which he took in the meeting, and also for his good work in connection with the Elma club. Rev. Mr. Annas, who is now farming and a farmers' club member spoke well and Mr. James Downham, president of the Atwood club, gave an able and stirring address. Mr. O'Brien was another of the good speakers. Mr. Wellington Hay, M.P., of Listowel, spoke at length. A rousing meeting was held at Gorrie. Mr. John Pritchard of Gorrie, who is well known in connection with the good work of the U.F.O., was in the chair. About 150 were present and enthusiasm prevailed as an indication of Mr. R. H. Halbert's usual enthusiasm, he removed his coat when he commenced addressing the meeting, and held the interest of his audience throughout.

The meeting at Markham was small in point of numbers as farm work in the district is backward. All of the local clubs, however, were well represented. Mr. Sanstetter of Stouffville was in the chair and the principal speakers were W. C. Gurney, N. Q. A. O'Brien and John Kennedy. Mr. Elmer Lick of Oshawa, spoke earnestly for a few minutes. The address of the afternoon, however, and the one that stirred the meeting and gave them an appreciation of the importance of the work before them, was that of Mr. Kennedy. As president of the Grain Growers' Grain Company he told of the great success that had attended the farmers in the West in their business ventures and then dealt briefly and ef-

fectively with the even more important problem of taxation and social reform which constitute the backbone of the farmers' platform. A year ago Mr. Kennedy came to Ontario to speak at the district conventions of the U.F.O.; he was the leading speaker at the 17 conventions this year. He is therefore in an excellent position to speak on the progress of the movement, as seen by an interested outsider. "The meetings of this year," he stated at Markham, "have doubled and tripled those of last year. The enthusiasm in Ontario has grown at a tremendous rate. There are big things in store for the farmers' movement in Ontario."

Mr. Kennedy's Address.

Mr. Kennedy, at the Markham meeting, was on well known ground, but unlike the prophet he was not without honor in his own country. For years Mr. Kennedy had lived in Markham, and recognized many familiar faces in his audience. He first referred briefly to the forerunners of the United Farmers' Cooperative Company. He stated that the capital stock should be larger and advised that a paid organizer should be sent out to spend two or three days in each district in company with one of the local officers of the club to sell stock to individual club members. This he said was the way the movement had been financed in the West.

"We must not confine ourselves and work as a class," said Mr. Kennedy in opening his address. "We are coming to the day when we must broaden out. If we have not been able to consider the other classes, all of the working classes, we have a whole lot of growing to do before we become big men." He then traced the relationship between grain prices and the prices in the East and proved to the satisfaction of his audience that just in proportion as the farmers of the West were enabled to get greater prices for their wheat, farmers of the East likewise benefited, as it is the Winnipeg market that determines the price. Also the West is drifting into mixed farming. They will need stock and had the grain growers more profits on their grain, they would be buying two or three times as much stock as they are, and this would come largely from Ontario. Then he took up the work of the Grain Growers' Grain Company in detail.

Financing the Grain Grower.

The great weakness of marketing systems in the past has been that farmers could not afford to hold their grain and 75 per cent. of it was marketed in the first three months after harvest. This marketing of wheat resulted in greatly reduced prices. Representations were made to Ottawa and legislation gotten which enabled the banks to advance money to farmers on the security of their stored grain. With these loans farmers are now able to pay their pressing debts and feed the world's markets systematically for 12 months in the year.

To store this grain and handle it properly, the Grain Growers' Grain Company has established a chain of 500 elevators. These elevators are paid for by the local shippers in the form of stock if they take in the Grain Growers' Grain Company. The central company builds the elevator and manages it. Once the local farmer delivers his grain to the elevator, his portion of the marketing is completed.

Then comes the question of the elevator. These must be controlled by the central and the central must control the grain before they can be of any use to the West. The Western Company was enabled to learn many the terms of the C. P. R. because the previous year they had handled 28,000,000 bushels of grain.

(Continued on page 17.)



We Welcome Producers

Trade increases

VOL. XXXVI

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# FARM AND DAIRY & RURAL HOME



We Welcome Practical Progressive Ideas.

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

VOL. XXXVI

TORONTO, ONT., JULY 12, 1917

No. 28

## The Light Farm Tractor—A Summary

Some Features That the Model Light Tractor, When It Arrives, Will Possess—By Louis Simpson

INVESTIGATION leads to the conclusion that no make of farm tractor, hitherto offered for sale upon the Canadian market, possesses all the qualities required in a tractor to be used by the farmers of Eastern Canada. Several problems yet require satisfactory solution. Many of the tractors offered are simply light road tractors, others are light road tractors, slightly altered, but none show that the requirements of the Eastern Canadian farmer have been studied, understood and provided for. Of what has been done by Mr. Henry Ford in the direction of producing a satisfactory farm tractor, no authentic information is available, but rumor would have us believe that Mr. Ford has appreciated one or more of the essential requirements. The following would appear to be essential:

### A Lighter Tractor Needed.

First: The farm tractor shall be made much lighter than the tractors hitherto offered for sale, consequently, and because of their less cost, they will be able to be sold at a much lower price. Tractors now being marketed and guaranteed to give a certain draw bar pull weigh from 3,650 lbs. to 5,000 lbs. Yet an ordinary Ford motor car, altered and equipped with a tractor attachment will weigh less than 2,100 lbs. It has been demonstrated that the car so altered will give an equal draw bar pull to that given by the heavier cars, and will do as much work, do it as well or better, and in less time than the heavier cars.

Certainly the excessive weight of the farm tractors, hitherto marketed, is not necessary; that is, if the reduced weight were properly distributed, and were certain parts of the tractors properly designed and proportioned, the excessive weight would not be necessary. With the road tractor, it is necessary that the weight of the tractor and of the load being carried or pulled by the tractor should be so distributed that the surface of the road should not be broken or disturbed. Weight is required so as to give a friction hold to the drive wheels. In a farm tractor it is possible to assist this friction hold by an intelligent use of "cleats" affixed to the outside of the rim of the drive wheels.

The conditions that govern the use of the two descriptions of tractors are so widely different that it is necessary to consider the requirements of one entirely apart from the requirements of the other. Yet, until quite recently, the makers have allowed the requirements of the road tractor to dominate the farm tractors they have designed and produced. Demonstration tests of the tractor attachment, applied to an ordinary Ford motor car, absolutely prove that it is not necessary to employ excessive weight in the construction of the tractor, and that if excessive weight be required, it is because certain of the other essential parts of the tractor are not properly designed. These

demonstrations indicate that no farm tractor need exceed in weight the following:

- For 8-16 h.p. farm tractor, 2,400 lbs.
- 10-20 h.p. farm tractor, 3,000 lbs.
- 12-24 h.p. farm tractor, 3,600 lbs.

### An Erroneous Designation.

Just here it will be well to take the opportunity to register the strongest possible protest against a method (advocated in certain quarters) of designating farm tractors by the number of plow bottoms they are supposed to be able to draw. The adoption of such a method would be deplorable, because it is based not only upon one, but upon several denominations of variable value; hence the adoption of this method would lead to confusion and misunderstanding.

In the first article of this series it was shown that the power required to plow virgin sod, plow-

ing the same width and depth, might be seven times as much as that required when plowing after corn. It was also shown that the power required varied according to the width of the bottom and according to the depth plowed. How, then, can a farm tractor be designated to be of a size, based upon the number of plow bottoms it will draw, when that number will vary, within wide limits, according to the conditions under which the plowing is done.

The only feasible, the only possible intelligible method is to designate the sizes of the tractor by the size and capacity of the engine supplied to the tractor. Here also there is some difficulty, but the trouble is such as can be easily and completely overcome by regulation, issued by the Department of Agriculture.

### Rating the Horse Power.

Makers to-day allow themselves much latitude as to the horse power they claim the engines they supply will produce. With a gasoline or oil engine there should be no difficulty in coming to an understanding on the point. As it is, one maker claims for the engine supplied to their make of tractor, an increase of 25 per cent. in the possible power over that produced by the engine supplied to another make of tractor, whilst the latter is actually 12½ per cent. more powerful.

The maximum horse power of a gasoline or oil engine is governed by the diameter of the cylinder, and by the length and speed of the stroke, in conjunction with the number of cylinders. The Ford motor car is driven by a four cylinder engine, three and three-quarters inch in diameter and four inch stroke turning 1,000 revolutions per minute. It is suggested that, as the Ford motor car is so generally and well known, this engine be accepted as a basis and be credited as producing 16 h.p. It is estimated that on a fairly well designed car, one-half this power is required to move the car, leaving the other half to draw any implement attached to the draw bar. It has been claimed that certain of the heavy cars will require more than one-half the engine power for the purpose of moving the car, and also that on the Ford car, converted by the application of the tractor attachments, into a farm tractor, less than one-half the engine power is required for the moving of the car itself. This question of draw bar pull is one difficult to decide. The draw bar pull required to start a load in motion is much more than the draw bar pull required to keep a load in motion.

Nor should it be forgotten that if it requires one-half of 16 horse power to keep in motion a car weighing 5,000 lbs., it should not require one-half of 16 horse power to keep in motion a car weighing 2,500 lbs. If it requires eight horse power in the first instance, it should only require about four horse power in the second case. In such cases the



### Fishing and Farming

FAILURE is written at the end of many a life, simply because there was lacking the quality to stick to one thing instead of scattering effort.

The successful fisherman first knows what he is fishing for and cuts his bait accordingly. Then again the successful angler doesn't fish first in one pool and then rush to another, but patiently tries out the pool he first selects.

Good farming and good fishing are not unlike. Get the best pool known by experience, then use the best bait obtainable. This means real live, up-to-date methods, and when your "string" is landed there will be satisfaction in the results obtained.

Be original in plans and think out a line of action before beginning active work. Don't get too many irons in the fire, for if you do you are likely to get burnt. Because your neighbor happens to be successful in a certain line of farming is no reason for your taking up that line unless you are pretty sure of success.

Are you trying to do a little grain farming, a little dairying, a little fruit growing without special effort in any one line? If you are, nine times out of ten your chances for good profits at the end of the year will be lacking. Choose a line of work as your leader on the farm and make other lines subservient to it. Don't scatter your efforts.—Western Farmer.

correct designation would be for the heavy car 8-16, and 12-16 for the light car.

#### The Driving Wheels.

Second: That particular attention be given to the construction and dimensions of the "bull," or driving wheels, and also to the "cleats" which are supplied to these wheels, affixed to the outside rim. However powerful an engine may be, however wisely the power may have been transmitted to the driving or bull wheel shaft, unless these wheels are well and properly designed, loss of power will result. This loss occurs through slippage. It is to prevent this loss that weight, often, is added to the tractor, but it has been demonstrated that there are other and better methods. The width of the wheel face is governed by the quality of the ground to be operated on. Ground that is very soft, especially when without sod, calls for a wider face. This can be secured by the use of extensions. The power requirements of the wheel should, however, be arranged for without any help from the extension, which should only be used to prevent the machine from sinking into the soft ground. Here again the lightness of a tractor becomes a factor of importance.

#### The Engine.

Third: The engine. Some tractor makers are using engines of one cylinder, others again use engines with two cylinders, whilst engines with four cylinders are coming more generally into use. Some engines are built with horizontal cylinders, but most have vertical cylinders.

The conclusions arrived at by the writer are that the four cylinder vertical engines are the most satisfactory—such as are similar in type and make to the engines provided with the Ford motor car, and it is suggested that the following sizes be made standard:

	Diam. of cylinder.	Length of stroke.
8-16 h. p. ....	3½ ins.	4 ins.
10-20 h. p. ....	4½ ins.	4½ ins.
12-25 h. p. ....	4¾ ins.	5 ins.

If an engine with only one or two cylinders be provided, the driving will be irregular, unless the engine be supplied with a heavy fly wheel for the purpose of overcoming this irregularity.

#### Transmission Gears.

Fourth: The system of transmission gears used may have considerable influence upon the cost of operating a tractor. Without entering into a technical dissertation, it is necessary to point out the fewer gear wheels there are the better. These wheels should also be easily got at for inspection, cleaning, lubrication and replacement. They should be protected, when necessary, from dirt. There are tractors which contain altogether too many gears, which, besides causing undue loss of power through friction, must largely increase the repair and lubrication expense account with which, when worn, will make considerable noise.

Other parts of a tractor are important, but the foregoing are those that to-day are pre-eminent vital and call for the anxious consideration of the contemplating buyer. The writer is satisfied that before long new light farm tractors will be produced, built upon the Henry Ford motor car lines (of course, without the motor car accessories) and supplied with attachments similar to the standard Detroit tractor attachment recently tested at Ottawa, which will prove to be an ideal tractor car for Eastern Canadian farmers, and which should be placed upon the market at popular prices such as:

- 8-16 farm tractor, \$500.
- 10-20 farm tractor, \$600.
- 12-25 farm tractor, \$700, or thereabouts.

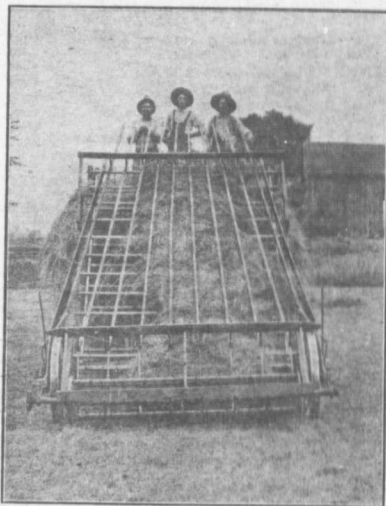
Before closing this series of articles attention (Continued on page 6)

## The Best Silo Corn for Quebec

Prof. H. Barton Favors Bailey

WHAT is the best variety of ensilage corn? During a recent trip to Macdonald College at Ste. Anne de Bellevue, Que., we asked Prof. H. Barton, who, in addition to his duties as Professor of Animal Husbandry, adds that of farm manager, for his opinion on this question of corn variety as it applies to Quebec.

"We have conducted some rather extensive experiments to determine just that point," remarked Prof. Barton. "For three years now we have grown five varieties of corn side by side—Bailey, Wisconsin No. 7, Golden Glow, Early Learning and White Cap. Last year we seeded a half a bushel of each variety side by side right across a 37-acre field. In the fall I had the cereal men go over the field with me and we rated the varieties from the standpoint of maturity, yield and general



The Business End of the Hay Loader.

utility. Summing it all up, we agreed that the Bailey was the best silage corn for our conditions. In some cases Wisconsin No. 7 outyielded the other varieties, but it fell down on maturity."

Prof. Barton did not pretend that these experiments have more than a local application. In many of the dairying districts of Ontario, Wisconsin No. 7, and even Improved Learning, reach a stage of maturity that makes them very desirable for the silo. For Quebec conditions, however, Prof. Barton's experiments would seem to have settled this question fairly conclusively.

## Cars and the Good Roads Movement

Our Views Modified, Not Changed

T. P. NEILL, Prince Edward Co., Ont.

"JUST wait till you get a car of your own," advised my brother some four years ago, "and you will be as mum as an oyster when appropriations are made for the good roads movement." You won't object to a grand provincial highway, and if they extend it clean from ocean to ocean, you will like it all the better." This

conversation occurred about the time that a letter of mine had appeared in Farm and Dairy protesting against trunk highways as a needless public expense for the benefit of a small number of touring motorists who did not then, and do not yet, represent one-tenth of one per cent. of the population. I then claimed that money should be spent on improving the highways that lead from the farms to market towns and railways, and I was very much opposed to the Dominion Government having anything to do with highway construction, and I wasn't sure but that the provincial authorities were getting out of their proper field.

Well, we have our car now. We have had it for two years. "And how do you feel about road expenditures now?" recently asked the same candid brother referred to heretofore. He is fully convinced that all the world is run by selfishness and that people's views of government are determined altogether by their own individual self-interests. Perhaps he is right. At any rate we find ourselves more interested in good roads than we ever were before. Only the man or the woman who drives the car appreciates to the full a good, hard, smooth stretch of highway, and had roads never appear worse than when one is running through mudholes, or over washouts on low gear. Yes, we appreciate good roads more than ever.

But when we consider the broad aspects of the problem our views are unchanged. We don't believe the control of our highways should be taken out of the hands of our township and county councils. And we don't want either our Provincial or Dominion authorities to get that control with a bribe of a few thousand or a few million dollars. Debts are piling up fast enough, public debts, I mean, without submitting ourselves to the extravagance that always characterizes Provincial and Dominion expenditures. Nor do we favor trunk highways. We use our car going to market, visiting nearby friends, and we take one or two long trips each year. Our extended tours are made at a season when all the roads are good. We don't want all the people to be taxed, directly and indirectly, in order that we may go touring at any season of the year. We may get as selfish as that some day, but not yet. In the meantime, we are right on hand to support every good roads scheme and boost for sensible and economical improvement of all our local roads and byways, and to our enthusiasm for local improvement the car has added much.

## A By-Product Worth Considering

Manure Annual Value of \$30 to \$40 per Cow

MAN Y industries nowadays pay running expenses only on their main lines of manufacture, and depend for profits on a careful utilization of the by-products. In this class comes the dairy industry. Many dairy farmers have told us that their business would show a loss were it not for the income derived from turning skim milk and whey into pork. Another by-product, the value of which should never be overlooked, is the manure excrementa. Just how valuable this product is may be gleaned from the results of an experiment conducted at the Experimental Station, Kentville, N.S. The manure from twenty-four steers, averaging in weight close to 1,000 pounds each, and running loose in two box stalls at the Experimental Station, Kentville, N.S., covering a period of 120 days, or four months, weighed 112 tons, 640 pounds.

Chemists tell us fairly well-fed steers pounds nitrogen, and nine pounds mineral fertilizer nitrogen, and seven acid. Potash cannot be in order to get at it we should allow a price of potash before manure at these prices of \$2.63.

Over \$30

At the valuation pounds, would be steered, a little over, sidering that potash greater factor in value, the value above. Nothing but calculation for the hundred per cent. of the manure, depending upon manure is used and

A well-fed dairy cretes more than a reason, therefore, is more valuable. Animal Husbandman humus value of the high as \$40. The issue with the dairy conserve the liquid base, will be featured are erected this summer for improvement barns. We can't afford

## Eradicating Honesty and Cl

THE recent masthead-Brocton, Mass., methods in eradicated in his herd a informal, concise, serene stance he said:

"It is easy to clean first be honest with come from your heart work for you. Assume tuberculous and pasteurizing process (holding uses). Take the call don't even let her lick milk. Next to Disinfect, whitewash, is not necessary to it. Make physical examinations to see if they throwing off germs.



A Hay Loader in Operation on the Farm of O. D. Bales, York Co., Ont.

Chemists tell us that this fresh manure from fairly well-fed steers contains in each ton 7½ pounds nitrogen, 3½ pounds of phosphoric acid, and nine pounds of potash. When buying commercial fertilizer we pay 25 cents per pound for nitrogen, and seven to eight cents per pound for phosphoric acid. Potash cannot be bought at any price, but in order to get at a fair valuation for the manure we should allow at least five cents a pound, the price of potash before the war. A ton of the above manure at these prices would, therefore, have a value of \$2.63.

#### Over \$36 a Year for Steers.

At the valuation of \$2.63 per ton, 112 tons, 640 pounds, would be worth \$295.40, or \$12.31 per steer, a little over \$3 per steer per month. Considering that potash will each year become a greater factor in economical agricultural production, the value is even greater than that given above. Nothing has been allowed in the above calculation for the value of the humus. It is estimated that the humus value of manures is 50 to 100 per cent. of the value of the chemical ingredients, depending upon the soil on which the manure is used and the manner of application.

A well-fed dairy cow consumes more and excretes more than a fattening steer. It stands to reason, therefore, that their manurial excrement is more valuable. Mr. E. S. Archibald, Dominion Animal Husbandman, has placed the chemical and humus value of the manure from a good cow as high as \$40. The conservation of manure is a live issue with the dairy farmer. Cement floors to conserve the liquid, absorbents to hold it, and perhaps a covered manure pit with tight concrete base, will be features of all good dairy barns that are erected this summer. And there is much room for improvement along this line in old barns. We can't afford to neglect the by-products:

## Eradicating Tuberculosis

### Honesty and Cleanliness the Requisites

AT the recent meeting of the American Holstein-Friesian Association, Fred F. Field, of Brocton, Mass., related his experience and methods in eradicating tuberculosis, which appeared in his herd a few years ago. His talk was informal, concise, sensible and practical. In substance he said:

"It is easy to clean up your herd, but you must first be honest with yourself. The effort must come from your heart, the association can't do the work for you. Assume that all your cattle are tuberculous and pasteurize the milk by the holding process (holding at 145 degrees for 30 minutes). Take the calf away from dam at birth, don't even let her lick it, and feed it on pasteurized milk. Next to honesty comes cleanliness. Disinfect, whitewash, let in air and sunlight. It is not necessary to incur expense in doing this. Make physical examination of your cattle, take cultures to see if they are 'spreaders,' that is, throwing off germs. By this is meant applying

the bacteriological test to samples of sputum, excreta and milk. This must be done right along, absolutely. Don't neglect it. Spreaders must be kept from the rest of the herd. Don't get frightened, keep your head, persevere, and eventually you will have a clean herd. We have done it, and what we've done you can do. The association could do no better thing than to take up this matter of helping members to clean up their herds; and I will do all I can to help by instructing a man who may be selected to visit the herds of members. The general application of this method would not only clean up the industry physically, but morally as well, as with clean herds the temptation to 'put one over on the other fellow' would be removed."

## Alfalfa vs. Bran for Dairy Cows

### They May Be of Equal Worth

DURING the past winter a test was conducted by the University of Nebraska to determine the comparative values of chopped alfalfa and bran in the ration for dairy cows. In November, 1915, six pairs of dairy cows were selected with reference to lactation period, milk and butter fat production, age, breeding and other factors influencing their probable production during the next 60 days. One cow from each pair was put into Group A, and the other into Group B. Their roughage all through the test consisted of about 30 lbs. of corn ensilage and all the alfalfa hay they would eat, or about 20 lbs. on the average. During the first 15 days Lot A were fed the standard ration of four parts ground corn, two parts bran and one part oil meal. The cows in Lot B were fed the same amount of grain, but in the mixture bran was replaced by chopped alfalfa. At the end of 15 days the cows in Lot A were fed the alfalfa mixture and Lot B the grain mixture for another 15 days, the rations being alternated at 15-day intervals until the 60-day test was completed. The amount of grain fed to a cow was based on her milk production, but the two cows in each pair were fed the same amount of grain.

The six cows in Lot A while on the bran mixture during two 15-day periods gave 3,972 lbs. of milk con-

taining 143.3 lbs. of butterfat, and lost 32 lbs. in weight. The same six cows while on the alfalfa mixture, during two 15-day periods, gave 4,052 lbs. of milk containing 138.7 lbs. of butterfat, and gained 223 lbs. in weight. The six cows of Lot B while on the bran mixture during two 15-day periods gave 4,244 lbs. of milk containing 158.4 lbs. of butterfat and gained 254 lbs. in weight. This same group of cows while on the alfalfa mixture during two 15-day periods gave 4,332 lbs. of milk containing 163.6 lbs. of butterfat, and gained one pound in weight. Bringing together the results from both groups we find that the 12 cows, while eating the bran mixture during two 15-day periods produced 8,216.5 lbs. of milk containing 302.7 lbs. of butterfat, and gained 222 lbs. in weight. The same 12 cows while on the alfalfa mixture during similar periods produced 8,384.5 lbs. of milk containing 302.3 lbs. of butterfat, and gained 234 lbs. in weight.

During this test with 12 cows for a period of two months chopped alfalfa was substituted for bran in the standard dairy ration of four parts of ground corn, two parts of bran and one part of oil meal, with no appreciable effects, either favorable or unfavorable. If these results are the same as will be found in general practice, then alfalfa fed in this manner has the same feeding value as bran. Since the same amount of butterfat and practically the same amount of milk was produced from the ration containing chopped alfalfa as from the ration containing bran, the difference in the cost of production is only the difference in the cost of the alfalfa and the bran. Valuing a good quality of chopped alfalfa at \$12 per ton and bran at \$20, the saving in cost of feed due to substituting chopped alfalfa for bran, amounted to 13.6 cents per 100 pounds of milk, or 11 per cent. of the cost of the feed eaten by the cows in producing this milk.

## Marked Dairy Temperament

AN interesting illustration of extreme dairy temperament is furnished at present by Finneroe Pride Johanna Rue, the second highest record cow in the world, owned by Bernard Meyer, New Jersey. After completing her record, in which she produced 80 lbs. of milk the last day, she was dried up and gave no milk for over a year. She is not yet in calf. During the past winter she has been fed only hay and corn stover. A short time ago it was noticed that her udder was filling. She was taken to the barn and in two weeks, on twice a day milking, was producing more than 50 lbs. of milk per day.—Hoard's Dairyman.



A Splendid Alaska Bloom on the Farm of J. W. Robinson, Ondruff, Ont.



# POULTRY



## Summer Care in the Poultry Yard.

By Michael K. Boyer.

THE summer care of poultry is a subject of so little importance to many new poultry keepers that they are apt to neglect it. It seems as though the hot, scorching days fairly wits the ambition of the otherwise wide-awake person, and much is "put off until tomorrow that should have been done to-day."

Now it is just as important that the fowls feel comfortable in summer as it is aimed to have them in winter. Not only should they be regularly fed and watered, but partial shade should be provided the runs, for the hot suns are depressing on the stock. All foods of a heating nature—carbonaceous material—should be down in quantity, using merely enough to balance the ration.

The houses should be freely ventilated at night—in fact, the stock should have open fronts to the houses that they may get full benefit of the pure, fresh air.

Not only is it necessary that fresh water be given, but care should be taken that the drinking vessels are kept in the coolest spot possible.

All this advice, to a veteran, is "an old story," but to the new aspirant—it is valuable information. The importance of these small matters may not be apparent at first, but the longer one is engaged in poultry culture, the more does he see the necessity of strictly living up to these rules.

Especially are the months of July and August trying to the ardor of the poultry keeper. The hot suns make work a burden. The house question calls for heroic action; the rusty look of the fowls about going into molt is an eye sore; the egg crop is noted for its limitations; and the market price is almost discouraging. Are you subject to the "blues"? That is the time when you are apt to get them.

But the enthusiastic, plucky, willing worker will plod along, knowing that the season will soon be here when the stock will look better, will do better, and when the prices for eggs and poultry will be a more tempting figure!

Green food is another important item. Short, tender grass, lettuce and radish leaves are not only relished, but the very best kind of greens to give. Of course, the best method is to put them down as a good pasture, but poultrymen do not always have that advantage to give their fowls.

There is more or less dry weather in the summer, and the run not infrequently becomes baked, and in heavy soils more or less filthy. The man who has the best interests of his stock at heart, will once a week use a hand plow in such yards and stir up the soil so as to make it loose and fresh. If he does this at night, the next morning the fowls will get at work, scratching, hunting worms, and stirring up things generally. It is wonderful how much they find in this turned up soil that furnishes them both amusement and food.

It should be the rule that nothing is thrown in the poultry runs that will not be eaten up quickly by the fowls. To make the runs a dumping place for slop, soon furnishes the stock with a lot of sour, tainted stuff that is sure to create sickness. We never believed in feeding slop to our pigs, and certainly would not to our poultry.

After breeding season, the wise poultrymen remove the male birds from the flocks. The eggs will keep

much longer if not fertilized, and the hens will be able to shed their feathers better if not harassed by the males. I believe in separating the sexes in July and not remating before the first of the following year. It means stronger, better and more vigorous stock.

Poultry that is well kept during the summer will be in good condition for winter work. Broody hens will be more or less frequent during the heat term, and here I wish to caution beginners about using harsh methods in breaking them up of this broodiness. This instinct, I believe, is nature's provision for giving rest to the hen, and the most humane methods should be employed to curtail that period. A good plan is to put all the broodies in a separate run and house in which there are no nests. Another plan is to place each bird in a separate cage. A week generally changes the hen's ideas, and she is ready to get down to work again.

# HORTICULTURE

## College Girls at Work.

NUMBER of college girls are at work in the Winona district, and so far are giving good satisfaction. The same is the case in other parts of the Niagara District. Clad in middie blouses and bloomers, they work all day in the orchards, gardens and jam factories of the Niagara Peninsula. The work is both convenient and picturesque.

Fruit pickers are what is chiefly needed, but the girls are willing to do weeding, hoeing, packing, or canning, if necessary. Work is now needed from May 15 to October 15, but a number of girls are signing on for only part of that period. The pay is 15c an hour for tree fruit, and a piece-work system for board and lodging is supplied in the camps at \$4 a week.

## Cooperative Fruit Selling.

WITH the large number of small orchards which Ontario possesses, much fruit would never find a market were it not for cooperative associations. In the north and west counties especially there are many small orchards planted to many varieties of apples. One farmer has not enough Duchesse instances to fill a car. By cooperation, however, a number of farmers get together and ship a car of Duchesse with profit to themselves. In the same way these growers are able to accept an order from the prairie farmers for one or more cars of winter Spys.

This does not mean that it is only in the small orchard fruit sections that cooperation is practicable. While the small grower needs cooperation in shipping, the large grower needs cooperation in distributing his fruit so as to find a good market for all of it. Some of the associations like that at Clarkson even now do no marketing. The members of the Clarkson organization ship strawberries to the Toronto and Montreal markets, and as their product is seasonal they found the need of cooperation. This association, however, handles large quantities of berry business, shipping last year well over a million bushels.

Of the fifty-two Ontario associations, eighteen took out stock in a central organization. In this way they are able to offer to buyers large quantities of any particular variety. They are also able to make better bargains with supply manufacturers because of a larger purchasing power. Any attempt at centralizing the efforts of local associations is met by a difficulty. That is to get the associa-

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less an authority than the Experimental Farm in authority for the statement. But this paper did not state all the facts. If the editors will look up the report again they will see that it is an estimated cost, not actual cost. How long could any business keep running if the manager charged up what he bought was the cost of running, instead of what it actually was.

If I could get my work done for the amount charged, I would never hire a man by the year, or own a horse, plow, drill, binder or any other piece of farm machinery. It is such "hot air" as this that disgusts the farmer with the Agricultural Department, for whenever the farmers band together to get a living price for their products, they are met by the consumer with some such sets of figures been worked cheaply the Agricultural Department has produced some farm product. The farmer is beginning to believe what one very prominent agricultural official said in speech before a city audience, that the Agricultural Department is conducted for the purpose of reducing the cost to the consumer, rather than for the benefit of the farmer.

The only sensible way to keep cost accounts is to charge the proportional part of all expenses against each department. The only true way in farming, and the one which has been neglected in all demonstrations conducted by the Department of Agriculture, so far as my knowledge goes, is to take a whole farm as a unit, just as manufacturers take a factory and charge all overhead expenses, when the proportional part would be charged against the out crop. If this were done we would not have so many "successful demonstrations on farms," but they would be nearer the truth.

In Canada the Department of Agriculture has never had the courage to find out what the farmer is actually making, but across the line where, if anything, I think they are more prosperous, an investigation of about 20,000 farmers in probably a dozen States, showed that they make five per cent on money and laborers pay. As proof that the Canadian does not, I would point to the uncultivated land in this year of high prices. It is not, as many say, because labor is scarce, but because the farmer does not feel that he can pay the price. I could get a dozen men to-morrow, but I do not see where I could come out even. I would not ask for a profit while our soldiers are shedding their blood on the battlefield.

If the Department of Agriculture has reliable information regarding world shortage of food stuffs, let the Government guarantee a minimum price. A motion to this effect was passed at a largely attended meeting of our local National Resources Committee, composed of not only farmers, but also business men. In the meantime, I would beg to inform the officers of the committee that there is plenty of uncultivated land in this vicinity that they can rent for less than the expenses incurred in ownership, on which they can not only produce food-stuffs, but according to the above report can also make a clear \$50 cents a bushel to double the Rod Cross Fund.—G. F. Marsh, Gr. Co., Ont.

Some men at the club were telling dog stories after a day's shooting. When the tales had got very "tall," one little man, who had been quite silent, said:

"I have a dog that makes all yours seem fools. I generally feed him myself after dinner, but the other day a friend dropped in and the poor animal slipped my mind. After the meal we went into the garden. The dog scratched up a flower and laid it at my feet, with the most yeasing look in his eyes—it was a forget-me-not."

Nobody telling any more dog stories that evening.

## Wayside Gleanings

By "Burnbrae"

**Y**ES, I have a grouch. It's against the man who first contrived the so-called sanitary and improved steel stalls for cow stables. I know the majority of men think them all right and may possibly laugh at my out-of-dateness, but, nevertheless, I stand firm against them.

Some three or four years ago we had our stables remodelled and, in order that we might be as good as our neighbors, we put in steel fixtures of the most expensive and approved type. Everyone admired them and praised their sanitation and other good qualities. I am willing to admit that they look nice and, possibly, are more sanitary than many of the old-fashioned sort, but I have a serious kick to register when you come to handle the animals which stand in them.

Fortunately, or otherwise, we had six two-year-old heifers freshen this last two months and, in trying to teach them to stand quietly while being milked, I have been so annoyed at those lovely sanitary steel stalls that from now until the distant future is reached, I will have little use for them. To illustrate, let me describe what happens when I good-naturedly sit down to milk. The two-year-old stands quiet a few seconds, then steps away from me. I follow. She refuses still farther. I persevere. Soon a lovely piece of steel tubing makes its appearance about 15 inches in front of the heifer's hind legs and exactly where my right foot ought to be to support the milk pail. The cow goes still further from me and the beautiful stall comes up to a position where I rasp my knuckles on it every stroke of the milking stroke. About this time the animal in the next stall decides that her domain is being encroached upon and she makes a move to regain the lost territory. Result—the cow being milked suddenly burches to the right and the writer beats a hasty retreat to avoid being mixed with the milk in the gutter. About this time it would be unhealthy for a Beatty London Superior man to enter the cow byre, because no buyer would be present. All this can be laid at the door of the man who invented these lovely, beautiful and sanitary steel cow stalls. And still they expect us to keep cool and not abuse the cows.

"BURNBRAE."

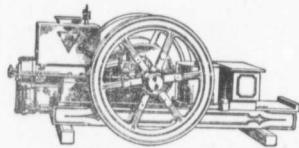
### Steel Braces—Metal Clad.

W. Arthur Clazie, Hastings Co., Ont.

**M**Y barn is 60 feet long and 36 feet wide and is constructed of 26 gauge metal siding. It has steel braces and steel shingles. I am well pleased with it so far. I believe the steel braces are much better and more convenient than other styles, as the steel braces only come out about three feet from each post, and are not in the way in the least.

There were several reasons why I decided to build this style of barn, one of these being that we had no lumber or lumber of our own. The material used was supplied, and all we had to do was draw it from the station, which was only about a mile from the farm. Another reason was that such a barn is entirely fireproof from the outside, as not an inch of lumber is exposed. The insurance is much lower, and it does not require any painting to keep in good shape. Such a barn is very convenient, having no tie beams or purlin posts. The cost was little more than lumber clad barns, and considering these advantages, I think it is cheaper in the long run to erect a metal clad barn.

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

## The U.S. Farmers Speak

**E**IGHT of the greatest farmers' organizations of the United States, with hundreds of thousands of members, have memorialized their president to use the great powers conferred upon him to exempt experienced men engaged in farm work from military service, at least in the first call for one million men. In their petition our brethren across the line mention the vital need of food and attribute the unsatisfactory agricultural situation to the death of agricultural labor. They ask that the United States be not allowed to fall into the same error that was committed in Great Britain earlier in the war, when young, active men were generally taken from the farms and put into training camps, their places being taken by unskilled labor. As the season advanced it was found that untrained labor, and because necessary to go over into the trenches in France and bring back thousands of skilled agricultural laborers. To this error in judgment is due in part the food crisis with which Great Britain is now threatened.

The subject matter of this United States memorial applies with equal force in Canada. Thousands of acres are lying idle because of the lack of hands to till them. Working men will always answer the lure of higher wages, and farmers cannot hope to hold their help in competition with the wages offered in munition factories. To further denude our farms by conscription, at least until the need for men becomes much greater than at present, would be suicidal. Even this exemption, however, will not end the complications of the case. If men are conscripted from the cities, higher wages will prevail there and the farmer will be more surely outbid for labor than he is at present. It may be that national service will have to be invoked to maintain pro-

duction. One thing is certain: the farmers of the land are doing their share. They are working long hours and paying in proportion to their returns higher wages than are city employees. They are producing every pound of food possible, and that without the guarantee of prices that the munitions maker demands.

## The City Milk Producer

**W**HEN city councils in Canada show any direct interest in the milk producer's problems, it is usually to express regret that the price of milk is so high; unnecessarily high, many councils seem to think. In Cleveland, Ohio, the Chamber of Commerce, instead of following the usual procedure and condemning milk producers as extortioners, set an example that might well be followed by similar bodies elsewhere. The members of the Chamber conducted a survey of farming conditions in dairy communities tributary to the city of Cleveland. They checked up the business of the milk producers on the same basis that they would conduct their own business, and found that, at the prevailing prices of milk, the farmers were suffering a loss of more than \$2,000,000 a year. Then they began to understand why many farmers were going out of the milk business and selling their cows for beef or export to other states.

These conditions are not confined to Cleveland alone. They are true of all districts where farmers are asked to specialize in the production of city milk. The farmer who ships milk to the city deprives himself of the income that is possible from converting the skimmed milk or whey by-product into pork. Also, when working under Board of Health regulations, the care of both the cows and the milk calls for greater expenditures of labor than is ordinarily demanded for factory dairying, and leaves less labor for the production of cash crops or the conducting of live stock sidelines. The business of the city milk producer is a specialized one, and he must secure considerably more for his stock than is possible in other lines of dairy farming, or his business will not be profitable. These are factors that city people should be made to appreciate. And they are most convincing to city readers when proved to be true by the investigations of such a purely city body as the Cleveland Chamber of Commerce.

## Cooperative Wool Sales

**T**HE wool marketing business of Canada will be on a new basis from now on. Two weeks ago Farm and Dairy reported the successful sale of over 100,000 pounds of wool by the Cooperative Wool Growers' Associations of the Province of Quebec. In last week's issue we told of how 200,000 lbs of Ontario wool was sold cooperatively at an even higher figure. In the Canadian west, cooperative wool marketing appears to be on an equally satisfactory basis. With this taste of successful cooperative marketing, Canadian farmers will never be content again to market their wool through the old channels.

In this stage, cooperative wool grading and sales have been under the superintendence of the various departments of agriculture except in Quebec, where Macdonald College has taken the lead. If department officials are wise they will from now on, divorce themselves more and more from the work of wool marketing, and leave it in the hands of the wool growers themselves. paternalism is always dangerous. Too much government aid in one line leads to a demand for similar aid in other lines, and, if carried to its logical conclusion, government supervision would tend to produce a people incapable of thinking for themselves. Wool growers appreciate the assistance given them by such men as Mr. Wade and Mr. McMillan, but we are confident the greatest result in the long run will be obtained by inculcating the spirit of independence and self-service.

## A Woman's Wisdom

**T**HE following from one of Our Women Folk, in a letter written to Farm and Dairy, contains some homely wisdom that many advisers of the farmer, self-appointed and otherwise, may well take to heart. She says in part: "The business of the country should be conducted in business fashion, and when those higher up begin to show their willingness to 'carry on' even at a loss, we of the plow and hoe will gladly do our share. I don't mean to infer that farmers, as a class, are faultless, or that there are no slackers amongst us, but these twin virtues, thrift and economy, which seem to have appeared so suddenly on the horizon of the speaking and writing public, have been studied and practised as a necessity of life by thousands of those who are now being urged to try them. They will come as a novelty to the adviser, rather than the advised."

This New Brunswick woman gives the situation in a nutshell. The appeal that is made to the manufacturer for greater production is a business appeal. The appeal to the farmer alone has been based on patriotism. The manufacturer has received contracts allowing such a wide margin of profit that munition plants have been able to pay wages which have drained every country district of its best available labor. Prices of farm products, while high, have not been high enough to overbalance the obstacles of bad seasons, high-priced labor and costly seed and feed. And yet in spite of these disabilities the farmer has responded to the call. He is working longer hours than any other class of the community. He is maintaining production wonderfully. And farm folk do now, and always have, set an example to all others in thrift and economy. We would suggest that the never-falling stream of advice and exhortation, which in recent months has assumed the proportions of a great river of oratorical and editorial effort, be diverted to channels where it is more needed. The farmers are doing their share. If other classes can be induced to do as much, the present crisis will be safely tied over.

## The Dairy Cattle Supply

**D**AIRYING is unlike the primary lines of farming. If labor were to become plentiful and cheap in the next few months it would be possible next season to wonderfully increase the area in fall and spring grains and potato and root crops. But no matter how great the demand nor how plentiful the supply of labor, the output of dairy products could not be suddenly increased to an appreciable extent. The number of milk cows could not be increased by the addition of a single animal. Heifers would first have to be reared, and at least two or three years would elapse before any great expansion would be noticed.

It is because of this stability in the supply of dairy products that the dairy farmer will be assured of a good market for his finished product when the unfinished food products of the farm, such as wheat and potatoes, will not command anything like the prices that they do to-day. For this reason the dairy farmer will be wise to conserve, and, if possible, increase his dairy herd. At the present time the grain farmer may seem to have an advantage, but as soon as the war is over the pendulum will swing back again in favor of the live stock farmer, who will then be converting comparatively cheap grain into a high priced product. The far-sighted dairy farmer, even if the labor situation is such that he cannot retain his whole milking herd, will endeavor to have heifers coming along which will enable him to take advantage of the demand for dairy products when the labor and feed situation eases.

## APIC

Prepa

**W**HILE a honey is in the making, it is creating the must not be seen. Roughly speaking, in the hive at the honey-dew the brood build next year, unless other imports brood is very nuclei, because with a laying cell, will build before winter, with brood from the honey from the brood build upon which quickly built up time an almost cured.

In newly-formed brood in all states more or less of consequent death and sometimes the older brood, are skillfully manipulated. Further immediately obvious is lost in introduced the newly-formed be guarded against height of the honey will cause however, the do so great that it newly-formed strong. Deserting stopping the entire brood will make grass dries and days, but care not overcrowding the would lead to weather. A good loss of young brood over a quarter before its removal hive. This many ordinary course of in the brood cell discourage swarms of the brood comb placed in the the bees is raised.

To M

All of these minimized as for queens' wings essential), and strain that it is swarms, move to new stand, and if empty hive on queen having been ground and placed. The swarm will live at the old place will now join together should be sent alive to produce the colony, now depleted in brood, is divided three to six nuclei consisting of two or three brood and three queen-cells soon to emerge bees.

The beginner to divide the pines many weak nuclei be rectified in the. The ideal condition are a lot out August and fortunately these Canadian localities and breakdown. Mismatched queen any time up to October, by the robbing sea.

## APICULTURE

Preparing for 1918

**W**HILE a maximum production of honey is of pressing importance in the war-torn year, yet increasing the bees for next season must not be neglected.

Roughly speaking, the bees that are in the hives at the commencement of the honey-flow gather the crop, while the brood builds up the colony for the next year, unless there is to be another important honey-flow. This brood is very valuable for forming nuclei, because these, started early with a laying queen, or ripe queen-cell, will build up into strong colonies before winter. Increasing in this way with brood from strong colonies during the honey flow is the basic principle upon which an apiary can be quickly built up while at the same time an almost full honey-crop is secured.

In newly-formed nuclei containing brood in all stages there is always more or less desertion of bees and consequent death of the young brood and sometimes swarming and death of the older brood, even when the nuclei are skillfully made by an experienced apiarist. Further, queens may not be immediately obtainable, or they may be lost in introduction. Robbing of the newly-formed nuclei has also to be guarded against, but during the height of the honey-flow only careless bees will cause this, towards its end, however, the danger of robbing grows so great that it is difficult to maintain newly-formed nuclei even when strong. Desertion may be checked by stopping the entrance with grass; the bees will make their way out when the grass dries and shrinks in about two days, but care must be taken to avoid overcrowding the confined bees, which would lead to stinging, especially in hot weather. A good way to overcome the loss of young brood is to place the brood over a queen excluder a week before its removal from the parent hive. This may be done in the ordinary course of relieving congestion in the brood chamber as a means to discourage swarming, a frame or two of empty comb or of foundation being placed in the brood chamber when the brood is raised.

### To Minimize Risk.

All of these risks may be greatly minimized as follows: Have all the queens' wings clipped (this is not essential), and when a colony of a strain that it is desired to propagate swarms, move the parent hive to a new stand, and place the swarm in an empty hive on the old stand, the queen having been picked off the ground and placed in the empty hive. The swarm will return to the new hive at the old stand. The field bees will now join the swarm, and the super should be transferred from the parent hive to the swarm which will produce the crop of honey. The colony, now depleted of bees, but rich in brood, is divided a week later into three to six nuclei, each nucleus consisting of two or three frames containing brood and honey carrying two or three queen-cells containing queens soon to emerge with the adhering bees.

The beginner should be warned not to divide the parent colony into too many weak nuclei, but this fault may be rectified in the autumn by uniting. The ideal conditions for building up nuclei are a slow honey-flow throughout the summer and early September. Fortunately these are supplied in most Canadian localities by goldenrods, asters and buckwheat.

Mistimed queens should be replaced any time up to the first or second week in October, preferably not during the robbing season.

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Your Cows



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Now is the time to plan for your silo. In selecting it, remember that it is GOOD silage that is most profitable to feed, and that GOOD silage can be produced only in a GOOD silo. Something that is claimed to be "just as good" at a lower price is never as good. A "cheap" silo is bound to be an inferior silo, and it can not produce GOOD silage. A "cheap" silo, or a silo that you can erect from "cheap" material, will prove the most costly you can buy.

The few dollars you might save on the first cost by buying such a silo will be lost many times over in the poor quality of the silage, the trouble and expense you will be put to in keeping the silo in repair, and in its short life.

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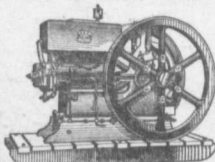
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If you are unhappy, it is probably because you have so many thoughts of yourself and so few about the happiness of others.—Mary L. Coon

## Winning the Wilderness

(Continued from last week.)

THE last shot was ready, when a wild yell burst from the darkness behind them, the shouts to "remember the Mater," mingled with the old university yell of "Rock Chalk, K. U.!" and reinforcements charged to the relief of the invincible sixteen.

What disaster might have followed the capture of the Tondo road and the attack upon the bridge is only conjecture. What did happen is history—type beneficent of the Twentieth century every company of the Twentieth Kansas was to help build. When daylight came, Thaine Aydelot saw the frontier line that he had proudly felt himself called upon to push back, and the reality of it was awful. He had pictured captured trenches, but he had not put in their decoration—the prone forms of dead Filipinos with staring eyes, watching nothing earthly any more forever.

Beyond that line, however, lay the new wilderness that the Anglo-American must conquer, and he flung himself upon the firing line, as the safety and honor of the American nation rested on his shoulders alone; while all his dreams of glorious warfare where Greek meets Greek in splendid gallantry, faded out before the actual warfare of the days and nights that followed.

Thaine's regiment, not the "Kansas Scarescows," but the "Fighting Twentieth," now, was one of the regiments on which rested the brunt of driving back and subduing the rebellious Filipinos. Swiftly the Kansas boys pushed into the unknown country north of Manila. They rushed across the rice fields, whose low dykes gave little protection from the enemy. They plunged through marshes they waded in water. They lay for hours behind their earthworks, half buried in muddy slime. They slept in holes, drenched to the skin. With the first early yell for their battle cry of freedom, they tore through tropical jungles with the bullets of the enemy cutting the branches overhead or spattering the dirt about their feet.

The American regiments were six days in reaching Caloccan, a prosperous town only six miles north of Manila; a mile a day, every foot stubbornly contested.

On Sabbath morning in the first day's struggle, Thaine was running in a line of soldiery toward the Filipino fortification, when he was halted beside a thicket but that stood between the runs of both armies and was riddled with bullets.

"Help the corporal here," Aydelot, then double quick it ahead," Lieutenant Kruse commanded.

Thaine followed the corporal inside the hut where, shot to pieces, lay the mangled forms of women and children who had caught the storm of bullets from both firing lines. Through a gaping hole in the wall beyond, he

saw a shallow pit where wounded and dead men and women were huddled together.

"Help me get out the live ones and send them back to Manila, and we'll cover the others right here," the corporal declared.

It was the neighborhood custom of the Grand River Valley for young men to assist at every funeral. Thaine had jokingly dubbed himself "official neighborhood pallbearer," and had served at so many funerals that the service had become merely one of silent dignity which he



Hay-making on the Farm of Mr. T. Graham, Peterboro Co., Ont.

forgot the next hour. He knew just how to place the flowers effectively, when to step aside and wait, and when to come forward and take hold. And these were the only kinds of services he had known for the dead.

As he bent over the blood-smeared bodies to take up the wounded and dying, now, the horror of war, burst upon him, and no dead face could be more ash gray than the young soldier's face as he lifted it above a dying Filipino woman whom he stretched tenderly beside the hut.

The next victim was a boy, a deserter from Manila, whom Thaine recognized by a scar across his cheek, as the young Filipino whose wound Doctor Carey had dressed.

"You poor fellow!" Thaine said softly.

The boy's eyes opened in recognition. "For liberty," he murmured in Spanish, with a scowling face. Then the scowl faded to a smile, and in a moment more he had entered eternal liberty.

A detachment of the Red Cross with a white-haired surgeon just then relieved the corporal of the wounded,

and Thaine saw Dr. Horace Carey coming toward him.

"I know what you are thinking. Maybe your gun did a good deal of it. This is war, Thaine."

The young man's dark eyes burned with agony at the thought.

"Forget it," Carey added hurriedly. "It is the lost cause here. I worked that line myself for four years long ago. I know the feeling. But the is the only medicine to give the is hands here. They can't manage liberty for themselves. You are giving them more freedom with your rifle to-day than they could get for themselves a century. Don't get your powder with your tears. You may need it for the devil that's after you now. Wait till you see a Kansas boy brought in and count the cost again. Good-by."

The doctor hastened away with the wounded, and Thaine helped to straighten out the forms about him and to fill the pit where they were placed in one common grave.

"Wait till you see a Kansas boy brought in and then count the cost."

Somehow, the words, ringing again and again down his mind, could not take away the picture of the thing he had just witnessed. And the dying gasp, "For liberty!" seemed to stab his soul, as he ran forward.

Two days later his company had orders to hold the trenches before a jungle filled with sharpshooters. All day the sun had blazed down upon them and the humid atmosphere had scalded them. All day the murderous

Clarke. As he spied Thaine and his comrades, he gave an instant's glance of kindly recognition to the admiring young privates, and was gone. The three involuntarily raised their feet, as if to follow him, and from three lusty throats they sent after him the beloved battle yell of the regiment, "Rock Chalk! K. U.!"

Then dropped to their platoon, again and hugged the earth as the rifle balls whizzed about them.

"I'm glad I'm alive and I'm glad I know that man," Thaine said to his neighbors.

"Alford's a prince. I'll bet he'll clean that woods before he's through. His work is always well done. Would you listen to that?" his comrade replied.

A tremendous crash of rifle shots seemed to split the jungle as the Kansas troops charged into it. The men in the trenches lay flat to the earth while the balls fell about them or sang a long whining note through the air over their heads. Plovers were frayed, and louder roared the hail wider the bullets flew, as the fighting lines swept over the enemy's earthworks and struck with deadly force into the heart of its wooded cover.

Then came a lull for shifting the fighting grip. A relief force was hurried to the front and the first companies retired for a brief rest. They fell back in order, while the aids came trooping out of the brush in groups, bearing the wounded to places of shelter. Thaine Aydelot and his comrades lifted their heads above the earthworks for an instant. Captain Clarke sat near on a little knoll staring hard at a stretcher borne toward him by the aids. The manner of covering indicated a dead body on it.

"How different the captain's face is from what it was before the attack," Thaine thought, as he recalled the moment when Clarke had talked with Lieutenant Alford. And then the image of the young lieutenant's face, so full of life and hope and power and gentleness, swept vividly across his mind.

"Who is it, boys?" Clarke called to the soldiers with the stretcher.

"Lieutenant Alford," they answered.

Something black dropped before Thaine Aydelot's eyes and Doctor Carey's words stung like powder-burns in his memory.

"Wait till you see a Kansas boy brought in, and count the cost again."

In civil life character builds slowly up to higher levels. In war, it leaps high in an instant. Thaine sprang to his feet and stood up to his full height in the blaze of the tropical sunshine. He did not see his captain, who had descended to the ground like a wounded thing, stabbed to the soul with an agony of sorrow. He did not see the still form of the young lieutenant outlined under the cover of the stretcher. He did not see the trenches nor the lines of khaki-clad, sun-browned soldiery plunging forward to rid the jungle of its deadly peril. In that one moment he looked down the years with clear vision, as his father, Asher Aydelot, had learned to look before him, and he saw manhood and a new worth in human descent. He had been a sentimental dreamer, ambitious for honors fairly earned, and eager for adventure. The first shots in the night attack on the Tondo road made him a soldier. The martyrdom of Lieutenant Alford made him a patriot. Human manhood, no worth much, it seemed to him, if in the providence of God, such blood must be spilled to redeem it to nobler civilization.

Six weeks after the death of Alford before Caloccan, Dr. Horace Carey came up from the hospital in Manila to the American line to see Thaine

(Continued on page 15.)

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## The Upward Look

### Redemption.

I HAVE redeemed thee, I have called thee by thy name; thou art mine.—Isa. 43: 1.

From the midnight mission in China Town, where we saw manhood expressive of pitiful degradation and sin, we went to the Jerry McElroy mission in the Bowery. We reached there too late for the meetings, as we had great difficulty to find the place, but some of those who had had charge of the service were still there, and courteously invited us in.

We had a long talk with the superintendent, a man with a refined spiritual face and manly bearing. To our surprise, after he had told us of the wonderful ways in which men have been helped, he added simply, "Six years ago I was picked up dead drunk from a bench in the park over there and brought here. Before then neither friends nor myself had any hope for me. Everyone had given me up, but here I found my Saviour and myself. My new life dates from then; an new six years and three months old."

Near us was standing a man with whose face I had been particularly impressed, as it seemed such an expression of peace and happiness and strength. Turning to him our informant asked, "John, how old are you?" "Four years and two months, sir," was the answer, given in such a glad confident tone that I can hear the answer yet. Then he asked the same question of a young man, whose face still showed the traces of past sin. With a determined straightening of his shoulders and a glad ring in his voice, his answer was, "One year and four days."

As I looked at them and thought of that other mission in China Town, and the faces, whose expressions with their markings, showed that they had not yet "been born again," with overwhelming force came the realization of Christ's wonderful power of redemption.—I. H. N.

### Canning of Vegetables Practicable

THE scarcity and exceedingly high price of tin cans, as well as the scarcity of labor, has very materially reduced the output and increased the cost of canned vegetables. In fact, some lines have reached almost a prohibitive figure for the majority of us. We, on the farm, however, need not do without canned vegetables. It seems the general rule for larger gardens this year, and we can well afford to can some of our garden products.

Some of us have been canning fruit for years and have had success with tomatoes, but when it comes to other vegetables, we are a little dubious of our success. The most important point in the process is, of course, the proper sterilizing of jars before the fruit is put into them and of the fruit after the jars have been filled. It is of great importance that the jars on no account be opened after the sterilizing period, as a very small particle of unsterilized air is sufficient to cause the jar of fruit to decay. Herein we give a method for canning beans, which will prove a guide in canning other vegetables as well.

Select beans of the same age and color and endeavor to can as soon after picking as possible. After stringing and washing well, they may be left whole or cut in small pieces, blanch by placing in boiling water from five to ten minutes, and plunge them quickly into cold water. Fill the jars, packing closely. Add a teaspoon of salt to each quart and boiling wa-

ter to completely fill the jars. Put on tops loosely. If jars with wire spring clasps are used, leave the lower side unclasped until sterilizing is over. If screw tops are used, screw them on, but not tightly. Then place in a boiler on false bottom, which may be made of wooden slats if nothing else is available. Some people claim that the water in a boiler should cover the cans about one inch, while others consider three-quarters of the way up on the seal to be sufficient. Opinions differ also as to the length of time necessary for sterilizing, running from one and one-half to three hours. After sterilizing, remove jars and tighten covers. The jars should be allowed to cool gradually so that there will be no danger of cracking the glass. By wrapping the jars in paper or storing in a dark place, it will help to retain the natural color of the vegetables.

Here is another method of canning beans which is considered very good. The beans are cut up and left in cold water over night. In the morning, this water is poured off and the beans tightly packed in thoroughly sterilized bottles and covered to overflowing with weak cold brine. They are immediately sealed and placed in a dark corner of the cellar. When these beans are opened for use, the brine is poured off and the beans allowed to soak in cold water for an hour or two. Then they are cooked in the natural way, and we are old that it is hard to distinguish them from freshly picked beans.

Now is a good time also to put away considerable rhubarb for making pies in the winter. Here is a method which is very simple. Wash and cut the stalks into small pieces. Pour boiling water over the fruit and drain immediately. Then plunge into cold water for a moment and pack firmly into sterilized jars. Fill up jars completely with boiling water. Put on rubbers and tops and seal at once. It is not necessary to cook rhubarb, as the high percentage of acid makes it unnecessary to sterilize as other fruits. When wanted, pour off the water and use as a fresh rhubarb.

If some of our women folk who have had good luck with canning vegetables would send along their methods, we would be glad to find a place for them in Farm and Dairy in order that they may be passed along to others who may be inexperienced.

### Arranging Cut Flowers Attractively.

WE are sometimes rather puzzled as to the best way of arranging cut flowers in vases tastefully and it adds so much to the beauty of flowers when they are displayed to good advantage. Here are a few suggestions worthy of note:

Flowers to be cut for use in vases must have long stems. Dahlias are especially fine for this use. Do not crowd into a vase flowers enough to supply half a dozen vases. When grouping cut flowers remember that quality and not quantity is what should govern. Have stalks long enough to lift them well above the vase in which they are placed. Before cutting blossoms, study the general appearance of the plant from all sides. Let the plant itself tell you how its blossoms should be clustered.

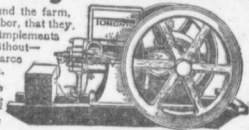
Short-stemmed flowers should be placed in low, flat bowls. They are especially attractive for table decoration. Pansies and nasturtiums are of this class. Nasturtiums are particularly effective in bowls of old blue or delicate green china or in glass bowls with the delicate green stems showing through the glass. These flowers may be used in thick clusters. Use with the blossoms a few of the leaves, but never combine other foliage with these flowers. Peonies are beautiful when placed in a wide-mouthed vase that permits them to

## "TORONTO" Engines Make Good

at so many different jobs around the farm, and save so much time and labor, that they have earned a place among the implements a farmer cannot afford to be without, especially in these days of scarce help and high-priced produce.

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## QUICK RETURNS

"Dear Sir:

"Enclosed find money order for ad. Received several enquiries from provinces east and west. Bull was sold to the first applicant, Mr. John B. Crawford, Monkland, Ont., and he has the satisfaction of owning a herd-header not only fit to go to the top in any showing, but whose two nearest dams average about 23,000 lbs. milk in one year.

"Yours truly,  
(Sgd.) G. A. Brethen."

The above is a letter just at hand from one of our big breeders in Holstein, who finds Farm and Dairy one of his best means of getting in touch with breeders who need choice Holsteins.

HAVE YOU SOME FOR SALE? WRITE US ABOUT THEM.

Advertising Department  
**FARM & DAIRY** - Peterboro, Ont.



our papers, speeches in Parliament, etc., so that we may vote intelligently. If after careful study of various questions you finally come to an opposite opinion from that of your husband, I think he will still be proud of you for that opinion."

Before refreshments were announced the president very kindly called on the household editor of Farm and Dairy to make a few remarks. This gave me an opportunity of expressing my appreciation of the good work which is being done by the King branch and to extend the best wishes of Farm and Dairy to all present.

### Let the Fireless Cooker Cook

**W**HILE, like every other invention, the fireless cooker has proven to be a great saver of hot kitchens when the mercury is soaring upward, also a saver of fuel and a saver of energy for the housewife. In summer, the dinner can be started on the range early in the morning, then placed in the fireless cooker and left until dinner time. As would be expected, the saving in fuel resulting from the use of a fireless cooker is greatest in the preparation of foods like stews which require long and slow cooking. The foods best adapted to the cooker are cereals, soups, meats, vegetables, dried fruits, steam breads



Homemade Fireless Cooker.

and puddings. A point which should not be overlooked is that we can utilize cheaper cuts of meat, as long cooking at a relatively low temperature, such as is given in the fireless cooker, improves the texture and flavor of these tougher cuts of meat. And in these days of high prices the meat bill in the majority of homes is quite a large item.

There are many styles of cookers on the market, but it is possible to construct a homemade cooker, which will give satisfactory results and is much cheaper. In a bulletin gotten out by the United States Department of Agriculture, a simply constructed cooker is described, a rough diagram of which appears herewith. For the outside container a lighty-built wooden box is probably the most satisfactory, although an old trunk, a small barrel, or a large butter or lard firkin may be used. Whatever the container used, its size should be large enough to allow for at least four inches of packing material all around the nest in which the kettle is placed.

Fireless cookers are adapted to a much wider range of cooking if they are provided with an extra source of heat, since a higher cooking temperature may thus be obtained than if hot water is depended upon as the sole source of heat. Obviously this introduces a possible danger from fire in

case the hot stove or other substance should come in direct contact with inflammable packing material like excelsior or paper. To avoid this danger a metal lining should be provided for the nest in which the cooking vessel and stove are to be put. For this extra source of heat a piece of soapstone, brick or an iron plate such as a stove lid may be used, which is heated and placed in the nest under the cooking vessel.

Asbestos and mineral wool are undoubtedly the best substances to use for the packing and insulating material, but some use crumpled newspaper which is very satisfactory, since it is clean and odorless and if properly packed will hold the heat. The paper must be packed in very tightly in order to do good work. Whatever packing material is used, it should come to the top of the container, for the kettle and the box should lack about four inches of being full. Then a cushion or pad, as shown in the diagram, should be placed in the space between the box and packing and the cover of the box after the hot kettles are put in place. Cotton, crumpled paper or excelsior will make good stuffing for the cushion. Enamel or aluminum kettles are most satisfactory, as they will not rust.

A precaution necessary in connection with the fireless cooker is to see that it is kept absolutely clean. It should remain open for several hours after use and should not be tightly closed when not in use.

### Winning the Wilderness

(Continued from page 12.)

Aydlett. The Kansas boys had been on duty in the trenches north of Caloocan for forty days, they occupied the breastworks under the rude shelter of bamboo poles, watching a sleepless enemy—a life as full of wearing monotony and hardship as it was full of constant peril.

"Well, Thaine, how goes the game?" Carey asked, as he sat beside the young soldier from the Grass River Valley. "I helped you into this world. I'm glad I haven't had to help you out yet."

Carey had never before seen any resemblance to Azher Aydlett in his son's face. It was purely the type of the old Thaine family of Virginia. But today, the pose of the head, the expression of the mouth, the far-seeing gaze of the dark eyes, bespoke the heritage of the house of Aydlett.

"I hope not to have any more help from you, either. You got me into the scrape; I'll see to the rest," Thaine replied. "I don't look all right? I haven't had a bath, except in a swamp mud, since the first of February. Today is the twenty-third of March. Neither have I seen a razor. Notice my silky beard. Nor a dress suit, nor—anything else civilized. Six weeks in one hole, killing Filipinos for our amusement and dodging their old Remingtons for theirs, living on army rations and respect for the flag of my country, may not improve my appearance, but it hasn't started me to the sickbed yet. Any news from home?" Thaine ended with the question put so carelessly, with a face so impetuous that Doctor Carey took notice at once.

"Homesick?" was his mental diagnosis, but he answered with equal carelessness.

"Yes, I had a letter from Leigh Shirley."

Thaine's eyes were too full of unspeakable things now for him to hold out. "She says the alfalfa is doing well. She and Jim have kept up all the interest, and are beginning to reduce the principal. That's why she wrote."

"Brave little soldier," Thaine muttered.

"Yes, civil life has its heroes, too,"

the doctor responded. "She also says," he continued, "that John Jacobs has had Hans Wyke convicted of running a joint and Hans had to pay a fine and atek in the Careyville jail thirty days. Hans won't love John for that when he gets out."

"What a hater of whisky John Jacobs is. He's always on the firing line and never misses his aim, bless him!" Thaine declared.

"Yes, Jacobs' battle is a steady one. He told me just before I left Kansas how his mother was killed on a saloon in Cincinnati when she was trying to get his father out of it. John wouldn't live in a state that had no prohibitory laws," the doctor commented. "Did Leigh write anything else?" Thaine asked.

"Yes, Jo Bennington and Todd Stewart are married. Pryor Gaines is in Pekin, and he writes that there are rumblings of trouble over there. Shall we go over and settle it when we finish the Filipino fuss?" "Might as well. I'd like to see old Pryor. I'm glad Todd and Jo had sense enough to take each other. I suppose Jo overcame her notions of living only in the city. What else?" Thaine replied.

"Nothing else. That's your message. Carey's black eyes held a shrewd twinkle.

"Why mine?" The impenetrable face was an Thaine again.

"See here, boy, don't think I haven't read her story, page by page. If Leigh had sent you a single line, I'd have begun to doubt."

Thaine threw one arm about the doctor's shoulder and said not a word. Then Carey read his story also.

"I nearly forgot to tell you that Leigh is doing well with her drawings. She sent me this, for which she had a good price paid her."

Doctor Carey unfolded the paper back of a magazine having a bit of prairie landscape for a cover design. In the distance, the headwaters swam in the golden haze of a Kansas October sunset, and their long purple shadows fell wide across the brown prairie and fields of garnered harvests.

The student, if carefully, had offered no comment. "Doctor Carey, what brought you to the Philippines?" he asked suddenly.

"To look after you," Carey replied frankly.

"Me! Do I need it?" "You may. In that case I'll be first aid to the injured," Carey answered. "I'm to go with the 'Fighting Twentieth,' when it starts out of these hog wallows toward the insurgents' capital. I must get back to Manila and pack for it. I have my orders to be ready in twenty-four hours."

In twenty-four hours the "Fighting Twentieth" left its six weeks' habitation in the trenches and began its campaign northward, and the young-hearted, white-haired physician with magnetic smile and skillful judgment found a work in army service so broad and useful that he loved it for its opportunity.

Fortunately, Thaine had no need for "first aid" from Doctor Carey, and he saw the doctor only rarely in the sixty days that followed. When the two had time for each other again, Colonel Fred Funston's name had been written round the world in the annals of military achievement, the renowned, courageous, beloved leader of a band of fighters from the Kansas prairies who were never defeated, never driven back, never daunted by circumstances. Great were the pens of that historian that could fittingly set forth all the deeds of daring and acts of humanity of every company under every brave captain, for they "all made history, and left records of unflinching glory."

(To be Continued.)



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## The District Convention of the U.F.O.

(Continued from Page 2.)

bushels of grain. "It was because of the loyalty of our farmers," said Mr. Kennedy. "If they had shipped only 10,000,000 bushels to us instead of 28,000,000, we could not have gotten the elevators. It is the loyalty of our farmers that made it a success, not our management. You might take the management of the Grain Growers' Grain Company, and if you were in Toronto, and they could not make a success of the Ontario company without the loyal support of Ontario farmers."

### The Export Business.

"When the Grain Growers' Grain Company started in 1906," he continued, "we started as a commission house. We soon found that it was not so profitable as far as protecting the farmers' price was concerned, unless we went into the export business. We had a terrible time for two or three years. At the annual meeting of three years ago, we showed a loss of \$250,000 on our export business. We asked the meeting of shareholders to write off this loss and pay it out of the reserve funds. Those who men rose up and instructed us to do so and to continue in the export business. The news was cabled over all the world. Farmers here at last came to the place where they would cooperate to the extent of standing a big loss as readily as in the taking of a long profit. We continued to export and at the end of last August we found that in the year we had exported 70,000,000 bushels of American grain and 78,000,000 of Canadian grain. We had nearly \$500,000 of profits on the export business last year and we did it with \$100,000 paid up capital."

"When we started into business we announced that we would not export so long as other firms handled the export business at a reasonable profit, six or eight per cent and one-half cent a bushel. In that year of financial stringency, 1908, the independent operators exacted a profit of five cents a bushel as revealed on the floor of the House at Ottawa. Last year we made our profits in exporting on three-quarters of a cent a bushel. Immediately the subsidized press came out with scare headlines to tell the farmers of the West that the farmers' company was robbing them. They had made \$500,000 profit on \$100,000 capital. This same press, however, had nothing to say when other companies were taking five cents to 12 cents a bushel. We did our business, not on our paid up capital, but on our line of credit of \$7,000,000 to \$8,000,000. We were just a bunch of green farmers who started this business. I know for I was green and the others were just as green as I was. Is this not proof that farmers can do what any other class of people can do?"

### In the Lumber Business.

Lately the Grain Growers' Grain Company has gone into the lumber business and Mr. Kennedy took a few minutes to tell of this phase of their activities. About seven years ago the executive decided that as the timber limits of the West were fast disappearing into the hands of foreign capitalists and at the same time the price of lumber was bound sooner or later to go to unnecessary high levels. Some of the shareholders objected to acquiring timber limits, considering that it was the duty of government to preserve these limits for the people, although as Mr. Kennedy said, "not a party in 40 years has preserved the resources of the country for the people." The Grain Growers got their timber limits. They now have a small mill cutting for their big mill, which is in course of construction. Their limits will enable them to turn out

30,000,000 feet of lumber annually for 30 years. The greatest result of this work will be that the output of lumber of the Grain Growers' Grain Company will be a barometer of the timber trade and hold down prices on the output of all other mills. All classes will benefit by this whether they live in country or city. "And this," said Mr. Kennedy, "is the way in which our company is built—service to all." It is possible too that this timber may be carried through the Panama canal to Eastern markets and regulate prices in the eastern provinces.

It was five o'clock in the afternoon when Mr. Kennedy concluded his sketch of the work of the Grain Growers' Grain Company. In the few minutes that remained to him, he dealt with what he himself called "the most important phase of the farmers' movement," the question of taxation. Said he, "We have an economic condition in Canada today that is based on injustice. We have a method of taxation that is based on injustice. We can never have a social condition such as the best men desire while our taxation remains as it is. I have with me a few apt illustrations. Mr. Kennedy showed the absurdity of tariff taxation with all its attendant evils and gave one of the most illuminating and simplest expositions of the working of the land tax that we have ever had the pleasure of listening to. This part of the address, however, is best appreciated when given in full and it will appear in a future issue of Farm and Dairy.

### Mr. Gurney.

Mr. Gurney dealt with some of the practical problems of the United Farmers' Cooperative Company. He told of how for two months they had practically combed America for a supply of coal, had received assurances that a supply would be given them and that only the day previous to the Markham convention had received word that the coal might not be delivered. Salt deliveries have been so slow as to cause dissatisfaction among some of the clubs. Mr. Gurney explained that the salt trade of the Maritime provinces, which was formerly supplied from Austria, was being entirely cut off by the salt companies at the expense of Ontario farmers. Were it not that the People's Salt Wells at Kincairdine, with a capacity of 250 barrels a year, were owned by the farmers, the situation in Ontario would be worse than it is. A new plant is in course of construction there with a capacity of 750 cars a year, which will be completed by August and will supply heat, light and power for the average farm for one year. A few years ago Mr. Gurney took up the question of denatured alcohol and in two weeks the oil companies had two lobbyists at Ottawa to see to it that nothing was done to facilitate its manufacture in Canada. "Politicians," said he, "have been legislating all the way through for the benefit of the clauses."

To illustrate just how well legislation is controlled by privileged interests, the speaker stated that the denatured alcohol manufactured from an acre of corn would supply heat, light and power for the average farm for one year. A few years ago Mr. Gurney took up the question of denatured alcohol and in two weeks the oil companies had two lobbyists at Ottawa to see to it that nothing was done to facilitate its manufacture in Canada. "Politicians," said he, "have been legislating all the way through for the benefit of the clauses."

### Mr. O'Brien.

Mr. N. Q. A. O'Brien occupies the unique position of a business expert who is not directly connected with the farmers' company and his advice on the business problems of the concern are all the more valuable on that account. He questioned if the progress that has been made is so wonderful after all. The half million dollar business done in the last six months,

amounts to only two cents a day among the 10,000 members of the U.F.O. "The club started badly" with \$10,000 as its authorized capital," said Mr. O'Brien. "How far will \$10,000 go in any business? Clubs of 50 members cannot be financed on a \$25 share. Every member of the club should have a share." The company is now proposing to raise its authorized capital to a quarter of a million dollars. "When we get this authorization we will ask the clubs to take up stock as required and I don't think we will have any trouble in getting members to take stock. At the present time, we should have \$50,000 paid up instead of \$2,000 subscribed and only half of it paid up and this would enable the company to make very advantageous arrangements for the benefit of the farmers of Ontario."

Mr. O'Brien explained how that the business of the company is financed by the cash discount of one per cent. to three per cent. given them by the firms with which they do business. The goods are then turned over to clubs at their invoice price. This one to three per cent. is all absorbed in the overhead expenses of the office. We have sufficient staff," said Mr. O'Brien, "to handle a \$900,000 business and the additional premium would leave a margin to work on and more and greater stock subscriptions would not then be necessary. Another point strongly emphasized by this speaker was the importance of local clubs placing their orders through the central company.

The Ontario movement has made good progress. It is yet but on the fringe of its development. The district conventions this year will play an important part in bringing Ontario farmers to a realization of the possibilities of cooperation in Ontario.

### The Tubercular Herd

ONTARIO stockmen would do well to follow the lead of the Iowa State College and make an effort to clean up the tubercular herd. Again it has been demonstrated that it is possible to build up a clean herd from a herd of reactors. Experts and veterinary surgeons have told us that it is possible to build up a clean herd, but we have been skeptical or else too indolent to attempt it. The Iowa people have accomplished it and we can. They use what is known as the "modified bang system." The details of the experiment follow in full:

In 1907 the college herd was tested and a large percentage of the animals were reactors. The cows were immediately put in quarantine pasture, maintained in absolute quarantine and fed in the open summer and winter. A shed open to the south furnished protection from storms. The calves were dropped in the quarantine pastures and allowed to remain with their dams until weaning time, 9 to 11 months. They were then tested and re-tested in from 60 to 90 days and taken to a clean herd. Of the 23 calves dropped from 1908 to 1914, 21 were tested, 18 passed the test and but three reacted. Allowing the calves to remain with their dams is cheaper and easier than separating them and furnishing a nurse cow for each calf.

To-day the college herd is a tubercular-free herd and has been since 1912. It contains daughters, grand-daughters and great grand-daughters of former tubercular ancestors. This condition has been accomplished by the annual testing of every animal more than six months old, when they go into winter quarters; maintaining a proper sanitation in the stable with the use of whitewash, disinfectant, paint and sunlight; maintaining of good ventilation and testing of the cattle purchased shortly after they come to the college herd.



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