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is the ideal fertilizer for Wheat, and can be obtained at any Station in Ontario for Twenty Dollars per ton. If you have never used fertilizer now is the time to start when big crops are essential. What about taking 20 tons and distributing the same among your neighbors? Drop us a line and our Salesman will call and talk the matter

The Cross Fertilizer Co., Limited SYDNEY, NOVA SCOTIA.

Rousing Meeting and Intense Enthusiasm the Rule -- A Synopsis of Addresses

at more than one meeting, the ses 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 held at Tilbury on June 29. At least 500 were inside the hall and quite a number could not get in. The mayor velcomed 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 discuss-ing the points which had been brought out by the speakers. All brought out by the speakers. All present were enger to hear and learn. On the same evening, Mr. R. H. Hal-bert and Mr. John Kennedy - went to Essex, where an equally good meeting was held. On Janc 20 the Forest club held a picnic at Hillsborough beach. Over 5,000 were present, a spiendid at: tendance. At this picnic Messra, Halbert, Kennedy, Morrison, Pettypiece, Groh and others addressed the gathering and in the evening a good meeting ing and in the evening a good meeting was held in the Forest town hall. About 100 were present at the meeting at Excler on July 2, Mr. Morrison and Mr. J. N. Kernighan being the speak-ers. On the same evening over 200 gathered in the town hall at Seaforth where a fine club was formed; that is they elected the directors and they will choose officers themselves at a later date.

The most representative and enthus iastic meeting up to this date was held at Listowel. Mr. W. S. Shearer, president of the Elma club, ably acted 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 Donaldson, president of the Atwood club, gave an able and stirring ad-dress. Mr. O'Brien was another of the Intersamp prevaised. As an interaction mere on the security on their storem, of Mr. R. H. Halbert's nual entities, strain. With these loans farmers are have, he removed his coat when he new able to pay their pressing debits commenced addressing the meeting, and feed the world's markets system-and held the interest of his audience atically for 12 months in the year. Throughout. The strong this grain and handle it.

The meeting at Markham was small The meeting at Markham was small-cent of numbers as farm work in the district is backward. All of the local clubs, however, were well repre-sented, Mr. Samssier of Stouffyllo, 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

Rousing witching and means Lindowskii in the three stylespines of rousiness T = 1000 m more important T = 7.0, are still in full swing problem of taxation and social reform and the interest and en which constitute the planks of the A and the interest and en which constitute the planks of the thusiasm is marked. The attend farmer plants of the func-ance has been splendid, in sev. Kennedy came to Outario to speak at eral case taxing to capacity the the district conventions of the U.P.O.; buildings in which the meetings were he was the leading speaker at the 17 held. In some instances it was in-conventions this year. He is therefore possible for all who came to the in an excellent position to speak on meetings to gain admittance. Forceful the procress of the movement, as seen speakers are bringing to the members by an interested outsider. "The meet-of the clubs the information they de ingo of this year." be stated at Mark-sire, an indication of this being that ham, "have doubled and trebiled those at more these of a members the same. The arbutanesm if Onof last year. The enthusiasm id On tario has grown at a tremendous rate. There are big things in store for the formers' movement in Ontario."

July 12, 1917.

Mr. Kennedy's Address.

Mr. Kennedy, at the Markham n. eting, 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 famillar faces in his audience. He first referred briefly to the financing of the United Farmers' Cooperative Com-United Farmers' Cooperative Com-pany. 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 dis-trict 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 grown big enough 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 in the West and 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 in the East would likewise benefit, as it is the Winnipeg market that determines the price. Also the West is drifting into mixed farming. Tuey 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 Ontarlo. Then he took up the work 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 aread speakers. Mr. Welkington Hay, grain and 75 per ceal of it was marked-M.P. of Listowel, spake at length. A of in the first three moulds after har-rousing messing was hold at Gorris. vest. This slaughtering of the market This slaughtering of the market W. John Pitchard of Gorie, who is resulted in greatly reduced prices, well known in connection with the Representations were made to Ottawa good work of the U.F.O., was in the and legislisation zottawn which enabled chair. About 150 were present and en- the banks to advance money to far-thusiasm prevailed. As an indication mers on the security of their stored

To store this grain and handle it properly, the Grain Growers' Grain Company have 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 man-age it. Once the local farmer delivers his grain to the elevator, his portion of the marketing is completed.

Then come the terminal elevators. These must be controlled by the cenappreciation of the importance of the tral and the central must control the work before them, was that of Mr. grain before they can be of any use to work before them, was that of ar, gram before they can be do any use to Kennedy. As president of the Grain them. The Western Company was ea-Growers Grain Company he toil of the abled to isase the big terminal eleva-great success that had attended the tors of the C. P. R. because the prev-farmers in the West in their suminess lows year they had handled 28,000,000 ventures and then dealt briefly and ef-(Continued on page 37.)



Trade increases t

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Some

NVESTIGATION no make of farm sale upon the C the qualities require the farmers of Easte yet require satisfac tractors offered are others are light ro but none show that ern Canadian farmer and provided for. O Henry Ford in the d factory farm tractor available, but rumor Mr. Ford has appr essential requireme appear to be essenti

A Lighte First: The farm lighter than the trac consequently, and be will be able to be Tractors now being give a certain draw lbs. to 5,000 lbs. 3 car, altered and equ ment will weigh less demonstrated that th equal draw bar pull cars, and will do as better, and in less ti

Certainly the exce tractors, hitherto man is, if the reduced weig and were certain pa designed and propor would not be necess it is necessary that t of the load being car should be so distribu road should not be b is required so as to gi wheels. In a farm tr this friction hold by affixed to the outside wheels

The conditions that descriptions of tract that it is necessary t of one entirely apart f other. Yet, until quit allowed the requirem dominate the farm t and produced. Demor attachment, applied i car, absolutely prove employ excessive weigh tractor, and that if 'es it is because certain of the tractor are not

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TORONTO, ONT., JULY 12, 1917

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 Ibs. 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 guarters) 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-



Fishing and Farming

AILURE is written at the end of F 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 what he is accordingly. Then again the success angler doesn't fish first in one pool and angler doesn't fish first in one pool and out the pool he first selects.

Good farming and good fishing are not unlike. Get the best pool known by ex-perience, then use the best balt 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 succes

cess. Are you trying to do a little grain farming, a little dairying, a little frui growing without special effort in any one line? If you are, nine times out of ten your chances for good profils at the end your chances for good profils at the end of the year will be lacking. Choose a near the year will be lacking. Choose a near the year of the second second second farmer that the second second second and make other line second the second parts. Farmer.

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.

No. 28

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 121/2 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 running 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 have power in the first instance, it should only require about four horse power in the second case. In such cases the

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

The Driving Wheels.

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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 ar-

ranged 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 cyclinder, 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 Length of cylinder. stroke. 8-16 h. p. 3% ins. ins. 10.20 h. p. 41/2 ins. 416 ins. 12.25 h. p. 4% 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 pint 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-eminently vital and call for the anxious consideration of the contemplating buyer. The writer is satisfied that before long new light faim 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, \$500.

12-25 farm tractor, \$700, or thereabouts: Before closing this series of articles attention

(Continued on page 6.)

FARM AND DAIRY

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 grow 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 Leaming, 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.

66 TUST wait till you get a car of your own," advised my brotner 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

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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 berefit 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 heretolore. He is fully conconvinced 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 bad 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 wo 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

A By-Product Worth Considering

much

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

MANY industries nowadays pay running ex-

facture, 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 manurial excrements. 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 twentyfour 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.

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Chemists tell u fairly well-fed ste pounds nitrogen. and nine pounds mercial fertilizer nitrogen, and seve acid. Potash cann in order to get at we should allow a price of potash bef manure at these p value of \$2.63.

Over \$3 At the valuation pounds, would be steer, a little over sidering that potas greater factor in e tion, the value is above. Nothing h calculation for the mated that the hur 100 per cent. of the ents, depending up manure is used and A well-fed dairy

cretes more than a reason, therefore, t is more valuable. Animal Husbandma humus value of the high as \$40. The co issue with the dair conserve the liquid, haps a covered ma base, will be feature are erected this su room for improvem barns. We can't affe

Eradicatir Honesty and Cl

T the recent m stein-Friesian Brocton, Mass methods in eradicat peared in his herd a informal, concise, se stance he said:

"It is easy to clean first be honest with come from your hear work for you. Assu tuberculous and past ing process (holding utes). Take the cal don't even let her lic ized milk. Next to Disinfect, whitewash. is not necessary to i Make physical exami cultures to see if th throwing off germs.



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

Chemists tell us that this fresh manure from fairly well-fed 'ateers contains in each ton 7% pounds nitrogen, 3% 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 for phosphoric cid. 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 \$255.40, 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 arricultural 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 shellical 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. Gement floors to conserve the liquid, absorbents to hold if, 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

A ^T the recent meeting of the American Holstein-Friesian Association, Fred P. Field, of Brocton, Mass., related his experience and methods in eradicating tuberculosis, which appeared in his herd a few years aco. His talk was informal, concies, 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 pasteurise 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. Noxit 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, takg 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

URING 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-



A Splendid Alsike Bloom on the Farm of J. W. Robinson, Ondrift, Ont.

(5)

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 mHk 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 224 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 oliment, 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 \$30, the saving in cost of feed due to substituting chopped alfalfa for bran, amounted to 13.6 cents per 100 pounds of mark, or 11 per cent, of the cost of the feed eaten by the cows in producing this mille.

Marked Dairy Temp. rament

A ¹ interesting illustration of extreme dairy temperament is furnished at present by Finderne Pride Johanan 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 hast 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 storer. A short time ago it was noticed that her udder was dilling. 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. (6)

\$25.00 FOR \$21.5

WAR SAVINGS CERTIFICATES

Annal or Annal States of State

THER DOLLARS FIGHT AT THE PROP

Back Up The Boys

Who Are Fighting For You!

Work and save as earnestly and whole-heartedly as they are fighting in France !

Work at something that helps directly toward winning the war! Save, and lend your savings to the nation, to finance the struggle

and furnish everything needed to the men in

For every \$21.50 you lend the nation now, you will get back \$25 at the end of three

years—an Interest return of over 5%. Certifi-cates are issued in denominations of \$25, \$50

and \$100 and may be purchased at \$21.50, \$43 and \$86 respectively, at any Bank or Money Order Post Office.

"Save for the men who are saving Canada."

The National Service Board of Canada.

C. W. PETERSON.

Secretary

the firing line,

R. B. BENNETT, Director Gene

FARM AND DAIRY

The Light Farm Tractor (Continued from page 4.)

should be called to a matter that appears to have escaped the attention of all makers and designers of farm tractors. That is, the influence the weight of the carried operator and of the carried store or supply of gasoline or oil has upon the operation of the tractor. The driver may weigh 220 lbs. or he may weigh 80 lbs.; difference, 140 lbs. The weight of gasoline or oil carried, with a full tank, may be 130 lbs. or with a nearly empty tank it may be 10 lbs.; difference 120 tank is may be 10 los.; difference 120 bbs. Total extreme difference, 260 lbs. A difference of 260 lbs. may make all the difference in the world and may make the satisfactory operation of a tractor very unsatisfactory when tractor very unsatisfactory when working difficult land. As the strength of a chain is the strength of its weak-est link, so the power of a tractor is limited by its work under adverse conditions. Whilst the driving wheels might work without slipping, when the tractor was being driven by a heavy man and with a full fuel tank, the wheels might slip and slip badly when a boy occupied the driver's seat and when the fuel tank was nearly empty. Tractors should be supplied empty. Tractors should be supplied with cast iron weights, which would be placed on the tractor when neces-sary, so that the total weight of the driver and the weight of carried fuel may be kept nearly constant.

with the surplus of stooked corn during the months of November and De-cember is followed successfully by many farmers. I do not know of any farmer who carries this to the extent of filling the four months' supply at that season of the year. It is doubt ful if as good silage can be made, and The ir as good single can be made, and the inconvenience and cost of filling during the cold weather of January would be much greater than in the fall. It is altogether likely, also, that the loss from the corn in feed value would be at least 15 per cost. It is also doubtful if in filling such a quantity of dried corn stover at this sea-son that sufficient moisture would be absorbed in order to insure proper packing to induce the correct maturing of the ensilage. It would cer tainly be necessary to use a fairly tamp be necessary to use a fairly large amount of water, either poured into the silo or run into the blower. The writer is strongly of the opinion that rather than all this expense, in-convenience and risk of winterfilling. it would be much more profitable to erect a stave silo for summer feeding. erect a stave glio for summer feeding. If sufficient help is not available for this, probably one of the manufactur-ing companies' patent stave silos would give satisfactory assistance.— E. S. A.

Inly 12 1917.

Calf Scours.

WHAT can be done for call tell us to remove the cause. better. Navel infection and indigestion are the two principal causes of scours. Sudden death shortly after birth is generally due to white scours or navel infection. Ordinarily com-mon scours is caused by digestive trouble. Over feeding, sudden changes in diet, changes in temperature of milk, filthy utensils, sour milk, one meal sweet and the next sour, are the most fertile causes of indigestion and hence the scours.

Calves should be watched carefully for symptoms. At the first appearto one half and add one ounce of cas-tor oil to the milk. The great objection against group feeding is that the sick animal cannot be detected. Then follow with the formalin treatment. The formalin treatment consists in giving one tablespoonful of formalin giving one tablespoonful of formalin solution, made by adding one-half ounce of formalin to 15½ ounces of water, in each one pint of milk fed. The quantity of milk fed is gradually increased until the normal amount is being fed. Many feeders have got good results from blood meal. In mild cases a teaspoonful of dried blood is added to the milk at each meal. L. W. Wayne of Missouri Agricultural College recommends the following pre-ventative measure: Care against over feeding, gegularity of feeding, clean conditions of the milk at feeding time, cleanliness of the pails, pens and stalls. Keep the conditions right at all times

An Accessory

LD DOBBIN was a good old nag, O LD DOLBHN was a good old nag, And he proved mighty handy In days of old when I would go A-sparkin' sweet Mirandy. He knew the roads that we would take,

He knew the roads that we would take, And faithfully he'd take 'em; He knew the hills that we would make And faulticasily he'd make 'em. Unguided, he, and when at times Her lips to mine were pressin', implicit faith we had in hmm-He never had us guessin'. The while I hugged her, I recall The lines were till sevinet.

The lines were idly swingin', Old Dobay was one good spark plug, His prove to-day I'm singin'.

-T. S. (Detroit.)

July 12, 1917.



Summer Care in

By Michae

HE summer o subject of s to many ne that they are apt seems as though days fairly wilts t otherwise wide-av much is "put off u should have been Now it is just as fowls feel comforts

it is aimed to have Not only should fed and watered, h should be provided hot suns are depres All foods of a he bonaceous material

in quantity, using balance the ration. The houses should lated at night-in should have open fr that they may get pure, fresh air.

Not only is it ne water be given, bu taken that the dri kept in the coolest All this advice, to old story," but to the and there are many

-it is valuable info portance of these s not be apparent at fi one is engaged in pe more does he see strictly living up to

Especially are the and August trying to poultry keeper. Th work a burden. T calls for heroic actic of the fowls about a an eye sore; the egg its limitations; and is almost discouragin ject to the "blues"? when you are apt to

But the enthusiasti worker will plod alo the season will soon stock will look bette and when the prices i

and when the prices i try will be a more to Green food is an item. Short, tender i radish leaves are n but the very best k give. Of course, the a range over a goo poultrymen do not a advantage to give the There is more or

in the summer, and th quently become bake soils more or less fi who has the best in stock at heart, will on hand plow in such y the soil so as to ma fresh. If he does th next morning the for work, scratching, hun stirring up things ge wonderful how much turned up soil that both amusement and

It should be the rul thrown in the poultr not be caten up quick To make the runs a for slop, soon furnishe a lot of sour, tainted to create sickness. W

certainly would not to After breeding se poultrymen remove the from the flocks. The

There is a great deal of controve

Refilling the Silos

O LTL allo of 10 x 21 des afford us will have no help to build a second roll the season, built would like to have even for recomending next summer. Can 1 roll mor add, say along in Jan set, p in the fall. Will email any made at this time pack sufficiently well to keep in warm wenther? How much water abouild be run roll. Jan set of the second second second roll.



Tool-Kit in Your Hip Pocket That is what you have in the Hawkeye Wrench. It combines six handy tools

Dept. 347.

in one, viz.: a monkey wrench, a pipe wrench, a screw driver, and three In one, viz: a monkey wrenen, a pap wrenen, a serve worst, sau un steel dies for threading or re-threading bulks, 5-16, 3-5 and 1-2 Inch. This useful little outfit, given away absolutely free to any subscriber Parm and Dairy who sends us one-only one padd in advance subscriptic Send more than one, and you will get your choice of other premiums or cash commission if desired.

CIRCULATION DEPARTMENT, FARM AND DAIRY, PETERBORO.



Is Fat on Heifers Dangerous?

IFAVE had dispute which a neighbor and would like you to settle the point in guession. I can make that I san not well fed, and perhaps a little on the fat alde. I do not think that disk will injure producing inhangent. My neighbor claims, and the other hand, that helfers will never make good millions if they are which in the other hand, that helfers which is a start of the other hand between the other hand. I show the other been more than another, and if so, which is a start of the other hand is a start of the other hand is a start of the other hand the other hand the other hand is a start of the other hand the other h

as to whether heifers kept fairly fat may be spoiled as milk producers. Advocates of some of the smaller breeds of cattle lay particular embreeds of cathe lay particular em-phasis on this question. However, the experience of the writer has been that, provided the animals are not over-fattened to the extent of curtalling the general growth and rugged-ness of the individuals, there are no injurious results. Generally speaking, a reasonable amount of fat is necessary in order to have calves in mo sary in order to have caved in most thrifty condition. Any excess of fat, however, is usually money wasted, for when the animals are turned on grass they very often shrink to this extent. It is generally found advisable to have It is generally found advisable to have the heifers only in thrifty condition and fair fiesh when at the breeding age, but during the last six months before their first freehening it almost invariably pays to make helfers quite Inversably pays as make neiters dutted fat as a preparation for their first lac-tation period. I have not noticed that too much fat in young stock is more injurious in one breed of dairy cattle than another.—E. S. A.



Summer Care in the Poultry Yard.

By Michael K. Boyer.

HE summer care of pcultry is a subject of so little importance that they are apt to neglect it. It seems as though the hot, scorching days fairly wills the ambition of the otherwise wide-awake person, and 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 owls 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-car-bonaceous 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.

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— and there are many of them each year —it is valuable information. The lim-portance of these small veters. portance 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 and avoid the action of the work system for betries. Board and poultry keeper. The hot suns make lodging is supplied in the camps at work a burden. The louse question \$4 a week. of the fowls about going into molt is an eye sore; the egg crop is noted for an eye sore; the egg crop is noted for its limitations; and the market price is almost discouraging. Are you sub-ject to the "blues"? That is the time when you are spit to get them. But the enthusiastic, plucky, willing worker will plod along, knowing that the season will soon be here when the stock will we hatter will do batter

stock will look better, will do better, and when the prices for eggs and poul-

and when the prices for eggs and pout-try 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 a range over a good pasture, but poultrymen do not always have that advantage to give their fowls.

in the hand plow in such yards and stir up work, scratching, hunting worms, and product is stirring up things generally. It is tion, the wonderful how much they find in this of coop-turned up soil that furnishes them tion, ho-bot amusement and food.

It should be the rule that aothing is the first second and a second throws in the positry runs that will . Of the first second throws in the positry runs that will be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock in a central not be caten up quickly by the fowles eighteen took out stock out stock in a central not be caten. The fowles eighteen took out stock ou

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

Poultry that is well kept during the Fourty 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-

ed term, and here I wish to caution beginners about using harsh methods in breaking them up of this brood-ness. This instinct, I believe, is na-turely provide the second second second second second targets and the second sec ness. This instinct, I believe, is na-ture'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 sep plan is to place each bird in a sep-arate 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 F Ł so far are giving good satisfac-The same is the case in other parts of the Niagara District. Clad in middy blouses and bloomers, they they work all day in the orchards, gardens and jam factories of the Niagara Pen-insula. The costume is both conveniinsula ent and picturesque.

Fruit pickers are what are chiefly needed, but the girls are willing to do weeding, hoeing, packing, or canning if necessary. Workers are needed if necessary. Workers are needed from May 15 to October 15, but a num needed from May 15 to October 15, but a num-ber 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 berries. Board and

Cooperative Fruit Selling.

W ITH the large number of small

With the large number or small orchards which contario pos-seases, much frait would never find a market were it not for the co-operative associations. In the north and west counties especially there are many small orchards planted to many varieties of apples. One farmer has not enough Duchess, for instance, to so the source of the sou fill a car. By cooperation, however, a number of farmers get together and ship a car of Duchess with profit to themselves. In the same way these growers are able to accept an order from the prairie farmers for one or but more cars of winter Spys.

This does not mean that it is only in the small orchard fruit sections that There is more or less dry weather cooperation is practicable. While the the summer, and the rune not infre- small grower needs cooperation in In the summer, and the run not intre- small grower needs cooperation in quently become baked, and in heavy shipping, the large grower needs co-sols more or less fithy. The man operation in distributing his fruit so who has the best interests of his as to find a good market for all of it, stock at heart, will once a week use a Some of the associations like that at Some of the associations like that at Clarkson even now do no marketing. have preserved as a to make it loose and show the solution of This associa a large quantities of berry msing last year well

To make the runs a dumping place organization. In this way they are for alop, soon furnishes the shock with able to offer to buyers large quantities a lot of sour, tainted stuff that is sure of any particular grade or variety, to create sickness. We never believed They are also able to make better bar-in feeding sour slop to our play, and gains with supply manufacturers be-estainly would not to our play.

In beging solv mop to our pigs, and gains with Supply manufacturers no-certainly would not to our poultry. Cause of a larger purchasing power. After breeding season, the wise Any attempt at centralizing the ef-poultrymen remove the male birds forts of local associations is met by a from the flocks. The eggs will keep difficulty. That is to get the associa-



E want you to have one of these Handy Long-Spout Oil Cans FREE. You'll find it most, convenient and useful with all your machinery. Mail the coupon today.

Thousands of farmers everywhere are using one every day with National Motor Oil, which was introduced to them first when they sent for one of these cans. This first-quality motor oil is the highest achievement of many years expert experience in making supreme petroleum products. It is your best insurance against repair bills caused by faulty lubrication. Also try

Black Beauty Azle Grease. In

smooth, friction-free, wear-resisting was axie. No compounds to clog and gum. Goes farther than ordinary grease. Buy it by the pail.

Sent

FREF To AUTO

National Motor Grease. For all purposes, Differential, compression cups, transmis-sion, all around the motor car. No longer pecessary to have several kinds of

White Rose Gasoline. Al-ways uniform. Every drop is continuous power. Pure, dry, carbon-free.

En-ar-co Tractor Oil. Especlally made for modern tractors. Proper body to lubricate most efficiently – saves cash in ma-chinery depreciation.

National Light Oil. Bright, clear light for lamps. No smoke, odor, charred wick or chimney. Best for oil heaters and all pur-



FARM AND DAIRY

nrice

tions to market all their crop through

The fruit branch is now advising members of associations in the west-

ern counties to set out new orchards of about a ten-acro size to replace the

or about a ten-acro size to replace the trees which are now coming out of the old orchards. Orchards of this size would be large enough to claim atten-

would be large enough to chilm atten-tion and the owners of ten such or-chards could by cooperative selling market from four to eight thousand barrels a year.—S. R. N. H.

A Good Advertisement.

THE very fact that Canada will

THE very fact that Canada will likely have a large surplus of In Canada brings to the first groups of a Canada brings to the first grower an upparalleled opportunity for de-veloping a market for apples in the years to come. There is no advortise-ment is explet which will bring re-with a non apple user at a fairly low price. It is safe to saw that the man

price. It is safe to say that the man who buys a barrel of apples this year

ed for them should make itself felt in increased marketing possibilities

This year will be a particular! they one for making use of such advertisement. The high price other food stuffs will make a re-able price for apples all the popular with the Canadian

products on every available market throughout the country at a rea-

sonable price they will receive more benefit than they could from market-ing a portion of their apples at a

comparatively high price on some of our markets and allowing the remain-

der to be wasted. Exclusive of their patriotic duty which demands that the most be made of the food resources of

Canada this year, the expected large supply of apples may thus be turned to

for a number of years to come.

If fruit growers are able

this central. This is always the draback in all cooperative work.

DELCO·LIGHT ELECTRICITY FOR EVERY FARM Puts Joy in Farm Life

Do you realize what electricity on the farm means-clean, clear light any time of the day or night—without matches Light all over the house, in the barns and sheds, in the yard, and dairy. Power to work the small machinery. Running water from an electrically operated pump.

It means doing chores in half the time. It means doing away with a lot of hard work. It means more fun, better health, *pleasure on the farm*.

And Delco Light completes the joy of electricity on the farm, for it brings you electricity easily, econ-omically. This truly wonderful plant costs little for the work it does. It is cheap to operate. Easy to operate. And gives splendid satisfaction.

(8)

788

and electric dynamo and a set of storage batteries. Starts on pressing of a lever, stops auto-matically when batteries are full. It is utterly simple in construc-tion and operation. Efficient of fuel and delivers all the light and power you will require.

- Thousands of Delco-Light plants have been installed. Every owner is enthusiastic and feels that he paid little for all he has Full details, descriptive literature received
- The Delco-Light plant consists of combined self-starting gas engine

and a free demonstration can be obtained by writing your nearest distributor. They are listed be-low. The price of Delco-Light is No. 208—\$485 and No. 216 --\$585. The Domestic Engineering Co. - Dayton





D^O you harvest and feed corn stover, the hay crop of your corn fields? If not, are

you giving yourself a square deal? A forty-acre field of forty-bushel corn contains, besides the grain, almost eighty tons of good, palatable, dry feed. At the Government's figures, that roughage is worth at least \$260.00. Without a corn binder, that much money is lost to you from every forty-acre field of corn. With a binder you

every lotty-acre held of corn. With a binder you can add it to your profits. Furthermore, it is easier and cheaper to save stover than to waste it. A Deering Corn Binder cuts free to seve a acres a day, cuts it at just the right time to get the greatest feeding value out of the stover, aves the wages and the trouble of getting two or three extra men and puts the hard work where it belongs on the tractor or horse.

it belongs, on the tractor or horses. Why not place your order now for a **Deering Corn Binder?** For catalogues write us at the nearest branch house.

International Harvester Company of Canada, Limited BRACH HOUSES WEST - Brancha, Man, Category, Alta, Edmonton, Alta, Lettbridge, Attan, Man, Category, Alta, Edmonton, Alta, Lettbridge, Attan, Man, Category, Alta, Jananou, Alta, Lettbridge, Minipute, Man, Yorkin, Saku, Winnipute, Man, Yorkin, Saku, EAST - Hamilton, Ont, London, Oct., Montreal, Geo., Ottawa, Ont., Queber, Que, St. John, N. B.

July 12, 1917.

A Bad Weed

this central. Thus is some work. The T. G. Raynor, while apring some only way to be sure of the loyal support of members is by penalizing quit. A functional some tunobly seed to a local dealer, which contained only be allowed to withdraw during come angularity is some work acceled to the original seeds of a print for versal seed in participation of seeds of a print for versal seed in participation is print versal seeds of a print for versal seed in participation is print versal seeds of a print for versal seeds of a print for versal seeds of a print for versal seed in participation is print versal seeds of a print for versal seed in participation is print when the print versal seed in participation is print when the participation is participation is print when commonly found in Ontario, or found as a weed seed impurity in annall seeds. As near as i, can be traced this No. 2 crade of timothy seed, vehich had this weed seed in it, was obtained from a jobber in seeds in Montreal, Que. As 200 werd seeds of this kind may be allowed per ounce in No. 3 timothy seed or 3,200 per ho, one could got a lot of weeds per acre, noxious and non-noxious, "! ine full noxious and non-noxious, the full noxious and not-noxious, " the full amount of weed seeds allowed verce always present. Fortunately this is rarely the case. Probably not more than 50 weed seeds per ounce in the seed under review. Even with six pounds sown per acre this amount would give a healthy plant for about every six square feet or more sown. A farmer's place was visited, who had seeded down 45 acres with this timothy seed mixed with alsike and timothy seed mixed with alskie and red, and the weeds appeared to be about as thick as one to six or eight feet, and quile evenly distributed. This was the case on two other farms visited where the same seed was used. Still another farmer had pulled for five days this plant and only had them half est

who buys a barrel of apprese this year will be a good prospect for another barrel or two next year. Thus, if apples are so plentiful in Canada as to allow of their being sold at a fair-ly reasonable price the demand creat-The plant is a strong one, very much branched and has small yellow blos-soms, which develop myriads of small seed pods. One healthy plant would do a lot of pollution to the soll. It belongs to the great mustard family which has given the world a great many useful plants as well as a num-ber of bad weeds. It is called Win-ter Cress. It is biennial or a winter annual, and at the time of my visit, June 12th, was in full bloom. It is also known as Barbara Herb, St. Baralso known as barbara nero, or par-bara's Cress. Yellow Rocket, and Rocket Cress. Cattle and sheep are fond of the plant. For this reason it was tried out as a fodder plant, but proved to be such a "stayer" in the soil that it is now considered a dangerous weed.

From Lanark County another plant was sent for identification, which was the same weed, and it appears to be getting quite a wide distribution The advice given was to lose no

apply of apples may thus be turned to the advice given way to use no sood account in paving the way for time in pulling all the plants possible. larger marketing possibilities at home in the years to come.-S. R. N. H. saved now, compared with what will happen if gome of these plants are allowed to mature their seed.

Had the farmers who used this seed availed thomselves of the opportunity every farmer has of getting his seed every farmer has of getting his seet tested for purity and germination free of charge, as a Government service through its Seed Branch, Decartment of Agriculture, Ottawa, they might have been saved this troble. This is the time of year to be look-ing around for unfamiliar pants, When found send them to the Dipart-ment of Boirony, C. E. & Ottawa, or Seed Branch, Ottawa, have them idea-tified and the means of control sur-

gested. The mails carry seed up to cight ounces and plants free. To be forewarned is to be forearmed.

Misleading Official Data

Editor, Farm and Dairy,-In a re cent issue of a Toronto daily it is stated that the cost of growing oats at the Central Experimental Farm, Ottawa, was 19.37 cents a bushel. Now, if this is correct, and as all farmers should be able to grow them as cheaply, it means nearly 50 cents clear profit on every bushel. Grow 2,000 bushels and you have \$1,000 clear of all expenses. Surely farming is a bonanza and farmers are all high

way robbers. This is the way the city man looks on it, and can he be blataed when no

July 12, 1917.

less an authority tal Farm is aut ment. But this p the facts. If the the report again the report again is an estimated How iong could running if the what he shought ning, instead of If I could get r

amount charged, man by the yea plow, drill, binde of farm machine air" as this that with the Agricult whenever the fa to get a living pri they are met by some such sets of how cheaply the ment has produce duct. The farme Meve what one we cultural official s fore a city audie cultural Departme the purpose of r the consumer, ra benefit of the far

The only sensib accounts is to cha part of all expense partment. The on ing, and the one lected in all dem ed by the Departs so far as my kne take a whole farm manufacturers tak charge all overhe the proportional p ed against the oat done we would " "successful demon but they would b In Canada the I

culture has never find out what the making, but across anything, I think t perous, an investig 000 farmers in p States, showed th per cent. on money As proof that the I would point to th in this year of high as many say, becan but because the fa that he can pay the a dozen men to-mo see where I could would not ask for soldiers are shedd the battlefield

If the Department reliable information shortage of food stu ment guarantee a r motion to this effect largely attended mo National Lesources business men. In would beg to inform committee that then cultivated land in they can rent for penses incurred in which they can not stuffs, but according port can also make a bushel to donate Fund.—G. F. Marsh

Some men at the dog stories after : When the tales ha one little man, wh silent, said:

"I have a dog tha seem fools. I gener self after dinner, bu friend dropped in a

mai alipped in a mai alipped my mine we went into the a scratched up a flow my feet, with the m in his eyes-it was a Nobody told any that evening that evening.



Making Hay

TN making hay the aim should be to

 \mathbf{I}^N making hay the aim should be to dry the plant with but little ex-posure to the sun, and to save all the leaves. The leaves, whether of a grass or a legume plant, are richer in food than the stems. Exposure to the sun also causes a loss of the flavor-ing material, and it is this that helps me in the help plants. The model through the leaves. If they are al-lowed to dry first the moisture in th-stem cannot pass out through them. stem cannot pass out through them, but must pass out through the walls of the stem, which is not the natural way for it to go, and so is slow.

The ideal way to cure hay is to put it into windrows or cocks soon after it is cut. This keeps the leaves in condition for drawing off the moisture, and it prevents the leaves from breaking off. Hay in the cock or windrow while feeling moist may really be a good deal drier than hay that has been exposed to the sun so that the leaves are dry enough to be brittle. but the stems full of moisture.

Farm Management

July 12, 1917.

ss an authority than the Experimental Farm is authority for the state-ment. 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 iong could any business keep running if the manager charged up what he hought was the cost of run-ning, instead of what it actually was.

If I could get my work done for the amount charged, I would never hire a amount charged, I would never nire a man by the year, or own a horse, plow, drill, binder or any other pieco 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 which show how cheaply the Agricultural Departhow cheaply the Agricultural Depart-ment has produced some farm pro-duct. The farmer is beginning to be-Meve what one very prominent agri-cultural official said in a speech before a city audience, that the Agri-cultural Department is conducted for the purpose of reducing the cost to in them. 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 farmlected 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 take a whole farm as a unit, just as manufacturers take a factory and charge all overhead expenses, when the proportional part would be charge ed against the oat 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 Agri-

culture 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, percent, 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. motion to this effect was passed at a largely attended meeting of our local National hesources 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 un-cultivated land in this vicinity that they can rent for less than the ex-penses incurre. In ownership, on which they can not only produce foodstuffs, but according to the above report can also make a clear 50 cents a bushel to donate to the Red Oross Fund.—G. F. Marsh, Gray 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 sem fools. I generally feed him myseem fools. I generally feed him my-self after dinner, but the other day a friend dropped in and the poor ani-mal 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 yearning look in the source it was a foreinmenot." in his eyes-it was a forget-me-not." Nobody told any more dog stories

that evening.

FARM AND DAIRY

By "Bumbras

A Farmer's Grouch

praised their sanitariness and other

mit that they look nice and, possibly, are more sanitary than many of the old fashioned sort, but I have a seri-

ous kick to register when you come to handle the animals which stand

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 mikked, I have been so annoyed

at those lovely sanitary steel stalls that from now until the distant future

them. To illustrate, tet 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 re-cedes still farther. I pursue 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 beauti-

ful stall comes up to a position where I rasp my knuckles on it every stroke of the milking operation. 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. Re-

sult-the cow being milked suddenly lurches to the right and the writer

mixed with the mik in the gutter.

for a Beatty, London or 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

Steel Braces-Metal Clad.

M^Y barn is 60 feet long and 36 feet wide, and is constant 36

feet wide, and is constructed of 26 gauge metal sking. It has steel braces and steel shingles. I

lieve the steel braces are much better and more convenient than other styles.

about three feet from each post, and

cided to build this style of barn, one

ed was supplied, and all we had to

of these being that we had no timber

or lumber of our own. The material

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 The insurance is inter lower, and it does not require any painting to keep in good shape. Such a barn is very convenient, having no tie beams or purilin posts. The cost was little more than lumber clad barns, and consider-ing these durations.

ing these advantages, I think it is cheaper in the long run to erect a metal clad barn.

am well pleased with it so far.

as the steel braces only come

are not in the way in the least. There were several reasons why we

"BURNBRAE."

I be

abuse the cows.

de

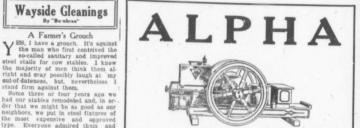
eats a hasty retreat to avoid being

I am willing to ad-

stand firm against them.

qualities.

good



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789

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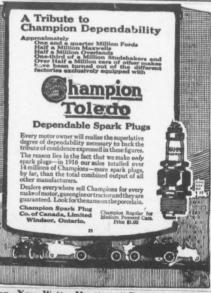
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engine of your own would soon pay the cost of an Alpha. The Alpha is a simple, powerful engine that will give you more service and cause you less trouble than any other engine you can buy.

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The Rural Publishing Company, Ltd. PETER ORO AND TORONTO

"Read not to contradict and to confute, nor to believe and take for granted, but to weigh and con-sider."-Bacon.

The U.S. Farmers Speak

E of the United States mith of states 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 dearth 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 farm help could not take care of the crops, and it became 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-

FARM AND DAIRY

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 employers. They are producing every pound of food possible, and that without the guarantee of prices that the munitions maker demands.

The City Milk Producer 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 Clevefand, 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 com munities 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 byproduct into pork. Also, when working under Board of Health regulations, the care of both the cows and the milk calls for greater expendi tures 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

THE 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.

U to 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 results in the long run will be obtained by inculcating the spirit of independence and self-service.

July 12, 1917.

A Woman's Wisdom

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 willing-"ness 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-failing 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 tided over.

The Dairy Cattle Supply

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 cwing 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

July 12, 1913

APIC

Prepa

W HILE a honey is honey is in the creasing the must not be ne

Roughly spea in the hives at the honey-flow the brood build next year, unl other import: brood is very nuclei, because with a laying cell, will build before winter. with brood fro ing the honey ciple upon wh quickly built t time an almost cured.

In newly-form brood in all s more or less consequent dea and sometimes the older brood are skilfully mapiarist. Furth mmediately ob be lost in intr the newly-form be guarded ag height of the ho ness will cause however, the da so great that it newly-formed strong, Deserti stopping the en bees will make grass dries and days, but care a overcrowding th would lead to st weather. A goo loss of young brood over a q before its reme hive. This ma dinary course of in the brood ch discourage swat of empty comb placed in the the brood is rai

To Mi

All of these minimized as fo queens' wings essential), and strain that it is swarms, move new stand, and empty hive on queen having t ground and place The swarm will hive at the old will now join th per should be parent hive to produce the cr colony, now dep in brood, is divi three to six nuc sisting of two or ing brood and h three que.n-cell soon to emerg

The beginner to divide the p many weak nucl be rectified in t The ideal condi nuclei are a slo

tunately these Canadian localit ters and buckw Mismated que

any time up to sk in October, p July 12, 1917.

APICULTURE

Preparing for 1918

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

Roughly speaking, the bees that are in the hives at the commencement of in the hives at the commencement of the honey-flow grather the crop, while the brood builds up the colony for the next year, unless there is to be an-other important honey-flow. This brood is very valuable for forming nuclei, because these, started early with a laying queen, or ripe queen-ceal, will build up into strong colonies with broad from strong volonies dur-with broad from strong volonies durbefore whiter. Increasing in this way with brood from strong colonies dur-ing the honey flow is the basic prin-cdple upon which an aplary 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 chilling and death of the older brood, even when the nuclei are skilfully made by an experienced aplarist. 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. ness 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 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 overcrowding the commed beek, which would lead to stilling, especially in hot weather. A good way to overcome the loss of young brood is to piace the brood over a queen excluder a week before its removal from the parent laive. This may be done in the or-dinary course of relieving congestion dinary course of releving 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.

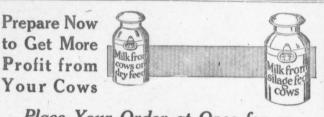
All of these risks may be greatly minimized as follows: Have all the queens' wings clipped (this is not essential), and when a colony of a strain that & is desired to propagate swarms, move the parent hive to a swarms, move the parent hive to a new stand, and place the swarm in an empty hive on the old stand, the gueen 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 been will now join the swarm, and the su-per should be transferred from the parent hive to the swarm which will produce the crop of honey. The colony, now depicted of bees, but rich in brood, is divided a week later into three to six nuclei, each nucleus conthree to six nuclei, each nucleus con-sisting of two or three frames contain-ing brood and honey carrying two or three que_n-cells containing queens soon to emerge with the adhering

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 through-out August and early September. Fortunately these are supplied in most Canadian localities by goldenrods, asters and buckwheat.

Mismated queens should be replaced any time up to the first or second ek in October, preferably not dur I the robbing season.

REEN

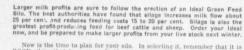
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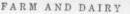
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JF you are unhappy, it is probably because you have so many thoughts of vourself and so few about the happiness of others .- Mary Lyon

Winning the Wilderness (Continued from last week.)

T wild yell burst from the darkness behind them, the shouts to "re-Defined them, the shouts to "re-member the Maine," mingled with the old university yell of "Rock Chalk, Jay Hawk, K. U. co." and reinforcements charged to the relief of the invincible

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What disaster might have followed the capture of the Tondo road and the the capture of the Tondo road and the attack upon the bridge is only con-jecture. What did happen is history —type henceforth of that line of his-himself called hither 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, seeing nothing earthly any more forever.

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

Thain's regiment, not the "Kansas Scarecrows," but the "Fighting Twen-tieth," now, was one of the regiments on which rested the brunt of driving back and subduing the rebellious Fillpinos. 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 waist deep in water. They hours behind their earthlav for works, half buried in muddy slime. They slept 'n holes, drenched to the skin. With the Una ersity 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 Caloocan, a prosper-ous 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 rtification, when he was halted beside a thatched hut that stood between the guns of both armies and was

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

HE last shot was ready, when a saw a shallow pit where wounded and wild yell burst from the darknoss dead men and women were huddled

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

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

The young man's dark eyes burned with agony at the thought. "Forget it." Carey added hurriedly.

"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 this ago. I know the feeling. But this is the only medicine to give the is-lands there. They can't manage libindistinere, they can't manage in-erty for themselves. You are giving them more freedom with your rifle to-day than they could get for thempower with your tears. You may need it for the devit that's after you pow. Wait till you see a Kansas boy brought in and count the cost again. Cood-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 "Wait till you see a Kansas boy

rought in and then count the cost mchow, the words, ringing again Ermchow, the words, ringing again and again down his mind, could not take away the picture of the thing he had just witnessed. And the dy-ing 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 scalded them. All day the murderous



and Thaine saw Dr. Horace Carey Clarke. As he spied Thaine and his coming toward him. '' know what you are thinking. of kindly recognition, or the admiring Maybe your sun did a good deal of it. 'Joi havar, Thaine.'' three involuntarily rose to their feet, as if to follow him, and from three as it to follow him, and from three busy threats they sent after him the beloved battle yell of the regiment, "Rock Chalk! Jay Hawk! K. U.!" then dropped to their pl-s gamin 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.

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 renlied

A tremendous crash of rifle shots A tremendous crash of rille shots seemed to split the jungle as the Kansas troops charged into it. The mean in the trenches lay flat to the earth while the balls fell about them or sang a long whining note through the air over them. Flercer grew the fray, and louder roared the guns, and fray, and lotder roared the guns, and wilder the bullets flew, as the fight-ing lines swept over the enemy's earthworks and struck with deadly force into the heart of its wooded

Then came a lull for shifting the fighting grip. A relief force was hur-ried to the front and the first com-panies 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. Can tain Clarke sat near on a little knoll staring hard at a stretcher borne to-ward him by the aids. The manner of covering indicated a dead body on it.

"How different the captain's face is "How different the captains 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 leutenant'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 answer-6a

Something black dropped before haine Avdelot's eyes and Doctor Thaine Aydelot's eyes Carey's words stung like powder burns is 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 upward in an instant. Thaine sprang upward 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 cap-tain, who had dropped to the ground like a wounded thing, stabbed to the like a wounded thing, stabled to the soul with an arony of sorrow. He did not see the still form of the young lieutenant outlined under the cover of the stricther. 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 Aydelct, had learn-ed to look before him, and Le saw manhood and a new worth in human deeds. He had been a sentimental dreamer, ambitious for honors fairly earned, and eager for adventure. The first shots in the nigh attack on the Tondo road made him a soldier. The martyrdom of Lieutenant Alford made him a patriot. Humanity must be 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 Nne to see Thaine (Continued on page 15.)



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

forgot the next hour. He knew just "ping!" ping!" of the hidden Mauser how to place the flowers effectively, in the jungle had stung the air about when to step adde and wait, and when them. 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 pon him, and no dead face could be more ashy 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 recog-nized by a scar across his cheek, as the young Filipino whose Doctor Carey had dressed. wound

"You poor fellow!" Thaine said softly.

The boy's eyes opened in recognition "For liberty," he murm red

Spanish, with a scowing face. Then the scowl faded to a smile, and in a moment more he had entered eternal liberty A detachment of the Rer Cross with

a white-haired surgeon just then re-lieved the corporal of the wounded,

Late in the afternoon Thaine lay

crouched benind his low defence with Colonel Funston had just given the command to rid the woods of the s'arpshooters, and the force ordered to the attack came racing by. Captain Clarke stood near Thaine's post, and tenant Alford halted beside him. Even in the thrill of the hour, the private down in the trenches felt a sense of bigger manhood as he looka ed at the young officer, for Alford was every inch a king; his soldier uni-form became him like a robe of royalty. His fine face was aglow now with enthusiasm of the battle and the assurance of victory.

Thaine did not hear the words of the two officers, for the jungle was beginning to roar with battle cries and oursting fire from many guns. But he knew the two had been boyhood friends, university chums, and mili-tary comrades, and the love of man for man shone in their faces. Alford tarried but a moment with

of Christ's v demption.-I. Canning of V THE search price of scarcity terially reduc creased the co

In fact, some most a prohil jority of us. ever, need not tables. It see larger garden well afford to products.

Some of us for years and tomatoes, but vegetables, we our success. point in the p proper steriliz fruit is put init after the jars of great impo no account be izing period, a of unsterilized cause the jar with we give beans, which

canning other Select beans color and ende ter picking as ing and wash left whole or Blanch by pla from five to to them quickly in jars, packing c

spiritual face our surprise the wonderful hean helped years ago I w from a honch and brought h friends nor n me. Everyon here I found My new life d

six years and Near us way pressed, as it of peace and Turning to hi "John, how of and two mont given in such that I can he

he asked the man, whose traces of nast mined straigh and a glad ri

swer was, "O that other mis the faces, wi not yet "been whelming for

HAVE red --Isa. 43 From the m Town, where

July 12, 19

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teously invite We had a l intendent, a

the service w

July 12, 1917.

The Upward Look

Redemption.

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 McCauley mis-sion 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 cour-teously invited us in .

teonaly invited us in . We had a long talk with the super-intendent, a man, with a refined spiritual face and manly bearing. To our surprise, after he had Joid us of the wonderful ways in which men have been helped, he added sinply. "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 me. Everyone had given me up, but here I found my Saviour and myself. My new life dates from then; am now six years and three months old." Near us was standing a man with whose face I had been particularly im-

pressed, as it had such an expression of peace and happiness and strength. of peace and happiness and strength, hard to distinguish them from freshly Turning to him our informant asked, picked beans. "John, how old are you?" "Four years Now is a good time also to put, away and two months, sir," was the answer, considerable thubbarb for making pies given in such a glad, confident tone in the winter. Here is a method that I can hear the answer yet. Then which is very simple. Wash and cut he saked the same queation of a young the stakks into small pieces. Four man, whose face still, showed the boiling water, over the fruit and drain traces of past similar. With a deter- immediately. Then plurge into col-umit a stade the intervent were for a proment and pack formly and a glad ring in his voice, his an-swer was, "One year and four days." As I looked at them and thought of that other mission in China Town, and

that other mission in China Town, and the faces, whose expressions with their markings, showed that they had not yet "been born again," with over-whelming force came the realization of Christ's wonderful power of re-demption.--I. H. N.

Canning of Vegetables Practicable

THE scarcity and exceedingly high The scarcity and exceedingly high price of tin cans, as well as the scarcity of labor, has very ma-terially reduced the output and in-creased the cost of cannod vegetables. In fact, some lines have reached al-most a prohibitive figure for the majority of us. We, on the farm, how-ever, need not do without canned vege-tables. 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 perhaps canned tomatoes, but when it comes to other vegetables, we are a little dubious of vegrables, we are a fittle dupings or 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 sterilno account be opened after the steri-sing period, as a very small particle of unsterilized air is sufficient to cause the jar of fruit to decay. Here-with 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 af-

ter to completely fill the jars. Put on tops loosely. If jars with wire spring clasps are used, leave the lower side chapps 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 boiler on false bottom, which may be made of wooden slats if nothing else is available. Some people claim that the available. Some people claim that the water in boller should cover the cans about one inch, while others consider three-quarters of the way up on the sealer 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 may be no dan. gradually so that there may be no can-ger of cracking the glass. By wrap-ping 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 cans 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 Lightly packed in thoroughly sterilized bottles and covered to overlowing with weak cold brine. They are im-mediately 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 it cold water for an hour or two Then they are cooked in the natural way, and we are told that it is hard to distinguish them from freshly

water for a moment and pack nrmiy into sterilized jars. Fill up jars com-pletely with bolling 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 the high percentage of acid makes it unnecessary to sterilize as other fruits. When wanted, pour off the water and use as fresh rhubarb. If some of our women folk who have

had good luck with canning vege-tables 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. TE are sometimes rather puzzled as to the best way of arrang-ing cut flowers in vases tastefully and it adds so much to the beauty of flowers if they are displayed to good advantage. Here are a few suggestions worthy of note:

Flowers to be cut for use in vasea must have long stems. Dahlias are especially fine for vase 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 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 in this class. Nasturtiums are in this class. Nasturtiums are parti-cularly effective in bowls of old blue or delicate green china or in glass bowls with the delicate green stems color and endoavor to can as soon af. or delivate green china or in ginas ter picking as possible. After string, bowls with the delicate green atoms ing and washing well, they may be showing through the ginas. These left whole or cut in amal pieces, flowers may be used in thick clusters. Blanch by placing in boiling water Use with the blossoms a few of the from five to ten minutes, and plange leaves, but never combine other foli-them quickly into cold water. Fill the age with these flowers. Peonles are jars, packing closely. Add a tenapoon becautiful when placed in a wide-of sait to each quast and boiling wa- mouthed vase that permits them to CN

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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 withoutespecially in these days of scarce help and high-priced produce. TORONTO Engines are made in five sizes, to run on gasoline, keroscae or matural gass 12 Write for Catalogue and full pe Better Ensilage at less Cost with

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"Dear Sir:

FARM & DAIRY

"Enclosed find money order for ad. Received several enquiries from provinces east and west. Buil was sold to enquires from provinces east and west. Buil was eoij 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 show-ring, but whose two nearest dams average about 23,000 lbs. milk in one year. "Yours truly," (Sgd.) G. A. Brethen."

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HAVE YOU SOME FOR SALE? WRITE US ABOUT THEM.

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GILLETT'S I



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WHITE AND COLUMBIA WYAN. DOTTES, LIGHT BRAHMAS, S. C. WHITE LEGHORNS. Michael K. Boyer, Box 23, Hammonton, N.J.

FARM AND DAIRY

arrange themselves naturally Sweet peas should be cut with the

-Sweet peak should be cut with the longest possible stems, and no at-tempt made to arrange them before they are put into vases. Use only white, pink, pale yellow and hender together. The deep colored do not harmonize well with the delively colored. Dron a headed into the steps. colored. Drop a handful into a vase give it a shake and each flower m to settle into the place where it belongs

Planning Meals in Advance. With the Household Editor.

"W HAT kind of meat will I have for dinner to-day," or "What in the world will I have for W for dimer today," or "What in the world will I have for dessert," are questions the hup bouse-wile often agis hereaft. It is bounds there will be variety from day to day. How many plan their meals alsead for how at a time? Some experienced how at a time? Some experienced how at time to do so. But why should it hup to alse the helpful in eliminatic Should it not be helpful in eliminatic should in the set days when it is new ask in these days when it is new alse in these days when the meals are planned for a whole week, think what a saving of time and thought it what a saving of time and thought it these every lasting dimers and tests take heaps of glanning.

Would it not be possible to plan the noon day meal in such a way that left-overs could be tastefully utilized for tea, or probably in some cases in cool les, or probably in some cases in cool weather, enough vegetables and meat could be cooked one day a shown to do for the next days alon, and not would be necessary the second day, would be necessary the second day, would be to add a few extra tong in order that there would be a slight waising from the mexima day. in order that there would be a signature variety from the previous day. What shout the daughter, who is

being taught housekeeping by a care ful mother? Would she not find it interesting to make out a week's schedule of meals, then let her mother offer criticisms as to how it might be improved, or let her follow, the schedule which she has drawn up and find, out from smellance find out from experience sometimes where it might have been planned to better advantage. For instance, she will learn that it is a good plan to have will rearn that it is a good plan to have a roast for dinner on wash day and to leave the top of the stove as clear as possible on ironing day. Bread baking day is an excellent time to make good use of the top of the stove as well preparing appetizing dishes, and so forth. Of course, we can never hope to standardize housekeeping after the factory model,-in fact, we do not wish to overdo this systematizing, yet is there not an ever increasing need for Increasing here increasing here for forethought and systematic planning? And what duty requires more plan-ning than the preparation of meals day in and day out?

The case concerned a will, and an Irishman was a witness. "Was the de-ceased," asked the lawyer, "in the habit of talking to himself when alone?"

"I don't know," was the reply. "I don't know," was the reply. "Come, come, you don't know, and yet you pretend that you were inti-mately acquainted with him?" "The fact is," said Pat dryly, "I never happened to be with him when he was alone."

Two British soldiers went into restaurant at Salonika and asked for Turkey and Greece. The waiter said, "I'm sorry gentlemen, but I can't Servia," whereupon the Tommies cried, "Fetch the Bosphorus." When that gentleman arrived and heard the complaint, the manager said, "Well, complaint, the manager said, well, gentlemen, I don't want to Russia, but you can't Roumania." And so the poor Tommies had to go away Hungary.

July 12, 1917.

A Women's Institute That is Thriving By Miss R. M. McKee, Household Editor Farm and Dairy

O attend a live Women's Institute Cross organization with which Mrs.

time with the meeting of the Institute, a month. June 28k was the date, and the It is Mrs. Tomlinson's firm opinion meeting was held the date, and the It is Mrs. Tomlinson's firm opinion the homa, of Mrs. James Stewart, who are not producing enough poultry. is one of the live wine Stewart, who are not producing enough poultry womany, branch. This farm how for the King Mrs. Tomlinson is a poultry womany commodious, yet the rooms is quite and pointed out that she can always the meeting was held, were taxed by brick of poultry in that the women of York capacity, couches and benches having County and that the women of York to be brought from other parts of the this splendid market, which is right house in order to provide seating ac at their door. "You would be doing commodation. About sixty were pres-ent, which was a splendid attendance. Miss Ferguson, who is scenetary of the branch, informed me when we were driving over to Mrs. Stewart's that driving over to Mrs. Stewart's that using newst three times a day was also she did not know whether or not the denounced very strongly, as she con-members would turn out in large siders that we should cut down our

heeting with a few items of dusiness. While the minutes of the last meeting were being read, 1 moted that 784 pairs of socks had been turned out since June, 1916, and 1,542 pairs since hostilities began. Two papers were read on the subjects of "Tactless Peo-ple" and "True Sociability." We plan to publish at least a part of these at a later date.

a litter date. Mrs. M. A. Tomlinson, of Simcon, Out. was the department delegate, who addressed the gathering on the subject of Dutter and Opportunities of Women in War Time." In opening her rougers, Mrs. Tomlinson spoke about preparing to celebrate Domin-ion Lay the proper spit. "I do not think we have fully realized our great hiew in her willy realized our great hiew shall. "We have commit-ted very many mailonal sins. We ted very many national sins. We have been over-prosperous and overhave been over-prosperous and over-frivolous and have not realized the Giver of all as we should. Perhaps Giver or all as we should, Perhaps the unfavorable crop of last year and the present shortage of food haw been sent as a lesson to help us set ready for this birthday of Canada and to turn over a new leaf. We should cele-brate Sunday. July tag a should celeturn over a new leaf. We should cele-brate Sunday, July 1st, as a national "holy day," not a holiday, in humble confession of our national sins and asking for a speedy end to this con-

Mrs. Tomlinson complimented the Mrs. Tomilisson complimented the members of the King branch of the Women's Institute very heartily on the great work they are doing and assured them that the Degement was very proud of them. Their spice, did contribution of socks to the Red Cross work was also commented

To attend a live Women's Institute Cross organization with which Mrs. Institution of the certainly an inspira Tomlineon is connected at Simco., in The certainly an inspira Tomlineon is connected at Simco., home to me quilted was brought Ont. turned out 13:00 parts attended a meeting recently, when I last year, which would not had need attended a meeting of the most possible without their knitting progressive institute because of the most the King branch was no to forgetting have ever had the pleasaure of the most the King branch was not forgetting have ever had the pleasaure of the most the King branch was not forgetting in was the King branch in Yowing, in order that drugs may Ont. I had a special inducement to well as socks, in order that drugs may It was the King branch in York Co., to send occasional sifts of money as Ont. I had a mpecial inducement to well as socks, in order that drugs may take a trip to King. Miss Alice A. to be purchased. She pointed out that robust of the trip of the send that the send that the send that the robust of the send that the send that the send that the send robust send the send that the send that the send that the send tributors to farm and Dairy, had given drugs was great, and that if \$10 was me a standing invitation to go and sent for this purpose last year, almost visit her at the first opportunity. This \$50 would be necessary this year to seemed to be my change to the send the send that the anyches visit her at the first opportunity. This 400 would be necessary this year to seemed to be my chance to "kill two cover the same work, as the purchas-birds with one stone," and scone is price of one dollar is not nearly ingly I took the trip. I will have not be a price of one dollar is not nearly to say about my pleasant visit more and the Prisoners of War Paul she Niss Fersysson in a later issue of diata two dollars will keep one Farm and Dairy, and will deal at this of out has two dollars will keep one Farm and Dairy, and will deal at this of out and and has been for June 28th was the date, and the It is Mrs. Tomlinson's firm opinion

County are not taking advantage of this spiendid market, which is right at their door. "You would be doing something very patriotic at the pres-ent time, the said, "If you raised chickens and supplied yourselves with food for next winter." The custom of using meat three times a day was also domained way strongly as the costs. she did not know whather or not the unsummer way should cut down our members as Mrs. Stewart's home was meat supply in order that more may not very central. Quite index of the sent overeass. Fish should be present were visitors and the number be sent overeass. Fish should be present were visitors and the number be week as cluctually as the present were visitors to bound the week and care to take a members of their organization. It week and care to take a Miss Bernice Stewart, the capable could heatbe." said the speaker, "you Miss Bernice Stewart, the capable could heatbe." as a week and would thus meeting with a few items of business, eliminate the splendid profit which while the minutes of the last meeting the average find heatber makes."

It meeting the average fish dealer makes." Incom-thant 784 Mrs. Tomlinson spoke at some airs since the food situation. "We are so ter-airs since the food situation. "We are so ter-ers were fibly hard to scare about the food lies? Dec question," she staid, "as we have al-these at about it seriously enough. We are rather softan in looking after our own Binceo, meets. Taking and saving more rather selfash in looking after our own needs." Reatin looking after our own needs." Reating and saving more vegetables was also emphasized. If there was any surplus of vegetables or fruit our farms. Mars. Tomilizon advised that it be sent to the Red Cross surplus and the sent to the red the second second second second second second the second second second second second second the second test second secon which is carried on under the airection of expert dictilans. Here they take fruit even down to the third and fourth grades and it is canned for overseas. This method is now taking fourth statistics. This method is now taking place of women canning jellies and fruit themeelves and sending over-sens as was tried out the first year. seas as was tried out the first year. Mrs. Tomlinson also pointed out that \$18,000 worth of pickles from the United States was sold in Toronto last year and that \$10,000,000 worth of imported fruit came into Canada. Her plea was to produce more and lessen this importation.

Conserve potatoes by using other things, was another plea. A table giving the comparative nutritive value of potatoes and rice was given by Mrs. Tomlinson, which was as follows:

Amount of	water.	Rice 12.4	Potatoe 78.3
Protein		7.4	2.2
Fat	******	.4	.1
Starch Mineral ma	*******	79.4	18.4
One of the	otter	4	1.0

r did contribution of socks to the Red Mineral matter ... 4 1.0 Cross work was also commented upon One of the last points dealt with a and suggested that they might do by Mrs. Tomm have this year realized, as such more work could be accome she said, "that our work in our own plashed. With a machine ten pairs of departments has been so important, less of socks can be turned out in that they taked our help and ad-an afternoon. It is best to stop using vice in matters of the state. We can-the machine at the ankle and kuit not go at these things blindly. We the machine at the ankle and kuit not go at these things blindly. We will fit and wear better. The Red get our hands on, such as editorials fat

July 12, 1917.

our papers, speed etc., so that we mail after careful st tions you finally (opinion from that think he will still that opinion."

Before refreshm ed the president the household Dairy to make a my appreciation being branch and to ext of Farm and Dair

Let the Firele W HILE, like tion, the limitath proven to be a kitchens when the upward, also a su saver of energy In summer, the di on' the range car then placed in the left until dinner expected, the savi from the use of greatest in the p like stews which re cooking. The foo the cooker are ce vegetables, dried f

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Homemade F

and puddings. A be overlooked utilize cheaper cut cooking at a relat ture, such as is g cooker, improves th of these tougher cu these days of hig bill in the majorit; a large item.

There are many the market, but it struct a homemade give satisfactory r cheaper. In a bul the United States riculture, a simply is described, a roug appears herewith container a tighti is probably the m though an old tru or a large butter of used. Whatever its size should be low for at least fe ing material all a which the kettle is

Fireless cookers much wider range are provided with heat, since a high ture may thus be of water is depended source of heat. Of duces a possible of

July 12, 1017.

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 announ ed the president very kindly called on the household editor f 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 HILE, like every other inven-

tion, the fireless cooker has its limitations, it has been proven to be a great saver of hot litchens 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 the range early in the morning then placed in the fireless cooker and left until duner 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 coding at a relatively not terms to be the start cooking at a relatively low tempera ture, such as is given in the fireless cooker, improves the texture and flavor of 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 con-struct 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 climply constructed cooker is described, a rough diagram of which appears herewith. For the outside container a tightly-built wooden box is probably the most satisfactory, al-bough an, old trunk, a small barrel, or a large butter or lard firkin may be used. Whatever the container used, the size should be large enough to aling material all around the nest in which the kettle is placed.

which the Rettle is placed. Fireless cooksrs are adapted to a much wider range of cooking if they are provided with an extra source of heat, since a higher cooking tempera-ture may thus be oblained than if hot water is depended upon as the sole source of heat. Obviously this intro-duces a possible danger from fire in

our papers, speeches in Parliament, case the hot stone or other substance should come into direct contact with inflammable packing material like ex-celsior or paper. To avoid this daninflammable packing material like ex-celsior or paper. To avoid this dan-ger a metal lining should be provided for the nest in which the cooking vessel and stone are to be put. For this extra source of heat a piece of sonpstone, 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 un-doubtedly the best substances to use for the packing and insulating ma-terial; 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 order to do good work. Whatever 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 diaa cushion or pad, as shown in the dia-gram, should be placed in the space between the top of the packing and the cover of the box after the hot ket-tles are put in place. Cotton, crum-pled paper or excelsior will make good stuffing for the cushion. Enamel OT aluminum kettles are most satisfac-tory, as they will not rust. A precaution necessary in connec-

tion with the fireless cooker is to see that it is kept absolutely clean. 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.)

Aydelot. The Kansas boys had been on duty in the trenches north of Caloocan for forty days, living beside 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.

Constant peri. "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 yot."

Carey had never before seen any resemblance to Asher Aydelot in his son's face. It was purely a type of the old Thaine family of Værginia. But to-day, the pose of the head, the exgaze of the dark eyes, bespoke the heritage of the house of Aydelot. "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. "Don't I look all right? I haven't had a bath, except in swamp mud, since the first of February. To-day is the twenty-third of March. Neither have I seen a razor. Notice my silky beard. Nor a dress suit, nor a-anything else civilized. Six weeks in one hole, killing Filipinos 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 sickshack yet. Any news from home?" Thaine ended with the ques-tion put so carelessly, with a face so impenetrable that Doctor Carey took notice at once. "Homesick!" was his mental diag-

nosis, but he answered with equal carelessness.

"Yes, I had a letter from Leigh Shirley." Thaine's eyes were too full of un-

akable 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. says," he continued. "She also "that John says," he continued, "that John Jacobs has had Hans Wyker convicted of running a joint and Hans had to pay a fine and stick in the Careyville

Jail thirty days. Hans work 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 bird!" There are the set of t 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. 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 mes-ge." Carey's black eyes held a sage."

sage. Carey's black eyes shrewd twinkle. "Why mine?" The im face was an Thaine again. The impenetrable "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 be-gun 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, three headlands swam In the distance, three neatlabus swam in the golden haze, of a Kanasa Octo-ber sunset, and their long purple shadows fell wide across the brown prairie and fields of garnered harvests. Thaine studied it carefully, but offered no comment.

"Doctor Carey, what brought you to the Philippines?" he asked suddenly. "To look after you," Carey replied frankly.

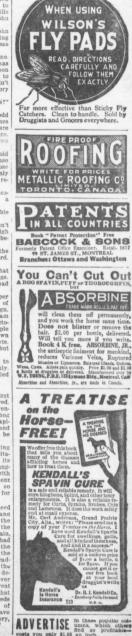
"Me! Do I need it?"

"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' capi-tal. 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 Twentleth" left its six-weeks' habitation in the trenches and began its campaign northward, and the young-hearted, white-haired physician with etic 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 When the sixty days that followed. 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 resourceful, 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 pen 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 unfading glory."

(To be Continued.)



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B.C. Dairymen Hold Extra Convention

By T. A. F. Wiancho, Provincial Dairy Instructor

British Columbia Dairymen's Association, held in the city of Vanaimo, Vancouver Island, last January, members from the Okanagan Valley urged upon the Association to hold the next annual convention at Kel-owna. It was felt, however, that the annual meeting, which has always been held in different points on the Island and lower mainland, should remain in the older dairy districts, and a promise was given that, if possible, an extra convention would be ar-ranged for the up-country districts, and to take place some time during the summer. Accordingly, arrangements were completed for a two-days' con-vention to be held in Kelowna on June 22nd and 23rd. Local business men and farmers of the district, under the direction of Michael Hereron, local director of the Association, greatly as-sisted the Acting-Secretary in arranging details.

First Day.

The morning session consisted of demonstrations in placing and judging dairy cattle and horses at the farm of Mr. Leslie Dilworth by Prof. J. A. Mc-Lean, of the B. C. University, and Prof. W. T. McDonald, Provincial Live Stock Commissioner, and much use-ful and valuable information was given to the farmers for their guid-ance in the breeding or purchase of these animals.

After a most satisfactory picnic lunch served in an adjoining grove by the ladies of the community, the afternoon session was opened by an address of welcome by Mr. J. W. Jones, local member of the Legislature, who in a few well chosen and happy words omed the speakers and delegates to the district, and told of the rapiu development of dairying in the district. Two years ago there were but few cows, and a little dairy butter was made and traded off for the usual family groceries in the local stores. A cooperative creamery was established in the spring of 1915, and over 100,000 lbs. of butter will be made during the current year. Until two years ago there were no silos in the district. The first one was built as a demon-stration silo by the Department of Agriculture on the farm of Mr. Hereron in the fall of 1915. At the present time there are some 30 in the district, and many more are being built this year. The Kelowna district is one of the very best in British Columbia for the growing of the two great dairy fodders, corn and alfalfa.

Suitable Feeds for Production.

Prof. McLean's talk on "Feeding Dairy Cattle" was full of valuable information regarding suitable feeds for the economical production of milk. Mr. T. A. F. Wiancko, Provincial Dairy Instructor, talked on the uctor, talked on the Variations in Cream "Causes of Variations in Cream Tests," and brought out some valuable points for the guidance of the cream producer, and made it quite plain that the blame for variations can seldom be placed upon the hard working and patient buttermaker.

Prof. L. Stevenson, Superintendent the Dominion Experimental Farm at Sidney, Vancouver Island, took for his subject, "Corn and its Relation to the Dairy Industry," and emphasized the importance of proper cultivation and seed selection for maximum production. He believed that corn and alfalfa such as can be grown in the Okanagan would solve the problem of producing milk and cream at a mini-

T the annual convention of the skim milk and good alfalfa or clover pasture are available, pigs can not be beaten. They take but little time to look after, and if kept out of doors largely during the summer season and comfortably and cleanly housed dur-ing the winter, they become a most valuable adjunct to the dairy industry.

Intensive Methods.

The evening session was held in the schoolhouse at Rutland, about six miles from Kelowna. The farmers in this section are becoming very thusiastic dairymen, and on their small holdings are going in for intensive methods. Corn, alfalfa and roots are grown largely between rows of fruit trees, and having plenty of water available for irrigation, this method can be followed without damage to the fruit trees.

Dr. S. F. Tolmie, B. C. Representa-tive of the Dominion Live Stock Branch, opened the evening's pro-gramme with a live talk on "Contag-ious Abortion, MHk Fever, and Bloatand pointed out the essentials ing." in handling these dread diseases.

P. H. Moore, now of Alderley Farm, Royal Oak, V.I., but until recently Superintendent of the Dominion Experimental Farm at Agassiz, gave some very valuable pointers on the making of clover silage. He recommends a mixture of nine pounds red clover, three and one half pounds alsike, one and one-half pounds white clover, and two pounds rye grass. Clover silage is more profitable than summer pasture, and is one of the most abundant of early spring crops. Alfalfa can be handled in the same The silo is especially valumanner. able in years when rain interferes with successful curing of alfalfa or clover for hay. These crops can be put into the silo in the wettest of weather with most excellent results.

Prof. P. A. Boving, of the Univer-Prof. P. A. Boving, of the Univer-sity of British Columbia, followed with a talk on "The Production of Roots," and emphasized the import-ance of early seeding and sufficient isced to insure a full stand. Cultiva-tion must be thorough, and thinning done early in order to keen sheard of done early, in order to keep ahead of weeds

Deputy-Minister Wm. E. Scott, of the Department of Agriculture, urged upon those present the importance of keeping the surplus over in the botcreased production to meet the Empire's needs. He expressed himself plaints of sour milk began coming pire's needs. He expressed himsen as particularly pleased with the pro-gress made by the dairymen of the Okanagan Valley, and hoped that exand he discontinued this. Then he tried to utilize it by churning, but the daily amount was comparatively small, and as he was busy with other tra conventions such as this, be held

by the association each year. Concurrently with the Rutlar I meet-ing, Prof. W. T. McDonald, Provincial Live Stock Commissioner, addressed to the pig trough. Live Stock Commissioner, addressed the Boys' and Girls' Club at the Board of Trade Rooms, Kelowna. There was a good turnout, and Pro. McDonald expressed himself as greatly pleased with the work of the Club.

Field-Root Demonstration.

lar sixty's worth of breakfast bacon The programme opened in the every time they sucked down eight morning with a field-root demonstragallons of milk, and the cost of the bacon they didn't lay on was deducted tion at the Bankhead Ranch-one of the largest of the fruit ranches where from the dealer's profits in the milk business. This leak of profits was not dalrying is carried on as a paying side-line. Mr. L. E. Taylor, the manbusiness. This leak of promis was not harge, but it was constant and result-ed in " a milk business for sale." The proprietor of the local cheese ager, is an enthusiastic grower of corn and roots; in fact, he won by a at the Provincial Seed Fair at Arm tale of wee. He saw his chaoc and about?" Mamma-"What is Willie crying strong, B.C. last year. After profit took over the business. Now, after Bridget--"Shure, ma'am, he wanted ably spending about an hour discuss the day's mllk has been delivered, the to go across the street to Tommy served with Bankhead strawberries tory and credited at current prices. Mamma "What is to Tommy and creating the fact are to the street to Tommy and creating fresh from the fact are to the server of the street street to the server of the server of the street street to the server of the street street street at the server of the street stree any contrast from the field and There is no wasts. The amount credit him go?" dairy. A doesn or more motor cars ted dairy is not large but it has turn. Dridge mum cost. and crean irean irean irean income the sent and there is no waske. The amount crean him so?" The session closed with an interest dairy. A dozen or more motor cars ted dairy is not large, but it has turn. Bridget--"They were havin' char-ing talk on hogs by G. S. Harris, took the visitors and speakers through ed an unground table basiness into a pro- ades, he said, ma'am, and I wasn't Moreaby Iale. As money makers when the Glenmore Valley, a distance of fitable one. Perhaps a little coopera- shure as he'd had 'em yet."

about 10 miles to Ellison, where at tion between the milk dealer and the the farm of Mr. Heraron a further talk cheese maker in other villages would on alfalfa and corn was delivered by Prof. Stevenson, Here the alfalfa cutting and curing was in actual opera-tion, and never before had anyone present seen finer or greener cured alfalfa.

At 12.30 p.m. an adjournment was made to the nearby Ellison school, where the ladies of the community, under the leadership of the Ellison Girls' Club, furnished a picnic lunch such as only country people can put up, consisting of great platters of cold chicken, ham and other cold meats, salads, home-baked bread, and the finest of butter from the local creamery, strawberries and cream, ice cream and cake, etc. Some eighty sat Some eighty sat down, and the way they stored away the good things was worth going a long way to see. After lunch, J. W. Berry, of Langley Prairie, and E. Dods-ley Barrow, Member for Chilliwack in local Legislature, spoke intereingly on "Cooperation." and farmers to study particularly the marketing end of their profession.

A motor trip through twelve to fifteen miles of the finest orchards and farm lands of the Okanagan Valley. brought the convention to a c every one went home feeling that the convention was one of the best in the history of the association.

The Makers' Corner

Butter and Cheese Makers are in

vited to send contributions to the department, to ask questions matters relating to cheese making and to suggest subjects for discu-

Something on the Side.

N a certain Quebec village with

his "left over" milk. This amounted to from 20 to 80 pounds a day, depend-

ing on the fluctuating demand of the consumer. The business was not large

enough to admit of the installation

of a costly pasteurizer, a refrigerator

and a mixer to make possible its

utilization next day. The surplus was

therefore largely allowed to go to

tles and sending these out, but com

things he found that this did not pay.

The surplus milk then found its way

This was all very well for the pigs.

ing was an very went to the pra-especially on the day when the sur-plus was large, but the dealer was pay-ing \$2 a hundred for the milk. The

pigs did not appreciate the latter point. They drank the milk all right,

but they simply wouldn't lay on a dol-

meet.

The trouble originated with

This amounted

latter

have equally good results.

July 12, 1917.

Patrons Should Share Costs

PROSPECTS for the cheese trade bright. The reconstruction of the European countries, which have been laid waste by the war, will em-ploy hundreds of thousands of workmen-and these workmen will want chéese. It is part of their diet. The choese cannot be supplied by European nations-their cattle have been killed off for meat purposes. Here Canada's chance.

But in the expected prosperity in the cheese business provision should be made whereby the owners of the cheese 'factory should share in the Many are not doing so now. profits.

The factory to which I send my milk owned by a joint stock company. The company is allowed by its charter 1¼ cts. on each pound of cheese manufactured, with which it has to pay all costs of manufacture. This charter was obtained some years ago, when prices were low.

At present we pay our cheese maker twice as much for manufacturing a hundred pounds of cheese as we did when the charter was obtained. Our wood costs us double, and rennet has advanced from \$1.75 a gallon to over \$10. But although the price cheese has practically doubled, the allotment for running expenses has remained unchanged.

This has resulted in an impoverished company-a company on the verge of bankruptcy-while the patrons are receiving exceptionally high prices their milk. The high cost of for manufacturing the cheese in these a normal times should be partially borne by the patron, who is now re-receiving such good prices for his milk population of about 1,000, the local milk dealer had failed to make ends

Here is the point-the maintenance appropriation should be movable, so that the company would not only be able to make ends meet, but would pay its loyal shareholders a fair profit every year. Unless the company is able to carry on its business profitably the patrons will soon find themselves without the means of marketing their milk at such satisfactory prices. The patrons who share in the war-time profits should likewise share At first the dealer had attempted in the war-time losses.

Cottage Cheese.

S KIM milk can be made into cot-and encodese, which is a whole and nutritious food. Sour the skim milk, then set the container in a pan of water 100° F. or that feels warm to the hand, leave there 20 minutes, stirring occasionally. Then pour into a cheese cloth bag or salt sack and hang up to drain five to 10 minutes, work the curds until they become fine in grain. The addition of cream improves the flavor. Salt and flavor to taste.

Skim milk is not always used to its full value, as the fat only has been romoved, the other valuable nutrients are left and these are the tissue building nutrients and so can to a large extent replace meat. In cottage cheese, these nutrients are brought into a more concentrated form.

July 12, 1917.

The I

bushels of grain the loyalty of or Kennedy. "If t 10,000,000 bushe 28,000,000, we c the elevators. It. farmers that mad management. management of Grain Company, onto, and they o cees of the Ont the loyal suppor The Ex

"When the Company started ed, "we started We soon house. nonentity as far farmers' price v we went into the had a terrible t years. At the an vears ago, we \$250,000 on our asked the meetin write off this loss reserve funds. 7 and instructed u tinue in the expo mers had at last where they would tent of standing as in the taking continued to exp last August we f we had exported American grain Canadian grain. \$500,000 of profit ess last year at \$100.000 paid up

"When we sta: announced that so long as other port business at say one cent to o a hushel. In tha stringency, 1908. ators exacted a p 13 cents a bushel ficor of the Hot year we made ou on three-quarters out with scare h farmers of the W company was rob made \$500,000 pr tal. This same proteins to say w were taking five bushel. We did cur paid up capit credit of \$7,000,0 were just a bun who started this I was green and as green as I wa that farmers can class of people ca

In the Lur

Lately the Gr Company has go business and Mr. minutes to tell o activities. About executive decided limita of the Wes ing into the hand ists and at the price of lumber v later to go to unr Some of the shan acquiring timber that it was the fu to preserve these ple, although as "not a party in 4 ed the resources of people." The Gra timber limits. Th mill cutting for t is in course of limits will enable

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FARM AND DAIRY

The District Convention of the U.F.O.

(Continued from Page 2)

bushels of grain. bushels of grain. "It was useause of 30,000,000 feet of lumber annually for the loyality of our farmers," said Mr. 30 years. The greatest result of this Kennedy. "If they had shipped only work will be that the output of lumber 10,000,000 bushels to us instead of of the Grain Growers' Grain Company 28,000,000 burners to us thread of or the data and the timber the elevators. It was the loyalty of our trade and hold down prices on the out

"When the Grain Growers' Grain Company started in 1906," he continu- when Mr. Kennedy concluded his ed, "we started as a commission sketch of the work of the Grain Growhouse. We soon found we would be a set Grain Company. In the few min-nonentity as far as protecting the uses that remained to him, he dealt farmers' price was concerned, unless with what he binnelf called "the most we went into the skyport business. We important phase of the farmers' had a terrible time for two or three movement." the question of taxation, years. At the annual meeting, three Said he, "We have an economic condihouse. We soon found we would be a years ago, we showed a loss of \$250,000 on our export business. We \$250,000 on our export bushness. We asked the meeting of shareholders to write off this loss and pay it out of the reserve funds. Those 600 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 had at last come 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 busi last year and we did it with

ators exacted a profit of five cents 'o convention had received word that the 13 cents a bushel as revealed on the coal micht not be delivered. Sait de-floor of the House at Ottawa. Last liveries have been so alow as to cause year we made our profils in exporting dissatiafaction among some of the out, threequarters of a cent a bushel, clobs. Mr. Gurney explained that the Immediately the subsidized press came sait, trade of the Marilime provinces, pout with secre headlines to tell the which was formerly supplied from formers of the West that the formers' Austria, was being specially catered to company was robbing them. They had by the sait companies at the expense made 500,000 profit on \$100,000 capi- of Ordunio formers. Were it not that cal. This same press, however, had the People's Sait Wells at Kinearding. nothing to say when other companies with a capacity of 250 barrels a year, were taking five cents to 13 cents a were owned by the farmers, the situa-bushel. We did our business, not on tion in Ontario would be worse than it cur paid up capital, but on our file of is. A new plant is in course of con-credit of \$7,000,000 to \$8,000,000. We struction there with a capacity of 750 were just a bunch of green farmers cars a year, which will be completed who started this company. I know for by Akurust and plenty of salt will be I was green and the others were just available in the fall. as green as I was is this not proof. To filustrate just how well legislaas green as I was. Is this not proof To illustrate just how well legisla-that farmers can do what any other tion is controlled by privileged inter-class of people can do?"

In the Lumber Business.

Lately the Grain Growers' Grain and power for the average farm for one Company has gone into the lumber year. A few years ago Mr. Gurney business and Mr. Kennedy took a few took up the question of denatured al-minutes to fell of this phase of their cohol and in two weeks the oil formactivities. About seven years ago the panies had two lobbyists at Ottawa to executive decided that as the timber see to it that nothing was done to fac-Executive declared and as an uninous see to it that nothing was done to fac-limits of the West were fast disappear. White its manufacture in Canada, ing into the hands of foreign capital. "Politicians," said ha, "have been leg-ists and at the value of a song, the islating all the way through for the price of lumber was bound sconer or berefit of the classes." later to go to unnecessary high levels. Some of the shareholders objected to acquiring timber limits, considering that it was the function of government that it was the function of government Mr. N. Q. A. O'Brien occupies the condition has been accomplished by to preserve these limits for the peo- unique position of a business expert the annual testing of every andmal ple, although as Mr. Konnedy, said, who is not directly connected with the more han six months old, when they "not a party in 40 years has preserve farmers' company and his advice on go into winter quarters; maintaining ed the resources of the cointry for the the business problems of the concern a proper sanitation in the stable with people." The Grain Growers got their are all the more valuable on that ac-time's limits. They now have a small count. He questioned if the progress paint and sunlight, maintaining of mill cutting for their big mill, which that has been made is so wonderful good venitation and testing of all cat-ies in course of construction. Their after all. The hair million dollar busi- the purchased shortly after they come limits will enable them to turn out ness done in the last six months, to the college herd.

"It was because of 30,000,000 feet of lumber annually for the elevators. It was the loyalty of our trade and hold down prices on the out-farmers that made if a success, not our put of all other mills, all classes will management. You might take the benefit by this whether they live in management of the Grain Growers' country or city. "And this," said Mr. Grain Company, set if down in Tor-Kennedy, "is the rock on which our onto, and they could not make a suc-company is built.-service to all." It cess of the Ontario company without the loyal support of Ontario farmers. The Export Business. the eastern provinces.

> tion' in Canada to-day that is based on injustice. We have a method of taxa-tion 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." And then with a few apt illustrations, Mr. Kennedy showed the absurdity of tariff taxation with its attendant ovils 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 fu: ture issue of Farm and Dairy.

Mr. Gurney

Rest just year and we did it with the source of the weight of the source of the sou

ests, the speaker stat d that the de-natured alcohol manufactured from an acre of corn would supply heat, light

Mr. O'Brien.

Mr. N. Q. A. O'Brien occupies the

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 anthorized capital," said Mr. O'Brien. "How far will \$10,000 go in any business? Clubs of 70 members cannot be financed on a \$25 share. Every member of the club should have a share." The company is now proshare." The company is now pro-osing 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 \$30,000 paid up instead of \$9,000 subscribed and only half of it paid up and this would enable the company to make very advantageous arrangem for the benefit's 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 cefit. to three per cent. given them by the firms with which they do business. The goods are then turned over te clubs at their invoice price. This one to three per cent. is all absorbed in the over head expenses of the offic We have sufficient staff." said M 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 ood progress. It is yet but on the good progress. good progress. It is yet out 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

NTARIO stockmen would do well to follow the lead of the Iowa State College and make an effort clean up the tubercular herd. Again has been demonstrated that it 19 essible to build up a clean herd from herd of reactors. Experts and vetherd of reactors. erinary surgeons have told us that possible to build up a clean herd The possible to build up a clean herd, but we have been skeptical or else too indolent to attempt it. The lowa peo-ple have accomplished it and we can. They use what is known as the "mo-dified bang system." The details of the experiment follow in full:

In 1907 the college herd was tested and a large percentage of the animals ware reactors. The cows were imme-diately 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 quarantime pas-tures and allowed to remain with their dams until weaning time, 9 to 11 months. They were then tested 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 romain with their dams is

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, granddaughters and great grand-daughters of former tuberculous ancestors. This condition has been accomplished by

cheaper



We have a few cars of baled shavings at 16c per bale, f.o.b. Burlington, ready for immediate shipment. We advise farmers to take them in now, as they will not be available next winter.

THE NICHOLSON LUMBER CO., LTD. Burlington, Ontar

Sell Them Now as Others are Doing

Make sale for those surplus bulls. Why keep them longer? Among our dairymen who read Farm and Dairy there are hundreds who, if they knew what you had for sale, would buy it at your own price

Fix up an advertisement to-night, and send it to Farm and Dairy, and have it in these columns for a few weeks. It will speak to 23,000 possible buyers. Cost to you is only \$1.68 per insertion or lower by contract.

Other progressive breeders sell their stock this way. You can, too.

Try it. Make your start now while the demand is still keen.

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THE WESTERN FAIR London - Canada September 7th to 15th, 1917 LONDON'S FIFTIETH EXHIBITION

"1867-A Half Century of Success-1917."

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Book Department PETERBORO, ONT. **FARM & DAIRY**

HOLSTEIN-FRIESIAN NEWS

Parm and Dairy is the leading exponent of dairying in Canada. The great majority of the members of the Canadian Holatein-Frieslan Association are readers of the paper. Members of the Association paper. Members of the Association est to if the send time of inter-est to if the send time of pub-lication in this column.

PERTH BREEDERS PROGRESSING.

The provide the second second

reash. Mr. D. Athogani, the president of the smoothin, presided, and the list opening emarks pointed out that the the pressed pleasure at the errowing evi-ments that learth preeders are improv-took and park by livesting in high-bed took and park by livesting in high-bed

to their herds. The principal meaks present was Mr. "The principal meaks present was Mr. G. R. Brevenson, of Anesater, one of the outstanding primers in the Holstein second principal meaks and the second coming of Buetry in Ontario. The over-coming of the second principal meaks and Stevenson was confront on which Mr. Stevenson also descriptions story. Mr. Stovenson also descriptions story. Mr. Stovenson also descriptions story. Mr. Stovenson also descriptions to the second breedges should follow in perfecting their herds.

After Mr. Biversion's address, a proc-diate and the second second second second tioal feature of the meeting was a round table conference. Irranitically all the address second second second second and many queries to the second second ing imparied. It was decided to have an-ing imparied. It was decided to have an ing imparted. It was decided to have an in the fail, and bling of the association in the fail, and bling of the association and of Holsteins next spring.

GOOD WORK IN THE FAREWELL

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July 12, 1917.

The second secon

RECORD FOR FAT PRODUCTION BROKEN.

AM defined through problem intervent protein drawing problem intervent Priorian Mefer, von Heim Winnifeed Colontha, 22934, has broken the record for 16 problem in the subic two-year consecutive days 1,925.3 has maile containing 94.54 has, fat. She freehened at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four at the days of two years, one month, four problem is the days of the days of the problem of the days of the days of the days is 2,644 has, milk containing 93.822 has, fat. Computed on the 50 per cent, basia, the equivalent butter claimed for amount to 117,806 has, MALCOLM H. (GAUDDER,

MALCOLM H. GARDNER, Supt. A. R.

Postal Card Reports Correspondence Invited.



July 12, 1917.

Instead by The Arriculture, we is and are promised and are promised in the second of the promise an average promise an average promise an average tables, with the pro-tables, with the pro-tables, with the pro-tables, with the pro-lamb and the pro-lamb are pro-promised by the promise and area of the promised of the pro-net of the pro-section of the school boys conting try and builter que unchanged.

Wh

A considerable an offering, preparator of the new crop. I tered by commission induce millers to bu to place any larg Northern is quoted Ontario wheat No. 2 according to freight ter, \$2.28 to \$2.33. considerable

COARSE

There was a firme the export business fairly extensive. On the coarse grain r Quotations follow: (

MILL F

Quotations on this changed: Bran, \$31 dings, \$42; good fee \$2.90. At Montreal, \$32; shorts, \$32; mk and moullie, \$44 to \$4

HAY AND

Hay No. 2 is quo \$12.50 to \$13.50; mixe carlots, \$9. At Montres lots, \$12.50 to \$13.

HIDES ANI

Country Markets-cured, 20c to 21c; de \$1.76 to \$2.50 ench; take-off, No. 1, \$6 to No.1 sheepskins, \$3 t farmera' atock, \$37. Wool-Unawashed fie quality, fine, 58c; coar wool, fine, 70c; coarae

POTATOES AN

Potatoes, new, bbl.,; Delawares, \$4.75, Beans, Japanese, hi \$7.50 to \$8; Canadian, h \$9.25; prime, \$8.75.

EGGS AND

Supplies of eggs co very liberal, but demai limited. Wholesalers a try points for cases retu-to the retail trade, ex-Live

TACASS,	over		5	1	62	ί.		
Rooste	52 .							
Ducks		6	• •	*	۰.			
Ducklin Turkey	nga			÷			ų,	

DAIRY PRO

Butter has not yet r slump of a week ago good and as the weather hot, the milk flow is maximum. At country are paying 33c to 33 solids; creamery printi dairy, 28c to 36c. At creamery, 35c; finest c lower grades, 35c to 29 The receipts of chersy



Market Review and Forecast

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COARSE CRAINS. There was a finner market is independent of the second business is understood to second the second business is understood to second business in the second business of the second business of

MILL FEEDS.

Quotations on this market remain un-chanced: Bran. §31; shorts. §33; mid-dings. §42; good feed flour. bag. §2.80 a \$2.90. At Montreal, bran is quoted at \$32; shorts. §38; middlings. §40 to §42, and moullie, §44 to §41.

HAY AND STRAW

Hay No. 2 is quoted on track here, \$12.50 to \$13.50; mixed, \$9 to \$11; straw, carlots, \$9. At Montreal, No. 2 hay in carlots, \$12.50 to \$12.

(Think and the state	Live weigh	. Dressed.
Chickens, spring	20c to 25	ic 30c to 35
Hens, under 5 4	ba 16c to 00	
Hens, over 5 Pb	1 19c to 00	90.000 000
DUCKS	120 10.00	00 1-00
DUCKHINGS HILLS	200 10 00	42
Turkeys	16c to 00	180 10 00

HORSES.

Provides. Business on this market has been good for the past week or two. Shipments of horese for Brilshi impection have been minorous. Carload trade is a little quiek, and Quebee CIV and a few to the West. Farmers are coming in and taking a num-ber in lois of one or two. Priess are as and Quebee CIV and a few to the West. Farmers are coming in and taking a num-ber in lois of one or two. Priess are as in 100 and the trade of the the the state of the trade of the the the taken of the trade of the trade of the taken of the trade of the trade of the bas. 5 to 8 years old and sound, sill for the stab. Drivers, young and could, sill for stab. depending upon the individual.

LIVE STOCK.

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clipped	10.00	to	11
ped	8.00	to	
do heavy and bucks	6.50	100	
do culla	4.00	to	5
do off cars	16,75	to	00.
do f.o.b.	15.75	10	



-HOLSTEINS-

Occasionally readers of Farm and Dairy wish to secure the ad-dress of manufacturess of farm or household equipment, but not able to locate it in our pages. At any time our Advertising Dept, will be pleased to give you any in-formation of this nature. Write us freely.

ADVERTISING DEPT. FARM & DAIRY PETERBORO, ONT.

No business can be successfully conducted without outside help and No outside can be successfully conducted without outside help and suggestions. The business man has his business magazine, the lawyer his legal paper, and the physician his medical journal. For the same reason, the dairymen require Farm and Dairy.

FARM AND DAIRY

July 12, 1917.

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